TILAK MAHARASHTRA VIDYAPEETH, PUNE

FACULTY OF MORAL AND SOCIAL SCIENCES,

DEPARTMENT OF ECONOMICS

PH.D. THESIS

A STUDY OF SOCIO-ECONOMIC RISK FACTORS IDENTIFICATION AND ANALYSIS OF FARMERS SUICIDES: A CASE OF MAHARASHTRA

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May 2011

DECLARATION

I hereby declare that the thesis entitled, " A Study of Socio-Economic Risk Factors Identification and Analysis of Farmers Suicides: A Case of Maharashtra", completed and written by me has not previously formed the basis for the award of any degree or other similar title of this or any other University or examining body.

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Research Student **(*Akshaytrutiya*)**

CERTIFICATE

This is to certify that the thesis entitled, " A Study of Socio-Economic Risk Factors Identification and Analysis of Farmers Suicides: A Case of Maharashtra", which is being submitted herewith for the award of the degree of Ph.D. (Vidyavachaspati) in Economics of Tilak Maharashtra Vidyapeeth, Pune is the result of original research work completed by Shri. Rasal Onkar Jeevan under my supervision and guidance. To the best of my knowledge and belief the work incorporated in this thesis has not formed the basis for the award of any degree or similar title of this or any other University or examining body.

Dr. Dnyandev Talule **Dated- 07th May 2011**

Research Guide **(*Akshaytrutiya*)**

ACKNOWLEDGEMENT

I express my deepest gratitude to my supervisor Dr. Dnyandev Talule, whose comments at every stage of my writing and insistence on perfection has helped this dissertation to come out in this shape. It is not only his careful supervision but also his personal care and affection that have given me a lot of confidence to proceed smoothly with my work. Words can only inadequately express my gratitude to my supervisor for patiently helping me to think clearly and consistently by discussing every point of this dissertation with me.

It was a memorable and enjoyable experience of my life to have worked with him. He introduced me to this wonderful world of research. In fact, most of my ideas have taken a preliminary shape owing to a number of discussions with him. It was a real privilege to work with him since my post undergraduate education. My time with him has helped me to 'grow' in many ways. I am grateful to him.

I am indebted to Dr. Neeta Jagtap whose constant encouragement, inspiration and parental affection has brought me to this stage.

I also owe a debt of gratitude to the Principal and Department of Economics of Ahmednagar College, Ahmednagar whose unfailing encouragement and friendliness made the process of research such an enjoyable one.

As most of the research materials had been obtained from various libraries, I must not forget to express my thanks to the Servants of India Society's Dhananjayrao Gadgil Library of the Gokhale Institute of Politics and Economics, Pune, the Library of Mahatma

Phule Krishi Vidyapeeth, Rahuri and also the library of Ahmednagar College Ahmednagar for helping me to obtain secondary information on my research topic.

I am also extremely thankful to Dr. Purushottam Bhapkar then District Collector, Amravati, and Mr. Vijay Suryawanshi of Vasantrao Naik Sheti Swavlamban Mission, Amravati, Mr. Balasaheb Nitnavare, Agriculture Officer Shevgaon for their valuable guidance for the field visit and understanding the ground reality.

I also acknowledge Mr. Sameer Bidkar, Chikhali, Mr. Dilip Khati, Yeotmal, Mr. Avinash Shirke, Principal BSW College, Yeotmal and Mr. Atul Sharma, Wardha for their help during the field visits. I am also thankful to the District Collectorates of Aurangabad, Jalgaon, Nasik, Solapur, Beed, Satara, Sangli, Kolhapur, Ahmednagar and Divisional Commissionerates of Aurangabad, Nasik, Amravati for providing the list of suicide affected farm households.

I must not fail to acknowledge muster my heartfelt thanks to surviving and still suffering family members of two hundred suicide hit farm households from the study regions those who despite their economic hardships and the psychological trauma responded quickly and provided me all information on the ground reality of the apathy.

I am also grateful to the authorities of my college, especially Principal R. S. Shinde of Arts, Commerce and Science College, Satral, Tal. Rahuri. Dist. Ahmednagar for their help and support.

I thank all my friends, especially Vijay Chaphekar, Mahadev Kavde, Videshkumar Pote, Bapusaheb Doshinge, Adv. Yuvraj Kakade,

Prof. Sachin Gadekar, Dr. Madhav Shinde, Anand Talule, Sohail Tamboli, Prof. Babasaheb Wani, Dr. Rajendra Salalkar, Prin. Dayama for their good company and support in helping me in every possible way to complete my research work.

I would be failing in acknowledging my gratitude if I do not mention my parents Shri. Jeevan and Mrs. Trupta Rasal without whose love and inspiration and all material and financial support not to speak of the moral support this thesis could not have seen the light of the day to them I simply and humbly say thank you. Also I am thankful to my uncle Mr. Rajiv Rasal and Mr. Ajit Rasal, my sister Mrs. Varda Joshi and brother in law Mr. Shashank Joshi whose moral support has been always inspiring. The moment also demands to remember my late grandfather Dr. Achyutrao Rasal and age old grandmother Smt. Indumati Rasal

Onkar Rasal

***(Akshaytrutiya*)** **Dated- 07th May 2011**

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Chapter – 01

Introduction

Introduction

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1.3 Background

1.4 Policy Fatigue

1.5 The Objectives of the Research

1.6 Hypotheses of the Research Study

1.7 Methodology and Sources of the Data Collection

1.8 Research Design/ Scheme of Chapters

Introduction

Rural and agricultural economy of India has been passing through a difficult time; it was particularly so during the decades of the 1990s and 2000s. The widening gap between input-output prices has led towards further deterioration of the farm economy. The decline of public investment in agriculture and allied rural sectors, started in the late 1980s, accelerated during the period of economic reforms. An incidence of rural poverty (37.5%) is still at an alarming high. Multiple crop-risk factors and uncertain rains have been instrumental in exceeding sometimes poor than always poor in rural parts of the country. It gives a new dimension to the rural poverty debate. Rates of interest charged by rural moneylenders double the principal within a year or two which incapacitates farmers' repayment ability further reduces the credit ability, pushing them in to a private debt trap. The average rate of interest charged by private moneylenders has been 78 per cent in the states like Maharashtra (minimum of 36% and maximum 120% per annum). The main reason for such a type of rates of interest is the failure of nationalized commercial banks lending for agricultural operations which didn't satisfy the statutory provision of farm lending of 18 per cent of the total credit disbursement. Post green revolution stagnation of land productivity to the level of 1970s and increasing input prices as a result of market integration deepened the crisis further (Dionne Bunshaw -2006)[1.1]. Therefore the spate of suicides since 1997-98 has been a tragic manifestation of India's deteriorating farm economy. Indian agriculture has never been a profession / business of profit. As has been pointed out by Amartya Sen

(1962, 1964)[1.2], if the family members working on agriculture are given an imputed value, most of the Indian agriculture will turn to be an unremunerative. During the last five decades, majority of farmers have become poor and harried outcasts in their own country with no respectful place in the government schemes of things. Farmers had been on the margins of India's economic, social, cultural and political life. Agriculture has become a relatively unrewarding profession due to a generally unfavourable price regime and low value addition causing abandoning of farming and increasing migration from the rural to urban areas. During the period of economic reforms agriculture entered into an advanced stage of crisis resulting in more than two lakh farmers in the country committing suicide. It brings out the fact that something is terribly wrong in the countryside (Swaminathan-2006)[1.3]. More than two third of the Indian farmers are in debt and much of the debt is due to increase in agricultural expenses and declining or stagnant returns, inequality in income between the rural and urban households and growing disparities of income between the cultivators and non cultivators. The agricultural economy of the country has been facing diverse challenges. Growth rate of Indian agriculture progressively decelerated over the last twenty years and for the second quarter of 2009 it bottomed the level of 0.9 per cent point. The trajectory of the growth of employment is also not different both for rural and urban areas. Proportion of small and marginal holdings has been on the rise and crossed the level of 80 per cent. The share of agriculture in GDP decelerated to 14.5 per cent while the proportion of people depending on agriculture for livelihood is still 58.5 per cent (RBI-2009)[1.4]. The changed pattern of landholdings, changes in cropping pattern

due to a shift away from food crops to cash crops, liberalization policies which prematurely pushed Indian agriculture into the global markets without a level playing field, heavy dependence on high-cost paid inputs and thereby growing cost of cultivation, volatility of crop output, market vagaries, lack of remunerative prices, debt, decline in public investment, break-up of joint families, individualization of agricultural operations, etc. had been the structural and social factors that have been responsible for rural economic distress and suicidal act by farmers in different parts of the country. Agrarian distress that has been brought out by research studies is widely acknowledged by major political parties, statutory bodies both at the national and international level. Studies hold the policies pursued by state and central governments over the years responsible for agrarian distress in India. More than 2.14 lac farmers ended their lives between 1997 and 2010 in India where the five states of Andhra Pradesh, Karnataka, Punjab, Kerala and Maharashtra have been at the top of the list (NCRB 2010)[1.5]. During the earlier periods, farmers in distress might have become dacoits or rebels, but never did we hear that they committed suicide. It brings to light a great deal about the plight of the farmers who are alive but whose conditions bear a close resemblance to that of the victims. Looking at the problem, two paradoxical situations come out. First, majority of farmer suicides have been reported from the states of Andhra Pradesh, Karnataka, Kerala and Maharashtra which are (a) relatively agriculturally advanced states, (b) states having history and experience of strong peasant movements either in the colonial or post independence periods or both and (c) the leadership of political parties predominantly rooted in farming communities. The states of Karnataka,

Kerala, Andhra Pradesh, Maharashtra, and Punjab are the worst affected by the tragedy and all of them share some or all of these characteristics. Second, in political theory it is presumed that in a mass electoral democracy the voice of a large number would tend to have a greater say in running the government affairs. In fact, what democracy is feared for does not seem to happen in India.

1.1 Interdisciplinary Relevance

A present study on farmers suicides has a study of interdisciplinary of nature. Because it covers various aspects of different social sciences ranging between suicidal theories in sociology (such as by Durkheim E.) to that of the economic and psychological aspects that have been instrumental in pushing farmers to end their lives. The present study also has an academic and policy value for the future. Majority of the research studies on farmers suicides are done by scholars in economics and attempted to bring out the various aspects of the problem. Apart from the academic value, the study has an angle of policy analysis from the political economy point of view of the country particularly in the context of the agriculture policy and the changes that have taken place during the period of post independence in general and that of the reforms period in particular. There has been a sea-change in the macroeconomic policy of the country during the period of the 1980s and the 1990s which has its impact on agrarian relations and socio-economic conditions of farmers that have been investigated from an interdisciplinary angle.

1.2 Significance of the Study

Understanding suicidal behaviour of farmers is a complex issue. It is not the outcome of any single reason but varied and complex issues have come

up during the course of different studies in different states. Incidence of farmers suicides is witnessed by relatively agriculturally progressive states like Punjab, Maharashtra, Andhra Pradesh, Karnataka and Kerala. A study of farmers suicides is an indirect study of the complexities of changing agrarian relations and the impact of government policies. It is interesting to note that even the first case of farmer suicide was reported in 1985 in Kerala but the more number of suicides have been reported during the period of economic reforms. Therefore the present study has focused on the significance of the policy changes in last forty years in general and that of reforms period in particular. The significance of the study is underlined by its coverage of the varied range of factors that have been instrumental in changing agrarian relations that are determined by the land tenure system and the structural aspects in a country like India.

1.3 Background

A plethora of writings is available on farmers suicides bringing out reasons for the crisis and the suicidal behaviour of farmers in India. Most of the studies that have been conducted by scholars focused on the states of Maharashtra, Punjab, Kerala, Karnataka and Andhra Pradesh which are most affected by farmers suicide in the country. In fact the situation assessment survey of farmers carried out during the year 2003[1.6], by the National Sample Survey Organization of India, brought out several startling findings on farm level crisis. The survey revealed that more than half of the Indian farmers were in debt and much of the debt was a consequence of the gap between agricultural expenses and returns from it. As a result, the agricultural activity has become an unrewarding profession in a generally unfavourable price regime. Surinder Jodhka in a

study on farmers suicides in Punjab highlighted the decadal changes in policy and agrarian situation and held it responsible for the suicide of the farming community. When there was a bumper crop of Paddy with favourable natural conditions, government was not ready to buy at the minimum support price and this led to further distress (Jodhka 2005)[1.7]. There has been a general stagnation in the agriculture sector over the last two decades which pushed farmers into distress (Govt. of Punjab 2004)[1.8]. Cash expenditure on crop production has been steadily rising for different crops while the prices have shown a declining trend. The compound growth rate of cash expenditure between 1974-75 and 1991-92 was nearly 9 per cent for Wheat and more than 11 per cent for Paddy in Punjab (Shergil 1998)[1.9]. This type of a situation causing indebtedness has been identified as a major cause for the crisis. Borrowing from informal sources invites trouble for farmers. Studies by Gill and Kaur (2002)[1.10] pointed out that the middlemen (*arthyas*) are the major source of credit for farmers in Punjab. The purpose of borrowing found that farmers borrowed for both the "productive" (41%) and "unproductive" (59%) purposes whereas the present study finds that in Maharashtra 83.16% of farmers borrowed for productive and 16.83% for the non agriculture unproductive purposes. The agrarian scenario in Maharashtra has also changed fast. Srijit Mishra (2006)[1.11] discussed the agrarian crisis that has precipitated a spate of suicides in the state. In Maharashtra the contribution of agriculture to GSDP has come down from 40% in 1960-61 to 13% in 2004-05 but the population dependent is still 58.5 per cent. Deshpande (2002)[1.12] in a study on farmers suicides in Karnataka, brought out the agrarian distress and debt of farmers as a major cause for the curse. P. Narsimha Rao and K. C.

Suri (2006)[1.13] in a combined study on dimensions of agrarian distress in Andhra Pradesh pointed out that it was a debt burden that pushed farmers into the suicide trap. High cost of cultivation, diminishing productivity, and low returns make farmers further difficult to withstand crop failures and lead them to distress. S. Mohankumar and R. K. Sharma (2006)[1.14], in an analysis of farmers suicides in Kerala, concluded that agrarian crisis and farmers distress are closely linked to the neo-liberal policy regime implemented in the country during the 1990s. V. Shridhar (2004)[1.15] writes that farm individuals and communities are under pressure to cope with the changes brought about by a churn in socio-economic conditions in Andhra Pradesh. Some other studies covering various aspects of farmers' suicide are by Assadi Muzaffar (1998)[1.16], Kumar Pramod and L S Sharma (1998)[1.17], Bhalla G S (1998)[1.18], Patnaik Utsa (2002)[1.19], Choudhary (2002)[1.20], Govt. of Kerala (2004)[1.21], Shridhar V. (2004)[1.22], Deshpande and Prabhu (2005)[1.23], Mohanty B B (2005)[1.24], Mohankumar and Binni (2005)[1.25], Sainath P. (2007)[1.26], Dandekar et. al. (2005)[1.27], M S Swaminathan (2006)[1.28], Gnyanmudra (2007)[1.29], etc. International academic development process has also given an equally adequate amount of attention to the studies on suicides. The beginning is contributed by a known sociologist like Durkheim (1951)[1.30]. The study known as; Suicide: A Study in Sociology where the author discovers socio-psychological factors that lead the causation analysis of suicidal behaviour. Recent studies on suicides in the world have stressed more on economic aspects and macroeconomic policy changes. Studies have attempted to assess the impact of change in macroeconomic policies of countries and its impact on socio-economic relations in urban and rural agrarian economy

and its dominance in the suicidal causes. Stone G.D. (2002)[1.31] studied the impact of Biotechnology on agrarian situation and farmers distress leading to suicides. Murphy, Lilliston and Lake (2005)[1.32] assessed the agrarian distress from the WTO and Agreement on Agriculture (AoA) point of view and studied the impact of a decade of United States dumping on agriculture markets and thereby agriculture prices and cost benefit effectiveness in developing economies. The foregoing analysis clearly shows that recent studies on suicides in the world have become farmer centric and the determining factors vary from the changing political economy to the macro-economic policies, change in technology, impact of neo-liberal policies and the role and dominance of advanced countries in the world agriculture market.

1.4 Policy Fatigue

The end of the impact of the green revolution as a result of productivity stagnation is a widely accepted fact but the neglect of agriculture in the policy domain is grossly over-looked in India. Several macroeconomic policy transformations have been instrumental in deteriorating the Indian agricultural conditions. Capitalistic macroeconomic policies of the 1960s gave the first shock to agriculture. An entrepreneurial shift to agriculture in the 1970s made it a highly cost orientated production activity whereas the decline in investment and capital formation in agriculture in the 1980s sown the seeds of crisis in future. Grossly the agriculture policy had been of the nature of give with one hand and take back by another. The classic example of reduction in minimum support price for Cotton by Government of Maharashtra after the Cheif Minister's Economic Package to farmers of six farmers suicides affected districts of Vidharbha region

brings out the approach vividly. Generally, the post reforms Central and State policies had direct and indirect adverse impact on farmers' welfare. Changes in patterns of government spending and financial measures also affected the conditions of cultivation. In the factors market farmers have to pay the prices dictated by suppliers whereas in the product market the purchasers determine prices with the farmer as a mute receiver (Deshpande 2008)[1.33]. The situation further worsened during the 1990s in the states of Maharashtra, Karnataka, Kerala, Punjab and Andhra Pradesh both due to the policy failure and the successive droughts (Vasavi-1999[1.34], Gill & Singh-2006[1.35], P.Jeromi-2006[1.36], Mishra-2006[1.37], Sainath-2007[1.38], Deshpande-2008[1.39]). In all, in these five states study reports have stressed on farmer consolidation, inadequate public investment and inadequacies of post suicide compensation, price risk and market imperfections. It is a well-known fact that the first transformation in the agrarian conditions of India had been the result of the British rule. As a result of this a definite right to private property in land was introduced. Agriculture activity became market oriented. Better irrigation, transport facilities, growth of usury capital and flow of money into land brought about far reaching changes in Indian agrarian land structure, as well as, the agrarian conditions. This process had aspects of both development and degradation. As a result the productivity of agriculture increased due to irrigation facilities and sections of peasants benefited from it. Crop production brought marginal and sometimes more than marginal monetary returns. Enterprising farmers started sending their children to schools and colleges. As a result they were employed in government and took to different occupations. Some of them moved to towns. At the same

time the extraction of surplus from agriculture through land revenue, price mechanisms and collection of other cesses led to great misery and indebtedness among certain sections of the peasantry. During the years of crop failures and depression in markets all suffered badly. During the post independence period there seems to be three phases in the evolution of agrarian relations. One, the reforms and consolidation of the agriculture during the period of the 1950s and 1960s which were on the lines charted out during the freedom struggle. Second, the period of green revolution and the growth of political populism during the 1970s and 1980s and third; the period of liberalization and the deterioration of farmers conditions during the 1990s and after. During the period of initial stages of independence, government came forward with several pro-peasant policies, such as the abolition of intermediaries, reduction of land revenue, provision of irrigation facilities, nationalization of commercial banks, consolidation of co-operative institutions, Lead Bank Scheme of 1969, Regional Rural Banks, institutionalization of NABARD (1982) and a greater share in political power for the farming communities at the state and national level. This also suited the strategy of import substitution and industrial development policy after independence ensuring that farmers produce necessary surplus food grains which would free the country from its chronic dependence on foreign countries and also enable the government to divert valuable foreign exchange to investment in manufacturing sector, ensure the supply of raw materials for industries and provide market for manufacturing sector. As both the capitalist and socialist theories consider the transfer of agrarian surplus as a necessary condition for growth of industry, in India also the improvement in the

living conditions of farmers have never been the objective of government policies. Use of high yielding varieties of seeds, fertilizers, irrigation and other mechanized implements was given high priority during the period of advanced stage of green revolution. The strategy led to an increase in productivity of agriculture on the one hand and the cost of production on the other. It also had other negative consequences on Indian agrarian conditions such as the fall of agricultural output prices as supply increased and increase in the input prices as demand for them shot up sharply thereby leading towards widening the gap between production cost and revenue from agriculture and finally cost exceeding revenue situation. Agriculture became a cash based individual enterprise requiring high investments in modern inputs and wage labour. Lack of remunerative prices in such a situation caused immediate troubles to farmers. In addition, failure of crops and uncertain rains and depleting underground water tables, failure in and increased cost of pest control further doomed the farming economy. Government investment in agriculture was continuously declining but private investment had also shown decelerating trend as the profession did not remain remunerative to farmers. Members of farming communities who had been attached to land for several centuries began to get disinterested in agriculture. They began to turn their face towards opportunities elsewhere in business, industry, education and employment (Suri-2006)[1.40]. Post reforms macroeconomic policies depicted the trend of removing state support to agriculture and dilusion of import restrictions. But the advanced countries, especially the US and European ones, continued with policies of state support to their capitalist agriculture. Developing nations like India are continuously asked to

reform their tariff regimes to facilitate imports or free entry of multinational companies in seed, fertilisers and pesticide markets. The place of agriculture in western countries, both in terms of contribution to GNP and employment, had declined due to a rapid industrialization over the last two centuries. But in countries like India this could not happen. The agricultural output growth during the period of post reforms decelerated to 2.4 per cent per annum as against 3.5 per cent during the 1980s. It further slumped to 1.5 per cent during the last few years and to 0.9 per cent by second quarter of 2009. Public investment in agriculture and rural infrastructure also declined sharply. Cultivation without any positive conditions, either at the individual private or state public level, has become more or less a gamble. Because the farmers are not certain whether they will get a good harvest and when they reap a good harvest whether they will get a good price. Only the lending institutions, moneylenders, financiers and traders in fertilizers, pesticides and seeds seem to have gained out of the mounting debts of farmers. Pauperization of farmers seems to be directly related to the prosperity of wasted interests of moneylenders, traders, merchants, commission agents and urban professionals. Heavy investments on inputs, crop failures, indebtedness, price and weather uncertainties result in suicides. The situation has also reduced the credit repayment capacity and thereby the credit ability of farmers in future. In all the loss of socio-economic status, uncertainty of income, unbearable debts, unfulfilled needs and the inability to decipher the factors responsible for the downslide of economic conditions make farmers desperate. Those who normally lead a better life or are socially expected to live a certain standard of life, but fell into difficult

circumstances, are more prone to mental depression and in them the problem of suicidal tendency erupts. Suicide is an outcome of a punctured pride due to despair and a disjuncture between the expected and actual status of socio-economic life of farming community. As a result of the decline in the size of holding, increase in input cost, fall in output prices and unfavourable macroeconomic policies during the period of liberalization, the agriculture in India has no more remained a remunerative activity. The increased productivity of agriculture during the green revolution stagnated in the latter stage. Supply induced fall in agriculture prices and free imports further worsened the situation. Ten years back, the international price of Cotton lint was $1.10 a pound ($2.42 a kilo) but now it is 52 cents (2006). The retail price of Cotton then was Rs.40 a meter, and it is now Rs.80 (2006). The manufactured commodity retail price here is doubled but the farmers are forced to sell their produce at half the price (Dionne Bhunsha 2006)[1.41]. The situation of support price regime has not been favourable to farmers but compels them to continue with a loss making activity. Not a single support price for the last ten years has met the cost of cultivation, except sugarcane for two years (Dandekar et.al. 2006)[1.42]. The average gap in the minimum support price and the cost of cultivation per crop as per the figures work out to the following in terms of each crop over the period of 8 years (1996- 2004). The difference given is in minus percentage from the price asked for and granted; Paddy– 38%, Bajra –48%, Groundnut –32%, Arhar –40%, Cotton –38%, Sunflower -50%, Mug -50%, Urad -47%, Soya bean -38%, Sugarcane -12%, Wheat-47%, Gram -47% and Safflower -39%. Thus all the crops are cultivated at a loss for the cultivators. The loss varies from a minimum of 38 per cent

and the maximum of 50 per cent. The exception is Sugarcane where the loss is minimized at 12 per cent.

1.5 Objectives of the Study

The objectives of the research are as under;

1) To study the agriculture policy transformations that had impacted the agrarian economy of India during last sixty years of independence.

2) To study the agrarian scenario and related issues in India during the period of planning in general and in the states from where the majority of farmers suicide cases have been reported in particular.

3) To study the terms of trade in Indian agriculture and to find out whether there is some correlation between the adverse terms of trade in agriculture and the farmers suicides.

4) To investigate in to and identify and analyze the socio-economic and psychological causes that has resulted in committing suicides by farmers.

5) To study the rural agrarian credit market and comparative role of different institutions and their practices and impact on the individual farmer economy and socio-economic decision making.

6) To study the agrarian situation in Maharashtra including the area and yield, changes in cropping pattern, cost of production, market and minimum support prices, difference between the cost of cultivation and revenue, government policies, irrigation and various other aspects and the impact of these on farming economy, as well as, its impact and correlation with suicidal behaviour of farmers.

7) To investigate the comparative significance of various causes that had a significant impact on the rate of farmers suicides in the state of Maharashtra.

8) To study the socio economic, geographic, demographic and gender concentrational aspects of suicides and the probable causes of the suicidal behaviour of farming community.

9) To investigate into the trends and patterns of the recent suicide scenario in Maharashtra.

10) To study the nature and extent of indebtedness among deceased farm households.

1.6 Hypotheses of the Research Study

The present research work has a basis of the set of following hypotheses;

1) The loss of socio-economic status due to uncertainty of income, unbearable debts, unfulfilled needs, production cost exceeding revenue situation, increase in input cost and fall in output prices, declining size of holding, crop failures and stagnated agricultural productivity have the concording impact on suicides of farmers in India in general and that of the state of Maharashtra in particular.

2) It is not the poverty that takes farmers to suicidal act but those who normally lead a better life and are socially expected to live a certain standard of life but fall into a difficult circumstances due to the disjuncture between the expected and actual socio-economic status are more inclined to commit suicides.

3) Pre and post independence agrarian policy transformations of the government in general and post reforms policies toward agriculture in particular have correlation of significant degree with the framers suicides.

4) The different phases of agrarian political economy that have evolved the changes in agrarian relations after independence such as the periods of the 1950s and the 1960s; the 1970s and 1980s and that of liberalization during

the 1990s have been instrumental in deterioration of farmers' conditions have led in to the suicidal behaviour of farmers in different states of India.

5) Marginalization of farmers political and economic interests in the states legislatures has led in to an apathy for farmers who constitute a large chunk probably one fifth of the electorate did not receive adequate policy attention thrown them in to a socio-economic isolation has led in proliferation of suicides of farmers in agriculturally progressive states like Maharashtra.

1.7 Methodology and Data Collection

Keeping in view the set of aimed objectives and hypotheses the main methodological thrust of the research is on collection of specific, relative and authentic secondary and primary data and on systematic data processing and analyses. The secondary data related to review of literature on suicides and suicidal behaviour have been obtained from books on various social sciences and from the earlier research works, empirical evidence, the facts, figures published in various reports by the institutional study groups and the government expert committee reports, reference material published in books, research papers, proceeding of seminars, government/legislative proceedings, etc. To mention some of the important sources of the secondary data are; IGIDR report, Report of the Fact Finding Team of Planning Commission, Commission on Farmers Welfare, Andhra Pradesh, Tata Institute of Social Sciences Report, Report of the Expert Group on Indebtedness, etc. For the purpose of the collection of the secondary data the libraries that have been useful are; Dhanajayrao Gadgil Library of Gokhale Institute of Politics and Economics, Pune, the library of Yashvantrao Chavan Academy of Development Administration,

Pune, library of Bankers Institute of Rural Development, Lucknow and the library of Mahatma Phule Agricultural University, Rahuri, etc. Another method that has been employed to cross tally and empirically study and verify the set of hypotheses is the case study method relying on a scientific method of sample survey done by field investigation and interview cum questionnaire method. The primary data collected through Simple Random Sample Method which consisted 200 farmers suicides affected households that were selected from 3 regions of the state i.e. Vidarbha, Marathwada and Western Maharashtra, 9 districts, 24 tehasils and 166 villages. Apart from the questionnaire, the survey method also consisted the different components such as focus group discussions and village level informations. The villages were selected on the basis of the list of reported suicide cases available at district collectorate for the period from 2001 to the latest available period during the study. The selected sample of 200 farmers suicides affected households for formal interviews and the questionnaire method interviews substantially represent the problem selected for the study. The data collected from the primary and secondary sources have been processed through simple statistical methods such as percentage and percentage change analyses and through some other simple statistical tools for the purpose of trend analyses and interpretation.

Regionwise selection of the villages and the households is depicted as under;

Region	No. of District	No. of Tehsils	No. of Villages	No. of Cases
Western	01	07	33	34

Maharashtra				
Marathwada	**02**	**02**	**23**	**33**
Vidarbha	**06**	**15**	**111**	**133**

1.8 Research Design/Chapter Scheme

Chapter - 01
Introduction

The chapter consists; Introduction, Interdisciplinary Relevance, Significance of the Study, Background, Policy Fatigue, Objectives and Hypothesis, Methodology and Data collection and Research Design/scheme of chapter.

Chapter – 02
Review of Literature

In this chapter we reviewed the existing research and empirical studies on farmers suicides conducted by earlier scholars in the field. In all 39 studies have been reviewed for the purpose which are; Muzaffar Assadi (1998), E Revathi (1998), G Parthasarathy and Shameem (1998), A.R.Vasavi (1999), B.B. Mohanty (1999), G K Grover, Sanjay Kumar and Kamal Vatta (2002), C Ratnam (2002), R S Deshpande (2002), G Satyanarayana, M.V. Raghavulu and A Ram Mohan (2003), S.R.Ahlawat (2003), B.B. Mohanty and Sangeeta Shroff (2004), Mohan Rao (2004), E. Revathi (2004), B. Muralidharan Rao and G Venkata Siva Reddy (2004), M. Nazeeruddin (2004), C.P.Chandrashekhar and Jayati Ghosh (2004), Jayati Ghosh (2005), V Ratna Reddy and S Galab (2005), K.C. Suri (2006), Surinder S Jodhka (2006), Srijit Mishra (2006), P. Narsimha Rao and K.C.Suri (2006), S. Mohankumar and R.K.Sharma (2006), V. Sridhar (2006), P Jeromis' (2006), P Satish (2006), Anita Gill and Lakhwindar Singh (2006), Muzaffar Assadi (2006), Tata Institute of Social Sciences (2006), Planning

Commission Report (FFC) (2006), Gnyanmudra (2007), S. Vijaya Kumar and K.S.Bhat (2007), B. Ratna Kumari (2007), Aldas Janaiah (2007), Ajay Dandekar and Shahaji Narvade (2007), T. Prabhakar Reddy (2007), Akkineni Bhavani Prasad (2007), K. Radhakrishna Murty (2007), R S Deshpande (2008) etc.

Chapter – 03
Changing Agrarian Political Economy of India and Farmers Suicides

This chapter focuses on the changing nature of the agrarian policies since independence and particularly during the reforms period and its resultant impacts on the agrarian economy of the country. The chapter also has thrown a light on the positive correlation of significant degree between the post reforms policies towards agriculture and increasing number of farmers suicides in India. Important aspects that have been covered are; the periodic plan outlay on agriculture and allied activities, budgetary allocation on agriculture, institutional and non-institutional credit flow to agriculture, source wise indebtedness and the farmers suicides during the period of the 1997-2006, etc.

Chapter – 04
State wise Review of Agrarian Economy of Suicide Prone States in India

The chapter consist the state wise phenomenon of agrarian crisis and farmers suicides in India. In which, the four farmers suicide affected states i.e. Punjab, Kerala, Andhra Pradesh and Karnataka have been studied.

Chapter – 05
State of the Agrarian Economy and Farmers Suicide in Maharashtra

Chapter deals with the characteristics of the agrarian economy of the state of Maharashtra. The important contains of the chapter are; cropping

pattern, Cotton economy, regional backlog, indebtedness and Suicide Mortality Rate etc.

Chapter – 06
Socio-Economic Charecteristics of the Surveyed Districts for the Primary Data Collection

In the chapter we reviewed the basic socio-economic characteristics of the districts which were selected for the purpose of the primary data collection i.e. Nine districts from Western Maharashtra, Marathwada and Vidarbha regions of the state.

Chapter – 07
Primary Data Based Identification and Analyses of Socio-Economic Causes of Farmers Suicides in Maharashtra

The chapter is based on the primary data collected from the three regions of the state of Maharashtra. The chapter brings out tabulation based analysis of the causes of farmers suicides in Maharashtra. In all the chapter consists 47 data tables that have been commented on the basis of the statistical outcome and the experiences gained during the course of the primary data collection.

Chapter - 08
Findings and Conclusion

I) Salient findings from the secondary data

II) Salient findings from the primary data

III) Conclusion

References

Annexure

I) Questionnaire

II) Name and address of farm households selected for primary data collection

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Chapter -02

Review of Literature

Introduction

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2.39 R S Deshpande (2008)

Introduction

Indian agriculture is passing through a difficult situation. It is widely acknowledged by major political parties, statutory bodies and underlined by the research studies. In the last five decades, majority of farmers have become poor and harried outcasts in their own country, with no respectful place in the public policies. Hence, farming community has been at the marginal in Indian economic, social and political life. Agriculture has become relatively an unrewarding activity due to the unfavorable price regime and low value addition. It causes abandon of farming and increases migration from rural areas. According to the Commission on Farmers' Welfare in Andhra Pradesh (2005)*, "agriculture in India has been in an advanced stage of crisis. The most extreme manifestation of the crisis is in the suicides by farmers in different parts of the country." This brings out that something is terribly wrong in the countryside (Swaminathan-2006).**

Half of the Indian farmers are indebted and much of the indebtedness is due to a sharp increase in agriculture expenses and declined returns during the late 1990s. Inequality in income between the rural and urban households and between the cultivators and non-cultivators has been growing very fast. The monthly per-capita consumer expenditure of three forth of the farmers was less than Rs.615 (NSSO-2003)#. As well as, the food consumption of the rural masses has been below the consumption level of the famine period of the 1939. In the last 15 years, the proportion of marginal and small holdings has been on the rise and the share of agriculture in GDP decelerated fast and has become 14.5 per cent. But the proportion of the population depending on agriculture for their livelihood

has remained more or less stable (i.e. 58.5 per cent) (RBI-2009)##. Agrarian distress is not a new phenomenon for India; but the suicide by farmers is a surprising apathy. During the British and post British periods, farmers faced droughts, crop failures, and worst price falls, also the burden of debt and excess land revenue. But, it is never heard that they ended life through suicides. According to the official statistics, there were 8900 suicides by farmers between 2001 and 2006 in four states of Andhra Pradesh, Karnataka, Kerala and Maharashtra. Studies on farmers suicides at national and international level have pointed out that several structural and social factors are responsible for the situation. It includes the factors such as the changed pattern of land holdings, changed cropping pattern from food grains to cash crops, liberalization policies, etc. which prematurely pushed Indian agriculture in to the global market without a level playing field. Heavy dependence on high cost paid out inputs, market vagaries, lack of remunerative prices, indebtedness, neglect of agriculture on policy front, decline in public investment, break up of joint families, individualization of agricultural operations, etc. have also been equally responsible for the farm distress. The findings of the reports and many studies pointed out that the agrarian distress is the resultant outcome of the policies pursued by the government in last twenty years at the central and state level.

The first incidence of farmers suicide was reported in 1986 in Kerala. Which was a Rubber growing farmer from the state. But the incidence was neglected by the state government as an accident. There after more number of farmers ended life through suicide in the state of Kerala. Further during the 1990s, the spate of farmers suicides spread from north

to south Karnataka, Andhra Pradesh, Maharashtra and Punjab. The growing incidences of farmers suicides are found particularly after the introduction of the New Economic Policy in the country. Farmers have been at the back foot in the era of liberalized market economy. Indian farmers could not compete with the developed countries due to high price of indigenous product. However, agricultural products of the developed countries are cheaper because of the higher degree of subsidies to them by the government. Hence, the international prices are set at low level. Which are not affordable due to the situation of cost exceeding market prices. As a result, the gap between income and expenditure has widened over the years. The institutional credit mechanism is expected to play a vital role in agricultural development. But the share of the same, which was little over 7 per cent in 1951, increased manifold to over 66 per cent in 1991 and further decelerated. The co-operatives are specially meant for the supply of credit to the small and marginal farmers. But the share of the sector was stagnated at 22 per cent in 2005-06. Which is less than half of what it was in 1992-93 (62%). The share of non institutional sources was 93 per cent in 1951 which declined sharply after the nationalization of the commercial banks. Again the same has been on the rise during the period of financial liberalization. This shot up to 30.9 per cent in 2000 and further around 36 per cent in 2006. It is a matter of concern. Because the root cause of the present distress is indebtedness and which is on account of the increasing share of the non institutional sources in agricultural credit disbursement and the heavy rates of interest. The structural changes which have taken place during the 1990s made a long term impact on Indian economy in general and that of agriculture in particular. At the

initial stage of the WTO (AoA) amendment, the agriculture sector was performing well. But the East Asian Crisis of 1996 caused reduction in the prices of agricultural commodities which adversely affected the domestic farmers. After 1997, Indian government substantially reduced subsidy to the agriculture sector which was as per the guidelines of the WTO amendment. On the other hand developed countries continuously safeguarded their farmers through increasing of subsidies under different names. Government also eliminated the quantitative restrictions on imports as well as import tariffs from 35 to 5 per cent in 2002. It boosted the imports of agricultural commodities in the late 1990s. This resulted in to the dismal of the agrarian community in India. Farmers don't have any prospectus to continue with the cultivation. It is the sign of dark clouds of distress over the agriculture sector. Further it manifested in to a distress act of suicides by farmers in countryside of the various states.

Still 1995, farmers suicides only had the value of 'Paper News'. Also the government did not have any separate record on farmers suicides. After 1996, government started to register farmers suicide cases separately in the National Crime Record Bureau (NCRB). And for Maharashtra, it is available from 1997. There is not even a single study available that was undertaken prior to 1995. First study was conducted in Karnataka by M Assadi in 1997 and then it ignited the national academic debate on suicides by farmers. The first study focused on the structural changes that have taken place after the period of 1991. Which was the root cause of the agrarian distress and thereby farmers suicides in the state of Karnataka. Another study was conducted by E Revathi (1999) which pointed that the stress on account of market imperfections and the deterioration of farmers

in the state of Karnataka led to suicides by them. In Maharashtra, the problem was first focused by a journalist, P Sainath in 1997. When he visited Yavatmal district (suicide hit district in the country) and found that growing indebtedness is the root cause of the agrarian distress and farmers suicides in the Vidarbha region of the state of Maharashtra. Thenafter the state government appointed a commission under the chairmanship of the Agricultural Commissioner, Pune. But for a long time the report was not available for decision. After 1997 the incidences of farmers suicides increased consistently in the state as well as other parts of the country. In 2004, the suicide by farmers was given a priority in state planning of Kerala. The Kerala government carried a thorough survey and implemented the recommended policies by different study groups. As a result, there was a sharp decline in the incidences of the farmers suicides. The states like Kerala, Andhra Pradesh, Karnataka and Punjab implemented policy measures to eliminate the spate of suicides among the farming community. On the other hand, state government of Maharshtra who carried out the study on farmers suicides in 1998 kept silent till 2006. In 2006, Indira Gandhi Institute for Development and Research (IGIDR) conducted a study in suicide affected Vidarbha region of the state of Maharashtra. However, the Mumbai High Court in the judgment against the writ petition by an NGO delivered a judgment ordering the state government to study the problem and submit report to court within a period of six months. Hence, Tata Institute of Social Sciences conducted a survey in Vidarbha, Khandesh and Marathwada regions of the state. Both the studies found that indebtedness of farmers has been the root cause of the agrarian distress and thereby suicides of farmers. However, the lack of

irrigation facilities, as well as, the weak institutional support is at the root of the unrewarding nature of the agricultural practices in the state. Thereafter the central government deployed a study team under the chairmanship of M S Swaminathan, entitled as a 'Fact Finding Team'. The team not only studied farmers suicides but also looked into the historical and contemporary phenomenon of the distress in Vidarbha region of the state. Study found that the wrong application of the new economic policy and neglecting of the agriculture sector during the post reforms period have been responsible for the agrarian crisis which manifested in to the suicides by the farmers in the state.

There are regional differences found in the causes of farmers suicides. Each of the state has a different characteristic of the phenomenon. Though, the indebtedness is a root causes of suicides, the reasons behind it are different in each state. In Maharashtra, lack of irrigation facilities, drying up of institutional credit and price volatility of Cotton were found responsible for suicides by farmers. The implementation of the trade liberalization after 1991 took the lives of farmers in the state of Kerala. The state farmers could not be able to survive in the uncertain nature of international market and hence were trapped into an economic hardship. In Karnataka the incidences of farmers suicides are found concentrated in the Northern Region. Which is characterized as dry land farming. Farmers of the region have to face difficulties to cultivate new varieties of seeds. As a result, there is a decline in productivity and thereby production and income from agriculture. The cost of cultivation has been continuously on the rise and returns have been decelerated. Further it leads to the indebtedness and the distress act of suicide in the state of Karnataka.

Increasing input prices by 400 per cent as well as a lack of irrigation facilities pushed farmers in suicidal behaviour in the state of Andhra Pradesh. And in Punjab, the increase in consumption or non agricultural expenditure has been at the root of the agrarian crisis. Also the crisis is saturated only among the cash crop growers i.e. Cotton, Chille, Groundnut, Rubber, etc. Farmers who cultivate the food grains relatively face less crisis as compare cash crops growers. Also, the conditions of wage labourers are found comparatively better than farmers. The labourers also face economic hardship due to the decrease in real wages. The major source of the literature for present study is based on the studies undertaken by research institutions and state governments in last few years. Studies are mostly carried out in Andhra Pradesh, Karnataka, Kerala, Punjab and very few in the state of Maharashtra i.e. four. However, not even a single study attempted to cover the whole state for the purpose in Maharashtra. At the most they covered a district or a region. In the year 2006, the state and the central government took steps towards solving the problem in the form of a Relief Package worth Rs.4820 crore for six suicides affected districts of western Vidarbha region in Maharashtra. It also failed to address the farmers directly because of inefficient implementation of the same by the government officials and corruption. The incidences of farmers suicides have increased even during the post package period. Nonetheless, till today the tragic act of suicides by the farmers is continuously on higher side in the Vidarbha region of the state of Maharashtra.

Muzaffar Assadi (1998)[2.1] studied the causes of farmers suicides in Karnataka. Suicides of farmers in Karnataka were found concentrated in

the northern dry region of the state. Heavy losses incurred due to crop failure and mounting debts of the private moneylenders seem to be the main reason of the agrarian distress in the state. Many of them who committed suicide were market oriented Arhar (Tur) growing farmers. Price crash in the market incurred heavy losses to the cultivators. It is a sign of the failure of the government agencies to procure bumper crop. Decline in the income and increase in the cost of cultivation forced farmers to borrow from the private sources at higher rates of interest both for the consumption and production purpose. Where as the supply of institutional credit was mere stagnant or sometimes declined. Majority of the farmers were not eligible for the institutional credit due to their defaulting accounts. Most of them cultivate on leased in land where 50 per cent of the produce goes in the form of rent of landowner. But in case of the losses farmer one who cultivates the land has only to bare it. Hence the situation of these cultivators is more vulnerable. Important to note is that these kinds of farmers are not eligible for the institutional loan because the land is not in their name. Therefore this category of farmers completely depended on the non institutional sources. Over all negligence by the government, market uncertainties, declining productivity and thereby increase in private debt burden are found the reasons for distressed behavior of the farming community in the state.

E Revathi (1998)[2.2] focused on the missing issues from the previous studies carried out on farmers suicide in Andhra Pradesh. Non- inclusion of irrigation is a major factor for the tragedy in the rural parts of the state of Andhra Pradesh. In the process of the creating private sources of irrigation, most of the farmers have invested heavily on digging and

deepening of wells. The average investment in creating of individual irrigation facilities varies from Rs.50,000 to Rs.100,000. The purpose of borrowing by farmers clearly shows that it is mostly for the creation of agricultural infrastructure. It is basically expected from the state government through budgetary provisions. Due to the failure of the institutional credit mechanism, farmers resort to the private sources for borrowing at exorbitant and usurious rates of interest. Institutional credit sources concentrate only on the big and medium farmers. Whereas, small and marginal farmers has been left out from the purview of institutional credit mechanism. One third of the deceased farmers were tenants who are not qualified to receive any institutional credit. In all, it is a politics and economics of negligence of rural economy for over a period of one decade that is one of the important causes of suicide by farmers. This demands an immediate attention towards agriculture in the policy domain to stop the distress act of suicides in the state.

G Parthasarathy and Shameem (1998)[2.3] studied farmers suicides in Andhra Pradesh. In a combine study the attempt was made to concentrate on the Cotton crop because most of the farmers who committed suicides were the Cotton growing farmers. The study was conducted in Warangal district of the state of Andhra Pradesh. A number of factors were found having a correlation of significant degree with the suicidal act such as adverse rain fall and low yields, unremunerative prices, rise in cost of cultivation, indiscriminate use of pesticides, inefficient work of co-operative credit agencies and nationalized banks, increasing share of private sources in agricultural credit and the growth of lease holdings in Andhra Pradesh. Cotton cultivation in the state was found inflicting

higher cost on the peasant than other parts of the country. The input prices have sky rocketed during 1995-2002 in Andhra Pradesh as compare to other states in the country. Hence the cost of cultivation increased but the returns from the agriculture remained stagnant and sometimes found declined. In this context, inaccessibility of institutional credit and dependence on moneylender or the input dealers for credit was the main cause of the deep stress on farming community. Instability of yields and prices made farmers unstable on economic ground. The sudden drop in price of Cotton during the harvesting has been the cause of lowering returns from the agricultural operations and particularly from the Cotton cultivation. The operational cost in Andhra Pradesh exceeds returns from cultivation more as compare to other states in the country. The failure in ability to acquire crop loans has been a different story. It forced farmers of the state to obtain loans from private sources at the higher rates of interest. Interest cost of non institutional sources has been quite high in Andhra Pradesh as compare to other states. It is because of the higher degree of reliance on moneylenders due to the neglecting attitude of the institutional credit sources. The rates of interest charged by the moneylenders varied between 36 and 60 per cent per annum. Moneylenders disadvantaged the weak position of the farmers and trapped them into a tied credit. In such a situation the pressure on borrower is greater because of the structural changes in the characteristics of moneylenders from agriculturist moneylenders to professional moneylenders. This type of a new category of moneylenders grabs farm land or assets to recover the loan. It has become a matter of humiliation of

the farmers and further reflected into the distress act of suicides in the region.

The study of A.R.Vasavi (1999)[2.4] depicted that the spate of suicide in farming community is largely an ecological, economic and social crisis in the state of Karnataka. The study was conducted in Bidar district of the state. Agricultural policies that overlooked the ecological specificity of the region and the retention of iniquitous social structure from the bed rock is producing such distress. The subordination of cultivators to market and capital forces without any safety net do not support them in the time of crop loss which has been causing the devastation of rural community. After the green revolution agriculture became commercialized which needs more capital, but it is not easily available to majority of farmers. From 1987-1992, credit availability to agriculture sector by nationalized banks stagnated to 11.7 per cent. As a result, there is an increase in the share of non-institutional sources in agriculture credit disbursement and thereby growing indebtedness of the farmers. Though the inputs are available, farmers do not know how to use it due to lack the of extension services. And also the quality of inputs is poor. So, it increases the cost of cultivation by increase in the quantitative use of inputs. Declining productivity with minimum returns and increasing indebtedness create a high degree of stress. Further it has manifested in the distressful act of suicides by farmers in the state of Karnataka.

A Sociologist B.B. Mohanty (1999)[2.5] focused on Durkheimian sociological approach of 1951 to examine the meaning and causes of farmers suicides in the state of Maharashtra. For the purpose, study was conducted in Amaravati and Yavatmal districts of the state of Maharashtra, where the

incidences of suicides at that time were highest. The analysis is based on the 66 reported cases of farmers suicides from the above mentioned two districts. To evaluate the impacts of agricultural distress, farmers who committed suicides were classified into three categories; small, medium and large on the basis of land holding pattern. The proportion of suicides committed by small farmers was 64 per cent, while medium and large cultivators were 23 and 14 per cent respectively. Mostly, they were the Cotton growing farmers. Increasing cost of cultivation and declining returns due to crop failure and market imperfections were found as the root causes of agrarian distress in the region and thereby farmers suicides. Large farmers borrow money from the formal lending agencies while small holders were found depending mainly on informal sources of the same. The small farmers were adversely affected by the introduction of the neo-liberal economic policies during the early 1990s. Some of those had over extended themselves financially due to unfavourable price regime. There was not only a decline in their agricultural income as a result of crop losses, but also increase in the cost of cultivation and indebtedness on account of borrowing from informal agencies was realized. Suicides among the large farmers were due to a combination of business failures, family discords plus diminishing political influence and social esteem. In their case, suicide was a consequence of estrangement linked to the break down in the traditional values and norms whereas the small and marginal farmers are committed suicides due to economic hardships.

G K Grover, Sanjay Kumar and Kamal Vatta (2002)[2.6] conducted a study on farmers suicides in Punjab. The incidences of farmers suicides in Punjab are attributed to the changing agrarian relations, frequent crop

failures particularly that of Cotton during the period of the 1990s, increasing debt burden among the farming community, increasing unemployment in the rural parts of the state and increasing spending on social functions such as marriages. The study was undertaken to unravel the socio-economic causes of distress faced by the farming community and to document the market conditions and infrastructure availability in product as well as factors markets. For the purpose of the study 30 victim families were approached to know the distressful conditions that led to suicide by farmers in the state. Study further found market imperfections as a root cause of the distress amongst cultivators. During the time of a bumper harvest there was a glut in the market and the government agencies were hesitant to procure large volumes of food grains because of already overwhelming stock. As a result of the glut of supply, market price of Rice and Wheat slashed below the cost of cultivation. Hence the expected returns turned in to negative which increased the debt burden of borrowing from village traders and pesticide dealers who have the important role in the marketing of Cotton, Rice and Wheat in Punjab. The farmers were forced to sell their produce through these dealers and they charged relatively more commission or unjustified deductions. Also the late entry of government agencies in the procurement contributed to the exploitation of farmers by the private traders through offering lower price for their produce. At the same time, farmers are also in hurry to make money to fulfill the previous commitments, vis-à-vis consumption. Victims were largely belonged to the age group of 18-37 years. About 57 per cent of victim families were the joint families and there was a prevalence of high degree of illiteracy. Almost all the sample households were indebted, which

was the prime reason for suicide among 86.58 per cent of the victims. The proportion of non-institutional credit in the total outstanding was around 65 per cent. Therefore such type of debt burden leads to the stress on individual life and the mental disorder leads to the ultimate act of suicide. The productivity of the Cotton has been declining with every passing year. Sometimes the Cotton cultivators have to forego the entire crop due to the severe attack of American bollwarm. The underground water table during the recent years has been declining so sharply that also forced farmer to use submersible pump-sets for getting adequate water for irrigation. This has increased the financial burden on the farmers. Due to this entire list of problems, already indebted farmers found it difficult to repay their debts and consequently it led to mental stress for them and ultimately towards suicide.

According to C Ratnam (2002)[2.7] farmers who have not been able to cope up with the distress take the extreme step of suicide. The agro-economic and social causes lead to farm distress. The study covered 50 suicide affected households of Warangal, Anantpur and Mehbubnagar districts of Andhra Pradesh. Majority of the farmers committed suicide belonged to the category of small and marginal farmers. Most of the victims had nucleated families, which indicates that the emotional and practical support to these victims was not there. The low level of literacy amongst farmers makes them fall prey to the false promises and advertisement by the pesticides dealers. The irrigation facilities mostly consists wells, is a private source where the farmers have to invest heavily to dig and deepen the tubewells and traditional wells. In the new input-output market structure, farmers were exploited by the traders. Farmers always used to

get the price for their produce below the cost of cultivation and their level of expectation. Farmers are only the mute receiver in the agricultural marketing mechanism. The Cost of cultivation was found high particularly in Cotton crop. The low yields and high cost of cultivation of the same resulted in to the negative returns from agriculture. On the social front, marriage of a daughter/sister was also found as an important aspect of distress to the individual. In all, crop loss, debt burden, failure of tube wells and change in the market structure are reported as major reasons for committing suicides in the state of Andhra Pradesh.

R S Deshpande (2002)[2.8] studied agro-economic causes of agrarian crisis and farmers suicides in the state of Karnataka. Most of the farmers committing suicides belonged to northern Karnataka region which is a drought prone area of the state. For the purpose, personal interviews of 99 suicide affected families and village group discussions were undertaken. Study found that the change in cropping pattern from food grains to commercial crops and thereby increase in the cost of cultivation and marginal remuneration with the minimum support of an institutional credit mechanism was the root cause of agrarian distress in the region of the state. Most of the farmers committing suicides were small and marginal farmers and belonged to backward communities. Cost of cultivation increased because of higher use of fertilizers, pesticides and for the irrigation facilities at individual farm level. Failure of input-output markets and the dominance of the middlemen in price determination caused the declining profitability of the business. State government has withdrawn the support by declining public investment in agriculture. As well as, the ratio of farmers dependency on input dealer for the use of

inputs has gone up. Because the state government extension services have been failed to aware the farmers about the applications of the new varieties. Increase in division and fragmentation of land causes for the disproportionate returns to the investment. The new varieties of seeds are more water intensive. And the inadequate irrigation facilities could not give expected returns from the cultivation. However, declined productivity and thereby production and the low prices at the market, agriculture is no more remunerative to the cultivators. On the other side household expenditure on consumption and other social functions increased substantially. As a result, farmers were not able to clear outstanding loan and became defaulters. Hence, instead of repaying the previous loans farmers need new loan and for that they resort to the non-institutional sources. At the same time, moneylenders charge heavy rates of interest and the loan amount goes beyond the repaying capacity of farmers. Again the vicious circle of production, marketing and credit leads to incurring of huge losses from the agriculture. Sometimes moneylenders forcefully acquire the land to recover loan amount. The loss of assets has been the matter of humiliation particularly in the rural parts. Further it leads to psychological stress and thereby distress act of suicides by farmers in the state of Karnataka. Study stresses on the long term measures rather than short term to come out with the problem.

According to, G Satyanarayana, M.V. Raghavulu and A Ram Mohan (2003)[2.9] a new economic policy and opening of Indian agriculture at international level without any institutional support affected the domestic prices and thereby income of farmers. Free entry of Multinational Corporations in the seed market affected the state farmers of Andhra

Pradesh badly as compare to other states in the country. Inadequate supply of institutional credit forced farmers to borrow from the private sources at higher rates of interest for meeting both cultivation and consumption expenditure. The irrigation facilities being scares in the state most of the farmers borrowed for the individual irrigation facilities i.e. digging and deepening of wells and tubewells. Unremunerative price pattern reduced the repaying capacity of farmers. Several social and psychological factors activated during the period which pushed them into a distressful act of suicides. But the root cause of the social and psychological stress led towards the deterioration of the rural economy of the state in recent past. Hence they feel that the policies which can enhance the economic conditions of farmers are needed rather to focusing on to counseling them.

S.R.Ahlawat (2003)[2.10] investigated the socio-economic reasons of farmers suicides in Harayana. The study was conducted in Jind, Rohtak, Sirsa and Hisar districts of the state. The district-wise suicides revealed that there were more occurrences of suicides in the water logging regions of the state. All these districts have experienced crop failure for the last five years which was due to the acute water logging and frequent pest attack. Study further found that most of the victims belonged to small and marginal category and some of them were land less means either the share croppers or agricultural labourers. More than 70 per cent of farmers who committed suicides were between the age group of 20 to 30. The important thing is that 91 per cent of the deceased farmers were living in nuclear families, and 79 per cent of them separated from the joint family in recent past of four or five years. As agriculture has become commercial, farmers

applied more fertilizers to get more production. But it was observed that the productivity has been declining in the state due to a misapplication of inputs. It not only affected the ecology but also increased the cost of cultivation. On the other hand institutional credit supply to state agriculture reduced during the post reforms period. There has been a rise in the standard of living of peasantry as a result of the green revolution. Farmers spent more to maintaining the status in the society. There was a big gap between income and expenditure and therefore farmers started to borrow from private sources at high rates of interest. These consumerist cultures have contributed more to the distress. Repayment of the loan becomes impossible due to the consecutive failure of crops and declining returns. The degree of stress goes beyond the capacity of victims and they have the only way to commit suicide to rescue from the situation.

B.B. Mohanty and S. Shroff (2003)[2.11] in a combine study of Maharashtra revealed that though crop losses, indebtedness and market imperfection causes economic hardship to farmers, social factors were also at work which led in most of the cases to their suicides. Farmers suicides in Vidharbha region was the result of a complex process of interaction of both historical and contemporary socio-economic forces. The study has covered 30 farmers suicide affected households from Amravati, Yavatmal and Wardha districts of the state. Almost, in all categories of farmers had taken loan from the formal agencies due to a heavy uses of high yielding variety of seeds, fertilizers and pesticides. Unlike the formal sources, the indebtedness to informal agencies was caused by non-agricultural purposes. The loss of agricultural income did cause an economic crisis for all the farmers. Frequent drought and thereby crop failure, vis-à-vis,

withdrawal of the state support to agriculture steadily tighten the rope of distress around the neck of farmers. The study further found that the distribution of suicides on the basis of major reasons reveals that suicides were mainly attributed to social reasons such as family problems, older age, illness, alcoholism and gambling, love affairs and death of close relatives also play a dominant role in the suicidal behaviour. According to the size classes, the social reasons of the suicides were more prominent in the case of large and medium farmers. It was found that out of the 7 large farmers who committed suicides, the loss of agricultural income led to the suicide of only one farmer. A significant number of farmers from small and marginal groups committed suicides due to the loss of agricultural incomes and indebtedness. Though the loss of agricultural income and indebtedness appeared to have taken the lives of a number of small farmers, in many cases the roots of such deaths lay in the social issues as well.

A study by Mohan Rao (2004)[2.12] focused on the relationship between land holding pattern and farmers suicides in the state of Andhra Pradesh. Study further states that majority of the farmers committing suicides belong to a small and marginal category of land holding pattern. Small and marginal farmers have entered in the arena of high risk commercial farming in the hope of salvaging themselves. Hence the situation of these categories of farmers has become more vulnerable. The small and marginal venture under the unfavorable environment of inadequate resource endowment, constantly eroding institutional support of credit and marketing mechanism of exploiters at various levels. Occasional benefits and profits received by them kindred their hopes of adventurism

towards risk taking. When their expectations failed either due to nature's fury or human greed or institutional indifference, life became vulnerable of already small and weak. Such circumstances trigger suicidogenic impulses in areas with high degree of social cohesion, as well as, those with low degree of social integration.

E. Revathi (2004)[2.13] conducted an inter districts analysis consisting four districts in Andhra Pradesh. For the purpose, the study used data available on farmers suicides from the commissioner office. The study focused on the impacts of the agrarian crisis on the small and marginal framers from the backward communities. The study found that, incidence of suicide is high among the first generation farmers belonging to the backward (*dalit)* communities. The backward communities became land owner during the tenancy reforms. The land distributed among these social groups has been less fertile and unviable for cultivation. At the initial stage, farmers invested heavily to make it cultivable and then for the actual cultivation. The cost of cultivation increased substantially during the post reforms period due to the increase in input prices. Also these categories of farmers are away from the public irrigation facilities. Hence, they depend more either on monsoon or underground water resources. Again farmers invested on the individual irrigation facilities i.e. wells and tubewells. Most of the suicides were concentrated in the areas having higher gross irrigated area through underground water sources. There is a positive correlation of high degree between the area under non-food crops and the concentration of farmers suicides. The farmers who followed the cropping pattern of large farmers faced high risk. On account of already weak economic conditions, farmers cannot carry the hidden risk in cash

crops. However, decline in income from the agriculture causes the high degree of economic burden. Indebtedness of the farming community due to increase in agricultural expenses and fall in income have been the main causes of committing suicides in the state in general and that of backward communities in particular.

B. Muralidharan Rao and G Venkata Siva Reddy (2004)[2.14] in a combine study of Anantpur district of Andhra Pradesh depicted that there is a correlation of high degree between agrarian crisis and farmers suicides in the state. After 1995, expenditure on the farming activities increased due to reduction in subsidies and the use of higher doses of pesticides and fertilisers. There is also an increase in the frequent crop failure due to successive droughts and spurious seeds. Implementation of new technology in agriculture reduced the employment in the rural sector but households' expenditure on consumption has increased substantially. Though there was an increase in money wages, there was a net decline in real wages due to the increase in general price level. However, there is no alternative source of income available to the farmers. As a result, the economic condition of farmers was shattered and they were in deep crisis of debt. Therefore farmers started to borrow money for the consumption purposes from non-institutional sources. It was an outcome of the lack of institutional credit opportunities and alternative source of income. Many of them with the deterioration of their economic activities lost hope of relief from their debt burden. It has pushed many farmers to commit suicides in the state of Andhra Pradesh. The crisis further aggravated the situation and forced people to involve in anti social and criminal activities. And this is the more serious aspect of the agrarian crisis. The youth of the

family affected of farmers suicides were found entered the nexalism. And the sense of anti government activities generated slowly among the rural youths. Study suggested that the inclusiveness of crop insurance scheme, input subsidies to affected farmers, remunerative prices and quality services should be provided by the extension services for an awareness of the farmers. The development policies should be drafted in such a way where the rural masses in general and farmers in particular will be at the center.

M. Nazeeruddin (2004)[2.15] studied farmers suicides in Rayalseema region of Andhra Pradesh. 85 farmers suicide affected households were select for the purpose of the study. According to the study, an erratic rainfall has become a worrying factor for the farmers particularly after the period of 1996. But the main reasons for agrarian crisis are the mounting debt burden, frequent droughts, crop failures, spurious seeds and pesticides, unfavorable prices for their produce and increasing expenditure on the private health services in the absence of the public health facilities. It compelled farmers to commit suicides. Mostly the victims belonged to small, marginal and tenant cultivators. In most of the cases, victims had borrowed huge loans from private moneylenders due to inadequate supply of credit from the institutional sources for agricultural purposes. The private moneylenders charged high rates of interest varying from 36 to 60 per cent per annum. Unkindly monsoon caused crop failures and thereby huge losses. Further, farmers could not repay the loans that mounted due to the high rates of interest. To sum up; there is a need of crop insurance, supply of quality seeds, major and minor irrigation projects for

strengthening of agriculture support and farmers in the state of Andhra Pradesh.

C.P.Chandrashekhar and Jayati Ghosh (2004)[2.16] in a combine study investigated some of the problems that affected agriculture and the wider background in which the problems occurred in the state of Andhra Pradesh. The dominant cause of such suicides is revealed as the inability of farmers to cope with the burden of debt, which farmers find themselves unable to repay. In most cases, the debt was contracted to private moneylenders due to the decline in agricultural credit from banks and co-operatives especially, to the small and marginal farmers. In last few years, input prices have skyrocketed in Andhra Pradesh and farmers have gone for cash crops with uncertain harvest and even more uncertain output market. The opening up of agricultural trade has forced farmers to cope with vagaries and volatility of international market prices and the protection which was offered earlier by the government has been removed. Public agricultural extension services have disappeared, leaving farmers in the mercy of private input dealers. The input dealer functioning without adequate regulation which resulted in to creating problems of wrong crop choices, excessively high input prices, spurious inputs and extortion. The crisis in water and irrigation sources was also be traced to these cultivation patterns. Other individual and social factors which have added to debt burden and the same became unbearable. Declining returns, increasing cost of cultivation and thereby indebtedness pushed farmers into a massive stress and they found that suicide is the only way to get freedom from this stress.

According to Jayati Ghosh (2005)[2.17] crisis has been most intense in states where the State governments have most actively pursued neo-liberal economic agendas of the post 1990s. The economic reforms did not include any specifically designed package for agriculture. It has only focused on the industrial development. There are changes in patterns of government spending and financial measures which also necessarily affected the conditions of cultivation. Financial and trade libralisation affected the cultivation, credit, trade and rural livelihoods. The main cause of this distress act is dominantly related to public policy in general and that of post reforms in particular. The new economic policy systematically reduced the protection offered to farmers and exposed them to market volatility and private profiteering without adequate regulation. It has been the significant cause of the deterioration of the rural economy during the post reforms period. Institutional credit supply merely dried up after financial liberalization. Public sector banks started shifting the rural deposits towards urban areas to make more profit from secure and conspicuous lending. Hence, farmers have to resort to the private sources for their credit needs. Farmers have the minimum income in their hand after the trade liberalization. In which, neither they sustain nor can they repay the loan amount. In all, reasons of agrarian crisis and thereby suicidal behaviour are accrued to the liberalized policies introduced during the 1990s.

V Ratna Reddy and S Galab (2005)[2.18] studied agrarian crisis and farmers suicides in Andhra Pradesh. The study found that farmers suicides is a result of the deep rooted agrarian and rural distress rather than a temporary phenomenon associated with society. Indebtedness is the

important factor, which pushed farmers towards suicide trap but, the factors that are responsible for indebtedness are more significant. Study categorized factors as technological, ecological, social and economic. Excessive use of pesticides and fertilizers over the years for cash crops has not only affected bio-diversity but also led to increase in resistance power among the pests. It resulted in the higher cost of cultivation and frequent crop failures. The gap between public-private and rural-urban services has widened significantly. It resulted into an increase in household expenditure of cultivators on education and health in rural parts. The cost of cultivation has gone up substantially and mismatch between earning and expenditure reflected in the high borrowing from the private sources. This has been the predominant cause of indebtedness of the farmers. The decline in over all public investment in agriculture and rural infrastructure caused an increase in investment for the creation of the infrastructure at individual household level. There was no policy emphasis on dry land agriculture technologies or promotion of practices. However, the increase in the volume of credit is not the solution on the ongoing agrarian crisis because; indebtedness is not the soul problem. The factors that are responsible for it have been the root cause of the problem. Hence policies for the sustainable agricultural development shall be helpful to overcome the problem of rural and agricultural development on sustainable basis and thereby distressful behavior of farmers in the region.

K.C. Suri (2006)[2.19] examined the interrelationship between the structural and economic changes after independence and the changing nature of political economy and policy priorities in the recent past which have extended agrarian distress in the country. Study further finds a

paradoxical situation in the agrarian crisis. Large number of farmers suicides have been reported from the states which are; a) relatively agriculturally developed, b) which have seen strong peasant movements either during the colonial period or after independence, and c) where the leadership of political parties comes predominantly from farming community of the rural areas. Though the farmers consist one-fifth of the electorate, still they are neglected in the policy priorities of the government. The worst affected states are Karnataka, Kerala, Andhra Pradesh, Maharashtra and Punjab. The states share some or all of aforementioned characteristics. The agrarian transformation has taken place since the British rule in India. Peasant section benefited from it through increasing productivity and production. At the same time, the "extraction of surplus" from agriculture through land revenue and other cesses and unfavorable price regime led to a great misery and indebtedness among the farming community. During the years of crop failure and price depression, all suffered badly. Peasant movement and campaigns during the period of pre-independence concentrated on the greater share for cultivators in the agrarian surplus. In the late 19th century, "Deccan Riots" and anti moneylenders movement is the example of famous rebel of the peasants in Ahmednagar and Pune districts of the state of Maharashtra. It was against the private moneylenders and Zamindars. During the same time also, farmers were under debt burden but they did not resort to suicide. There seems to be three phases in the evolution of agrarian relations after independence such as; I) Reforms and consolidation of the agriculture during the 1950s and 1960s on the lines charted out during the freedom struggle, II) The green revolution and the

growth of political populism during the 1970s and 1980s and III) That of liberalization and the deterioration of farmers conditions during the 1990s and after(also see R.S.Deshpande, 2008). The policies adopted by the government after the independence such as; land reforms and abolition of intermediaries made significant change in rural parts of the country. Under which landless became owner of the land and eligible for the institutional credit. But the land distributed to them was less fertile. Hence this new category of farmers had to spend more for the cultivation. After the green revolution of the 1970s the agriculture became commercial activity, which needed more capital than before. At the same time inadequate supply of credit from the nationalized banks caused to increase dependence on private sources of credit for the farming community at higher rates of interest. The minimum support prices for several crops for several years have been below the actual cost of cultivation. Household expenditure on agricultural operations, education, health and consumption shot up sharply, whereas the returns from cultivation remained stagnant and sometimes the same has been even negative. The loss of socio-economic status, uncertainty of income, unbearable debts, unfulfilled needs and the inability to decipher are the responsible factors for the downslide of their economic condition. It suggests that it is not the poverty that kills them but the disjuncture between the actual and expected socio-economic standard of life. Poor are less inclined to commit suicide than who normally lead a better life or socially expected to live a certain standard of life but can't afford due to poor status of individual household economy. It has thrown them in to a mental depression that resulted into suicide. The pauperization and immiserisation, a disjuncture

between the expected and actual status, a punctured pride are found at the root of the suicidal behaviour of the farming community. In the last twenty years, businessmen and industrialists have the greater say in the government affairs and policy designing. Hence, the government has been drafting the policies which are favorable to them. It means changing nature of politics more in favour of corporators and thereby changes in policies towards agriculture and rural sector have been responsible for the agrarian crisis and farmers suicides.

Surinder S Jodhka (2006)[2.20] analyzed the agrarian crisis and farmers suicides in Punjab. The study brought out different economic, social and political factors which have been responsible for the crisis in general and that of agriculture in particular. With the beginning of the 1980s in the state of Punjab, the word 'Crisis' became dominant to representing politics and economy. The rise of Sikh militancy for Khalistan, a separate Sikh nation generated a sense of crisis. On the contrary, though Punjab faced major problem of militancy but the agriculture sector of the state was growing at 5 per cent per annum while national growth rate was 3 per cent. It was because of the efficient implementation of the green revolution in the state. It brought transformation just not only in the agriculture but also in the entire society, culture and politics of state. The transformation put villagers closer to the urban life and economy which became one of the reasons for increasing consumption expenditure of rural society. Most of the part of their income was spent on social functions and marriages for maintaining status in the society, which was completely unproductive. During the 1990s, an implementation of the new economic policy forced farmers to enter in to open market operations and compete with developed

countries. In this new structure of input-output market, the role of farmers in price determination was negligible. Though government announces minimum support price for Paddy and Wheat, procurement agencies at the time were not ready to purchase it from the farmers. They rejected their crops due to inferior quality without any scientific testing and offered a price below the MSP. On the other hand, there was a sharp increase in cultivation expenditure during the post reforms period due to decontrolled inputs market and heavy use of pesticides and fertilisers. During the post reforms period, agriculture became a capital intensive business which requires more capital for investment. Institutional supply of credit has been shorter than increasing demand for it. It caused an increase in the share of informal sector up to 61.31 per cent in total supply of credit in Punjab. Commission agents (*Arthias*) were observed to be the major source of credit for farmers in the state. They charged heavy rates of interest ranging between 2 to 6 per cent per month i.e. approximately 24 to 72 per cent a year. Initially the farmers feel it easy because of less of paper work and other bureaucratic obstacles. Generally money was borrowed both for the 'productive' (41%) and 'unproductive' (59%) purposes. The tendency of unproductive borrowing was highest among marginal farmers (71%) and for big farmers; it was 48 per cent. Most of the borrowed money for the unproductive purpose was spent on marriages and social functions. All these factors pushed farmers in to a debt trap and thereby suicide. In all, fragmentation of farmers' movement, liberalization, withdrawal of the state support to agriculture and the involvement of corporators in the state politics caused for the marginalization of farmers in the policy domain. Small and marginal

farmers increasingly find it hard to stay in agriculture and are moving to other occupations. Which clearly brings out the nature and extent of crisis in the state agriculture of Punjab.

Srijit Mishra (2006)[2.21] in a study on farmers suicides in Maharashtra identified important socio-economic risk factors responsible for the extreme step of suicide by farmers in the state. A study was based on government records and field investigation with personal interviews and focus group discussions conducted in Vidarbha region of Maharashtra. The personal interviews of 111 farm households affected of suicides were conducted in Wardha, Yavatmal and Washim districts of Vidharbha region of the state. It is found from the cropping pattern of Vidarbha region that Cotton is the predominant crop and it is followed by Soyabean and Tur (Arhar). Historically weather conditions and soil fertility of the region are very positive for Cotton cultivation. It earned them a good amount of profit till the mid 1990s. Therefore Cotton was known as 'White Gold' in the region. Because during the 1980s the price of 10 grams of gold was equal to the price of one quintal of Cotton. But later it turned upside down and became a death crop from the erstwhile golden one. There are several factors responsible for such type of the situation. During the post reforms period, domestic market got directly linked with international agricultural market. At the same time, Government of India removed the quantitative restrictions on imports and also reduced the import tariffs from 35 per cent to 5 per cent during a period of 1998-2001 and also slashed the subsidies that were given to agriculture sector of the country. On the other hand subsidies given by the developed countries particularly the U.S.A. to their farmers continued and caused reduction in the Cotton

prices by 50 per cent in the international market. Monopoly Cotton Procurement Scheme was in operation since 1972-73 in Maharashtra. It was meant to stabilize Cotton prices, but over the period of time, a plethora of problems and cumulative losses have rendered it non-functional. Since the 1986 to 1994, the scheme incurred the total loss of over Rs.900 crore. There were declining trends in gross fixed capital formation in agriculture as proportion of GDP and gross fixed capital formation as proportion of total gross fixed capital formation. And also decline in the plan expenditure to agriculture and allied activities by centre and state government after the sixth five year plan (1986-87). Another important thing is that the shift in agricultural credit utilization from rural to urban area. Co-operative sector is the dominant source of credit to farmers of the state as compare to all India level. The origin of the co-operative sector is found in the state of Maharashtra. But the benefits of the co-operative remained limited to the region of Western and Southern parts of the state. Vidarbha and Marathwada did not receive sufficient benefits of the movement. After the 1990s, the period of financial liberalization, the public sector banks became more profit oriented than previous. As a result, they started shifting the rural deposits to urban areas for earning of more profit. After the nationalization of the banks the share of institutional credit in total agricultural lending was increased. But again the share of non-institutional sources increased during the second phase of reforms period i.e.1997-98. Private moneylenders became more powerful in the rural parts and captured the rural economy because either they are input dealers, traders or the sellers of the daily needs and commodities. It means farmers are depending more on them for the

consumption and production. They charged high rates of interest and purchase their crop at a very low price, which even did not cover the cost of cultivation. In Vidarbha some school teachers are also involved in private money lending business and it is a new category of the money lenders. It is a sign of the failure of institutional credit mechanism. After the mechanization of agriculture, there is a sharp decline in employment and unavailability of non-farm employment increased the rate of overall unemployment in rural parts. It increased migration from rural to urban areas. And on the other side, the amount sanctioned under "Employment Guarantee Scheme" was not fully utilized in the region. The Vidarbha region has a better irrigation potential but goes waste due to the lack of proper management of the same. If the same is properly managed, 80 per cent of the gross cropped area of the region can be covered by irrigation facilities. Hence farmers dependency on monsoon increased substantially; which is always uncertain. It also caused the decline in underground water table of the region. In the last 5-10 years, number of sowings increased up to 3rd sowing (repeating of sowing due to non-germination of seeds on account of less or delay in rainfall) due to deficit rainfall. Sometimes it happens because of spurious seeds sold by the seed trader. It means there are no quality parameters at the village level to control the supply of spurious seeds (Yavatmal district has around 1200 *krishi seva kendras* or input dealers but there is only one shop inspector). Although Cotton grower farmers of Vidharbha region use BT Cotton seeds but number of spraying has increased rather than declining because the BT variety is not free from other pests. It only prohibits boll worms. However, it increases the cost of cultivation and which causes unrewarding nature of

agricultural operations and further deterioration in the condition of farmers in the Vidarbha region. It pushed farmers in distressful situation which further resulted into the extreme step of suicide by them. Study further found that indebtedness, economic downfall, family discords, crop failure, deterioration in social status, marriageable daughter/sister, occurrence of suicide in nearby villages, addictions (alcoholism, gambling), change in behaviour, disputes with neighbours or others, death of family member before the incidence, suicide history in family, chronological illness of family members are the major risk factors for the distress act of suicides by the farmers in Maharashtra. There are minimum two and maximum nine risk factors identified in one deceased. It means suicide is a complex interplay of multiple factors. Indebtedness is the common risk factor which accounts for 86 per cent followed by economic downfall 74 per cent of the farmers those who committed suicides. Frequent crop failure was mentioned by 40 per cent respondent. Farmers do not get the proper guidance of new methods of cultivation due to lack of extension and education services. Hence, they depend entirely on the input dealer for the application of input such as pesticides and fertilizers. Marriage of daughter or sister is the sensitive subject for rural families. If they are unable to do this, they feel guilty and get mentally depressed because they get afraid in society and further humiliation. So they borrow money from private sources at very high rates of interest (3 to 6 per cent per month) and finally found themselves into the trap of debt. It is also responsible for the intra household conflict. Which plays dominant role in the suicidal behaviour of the farmers. Though there are several social and psychological factors responsible for the distress act, but at the grassroot it

is closely connected with economic factors and economic hardship due unrremunerative nature of the agriculture in recent past. In all, farming community of the state of Maharashtra has been neglected by the government and excluded by the society. Hence they are in isolation where the probability of committing suicides is high.

P. Narsimha Rao and K.C.Suri (2006)[2.22] focused on the dimensions of the agrarian crisis in the state of Andhra Pradesh. For the purpose they visited 75 farm households of two villages in Guntur district, one of the suicide hit districts in Andhra Pradesh. Though agrarian crisis and indebtedness are the two important factors which force farmers to take an extreme step of suicide in the countrywide, the reasons behind it were different in different states/regions. Rising cost of cultivation was found as the main reason of indebtedness in the state of Andhra Pradesh. During the period of 1992-2002 seed prices increased by 400 per cent and similar trend in the prices of fertilizers and pesticides was found which was highest as compare to other states in the country. Whereas the output prices did not increase in proportionate of input prices. Due to the lack of extension services, farmers mostly depend on the seller for the knowledge and the information about the uses of chemical inputs. Seller or trader suggests them to use heavy doses of fertilizers so that they will get higher production and thereby income. Farmers use BT Cotton seeds but the variety is not free from pests other than bollworms. Hence the number of spraying has increased substantially. The use of pesticides is highest in Andhra Pradesh as compare to other states in India. State alone consumes 45 per cent of total pest controlling pesticides in the country and most of the same is for the purpose of Cotton. It affects the fertility of soil,

productivity, production and ecology of the state. High prices and heavy use of pesticides and fertilizers are responsible for the increase in the cost of cultivation. An imperfect structure of agriculture market with heavy influence of middlemen and commission agents keep no role for farmers in the price determination or very marginal hence they get low price for the produce. Which did not cover the cost of cultivation for a long time. It resulted into unrewarding nature of the agriculture. Due to poor economic conditions of farmers, they need money for consumption and agricultural cultivation. So, they are in hurry to sell their entire produce at the available price in the market. And traders are aware of their neediness and offer them lower price. Government announces MSP for different crops which cannot cover the cost of cultivation. Increasing cost of cultivation, decreasing returns and lack of institutional credit facilities forced farmers to borrow from the private moneylenders at high rates of interest ranging between 36 to 120 per cent per annum for consumption and production purposes. Important fact is that, farmers of the state use 62 per cent of total credit for the production and 38 per cent for non agricultural purpose. And it is the second highest proportion of the use of borrowed money after Maharashtra for agricultural purposes among all states in the country. Due to the lack of irrigation facilities, the dependence of farmers on underground water has increased. It causes the decline in the underground water table at an alarming rate in the state. As well as, failure/drying of wells and loss of money also has increased in the last few years. Apart from these factors, urban based economic and developmental policy of the state government hunted farming community and rural economy of the country. The gap between urban and rural per capita

income has increased in the state of Andhra Pradesh particularly during the post reforms period. The conditions of the wage labourers are far better than the cultivators. Farmers are ready to sell their land due to unrewarding state of the business but nobody is ready to purchase it. It projects the overall economic and psychological conditions of the rural people in the state. The rising cost of cultivation, imperfect market structure, negligence by the government are found the reasons for crisis and thereby farmers suicides. In conclusion, study suggests that to draft a policy in which rural economy should be at the center stage of entire economic development process.

S. Mohankumar and R.K.Sharma (2006)[2.23] in a combine study on Kerala depicted that the prevailing agrarian crisis and its manifestation in the end of the farmers' lives was purely due to economic distress rather than social and psychological. The survey of 35 farm households of suicides affected region was conducted in Wayanand district of the state of Kerala. Historically the agrarian economy of the state depends on the international market. Most of the part of the agriculture produce is exported. Hence, agrarian distress of the state was closely linked to the neo-liberal policies of the 1990s implemented in the country. Price fall of export oriented crops has claimed the lives of many farmers during the second half of the 1990s. The export oriented or exportable cash crops include natural Rubber which accounted for 60 per cent of the gross cropped area in the state. There has been a sharp decline in the area under food grains after 1990. Distinguished feature of the crisis and suicide is that the majority of Rubber cultivators committed suicide. Most of the commodities produced by the state agriculture were found of low quality as per the international

norms. Which has been the reason for low price and as the cost of cultivation being high; it led towards the negative income receipts by farmers in the state. The crops with high export intensity experienced wider fluctuations in price pattern than any other crop. This indicates a strong association between export intensity and price movement. For the primary survey they considered three variables which included cropping pattern, indebtedness and assets loss of suicide affected households. Agrarian crisis was observed to be of multidimensional but international price fluctuations were found as a dominating cause of distress. More than 70 per cent of farmers were depended on international market for livelihood through the export income. Farmers with the lowest level of assets were more affected than farmers with larger holdings and more assets. It means the reforms policies hunted small and marginal farmers of the state. Price fall of primary commodities caused a decline in general income level of farmers. The use of heavy mechanization for maintaining product standards at the international market with declining state support increased the cost of cultivation. Households' expenditure on consumption, education and health was also increased during recent past. The institutional credit supply falls short of demand. It forced farmers to borrow from the private sources at the interest rate of 36 the minimum and 60 per cent the maximum. Therefore farmers have not been able to repay the loan due to declined returns from the agriculture and heavy interest. Decline in productivity coupled with sharp drop in output prices forced farmers to stop fertilizer application and other essential practices, resulted in a further decline in productivity. As a part of depoliticizing the spate of farmers suicides, causes of debt accumulation are classified under

different heads such as borrowing for the health, repayment of previous borrowing and conduct of marriage. Therefore, it was contended that borrowings were not for the agricultural purposes alone. Debt accumulation and suicides caused by agrarian crisis were in reality the results of the social isolation and individualization. Such social interpretations fail to take the note that farmers are not able to meet such expenditures with their income, which disappeared with the price fall. In all, unless the plight of farmers is addressed in terms of changing macroeconomic policies, regulating taxes, prices and imports, the conditions of farmers cannot be improved on a sustainable basis, only by increasing the availability of institutional credit. It needs to provide small alleviatory sops to the victims of suicide affected families.

In another study by V. Sridhar (2006)[2.24] substantial dislocations of livelihoods drive a community to despair and eventually suicides in Andhra Pradesh. While explaining the nature of agriculture and farmers suicides in Andhra Pradesh, the consecutive drought, stagnant employment in agriculture, lack of non-farm employment, raising cost of inputs, declining returns, soil degradation and inappropriate agricultural operations are found as the dominant causes of suicides by farmers. The agrarian crisis is saturated in Telangana and Railseema districts of the state from where most of the suicide cases have been reported. There is an increase in the extent of indebtedness because of the heavy dependence on cash crops which needs heavy investment. Decline in output prices gives a set back to the farming community of the state during the post reforms period. Farmers are not able to repay the loan taken even from the institutional sources. Hence they become defaulter and the doors of the

institutional sources are closed to them. As a result, farmers resort to the non institutional sources. Farmer needs money not only for the cultivation but also for consumption purpose which has termed as unproductive expenditure. It is the reason for the raising importance of moneylenders in rural parts. Another aspect of the phenomena of suicide is the introduction of liberalization policy after the period of 1991. It affected the farming of the state just like it had been for other regions of the country.

P Jeromis' (2006)[2.25] study of farmers suicides of Kerala brought to the light that the trade liberalization adversely affected the agriculture sector because more than 80 per cent of the agricultural commodities produced in the state are dependent on changing domestic and international market situation. The fact is that general suicide rate in Kerala is highest in India. It is almost three times more than national average. For the purpose of the study, 316 suicide affected families were covered in Wayanand and Kannur districts of the state. Around 40 per cent of the surveyed families could not pinpoint the reason behind the suicide committed by their family member. This indicates how fragile is the family setup and communication among the members of the family. The rate of farmers suicide was more in those districts which concentrate more on cultivation of export oriented commercial crops. However, with the removal of the quantitative restrictions on imports and lowering of tariff levels, farmer's hope for cultivating commercial crops have been affected by higher imports and stiff competition for exports in the international market. Also the productivity of agricultural sector has stagnated over the last decade and the cost of cultivation has gone up due to excess use of fertilizers and increasing input prices. Heavy use of fertilizers and pesticides has been one

of the reasons of decline in productivity of the sector which also resulted into environmental degradation. Mono cropping pattern caused a decline in the profitability of cultivators. An unfortunate manifestation of the crisis faced by the sector is responsible for the rise in the incidences of farmers suicides. Study is concluded with the suggestion of reduction in the rates of interest on all agricultural loans, protect farmers from international price volatility through remunerative price for their produce, strengthen agriculture extension through state government support, counsel farmers and increase farmer-banker communication to come out from the problem.

P Satish (2006)[2.26] in a study of Punjab depicted that the incidence of suicides in Punjab has not been higher than the all India average. The study revealed that the indebtedness is one of the major causes of suicides by farmers. The marriage of daughter/sister and deterioration of social status are in the social factors which have been contributing to worsen the situation of the farmers. There is no direct relationship between institutional credit, indebtedness and suicides in rural Punjab. But there is a positive relationship between non-institutional credit and indebtedness of the farmers of the state. The commission agents are the dominant source for supply of private credit. Borrowing of money from these sources is mostly for the non agricultural purposes. The consumption expenditure has increased in recent past. It is the manifestation of the urban life style. Increase in consumption expenditure due to reduction in the gap between urban and rural was found as the dominant cause of the economic crisis in rural parts of the state. Further study stresses on the availability of quality social infrastructural facilities, viable and modern technology, quality

control of agricultural inputs and adequate institutional credit supply to mitigate the problem of farmers suicides in the state of Punjab.

Anita Gill and Lakhwindar Singh (2006)[2.27] studied farmers suicides in rural Punjab. The study was conducted in Amritsar and Patiyala districts of the state. Stagnation of the green revolution technology, rise in the cost of living, lack of alternative employment opportunities in the state and near freeze in the minimum support prices generated the crisis in the state. In the agriculture set up, borrowing is a necessity. It is neither objectionable nor is the sign of weakness. It is the failure of the institutional set up in supplying credit commensurate with demand that is mainly responsible for the crisis and its manifestation in the form of suicides. The causes of the suicides, of which indebtedness figured prominently, were multiple. The other factors included economic distress, crop failure, alcoholisms, marital and domestic discord, etc. All these causes, in one way or the other pointed towards the poor economic status of victims which manifested it in various ways. It attributes mainly because of rising cost along with declining returns, stagnant technology and near freeze in the minimum support price of Wheat and Paddy, which turned the already adverse terms of trade from bad to worse surely reduced returns on food grains production. During the bumper crop, the market price is low due to excess in supply and during bad harvest government enters into market to stabilize the food prices which keeps price at low. In both the situation, farmers are at the end and mute receiver. Indebtedness was more due to non-institutional sources of borrowing, in which commission agents figured prominently. The commission agents bridged the gap between availability of credit from

institutional sources and total demand for credit in rural Punjab. Most of the loans (59 per cent) from both the sources of these victims were used for the purposes that are traditionally classified as unproductive. It has been the main reason of the indebtedness and thereby suicides by farmers in Punjab.

A study by Muzaffar Assadi (2006)[2.28] depicted the dimensions, nature and state response to farmers suicides in Karnataka. Where the study pointed out that the farmers suicides in India have become a recurring phenomenon over the past one decade or so. However, it reflects the deep rooted agrarian crisis. The latter is entrenched in the path of capitalist development persuaded by the Indian government. The beginning of such a crisis can be traced back to the decade of the 1980s when farmers' movements in different parts of the country were at a full swing demanding for remunerative prices and writing off loans. The policy of globalization added to the crisis has translated in the form of farmers committing suicides. Study found that the farmers who were committing suicides have been the market oriented autonomous farmers belonging to different social groups or background. Agriculture continuously received a raw deal from the Indian state. The public investment in agriculture over the last two decades has drastically come down and the budgetary allocation does not cross the limit of two per cent of the total budget. The development path has been multiplying the debt rather reducing it. The apathy of suicide has slowly spread to those states where capitalist development in agriculture has come to stay. Initially suicides were confined to the northern parts of Karnataka; later it began to envelop other districts which included the irrigated areas also. The debt of the

farmers who committed suicide was not uniform; it varied from Rs.5000 to Rs.50,000 and the reasons for the loan were also multiple. It was due to cumulative losses, drying up of institutional credit for small and marginal farmers, sharp increase in the cost of cultivation, declining prices of the agricultural commodities and the withdrawal of subsidies to agriculture sector. But the government attributed the increasing debt to personal reasons such as gambling, marriage, illicit relations and festivals. Most of the victims borrowed from the private moneylenders at the rate of 24 to 60 per cent per annum. Most of them belonged to the age group of 25 to 35 years. It is not confined to any caste but majority of them are from the backward classes. The study concluded with that the farmers suicides required to be seen in the context of capitalist development that the state introduced during the post independence period and particularly after the 1990s. Nevertheless, the state government focused on the social factors as a root cause of the agrarian crisis.

Tata Institute of Social Sciences (2006)[2.29] conducted a study on farmers suicides in Maharashtra. For the purpose of the study, 5 per cent (36 victims) of the total number of suicide cases that took places till December 2004 were selected from the state. The study was carried out in Vidharbha, Marathwada and Khandesh regions of the state of Maharashtra. Repeated crop failure, inability to meet rising cost of cultivation due to unremunerative prices and indebtedness were found creating a situation that forced farmers to commit suicide. According to the study the crop failure was not always associated with the uncertain monsoon but the increase in pest attack and the spurious seeds between 2001 and 2004. Farmers were spending more on fertilizers even while crop performance

has shown declining trend. The heavy use of pesticides and fertilizers caused an increase in the cost of cultivation, as well as, polluted the ecosystem. Study also observed that the MSP declared by the government always falls short of the cost of cultivation. And it is found that the MSP has always remained below the recommended prices by the state government. The minimum support price has not been available to all farmers, particularly the small and marginal farmers and important is that most of the farmers who committed suicides belonged to the same category. It was true in case of the Cotton crop because majority of the farmers who committed suicides were the Cotton growers. Declining opportunities of non-farm employment has further aggravated the crisis. There is a noticeable absence of irrigation facilities in Vidarbha region of the state and the fiscal backlog still remains unattained from 1984. The study revealed that there has been a sharp increase in the dependence on loans to enable cultivation during the 1990s. Firstly, farmers obtain loan from banks and when they are unable to repay it they get into the category of defaulter and hence ineligible for the next loan. Therefore, farmers have to turn towards the private sources for credit. Whereas the private moneylenders charge high rates of interest varied from 36 to 72 per cent per annum. In the absence of credit and other inputs like support price the dependence on cash crops has contributed to the agrarian crisis in the region. Those farmers who faced repeated crop failures accumulated loans beyond their capability which forced them to commit suicides.

According to the Planning Commission Report (FFC) (2006)[2.30] the backlog of irrigation, lack of electricity, spurious seeds, high cost of inputs, low credit availability from the institutional sources mainly the

nationalized banks and thereby increasing dependence on informal credit sources at exorbitant rates of interest and market failures are the causes of farm distress and suicide by farmers in the Vidharbha region of Maharashtra state. The Committee concluded that the situation occurred due to unfulfillment of the regional backlog of Vidarbha and Marathwada regions which was brought out by the Dandekar Committee in 1984. The financial backlog for irrigation increased up to 60 per cent in 2002 which was 38 per cent in the year 1984. On the one hand the productivity has declined due to dry land farming whereas on the other unregulated input market caused an increase in the cost of cultivation due to high and ever increasing prices. The dependence of farmers on informal sources of credit has increased due to the inability of formal credit agencies. Rates of interest charged by moneylenders varied from 36 to 72 per cent. Hence the debt amount goes beyond the repaying capacity of the borrower. Other infrastructural facilities are also poor in the region. The Committee recommended a long term and short term policy measures to overcome the problem where it stressed on the distribution of appropriate quality seeds, advisory and extension centers, waiver of institutional loans, water harvesting and conservation, removal of regional irrigation backlog, regional development plans, procurement and pricing, value addition in case of Cotton crop, self help groups and crop insurance, etc.

According to Gnyanmudra (2007)[2.31] suicide has emerged as an increasing public health problem in India over the last two decades. It is highlighted especially by the rise of male youth suicide rates particularly in the rural areas. Internationally, higher suicide rates in rural parts as compare to urban areas for male have been noted in many countries. Higher rural

male suicides have been attributed to the isolation and rigors of the rural life, fluctuating economic hardship from climate and commodity prices, greater access to poison, lack of employment opportunities, prevailing rural masculine culture and lack of mental health facilities. It means that the state of farming community is same at world wide. An introduction of capital intensive techniques in agriculture and the opening of the seed industry to the Multinational Corporations (MNCs) affected Indian agriculture badly. A mixture of economic causes and poorly chosen modern plan and GM (Genetically Modified) varieties led to thousands of farmers committing suicides in India. Study concluded that the modern life is killing more and more young men by suicide but at the same time it is not affecting so much young women. It needs a counseling agency for depressed people in general and farmers in particular.

S. Vijaya Kumar and K.S.Bhat (2007)[2.32] in a combine study of Andhra Pradesh depicted that the state has been suffering from drought since 1996. And it has become root cause of the agrarian crisis and farmers suicides in the state. Interviews of 125 households each from control and non-control families were conducted for the purpose of the study. More than 90 per cent of farmers are small and marginal who are struggling with poor unremunerative agricultural operations. Out of total number of suicides in the state, 67 per cent incidences were reported from Telangana district. In 1987, for the first time 27 farmers of Warngal and Guntur districts committed suicide because the uncontrolled pests attack destroyed their Cotton fields. It has been widely acknowledged that the act of farmers suicides is rooted in the endemic neglect of the farming sector in the state of Andhra Pradesh particularly during the post reforms

period. The lack of irrigation facilities and institutional credit mechanism to small and marginal farmers and their over dependence on private moneylenders has further aggravated the crisis. Some farmers could be taking their life to invite attention to their family plight. In the family set up study found that around 98 per cent families were nuclear. It means farmers have no moral support during the distress situation. And it is also a dominant cause of committing suicide because in isolation, probability of committing suicide is always high. Farmers shift their cropping pattern from food grains to cash crops like Cotton, Chillies and Groundnut which is without irrigation support. It is nothing but the imitation or the demonstration of the high profit earned by big farmers. But small and marginal farmers failed to identify the risk factors associated with the commercial crops and blindly follow their way to making higher profit. And at last bare their lives as a cost of risk associated with the commercial crops. Free entry of MNCs in the seeds and fertilizers sectors affected state agriculture of Andhra Pradesh more as compare to other states. Inputs suppliers are found as the predominant source of information for farmer and also the main source of the credit. Investments in agricultural operations have increased and unfortunately rains have failed over the years, consequently farmers started exploiting ground water which has depleted considerably. Due to poor agricultural marketing system, farmers did not get the remunerative prices and failed in covering the loans taken from the moneylenders. In all; unremmunarative agriculture, family discords and the issues related to the psychology are the three problems which pushed farmers into a suicidal trap in the state of Andhra Pradesh.

A study of B. Ratna Kumari (2007)[2.33] stressed on the impact of agrarian distress and farmers suicides on the remaining family members in general and wives of the deceased in particular through a gender perspective in Andhra Pradesh. Survey of 30 farmers suicide affected families was conducted from Guntur district of the state. Study finds that the reasons of agrarian crisis or the factors responsible for suicides by farmers are same as mentioned by other researchers. They are the free entry of MNCs in the seeds and fertilisers market, indebtedness, monsoon failure and declining underground water table and several other social and psychological factors. But the study focused on the untouched issue of the problem which is related to the suicide affected family members. After the distressful death of the family head, the wives of the deceased not only have to face the economic burden but also social, psychological and occupational, which are closely interrelated. Further, it has a linkage of daughter's or sister's suicide due to the lack of money for their marriage. After the debt accumulated by the deceased farmers, the wives are responsible to repay it. Sometimes moneylenders grab their land and taken their children as a bonded labour. It resulted into the suicides of the women in the family. The victim's family has to experience more distress than the head of the household. The victims face this situation because of the lack of an appropriate compensation policy of the state. The existing policy initiative gives relief just in terms of money. But neither center nor does the state government adopts such kind of policy for the up-gradation of the deceased family by creating non-farm employment opportunities in the rural parts. Study further suggests that it needs to provide employment, education, good infrastructural facilities, supply of quality

seeds and fertilizers and remunerative prices for their produce to empower the suicide affected households.

Aldas Janaiah (2007)[2.34] study of three districts (Anantpur, Guntur and Warangal) of Andhra Pradesh found that; rural distress and farmers suicides are the outcome of multiple factors related to the agrarian economy. Study finds the paradoxical situation of agricultural development that increased the incidences of farmers suicides in the state. Indebtedness of farmers is found as the main reason for this distress behavior and policy implemented by the center during the post reforms period further aggravated the situation. Price volatility has increased for major agricultural commodities since the early 1990s. It has been the outcome of the direct linkage of the agriculture sector to the international market without any safety net. Which leads to uncertainties in farmer's income. There is a decline in farm and non farm employment opportunities and thereby income in the rural parts of the state. But the consumption expenditure has remained constant or sometimes increased due to an increase in prices of consumption commodities which is common as increase in rate of inflation. As well as, the cultivation expenditure has also increased. Farmers borrow money for both the consumption and cultivation expenditure from the private sources at higher rates of interest. Crop diversification from food grains to cash crops forces farmers to borrow heavily from the private sources. The institutional credit supply has dried up especially, to the small and marginal farmers. The uncertain monsoon has always pushed farmers to further loss making operation. All these factors of suicidal behaviour come hand in hand for taking lives of the farmers.

According to Ajay Dandekar and Shahaji Narvade (2007)[2.35], the agrarian crises had been rooted in the pre-libralisation era has further aggravated during the post reforms period. It is an outcome of the failure of the state and central policies and the political economy. Widening gap between cost of cultivation and minimum support price has the outcome of the difference between recommended prices by state government and prices announced by the center (CACP). The average gap between cost and prices for all crops ranges between 38 to 50 per cent, (cost above the revenue) except Sugarcane which accounted a loss for 12 per cent for the year 2005-06. Under the guidance and insistence of the IMF and World Bank, Indian government slashed its fiscal provisions on rural development. Therefore it did not give an expected result on the ground of creation of non-farm employment opportunities and other infrastructural facilities in rural parts of the country. Also the government reduced subsidies and investment in agricultural sector. Hence, farmers have to invest on their own more on creation of the infrastructural facilities. The loss making cultivation, high cost paid inputs, increasing consumption expenditure and also expenditure for maintaining social status and unavailability of institutional credit are the responsible factors for the distress act of suicides by farmers in the state of Maharashtra. Inadequate institutional credit supply forced farmers to borrow from non-institutional sources. Whereas the moneylenders charged rates of interest from 36 to 96 per cent per annum. As a result the borrowed amount becomes double within a span of one year and it goes beyond the repaying capacity of farmers. Because the returns from agriculture are unsatisfactory and cannot covers the cost of cultivation. Again farmers borrow from private

sources for the cultivation with the hope that in the upcoming year they will get good harvest and can repay the loan amount. But they again have the negative returns from agriculture due to natural factors such as pests and untimely rains. Further it converted in to a vicious circle of indebtedness. And the end of the circle took the lives of thousands of farmers in the state of Maharashtra.

T. Prabhakar Reddy (2007)[2.36] argues on the basis of the study on Andhra Pradesh that the successive droughts and the irrigation backlog are causes of the distress in agriculture sector of the state. The study of 28 and 22 of control and non-control distressed households carried out from Guntur and Anantpur districts of the state. The economic condition of the control households is same as like non-control households. The distress got compounded by the virtual withdrawal of public support of institutional credit and research and extension during the post reforms period. Major part of the investment is spent on creation of irrigation facilities through tubewells. And it is followed by the input cost especially on fertilizers. Increasingly high burdens of input costs have contributed substantially to the plight of small and marginal farmers in Telagana and Rayalseema regions of the state. Farmers are unable to repay the loan because of increasing household consumption and cultivation expenditure and negative returns from the agriculture. The heavy use of pesticides and fertilizers further resulted into a decline in soil fertility and environmental degradation. It created problems to the ecology which have long term impacts on the rural and agricultural economy of the state. As well as, the market prices for their products set at a minimum which earns negative returns for them. And the burden of the loan amount has been on the rise.

As a result of it, some farmers are driven to commit suicide rather than wait for the next crop. Provision of adequate irrigation to small and marginal farmers through fast development of infrastructure like small irrigation projects, subsidized seeds and other inputs and reasonable support price should be provided for empowerment of farming community of the state of Andhra Pradesh.

Akkineni Bhavani Prasad (2007)[2.37] in a study of Andhra Pradesh found that farmers suicides in the state are closely related to the traditional policies adopted both by the Central and State Governments in general and that of the policies during the post reforms in particular. The wrong estimation of the cost of cultivation and thereby announcement of the MSP by CACP (Commission on Agriculture Cost and Prices) which is often below the recommended price by state government and failure of input output markets of agriculture produce are responsible for the loss making agricultural operations. Opening up of the agriculture sector at international level has been responsible for the deterioration of cultivators. Farmers have to face uncertain nature of the international prices without any safety net. The negligence of irrigation projects resulted into an increase in the heavy expenses on tubewells. Lack of institutional credit supply compels farmers to borrow from the private sources at higher rates of interest. And the debt burden becomes uncomfortable due to the unrewarding nature of the agriculture. Due to the lack of public health facilities, the expenditure on the same has increased. As well as, efficiency of the rural people is declining at an alarming rate, which affected the productivity and also the production of the sector. On the other hand farmers spent more on unproductive purposes i.e. to maintain the certain

amount of social status. All these social, economical and policy matters are underlined as responsible for the distress act of suicides by farmers in the state of Andhra Pradesh.

K. Radhakrishna Murty (2007)[2.38] carried out a survey of 60 farmers suicides affected households from Guntur, Anantpur and Warangal districts of Andhra Pradesh. The major thrust of the study was to analyze the causes and consequences of farmers' distress and to delineate the motivating factors responsible for much aggravated phenomenon of suicides in the state of Andhra Pradesh. The study is based on the Durkheims' (1951) approaches towards suicides i.e. anomic, altruistic and egoistic. The risk factors are classified into three sections; agro-economic factors contended chronic drought and scanty rainfall, lack of underground water, high cost of cultivation with inadequate returns, crop failure and low yields, withdrawal of state support and decontrolled input market. In social factors, high expenditure on marriage and other ceremonies, lack of education and caste structure were found dominant. And in psychological factors the loss of self esteem, ego and pride, feeling of shame and insult and isolation have been observed responsible for increasing the distress of farmers. All these factors come hand in hand to take the lives of farmers. Study further found that more than 37 farmers ended their lives due anomic condition which followed by 16 due to egoistic, 2 for altruistic reasons and the remaining 5 cases due to ego-anomic reasons. Majority of the farmers are in economically anomic condition. It has been the outcome of the gap between income and expenditure. The cost of living increased substantially during the post reforms period but the general income of the rural masses is either

stagnant or sometimes declining. As a result, farmers are not able to live the expected standard of living. Further it leads to the loss of social status and increase in the psychological stress and thereby the distress act of suicides by farmers. Hence there is a need of comprehensive rural credit reforms and to reduce the gap between supply and demand for quality services in the social sector. However it is an imperative need for paradigm shift in the government attitude towards agriculture.

In another study on the state of Karnataka by R S Deshpande (2008)[2.39] depicted that, the spate of farmers suicides was naturally associated with the performance of the sector, along with the other factors that were prominent including advent of WTO, GM varieties of crops, price collapse and spurious seeds. Farmers, as an occupational group is always under the burden of debt, but during nineties farmers' debt burden increased substantially in the state of Karnataka. The situation became worse during the period of the 1990s which has been due to the changes in market situation, weather inflicted uncertainties at the end of the decade and systemic fall in the credit delivery system. As a result, the distress in farm sector got amplified culminating into a spate of farmers suicides in the state of Karnataka. Study further found that suicide is mainly attributable to social reasons such as family problems, older age and illness, drinking and gambling habits. In Karanataka the problem of indebtedness is acute specifically in the rain fed northern regions of the state and also in the areas that have some potential for growth. Shift in the cropping pattern from food grains to cash crops neither give them money income nor dose it provide food for throughout the year. Therefore the income and expenditure become disproportionate. The technological changes and crop

diversification are found as the root causes of agrarian crisis and social and psychological factors are there for worsening the situation which has been contributing to take the lives of the farmers in the state.

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Chapter-03

Changing Agrarian Political Economy and Farmers Suicides in India

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Introduction

Agrarian relations in India had undergone a sea-change during the period of last two decades of economic reforms. One of the serious outcomes of these changes is the incidence of suicides of farmers in different states of the country. Changes in agrarian relations occurred due to the changing policies and change in agricultural market. Changing macroeconomic policies and other changes led to the gross neglect of agriculture consisting of 60 per cent of the population and one fifth of the electorate. This took agriculture and rural economy towards distress. The number of suicide cases in rural parts has been mounting in last fifteen years. More than two lakh of farmers ended their life through suicide.

Since the mid 1990s, large section of farm households have been facing a distress as a consequence of decline in agricultural income and loan repaying capacity and increased debt burden. Rain-fed areas are particularly prone to year to year fluctuations in production and degradation in environmental resources. In the present liberalized trade market, farmers are exposed to price volatility because of fluctuations in domestic production and international prices of agricultural commodities. The most serious aspect of this crisis is deceleration in agricultural growth with distress state of farmers in general and that of small and marginal in particular. The issue of farmers indebtedness become a matter of intense debate whenever agricultural sector faces distress. But, indebtedness is not the root cause of the current crisis. The factors that are responsible for indebtedness are vital in this phenomenon. The underlying causes are stagnation in agriculture, increasing production and marketing risks, institutional vacuum and lack of alternative opportunities.

The agrarian crisis in India has both long term structural and institutional as well as short term manifestations. The long term structural features indicate sharp decline in the share of agriculture in the Gross Domestic Product (GDP) accompanied by very low rate of labour force diversification away from agriculture. This has resulted in declining relative productivity of agriculture and non-agriculture sector. The growth rate of agriculture has decelerated noticeably during the post reforms period. The crisis has been exacerbated further by rapid environmental degradation and plate acing the existing agricultural technology. The liberalization of economy has failed to give a big push to agriculture sector and to increase income and employment in agriculture. The gradual withdrawal of state from active participation in development activities has resulted in sharp decline in public investment in agricultural infrastructure in general and agriculture science and technology in particular. This has resulted in deterioration of rural infrastructure and thereby stagnation in agriculture development.

Although, almost all the regions of the country have experienced a deceleration in their agricultural growth, the adverse impact is especially serious in rain fed regions and among small and marginal farmers. The glory of the green revolution has been darkening since the mid 1980s. The income from agriculture had been declined with increased cost of cultivation. However, the institutional credit supply dried up and farmers resorted at private moneylenders for their credit needs. The moneylenders took disadvantage of the footloose situation of farmers and charged heavy rates of interest on loan amount doubling the principal amount within a year or two. The situation further aggravated during the post reforms

period. Farmers have to face the international market competition without any state support.

The present agrarian crisis is closely associated with the misapplication of the macroeconomic policies towards agriculture during the post independence period in general and that of the post reforms in particular. The blindly following of the developmental polices of the developed countries has an adverse impact on the agriculture sector of the country. The innovation in the agriculture during the 1960s expected an inclusive growth of the sector but has been limited to few crops (Paddy and Wheat) and in few states i.e. Punjab and Haryana. The increase in the agricultural credit remains only on paper and in real terms it has been stagnant over the decades. The co-operatives are far away from their target group i.e. small, marginal and weaker sections of the agrarian community. However, the institutional structure of agricultural produce marketing failed to address the farming community and became a play ground for the new comers in the politics. The functioning of APMCs is like a private entity of the traders, whereas farmers are the mute receiver. This is the situation of the domestic institutional marketing mechanism of agricultural produce. Whereas, at international level, government withdrew the institutional support through reduction in import duties during the 1998 to 2001 from earlier 35 to 5 per cent. At the same time developed countries continuously support their farmers through direct subsidies under different schemes. Over the years, Indian government reduced the volume of indirect subsidies to the agriculture sector. Which resulted in to increase in the cost of cultivation and the mere stagnant and declined support prices caused for the increase in the gap between income and expenditure.

In all, the subject matter of agrarian crisis and thereby farmers suicides in the country has the positive correlation with the agricultural polices since the independence.

3.1 Indian Agriculture

The agricultural development in India essentially involves five important phases. The first phase involves the period prior to independence of the country. This period was marked by the retrogression of the sector and ended by leaving the country with perhaps the worlds' most refractory land problem. The second phase of development of agriculture sector covers the period of independence influenced both by the indigenous thinking about development i.e. Gandhian Perspective and also the western process of growth borrowed from the industrialized countries. This phase ended with the drought of mid-sixties when food security and acute poverty became prominent issues. The third phase consisted the Green Revolution after the mid-sixties. Afterwards India not only met the domestic requirement of food but also became a net exporter of food grains particularly the Wheat and Rice. This was the success of the technological changes of the 1960s. This should be equally credited to the participation of farmers in readily accepting technological innovations along with the availability of new inputs. The role of farmers in the process of the spread of technological changes is of prime importance but acknowledged or highlighted rarely. The half-clad, ill-fed and under-nourished farmer with strong resource constrains was fully charged to provide food security to the country and to prove wrong the predictions of a widespread famine by the western economists. Therefore, the achievements of the technological change were possible only due to the

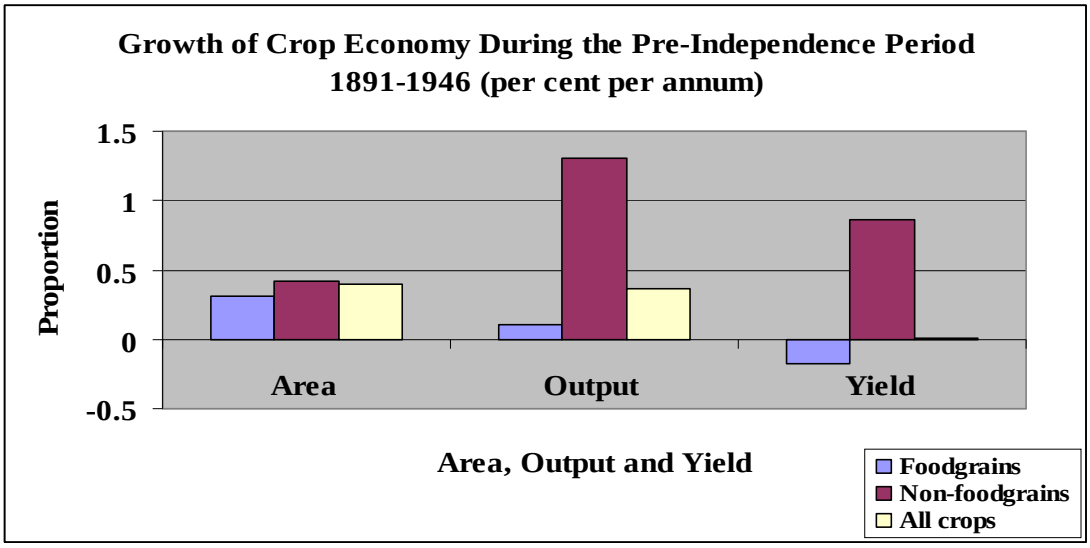
farmers' positive role and whole-hearted participation in the process. This was followed by two distinct phases of growth, i.e. the immediate fall-outs of technological change and the phase of new economic policy.

3.1.1 Agriculture during Colonial Period

3.1 Growth of Crop Economy during the Pre-Independence Period 1891-1946 (per cent per annum)

Sr. No.	Crop Groups	Area	Output	Yield
1	Food-grains	0.31	0.11	-0.18
2	Non-foodgrains	0.42	1.31	0.86
3	All crops	0.40	0.37	0.01

Source: State of the Indian Farmer A Millennium Study, Vol-09[3.1]



During the pre-independence period, even though food was the major contribution expected from the agriculture sector, the foodgrain sector recorded extremely dismal rate of growth. The data in the above table (No. 3.1) revealed the agricultural stagnation during the period of 1891 to 1946 can be noted from the growth rates of 0.37 per cent per annum for all crops. It is further painful to observe that the foodgrain output grew only at 0.11 per cent per annum which was far below the growth of population during that period. The growth rates in non-foodgrains were higher than foodgrains which indicated strong forces of commercialization operating

in the sector. It means, the farmers growing food crops were facing major constrains compared with those growing non-food crops. The growth of agriculture sector came mainly through the expansion of area under the crops and not through improvements in productivity. The productivity growth of 0.01 per cent per annum in all crops indicates stagnation or near absence of any technological changes over a half century. Production of non-food crops grew at much faster rate than food crops and same trend was visible in area as well as productivity. It points to the historical process of commercialization of agriculture during British Rule, which favoured selected crops and areas of importance. The farmer and his welfare was obviously not the focus of the developmental process then.

3.1.2 The Period of Independence

At the time of independence, the agricultural economy of the country was clearly a stagnant economy with wide regional diversities, lower resource availability, inadequate institutional support and acute poverty. The policy makers then began with an optimistic note and recognized the problems at the outset. The farmers became the focus of reforms and increasing their efficiency became major objective. Community Development (CD) programme initiated in 1952 for the development of villages by coordinating the activities related to agriculture, animal husbandry, infrastructure and extension at the level helped to create rural infrastructure across blocks (Dandekar-1994)[3.2]. The National Extension Service Programme of 1952 was also initiated as part of the CD programme. These two initiatives were intended to provide necessary technical inputs to the farmers and organize them for the village development. Early sixties witnessed two important interventions in

agricultural development. One, in the form of Intensive Agricultural District Programme (IADP) of 1960-61, for 13 selected districts in the country, to provide a package of inputs and the other, as Intensive Agricultural Area Programme (IAAP) of 1964-65, for selected districts, to provide technological inputs for production improvement.

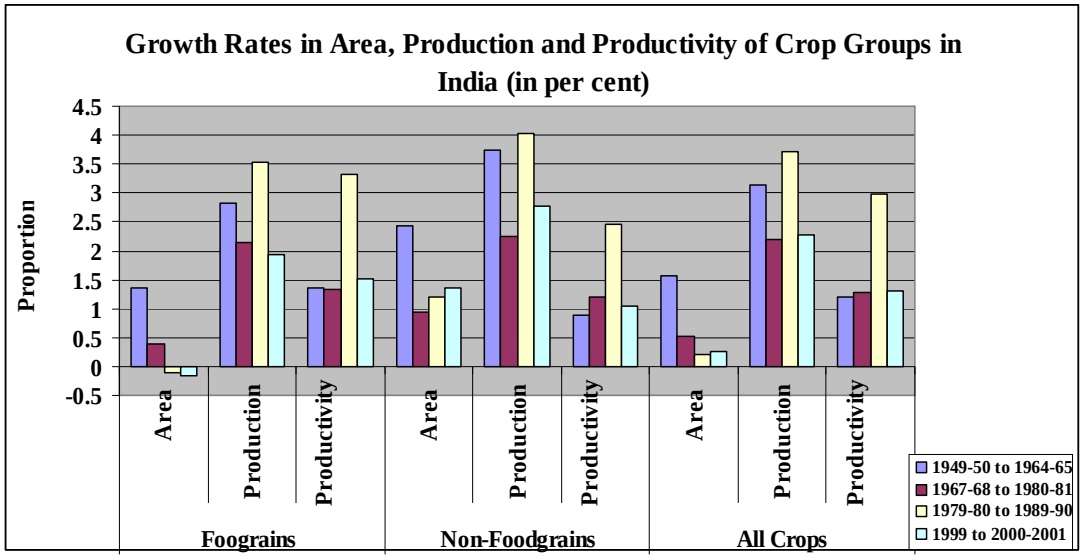
3.1.3 Green Revolution

Farmers and food crops became the focus of the strategy during this phase. The technological changes focused on Cereals as a broad group and Paddy as well as Wheat as the vanguards of the revolution. The process involved providing essential resources for the transfer of the technology from lab to land along with extension support. In addition to this other support institutions also helped the technology to take roots in the farm i.e. price policy, agricultural education, extension services and provision of credit. All these presumed the farmer as a active participant, without really making the group as a part of decision making process at least overtly.

3.2 Growth Rates in Area, Production and Productivity by Crop Groups in India (in per cent)

Crop Groups		1949-50 to 1964-65	1967-68 to 1980-81	1979-80 to 1989-90	1999 to 2000-01
Foograins	Area	1.35	0.38	-0.11	-0.17
	Production	2.82	2.15	3.54	1.94
	Productivity	1.36	1.33	3.33	1.52
Non-Food-grains	Area	2.44	0.94	1.21	1.37
	Production	3.74	2.26	4.02	2.78
	Productivity	0.89	1.19	2.47	1.04
All Crops	Area	1.58	0.51	0.21	0.25
	Production	3.15	2.19	3.72	2.28
	Productivity	1.21	1.28	2.99	1.31

Source: Government of India(1999)Agricultural Situation in India, Directorate of Economics and Statistics[3.3]



It comes out clearly from data that the non-food crops dominated the growth in the crop economy during 1949-65 and the growth in the production of food crops came mainly through the expansion of area. Growth in productivity of food crops was quite low indicating little gains due to technological innovations during that period. The situation changed after the introduction of new technology. Growth of food-grains was quite impressive. It was food-grains, which contributed mainly to the crop economy, and the growth came out of improvement in yield per hectare. The growth rates in production of food-grains stayed ahead of the growth rates in population in following decades thereby ensuring certain minimum per capita availability of food-grains. The expansion in area under foodgrains more or less ceased by 1980s and growth in production was clearly visible during eighties and nineties. Yield improvement is seen during the seventies and the second spurt in the growth is visible around the late eighties. Production and productivity seem to be stagnated in the post 1997 period. The gains of technological changes were incurred in a few states and for a few crops. A large portion of the farming community

was out of the technological changes during the mid1960s. As a result, the gains from the innovation were not as per the level of expectation. And more vigorously small and marginal farmers were at the marginal in this new commercial agricultural practice.

The transformation of the agriculture sector also had its negative externalities. The objections were directed more towards the region, crop and groups of farmers participating in the technological change. The technological change resulted in widening the regional as well as interpersonal disparities.

3.3 Growth of Area, Production and Yield of Major Crops in India-1980-81 to 2003-04 (in per cent)

Crop	1980-81 to 1990-91			1990-91-2003-04		
	Area	Production	Yield	Area	Production	Yield
Rice	0.40	3.56	3.47	0.15	1.14	0.99
Wheat	0.46	3.57	3.10	0.74	2.13	1.35
Coarse Cereals	-1.34	0.40	1.62	-1.58	0.25	1.87
Total Cereals	-0.26	3.03	2.90	-0.25	1.32	1.58
Total Pulses	-0.9	1.52	1.61	-0.87	-0.74	0.16
Foodgrains	-0.23	2.85	2.74	-0.44	1.16	1.11
Sugarcane	1.44	2.70	1.24	1.41	1.22	-0.16
Oilseeds	1.51	5.20	2.43	-1.07	0.18	1.26
Cotton	-1.25	2.80	4.10	0.82	0.15	-0.69
Non-foodgrains	1.12	3.77	2.31	-0.09	1.20	0.62
All crops	0.10	3.19	2.56	-0.25	1.58	0.90

Source: Ministry of Agriculture, Area and Production of principal Crops in India 2004[3.4]

Data in the above table revealed that the foodgrains growth decelerated from 2.85 per cent in the 1980s to 1.16 per cent during the post reforms period. Which was lower than the rate of growth of population of 1.9 per cent during this period. The 1990s was the first decade since the 1970s in which the rate of growth of food crops fell below the growth rate of population. It is due to the gradual decline in the growth of yield levels,

especially of some food crops. While the annual yield growth for all crops taken together decelerated from 2.56 per cent during the eighties to 0.90 per cent during the later period, for Rice the yield growth rate decelerated from 3.47 per cent to 0.99 per cent and for Wheat from 3.10 per cent to 1.35 per cent. In case of Cotton, the yield growth rate has gone down from 4.10 per cent during the 1980s to -0.69 per cent during the 1990s. The free entry of MNCs in the pesticides production during the reforms period caused the decline in the effectiveness of the same on pests and the spurious pesticides have failed to prevent complete loss of the crop.

3.4 Area, Production and Yield of Major Crops in India 2003-04 to 2008-09

Crop / Group of Crops		Season	Area	Production	Yield
I. Food-grains					
	Rice	Kharif	39.51	79.65	2016
		Rabi	4.26	13.18	3097
		Total	43.77	92.83	2121
	Wheat	Rabi	27.33	74.61	2730
	Jowar	Kharif	3.60	3.80	1055
		Rabi	4.71	3.64	774
		Total	8.31	7.44	896
	Bajra	Kharif	9.33	8.58	920
	Maize	Kharif	6.87	12.88	1877
		Rabi	0.97	3.65	3741
		Total	7.84	16.53	2109
	Total Coarse Cereals	Kharif	22.22	27.83	1252
		Rabi	6.32	8.62	1363
		Total	28.54	36.45	1277
	Tur	Kharif	3.55	2.55	717
	Gram	Rabi	7.31	6.04	826
	Total Pulses	Kharif	10.79	5.09	472
		Rabi	12.02	8.91	742
		Total	22.81	14.00	614
	Total Food-grains	Kharif	72.53	112.57	1552
		Rabi	49.93	105.33	2109
		Total	122.46	217.90	1779
II .Oilseeds					
	Groundnut	Total	6.29	7.20	1144
	Rapeseed & Mustard	Rabi	6.70	7.24	1080
	Soyabean	Kharif	8.40	8.97	1068
	Sunflower	Total	2.08	1.29	623

	Nine Oilseeds	Total	27.23	26.82	985
III. Other Cash Crops					
	Sugarcane	Total	4.50	301.40	67024
	Cotton @	Total	9.09	21.14	396
	Jute & Mesta $	Total	0.47	15.53	6010
	Potato *	Total	1.41	24.25	17207
	Onion *	Total	0.62	7.81	12520

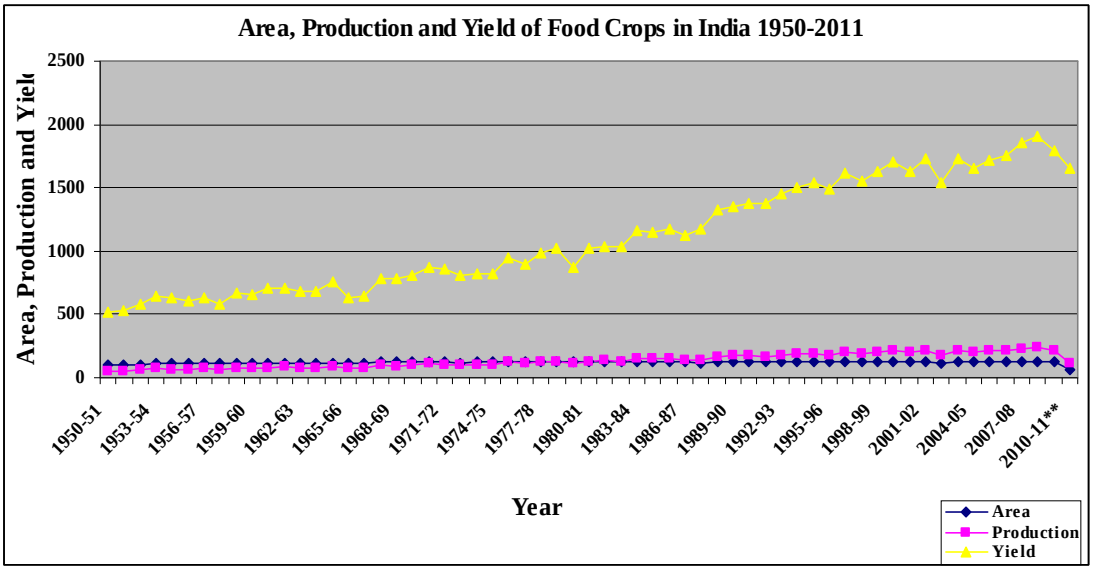
Source: Directorate of Economics and Statistics, Department of Agriculture and Co-operation[3.5]
Area- Million Hectare, Production- Million Ton, Yield- Kg./ per hectare
@ Production in million bales of 170 kg of each
$ Production in million bales of 180 kg of each
*** data not updated**

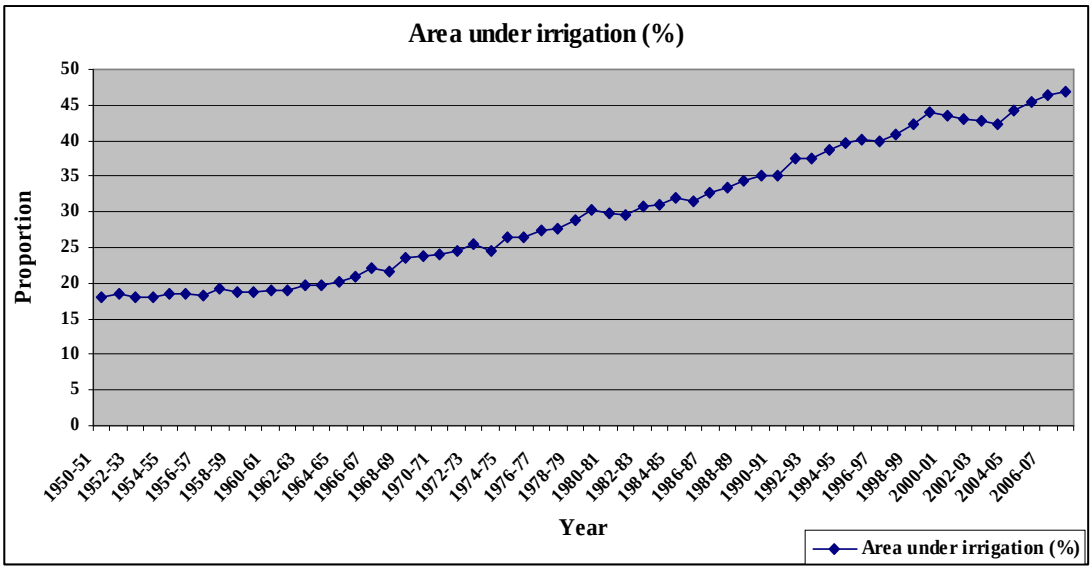
3.5 Area, Production and Yield of Food grains along with Irrigation Coverage 1950-51 to 2010-11

Year	Area	% change	Production	% change	Yield	% change	Area under irrigation
1950-51	97.32	--	50.82	--	522	--	18.1
1951-52	96.96	-3.41129	51.99	2.250433	536	2.61194	18.4
1952-53	102.09	7.114978	59.2	12.17905	580	7.586207	18.1
1953-54	109.07	15.46956	69.82	15.21054	640	9.375	18.1
1954-55	107.86	6.738175	68.03	-2.63119	631	-1.42631	18.4
1955-56	110.56	13.00211	66.85	-1.76515	605	-4.29752	18.5
1956-57	111.14	11.66186	69.86	4.308617	629	3.81558	18.2
1957-58	109.48	7.963741	64.31	-8.63007	587	-7.15503	19.3
1958-59	114.76	19.36091	77.14	16.6321	672	12.64881	18.7
1959-60	115.82	16.73521	76.67	-0.61302	662	-1.51057	18.8
1960-61	115.58	15.37235	82.02	6.522799	710	6.760563	19.1
1961-62	117.23	18.63749	82.71	0.83424	706	-0.56657	19.1
1962-63	117.84	18.35765	80.15	-3.19401	680	-3.82353	19.8
1963-64	117.42	17.06231	80.64	0.607639	687	1.018923	19.8
1964-65	118.11	18.6942	89.36	9.758281	757	9.247028	20.2
1965-66	115.1	12.48488	72.35	-23.5107	629	-20.3498	20.9
1966-67	115.3	15.47346	74.23	2.532669	644	2.329193	22.2
1967-68	121.42	26.46036	95.05	21.90426	783	17.75223	21.6
1968-69	120.43	19.60795	94.01	-1.10627	781	-0.25608	23.6
1969-70	123.57	26.11107	99.5	5.517588	805	2.981366	23.7
1970-71	124.32	24.92328	108.42	8.227264	872	7.683486	24.1
1971-72	122.62	21.2336	105.17	-3.09023	858	-1.6317	24.5
1972-73	119.28	16.47987	97.03	-8.38916	813	-5.53506	25.4
1973-74	126.54	32.27732	104.67	7.299131	827	1.692866	24.5
1974-75	121.08	16.57058	99.83	-4.84824	824	-0.36408	26.5
1975-76	128.18	33.71909	121.03	17.51632	944	12.71186	26.5

1976-77	124.36	21.28827	111.17	-8.8693	894	-5.59284	27.4
1977-78	127.52	29.99804	126.41	12.05601	991	9.788093	27.7
1978-79	129.01	30.16495	131.9	4.162244	1022	3.033268	28.8
1979-80	125.21	22.1751	109.7	-20.237	876	-16.6667	30.3
1980-81	126.67	27.8226	129.59	15.34841	1023	14.3695	29.7
1981-82	129.14	31.05265	133.3	2.783196	1032	0.872093	29.6
1982-83	125.1	21.87058	129.52	-2.91847	1035	0.289855	30.8
1983-84	131.16	35.78031	152.37	14.99639	1162	10.92943	30.9
1984-85	126.67	23.12536	145.54	-4.69287	1149	-1.13142	31.9
1985-86	128.02	29.07452	150.44	3.257112	1175	2.212766	31.4
1986-87	127.2	26.55535	143.42	-4.89471	1128	-4.16667	32.6
1987-88	119.69	13.41546	140.35	-2.18739	1173	3.836317	33.5
1988-89	127.67	33.92049	169.92	17.40231	1331	11.87077	34.4
1989-90	126.77	26.06005	171.04	0.654818	1349	1.334322	35.0
1990-91	127.84	28.67698	176.39	3.033052	1380	2.246377	35.1
1991-92	121.87	16.97134	168.38	-4.7571	1382	0.144718	37.4
1992-93	123.15	24.18938	179.48	6.184533	1457	5.147563	37.4
1993-94	122.75	22.42413	184.26	2.59416	1501	2.931379	38.7
1994-95	123.86	24.75617	191.5	3.780679	1546	2.910737	39.6
1995-96	121.01	18.65482	180.42	-6.14123	1491	-3.6888	40.1
1996-97	123.58	25.65962	199.44	9.536703	1614	7.620818	40.0
1997-98	123.85	24.06801	192.26	-3.73453	1552	-3.99485	40.8
1998-99	125.17	26.22457	203.61	5.574382	1627	4.609711	42.4
1999-00	123.1	21.41844	209.8	2.950429	1704	4.518779	43.9
2000-01	121.05	19.35648	196.81	-6.60027	1626	-4.79705	43.4
2001-02	122.78	24.18902	212.85	7.535823	1734	6.228374	43.0
2002-03	113.86	6.025818	174.77	-21.7886	1535	-12.9642	42.8
2003-04	123.45	31.21833	213.19	18.02148	1727	11.11754	42.2
2004-05	120	17.125	198.36	-7.47631	1652	-4.53995	44.2
2005-06	121.6	22.91579	208.6	4.908917	1715	3.673469	45.5
2006-07	123.71	25.4156	217.28	3.994845	1756	2.334852	46.3
2007-08	124.07	24.36016	230.78	5.849727	1860	5.591398	46.8
2008-09	122.83	21.82047	234.47	1.573762	1909	2.566789	NA
2009-10*	121.37	20.16707	218.2	-7.45646	1798	-6.17353	NA
2010-11**	69.05	-106.721	114.63	-90.3516	1660	-8.31325	NA

Source: Directorate of Economics and Statistics, Department of Agriculture and Co-operation[3.6]
Area- Million Hectare, Production- Million Ton, Yield- Kg./ per hectare
*** Fourth advance estimates released on 10-07-2010,**
**** First Advance Estimates as released on 23-09-2010**





The data in the above table revealed the area production and yield for the period of 1951 to 2011. Initially the plan target i.e. first five year plan was food security. And we received the success more than level of expectation. But during the 1960s the situations of food-grains became worst. During that period the Indian agriculture was introduced with the new technological innovation i.e. the Green Revolution. Which has resultant impact on the crop productivity and it increased substantially. Irrigation is the key factor for the agricultural development. At the initial stage only 18.1 per cent of the total area under food-grains had irrigation coverage

which was increased later but very slowly. At present 46.8 per cent of the total area under food crops is under irrigation. Still 54.2 per cent of the area is out of the purview of institutional and individual irrigation. This is the obstacle in the 11th five year plan goal of food security. After the implementation of the new policy during the mid 60s there were a boost in the agricultural production and thereby productivity. Till the late 1980s the crop productivity increased substantially. But during the period of new economic reforms and WTO amendment the production of food-grains has been volatile. Further the situation became worse during East Asian Economic Crisis in 1996-97. Another reason of the deceleration or mere stagnancy in the food grains production is the fundamental Law of Returns. According to the law; at the initial stage of production all factors of production are efficient hence there is incremental trend in production. As a time passes, the sector experiences a stagnation and thereby deceleration due to the over exploitation of technology and natural resources. The law is applicable for the agriculture sector. In India, the boom in agriculture sector during the period of 1970-1990 was the resultant impact of green revolution of 1966. After 1991 the agriculture sector faced the stagnation and since 2003 the agricultural production decelerated considerably. And the country experienced the food insecurity and thereby food price inflation which has almost crossed the limit of 18 per cent. Hence now the policy makers are thinking about the second green revolution which is expected to give the sustainable food security.

3.6 Minimum Support Price for Major Agricultural Commodities

Commodity	Variety	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Kharif Crops								

Paddy	**Common**	**560**	**570**	**580^**	**645$$/ 850~**	**850$**	**950&**	**1000**
	Grade 'A'	**590**	**600**	**610^**	**675$$/ 880~**	**880$**	**980**	**1030**
Jowar	**Hybrid**	**515**	**525**	**540**	**600**	**840**	**840**	**880**
	Maldandi	**-**	**-**	**555**	**620**	**860**	**860**	**900**
Bajra		**515**	**525**	**540**	**600**	**840**	**840**	**880**
Maize		**525**	**540**	**540**	**620**	**840**	**840**	**880**
Ragi		**515**	**525**	**540**	**600**	**915**	**915**	**965**
Arhar(Tur)		**1390**	**1400**	**1410**	**1550^^**	**2000**	**2300**	**3000!!**
Moong		**1410**	**1520**	**1520**	**1700^^**	**2520**	**2760**	**3170!!**
Urad		**1410**	**1520**	**1520**	**1700^^**	**2520**	**2520**	**2900!!**
Cotton	**F-414/H-777/J34**	**1760**	**1760**	**1770**	**1800**	**2500a**	**2500a**	**2500a**
	H-4	**1960**	**1980**	**1990**	**2030**	**3000aa**	**3000aa**	**3000aa**
Groundnut In Shell		**1500**	**1520**	**1520**	**1550**	**2100**	**2100**	**2300**
Sunflower Seed		**1340**	**1500**	**1500**	**1510**	**2215**	**2215**	**2350**
Soyabean	**BLACK**	**900**	**900**	**900**	**910**	**1350**	**1350**	**1400**
	YELLOW	**1000**	**1010**	**1020**	**1050**	**1390**	**1390**	**1440**
Sesamum		**1500**	**1550**	**1560**	**1580**	**2750**	**2850**	**2900**
Nigerseed		**1180**	**1200**	**1220**	**1240**	**2405**	**2405**	**2450**
Rabi Crops								
Wheat		**640**	**650$**	**750$$**	**1000**	**1080**	**1100**	**--**
Barley		**540**	**550**	**565**	**650**	**680**	**750**	**--**
Gram		**1425**	**1435**	**1445**	**1600**	**1730**	**1760**	**--**
Masur (Lentil)		**1525**	**1535**	**1545**	**1700**	**1870**	**1870**	**--**
Rapeseed/Mustard		**1700**	**1715**	**1715**	**1800**	**1830**	**1830**	**--**
Safflower		**1550**	**1565**	**1565**	**1650**	**1650**	**1680**	**--**
Toria		**1665**	**1680**	**1680**	**1735**	**1735**	**1735**	**--**
Other Crops								
Copra	**Milling**	**3500**	**3570**	**3590**	**3620**	**3660**	**4450**	**4450**
(Calender Year)	**Ball**	**3750**	**3820**	**3840**	**3870**	**3910**	**4700**	**4700**
De-Husked Coconut		**-**	**-**	**-**	**-**	**988**	**1200**	**1200**
Jute		**890**	**910**	**1000**	**1055**	**1250**	**1375**	**1575**
Sugarcane@		**74.50**	**79.50**	**80.25**	**81.18**	**81.18**	**129.84**	**139.12***
Tobacco(Vfc)	**Black Soil(F2 Gr)**	**32.00**	**32.00**	**32.00**	**32.00**	**-**		
(Rs. per kg.)	**Light Soil (L2 Gr)**	**34.00**	**34.00**	**34.00**	**34.00**	**-**		

Source: Directorate of Economics and Statistics, Ministry of Agriculture and Co-operation[3.7]

The minimum support price is declared by the CACP on the basis of cost of cultivation and the recommended support price by the state governments. The thrust of the price mechanism is to give a remmunerative returns to agricultural commodities. The situation of open market operations for agricultural commodities is always fluctuating

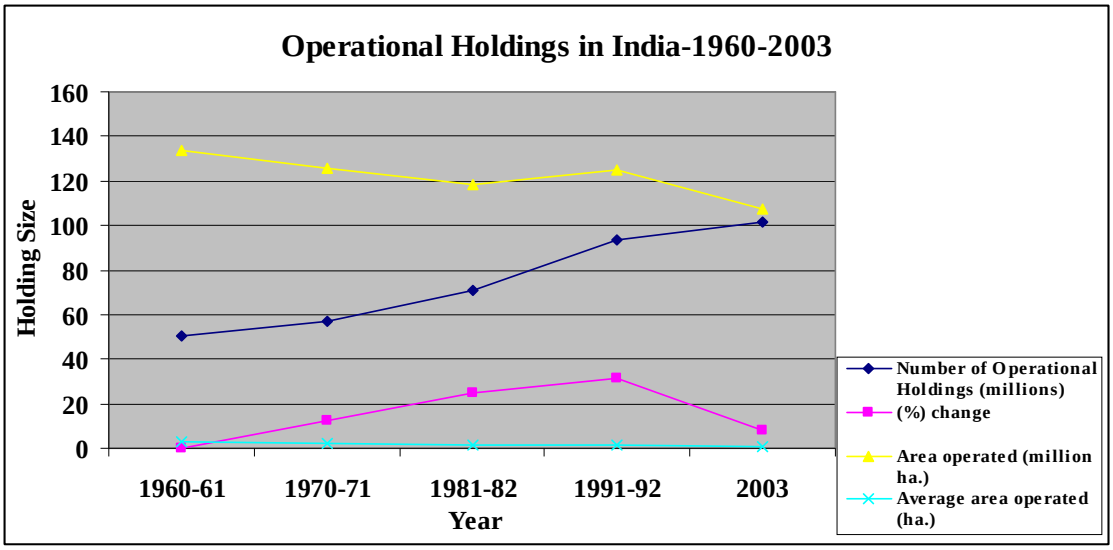
which have the adverse impact on the returns from the agricultural operations. While declaring the support prices for agricultural commodities it is expected that the market prices should be above the support price. And whenever the market price is below the support price the government will enter the market for the procurement. Basically the methodology of accounting of cost of cultivation is not beyond doubt. Due availability of the factors of production the cost of cultivation may vary but the accounting mechanism doesn't consider it. The transportation cost is only considered for the crops of Sugarcane and Jute. The cost of transportation is substantially higher for the Cotton due to the time lagging at government procurement centers. As a result the support price is benefited for the less and incurred losses for the large section of farming community. The average gap between the cost of cultivation and support prices for the year 2005-06 was about 38 to 50 per cent. However the gap between the recommended prices from state government and price announced by CACP is around 50 to 55 per cent. It means center announced the support price below the recommended prices by the states. During the field visit for the collection of primary data for the present study we observed that around 80 per cent of the surveyed farmers are unaware of the Minimum Support Price mechanism. For the year 2010-11 the support price for Cotton is Rs.3000/- per quintal and market price during the period is observed around Rs.4500/-. The fact is that the difference between the support and market prices is due to the decline in the production of Cotton. The cost of cultivation of Cotton is around Rs.4000/-. It means the cost of cultivation and support price have no

positive relationship. The declining returns from agriculture and increase in cost of cultivation resulted in to increase in indebtedness of farmers.

3.7 Operational Holdings in India-1960-2003

	1960-61	1970-71	1981-82	1991-92	2003
Number of Operational Holdings (millions)	50.77	57.07	71.04	93.45	101.27
(%) change	--	12.4	24.5	31.5	8.4
Area operated (million ha.)	133.48	125.68	118.57	125.10	107.65
Average area operated (ha.)	2.63	2.20	1.67	1.34	1.06

Source: NSSO, Some Aspects of Operational Land Holdings in India, Various rounds, 17th, 26th, 37th, 48th and 59th (3.8)



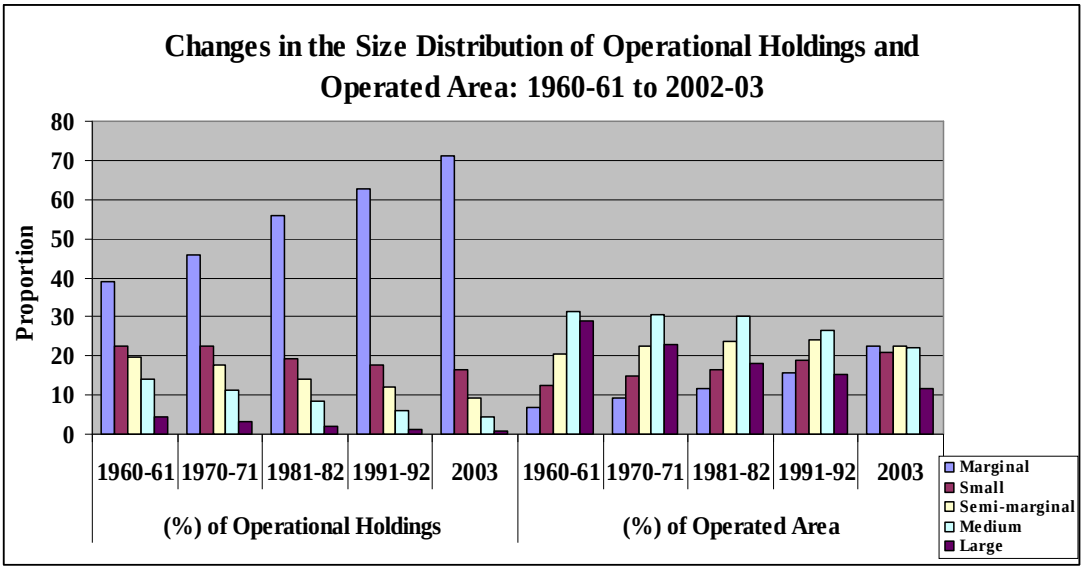
3.8 Changes in the Size Distribution of Operational Holdings and Operated Area: 1960-61 to 2002-03

	(%) of Operational Holdings					(%) of Operated Area				
	1960-61	1970-71	1981-82	1991-92	2003	1960-61	1970-71	1981-82	1991-92	2003
Marginal	39.01	45.8	56.0	62.8	71.0	6.9	9.2	11.5	15.6	22.6
Small	22.6	22.4	19.3	17.8	16.6	12.3	14.8	16.6	18.7	20.9
Semi-marginal	19.8	17.7	14.2	12.0	9.2	20.7	22.6	23.6	24.1	22.5
Medium	14.0	11.1	8.6	6.1	4.3	31.2	30.5	30.1	26.4	22.2
Large	4.5	3.1	1.9	1.3	0.8	29.0	23.0	18.2	15.2	11.8

Source: NSSO, Some Aspects of Operational Land Holdings in India, Various rounds, 17th, 26th, 37th, 48th and 59th (3.9)

The increasing burden of labour force on a slowly contracting cultivable land area leads to increasing number of holdings with lower size. Over the period 1960-61 to 2003, the number of holdings doubled from 51 to 101 million, while the area operated declined from 133 to 108 million hectares. This has resulted in a sharp decline in average size of holding and growing

marginalization. Added to this the fact is that despite land reforms, the land holding pattern continued to be skewed.



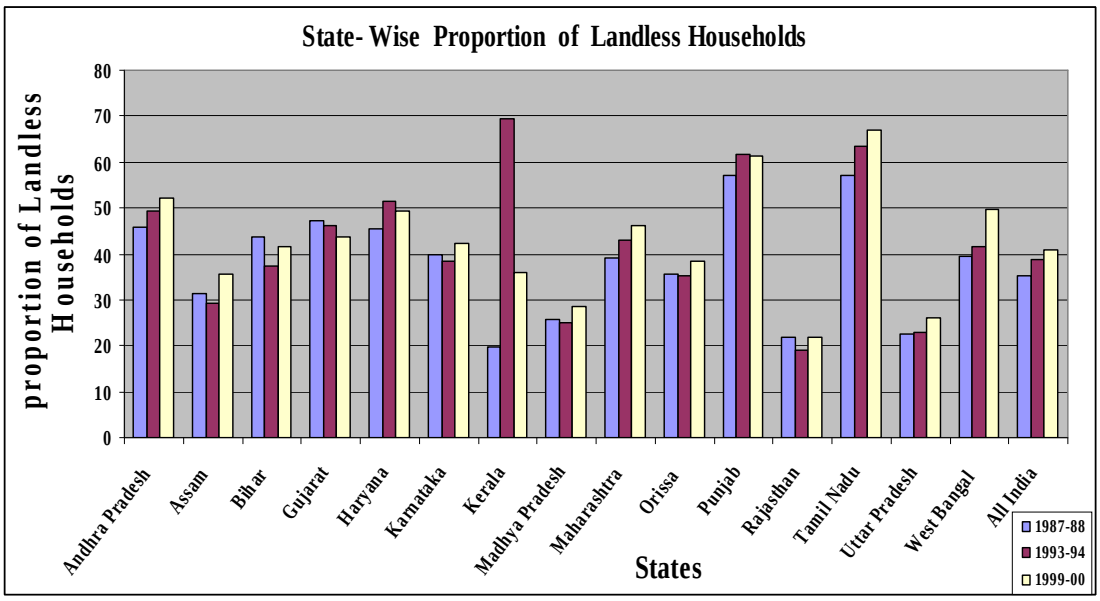
3.9 State- Wise Proportions of Landless Households

State	1987-88	1993-94	1999-00
Andhra Pradesh	45.9	49.5	52.3
Assam	31.2	29.4	35.6
Bihar	43.7	37.5	41.5
Gujarat	47.2	46.3	43.8
Haryana	45.6	51.5	49.3
Karnataka	40	38.3	42.2
Kerala	19.6	69.4	36.1
Madhya Pradesh	25.8	24.9	28.6
Maharashtra	39.1	43	46
Orissa	35.7	35.4	38.4
Punjab	57.1	61.5	61.2
Rajasthan	21.9	18.9	21.8
Tamil Nadu	57.1	63.4	67
Uttar Pradesh	22.7	22.9	26.2
West Bangal	39.6	41.6	49.8
All India	35.4	38.7	40.9

Source: Ghosh & Chandrashekhar, 2004[3.10]

Decline in size of holding and increase in the number of small and marginal holdings, as well as, the number of rural landless households had continuously increased after the 1980s. In states like Tamil Nadu, Andhra Pradesh, Punjab, West Bengal, Harayana, Maharashtra and Karnataka

the proportion of landless households abnormally gone up after the period of 1986-87.

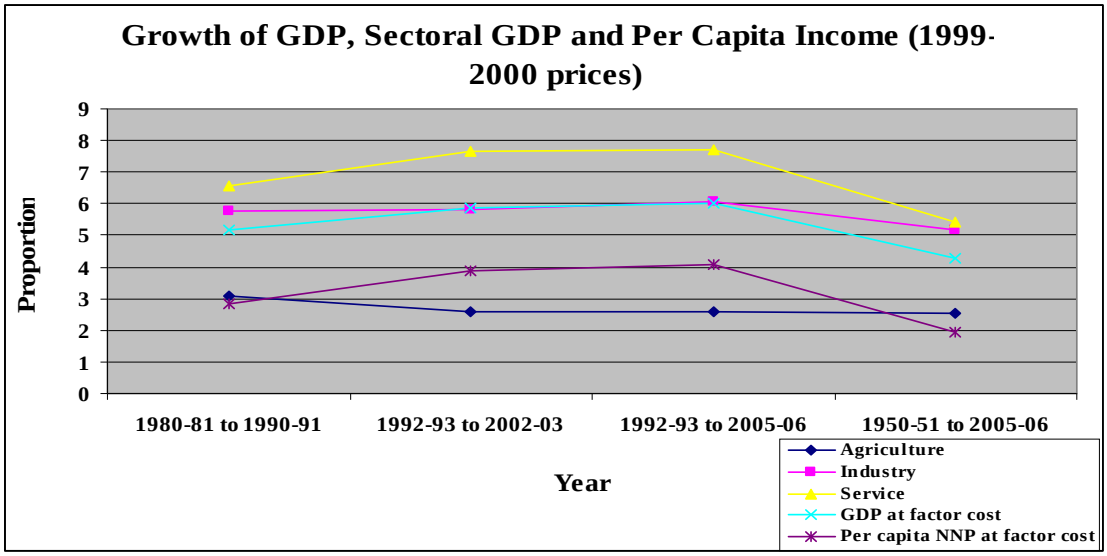


As well as, the plan and non-plan expenditure on agriculture did not increase in proportion to its share in employment and GDP of the country. Total expenditure on agriculture during reforms period increased slightly which shown a disproportionate trend for the period brings out overall neglect of agriculture in fiscal policy. The unremmunerative state of agricultural operations caused for the increase in landless households. The area operated was declined from 133.48 million ha. to 107.55 million ha. between 1960 -61 and 2003-04. As well as the average size of holding reduced from 2.63 ha. to 1.06 ha. during the period of 1960 to 2003. Increase in landless households on the one hand and decline in total area operated and average size of holding indicated increase in the use of agriculture land for the purpose of industrialization and urbanization. It has affected the total production of food and non-food crops. Nonetheless, we achieved the food security after the four decades of green revolution.

3.10 Growth of GDP, Sectoral GDP and Per Capita Income (1999-2000 prices)

Sr. No.	Year	Agriculture	Industry	Service	GDP at factor cost	Per capita NNP at factor cost
1.	1980-81 to 1990-91	3.08	5.79	6.54	5.15	2.82
2.	1992-93 to 2002-03	2.61	5.82	7.65	5.85	3.89
3.	1992-93 to 2005-06	2.57	6.05	7.72	6.00	4.10
4.	1950-51 to 2005-06	2.54	5.19	5.40	4.26	1.94

Source: CSO National Accounts Statistics, Various years[3.11]



The most important manifestation of the crisis is deceleration of agricultural growth combined with increasing inefficiency in use of input and thereby adversely affecting the profitability of the sector. The growth rate of GDP from agriculture decelerated from 3.08 per cent during 1980-81 to 1990-91 to 2.61 per cent in 1992-93 to 2002-03. The growth rate of agriculture both in terms of GDP from agriculture and agricultural output has also decelerated in most of the states. Increasing share of service sector in GDP is an obstacle in sustainable development due to lack of creativity. Hence, sectoral transformation in the economy is required. Industrial sector has also shown an increasing trend during the mentioned period.

But the share of service sector was high as compare to other sectors. Increasing share of the service sector in GDP indicates that the post reforms policies were more in favour of the same and adverse to the agriculture sector. The negligence of the agriculture in the policy domain has reflecting by the declining share of the sector in GDP during the post reforms period.

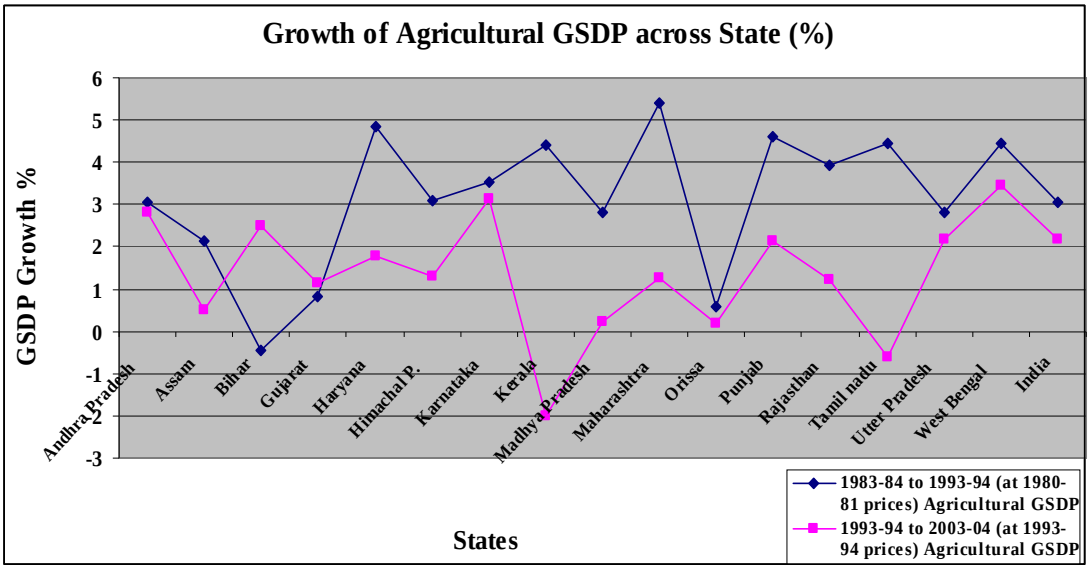
3.11 Growth of Agricultural GSDP and GSDP across States (%)

Sr. No.	State	1983-84 to 1993-94 (at 1980-81 prices)		1993-94 to 2003-04 (at 1993-94 prices)	
		Agricultural GSDP	GSDP	Agricultural GSDP	GSDP
1.	Andhra Pradesh	3.05	4.58	2.80	5.63
2.	Assam	2.12	3.51	0.51	2.93
3.	Bihar	-0.45	2.69	2.50	5.34
4.	Gujarat	0.84	5.00	1.13	6.19
5.	Haryana	4.86	6.18	1.77	5.96
6.	Himachal P.	3.08	5.89	1.30	6.53
7.	Karnataka	3.54	5.86	3.12	7.10
8.	Kerala	4.40	5.33	-2.00	4.85
9.	Madhya Pradesh	2.82	5.21	0.23	4.14
10.	Maharashtra	5.39	7.42	1.27	4.92
11.	Orissa	0.57	3.39	0.17	3.96
12.	Punjab	4.62	5.13	2.15	4.13
13.	Rajasthan	3.93	6.19	1.21	5.32
14.	Tamil nadu	4.43	7.45	-0.60	5.08
15.	Utter Pradesh	2.80	4.66	2.18	3.76
16.	West Bengal	4.45	4.73	3.45	7.03
17.	India	3.05	5.32	2.19	6.01

Source: CSO Gross State Domestic Product, Various Years[3.12]

The growth of agriculture GSDP shows a declining trend from 3.05 to 2.19 per cent for the period 1983-84 to 2003-04. It means the agriculture GSDP was quite high in pre reforms period and decelerated during the post reforms period. It is expected to grow at 4 per cent per annum but resorted at 2.19 per cent for the decade. The agriculture GSDP of the suicide affected states has also shown a deceleration. In Maharashtra

agriculture GSDP dwindled from 5.39 to 1.27 per cent whereas, GSDP decreased from 7.43 to 4.92 per cent.



It means both the agriculture GSDP and GSDP shown sharp decline in the post reforms period. Kerala has shown negative GSDP (-2 per cent) for the period. The states like Haryana and Punjab where the green revolution was very successful also experienced a sharp deceleration in agriculture and overall growth during the post reforms period. State like Bihar experienced increase in both agriculture and GSDP for the mentioned period and the same has happened with Orissa. These are the backward states of the country with high incidence of poverty. Gujarat and Utter Pradesh have shown tremendous improvement in agriculture sector. Among these, most striking is that GSDP of West Bengal was increased from 4.73 to 7.03 per cent during the post reforms period which was quite high than national average. The states that were comparatively developed in agriculture and general growth experienced huge setback during the post reforms period. That was happening due to both technological and policy related factors. On the other hand backward states experienced

increasing growth in general and agriculture in particular. Agriculture is the root of the sustainable development. Hence, the crisis in agriculture has multiple impacts on economy of the nation as a whole.

3.12 Gross Capital Formation in Agriculture

Year	Total	Public	PIA-GDPA-%@constant Prices	
		Old Series (1993-94 prices)		
1990-91	14836	4395	10441	1.92
1995-96	15690	4849	10841	1.57
1996-97	16176	4668	11508	1.51
1997-98	15942	3979	11963	1.43
1998-99	14895	3870	11025	1.26
1999-00	17304	4221	13083	1.37
		New Series (1999-00 prices)		
1999-00	43473	7754	35719	2.2
2000-01	38176	7018	31158	1.9
2001-02	46744	8529	38215	2.9
2002-03	45867	7849	38018	2.1
2003-04	47833	12809	35024	2
2004-05	43123	12591	30532	1.7

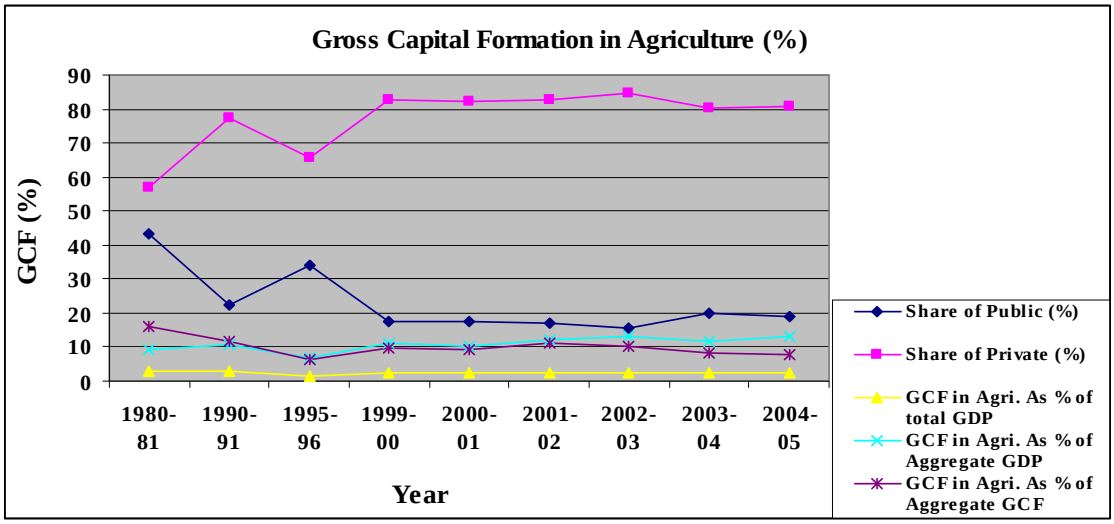
Source: Economic Survey, 2005-06[3.13]

The data on public and private investment in agriculture doesn't depict any satisfactory picture but on the contrary it brings out vividly the neglect. From 1996-97 onwards total public and private investment in Indian agriculture has declined substantially and increased slightly for 1999-00. For the subsequent period of 1999-00 to 2004-05 the situation brings out overall fluctuating trend. When public investment in agriculture was not satisfactory the private was also bound to fall and thereby the total investment. Means the withdrawal of public sector compels an equal reciprocal withdrawal by private sector, projects the complementarity hypothesis. Hence the overall decline in the public investment in agriculture causes for the deceleration in the growth of the sector.

3.13 Gross Capital Formation in Agriculture at Current Price (1999-2000 series)

Year	Total (GCF) Rs. crore	Public (GCF) Rs. crore	Private (GCF) Rs. crore	Share of Public (%)	Share of Private (%)	GCF in Agri. As % of total GDP	GCF in Agri. As % of Aggregate GDP	GCF in Agri. As % of Aggregate GCF
1980-81	4342	1876	2466	43.2	56.8	3.0	9.2	16.1
1990-91	15839	3586	12253	22.6	77.4	2.8	10.5	11.5
1995-96	17392	5952	11440	34.2	65.8	1.7	6.9	6.3
1999-00	50151	8670	41481	17.3	82.7	2.6	11.2	9.8
2000-01	46432	8176	38256	17.6	82.4	2.2	10.3	9.2
2001-02	60366	10353	50013	17.2	82.8	2.6	12.4	11.1
2002-03	61883	9564	52319	15.5	84.5	2.5	13.1	10.1
2003-04	61827	12218	49609	19.8	80.2	2.2	11.6	8.4
2004-05	70786	13610	57176	19.2	80.8	2.3	13.2	7.6

Source: Report of the Expert Group on Agricultural Indebtedness, 2007 (3.14)



The share of Gross Capital Formation in Indian agriculture in total GCF started to decline since the early 1980s. In the year 1995-96, it declined to 6.3 per cent from 16.1 per cent during 1980-81.There was a steep decline in the share of public sector GCF in agriculture to 17.3 per cent in 1999-2000 from 43.2 per cent in 1980-81. Thereafter it shows a marginal increase. On the contrary private investment failed to compensate for the drastic decline in public sector investment. The share of private investment was

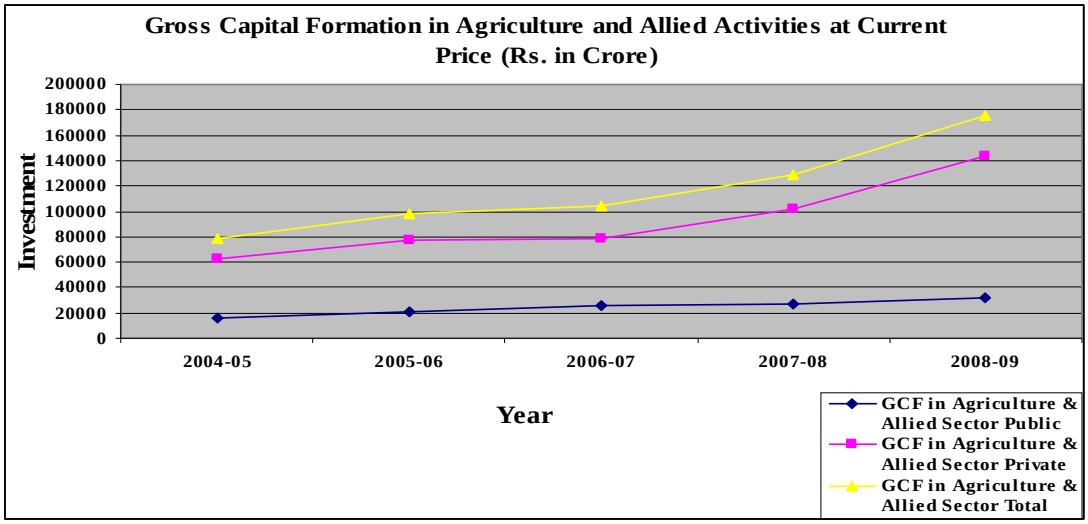
increased during the period of 1995-96 to 2003-04. The consequence was that the overall GCF in agriculture as a share of total capital formation in the country declined sharply from 16.1 per cent in 1980-81 to 7.6 per cent in 2004-05. As well as, the GCF in agriculture to total GDP was stagnated around 2.5 per cent during the abovementioned period and the GCF in agriculture as per cent of aggregate GDP around 11 per cent. It means the government gradually withdrawn the institutional support to the agriculture sector in general and during the post reforms period in particular. This led to unprecedented distress that has been one of the causes underlying the rising trend in the incidence of farmers suicide in the country.

3.14 Gross Capital Formation in Agriculture and Allied Activities at Current Price (Rs. in Crore)

Year	GCF in Agriculture & Allied Sector			GCF of Economy (by industry of use)			Share of Agriculture & Allied Sector in Total GCF (%)		
	Public	Private	Total	Public	Private	Total	Public	Private	Total
2004-05	16182	62666	78848	240755	770168	1010923	6.7	8.1	7.8
2005-06	20739	76818	97557	293188	936746	1229934	7.1	8.2	7.9
2006-07	25606	78883	104489	359778	1132574	1492352	7.1	7.0	7.0
2007-08	27379	101287	128666	442177	1363491	1805668	6.2	7.4	7.1
2008-09	31755	143559	175314	524241	1388281	1912522	6.1	10.3	9.2

Source- Central Statistical Organization, New Delhi 2010[3.15]

Capital formation is the prerequisite for the economic growth which is widely acknowledged by the models of economic growth. Whereas agriculture development is the precondition of the industrialization. Looking at the trend of capital formation in agriculture sector it was declined from 7.8 to 7.1 per cent during the period of 2004-08, which is the period known for agrarian crisis and farmers suicides.



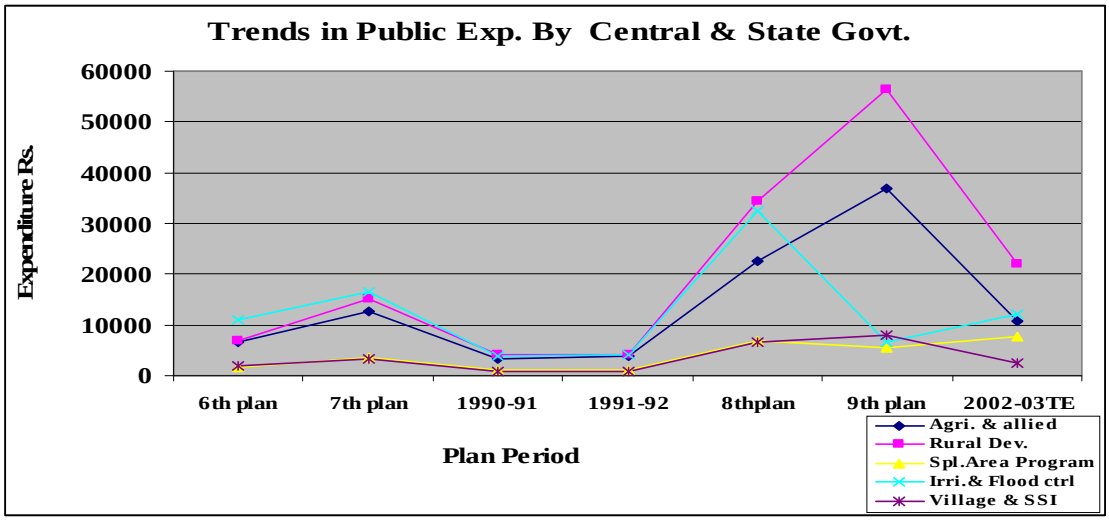
On the one hand government announced economic relief packages for suicide hit states and on the other it reduced the share of capital formation in agriculture. The interesting fact is that the share of public sector was declined from 6.7 to 6.1 per cent while the share of private in GCF increased from 8.1 per cent to 10.3 per cent. The increased share of private capital formation is a good sign for the development of the sector but this does not seem to be happening due to the decline in share of public sector in GCF. The role of public sector is important particularly in developing economies but the policy makers thrown open the agriculture sector without any safeguards. Which have the negative impact on the sector.

3.15 Trends in Public Exp. By Central & State Govt. (as Proportion of NNP@FC/Rs. In Lakh)

Head	6th plan (1980-85)	7th plan (1985-90)	1990-91)	1991-92	8thplan (1992-97)	9th plan (1997-02)	2002-03TE
Agri. & allied	6623.5	12792.6	3405.4	3850.5	22467.2	36818.1	10691.28
Rural Dev.	6996.8	15246.5	4149.9	4141.6	34425.4	56427.5	21963.1
Spl.Area Program	1580.3	3470.3	986.3	1067.3	6750.1	5536.3	7698.97
Irri.& Flood ctrl	10929.9	16589.9	3974.1	4231.9	32525.3	6709.5	12164.42
Village & SSI	1945.1	3249.3	877.9	941.2	6734.2	8088.7	2385.03
Total Rural Dev.	28075.6	51348.6	13393.6	14232.5	102502.2	169880.1	54902.71
Current NNP@FC	784255	1466896	450145	514607	4114780	7791878	2003282

Total Rural Dev. As %of NNP@FC	3.6	3.5	3	2.8	2.5	2.2	2.7

Source: Economic survey for years[3.16]



3.16 Public Sector Outlay in India

Sector	9th Plan Outlays$	10th Plan Outlays	11th Plan Outlays	2007-08		2008-09		2009-10		2010-11
				BE	AE	BE	RE	BE*	RE##	BE##
Agriculture and Allied Activities(*)	37546	58933	136381	19370	18770	27274	23405	26291	10123	12308
Rural Development	73439	121928	301069	32509	34725	222906	61335	63627	43642	46194
Special Area Programmes	3649	20879	26329	7732	6700	8271	8152	7501	NA	NA
Irrigation & Flood Control	55598	103315	210326	38558	38241	48094	43296	42182	404	526
Energy	215545	403927	854123	106275	33019	127496	132595	151066	109685	146579
Industry & Minerals	69972	58939	153600	25003	10989	34918	32217	45222	30694	39019
Transport	121324	225977	572443	101897	60321	121116	114774	129746	88948	101998
Communications	47616	98968	95380	25812	794	21937	20236	16731	16099	18529
Science, Technology & Environment	25529	30424	87933	10378	10017	13187	12089	15002	9908	13677
General Economic Services	15038	38630	62523	11751	9838	18062	13278	15476	5446	7554
Social Services	182005	347391	1102327	172961	133060	216548	209605	230984	109288	136566
General Services	11940	16328	42283	7067	4782	8020	5547	8823	1354	1535
Total	859201	1525639	3644717	559315	361255	867828	676529	752650	425590	524484

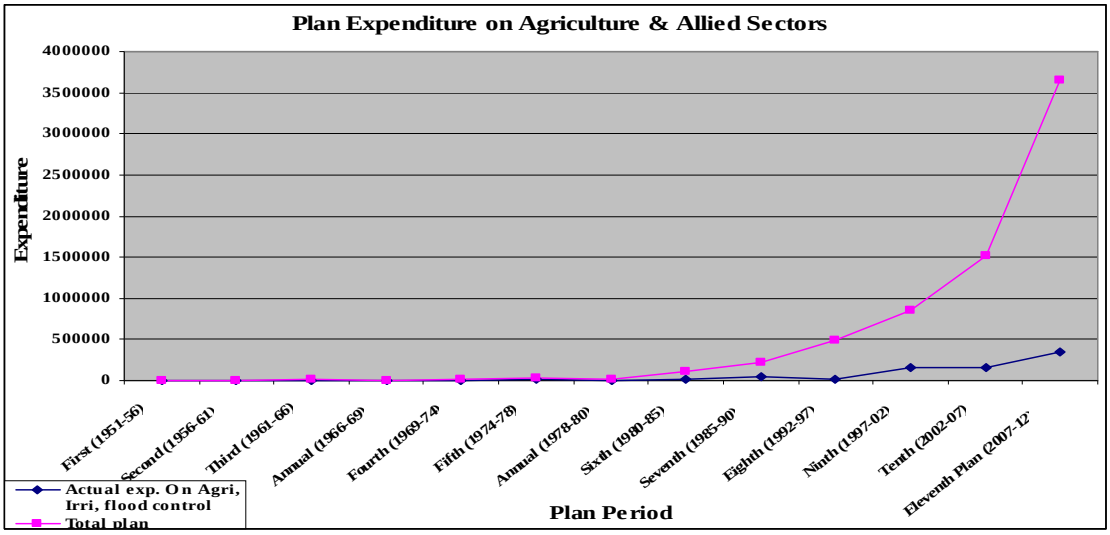
Source: Planning Commission[3.17]

For center only
*** Total center and state except Maharashtra and UTs**
Note: Total may not tally due rounding of figures

3.17 Plan Expenditure on Agriculture & Allied Sectors

Plan	Actual exp. On Agri, Irri, flood control	Total plan expenditure	Col-2 as % of col-3
First (1951-56)	724	1960	37
Second (1956-61)	979	4672	20.9
Third (1961-66)	1754	8577	20.5
Annual (1966-69)	1578	6625	23.8
Fourth (1969-74)	3674	15779	23.3
Fifth (1974-78)	8741	39426	22.1
Annual (1978-80)	3284	12177	26.9
Sixth (1980-85)	16130	109291	23.9
Seventh (1985-90)	48099	218730	22.0
Eighth (1992-97)	12729	495669	20.7
Ninth (1997-02)	161791	859201	18.83
Tenth (2002-07)	162248	1525639	10.63
Eleventh Plan (2007-12)	346707	3644717	9.51

Source: Planning Commission plan document of 11th Five Year Plan(3.18)



The change in focus during the second plan period (1956-61) towards heavy industries, led to slackening of investment in the farm economy. This has shown the result in the form of slow down in the overall growth of the sector. Then for the next plan again the expenditure on the agriculture sector has declined and thereafter increased little. But it was stagnated around 24 per cent of the total plan expenditure. Actually, it has expected to grow more than 30 per cent during the period of the Green Revolution.

After the sixth five year plan (1980-85) the plan expenditure on agriculture declined substantially. Where the seeds of the future agrarian crisis were sown. Plan expenditure on agriculture and important allied sectors like irrigation has declined much faster during the reforms period than before. Particularly during the period of tenth plan, the ratio of actual expenditure on agriculture to total plan expenditure declined to 10.63 per cent from the earlier 18.83 per cent i.e. ninth plan. This had negative multiplier effects on the agrarian economy of the country. This is the period when the agrarian crisis was deeply rooted and took the lives more than two lakh of farmers in the country. After such worst periods of agriculture sector the expectations of agriculture sector from 11th five year plan have increased. But the plan also did not complete the expectations and the sectors' share in total plan expenditure remains at the level of 9.51 per cent.

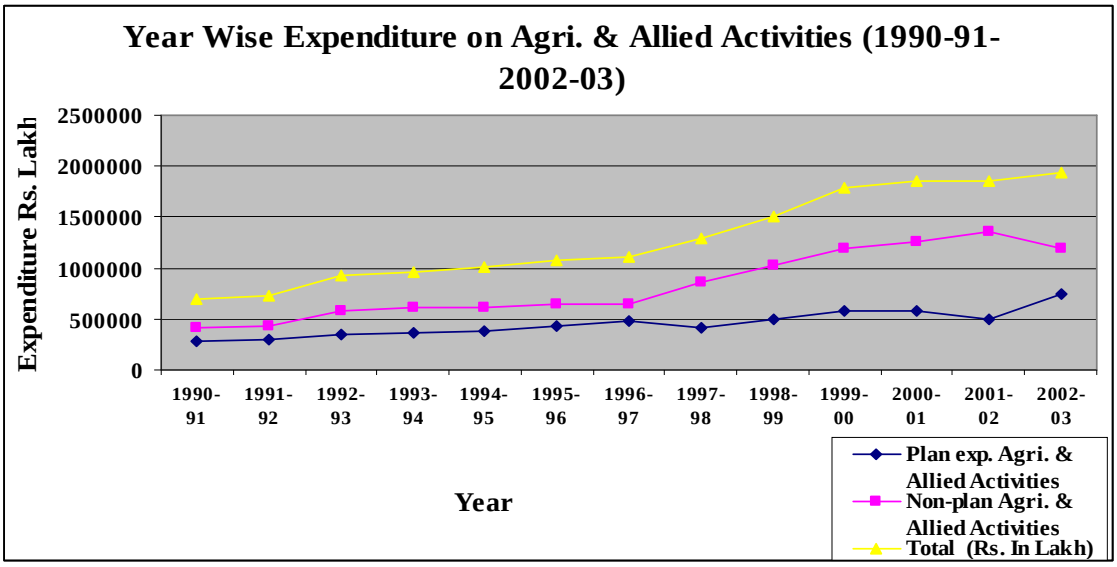
3.18 Year Wise Expenditure on Agriculture & Allied Activities (1990-91-2002-03)

Year	Plan exp. Agri. & Allied Activities	Non-plan Agri. & Allied Activities	Total (Rs. In Lakh)
1990-91	279119	413672	692791
1991-92	294998	428248	723246
1992-93	342597	579283	921880
1993-94	356531	605385	961916
1994-95	386768	615112	1001880
1995-96	425378	646363	1071741
1996-97	473714	639943	1113657
1997-98	419805	865861	1285666
1998-99	492388	1022090	1514478
1999-00	587502	1198347	1785849
2000-01	581370	1264869	1846239
2001-02	490495	1364694	1855189
2002-03	747222	1196240	1943462

Source: Handbook of statistics on state government finance, RBI-2006[3.19]

Year wise expenditure on agriculture and allied activities during the post reforms period has remained mere stagnant. It resulted in to an increase

in the individual farm household level expenditure on creation of the infrastructural facilities. 1997-98, 2000-01, 2001-02 were the worst years for the agriculture sector.



This period witnessed a sharp decline in the expenditure on agricultural and allied activities. And this is the period when the agrarian crisis has deeply rooted in the country and further manifested in the distressful act of committing suicides by farmers.

3.19 Year wise Public Sector Outlays and Expenditure on Agriculture and Allied Activities (Rs. Crore)

Five Year Plan / Annual Plan	Agriculture and Allied Activities		Total Plan Outlay		Percentage share of Agriculture and Allied Activities to Total	
	Plan Outlay	Actual Expenditure	Plan Outlay	Actual Expenditure	Plan Outlay	Actual Exp.
Ninth Plan (1997-2002)	37546	37239 $	859200	941041$	4.9	4.0
(1997-98)	6974	5929	155905	129757	4.5	4.6
(1998-99)	8687	7698	185907	151581	4.7	5.1
(1999-2000)	8796	7365	192263	160608	4.6	4.6
(2000-2001)	8281	7577	203359	164479	4.1	4.6
(2001-2002)	9097	8248	228893	186315	4.0	4.4

Tenth Plan (2002-07)	**58933**	**60702 $**	**1525639**	**1618460 $**	**3.9**	**3.8**
(2002-2003)	**9977**	**7655**	**247897**	**210203**	**4.0**	**3.8**
(2003-2004)	**9940**	**8776**	**256042**	**224827**	**3.9**	**3.9**
(2004-2005)	**11109**	**10963**	**287843**	**263665**	**3.9**	**4.2**
(2005-2006)	**13840**	**12554**	**361239**	**247177**	**3.8**	**5.1**
(2006-2007)	**16163**	**16573**	**441285**	**309912**	**3.7**	**5.3**
Eleventh Plan (2007-12)	**136381**	**N.A.**	**3644718**	**N.A.**	**3.7**	**N.A.**
(2007-2008)	**19370**	**18770**	**559314**	**361255**	**3.5**	**5.2**
(2008-2009)	**27274**	**23405***	**867828**	**676529***	**3.1**	**3.5**
(2009-2010)	**26291**	**10123****	**752650****	**425590****	**2.4**	**3.5**
(2010-2011)##	**12308**	**N.A.**	**524484**	**N.A.**	**2.3**	**N.A.**

Source: Planning Commission(3.20)
For Center only
*** Revised Figures**
**** Revised Center Figures only**
***** Total Outlay of Center and states except Maharashtra and UTs, $ Indicate 9th and 10th plan realization**

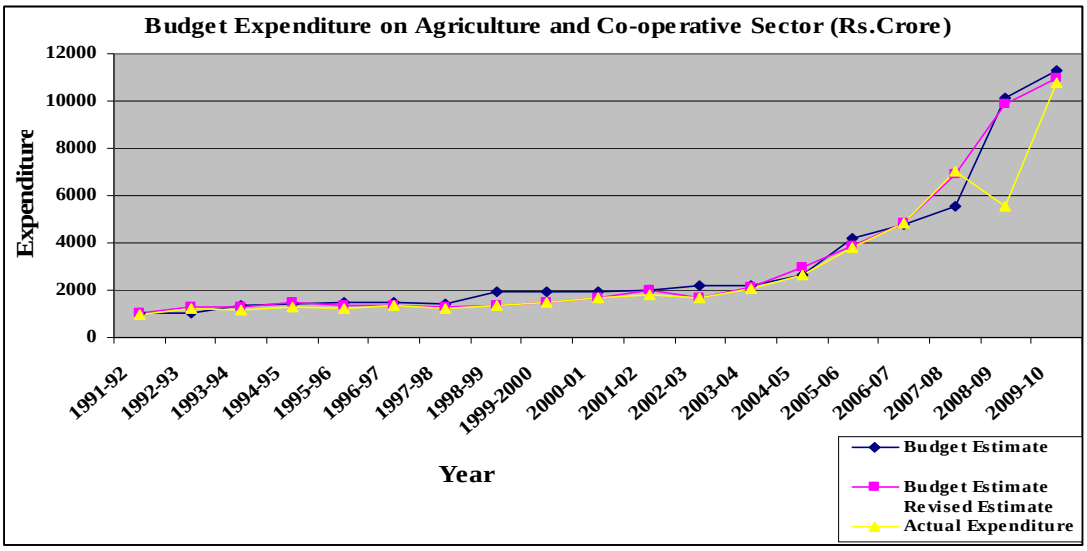
The data in the above table reveals the year wise expenditure for 9th to 11th five year plan. The actual expenditure on agriculture and allied activities never crossed the 5.3 per cent of the total plan outlay. During the time of crisis the role of the State has been vital for the upliftment of the society. Earlier it was acknowledged by Kautilya. As well as the importance of the role of state through public expenditure to recover from the crisis was experienced during the period of the great recession of the 1930s. But the public expenditure during the period of agrarian crisis has been fluctuating and remained at 5.3 per cent of the total plan outlay.

3.20 Budget Expenditure on Agriculture and Co-operative Sector (Rs.Crore)

Year	Budget Estimate	Revised Estimate	Actual Expenditure	% change
1991-92	**1041.35**	**1016.93**	**957.86**	**--**
1992-93	**1050.00**	**1273.16**	**1214.88**	**21.15**
1993-94	**1330.00**	**1320.05**	**1183.50**	**-2.65**

1994-95	1405.00	1458.84	1279.43	7.49
1995-96	1490.00	1325.39	1246.42	-2.64
1996-97	1471.25	1377.91	1378.61	9.58
1997-98	1431.00	1266.28	1222.80	-12.74
1998-99	1956.00	1378.41	1358.89	10.01
1999-2000	1956.00	1492.00	1471.90	7.67
2000-01	1965.00	1692.00	1666.04	11.65
2001-02	1985.00	1985.00	1792.92	7.07
2002-03	2167.00	1667.00	1676.78	-6.92
2003-04	2167.00	2120.00	2050.73	18.23
2004-05	2650.00	2945.00	2657.42	22.83
2005-06	4179.32	3890.00	3798.69	30.04
2006-07	4800.00	4860.00	4860.00	21.83
2007-08	5560.00	6927.94	7049.36	31.05
2008-09	10105.67*	9865.58*	5530.33*	-27.46
2009-10	11307.07*	10965.23*	10794.86*	48.76

Source: Department of Agriculture and Co-operation, Plan & Policy Budget Division[3.21]



There is a fluctuation in the budgetary expenditure on agriculture during the reforms period. The year 1997-98, there was a first big setback to the agriculture sector when the budgetary expenditure declined by 12.74 per

cent over the previous year. Thenafter it was increased but not significantly. After the year 2000-01 the sense of crisis has been generated in the agriculture sector. And in the following year the expenditure again declined by 6.92 per cent. Thenafter little attention towards agriculture was given and the expenditure increased by around 25 per cent averagely up to the year 2007-08. And again it was declined by 27.46 per cent in 2008-09. Hence the inconsistency in the budgetary allocation on agriculture sector caused for the vulnerability of the farming community.

3.2 Agricultural Credit and Farm Indebtedness in India

The importance of farm credit as a critical input to agriculture is reinforced by the unique role of Indian agriculture in the macroeconomic framework and its role in poverty alleviation. Recognizing the importance of agriculture sector in the development process, the government and the RBI have played a vital role in creating a broad-based institutional framework for catering to the increasing credit requirements of the sector. Agricultural policies in India have been reviewed from time to time to maintain pace with the changing requirements of the agriculture sector, which forms an important segment of the priority sector lending of scheduled commercial banks (SCBs) and target of 18 per cent of net bank credit has been stipulated for the sector. The approach paper of the Eleventh Five Year Plan has set a target of the growth of 4 per cent for the agriculture sector within the overall GDP growth target of 9 per cent. In this context, the need for affordable, sufficient and timely supply of the institutional credit to agriculture has assumed critical importance.

The evolution of the institutional credit to agriculture could be broadly classified into four distinct phases i.e. 1904-1969 the predominance of co-

operatives and setting up of RBI, 1969-1975 nationalization of commercial banks and setting up of Regional Rural Banks (RRBs), 1975-1990 setting up of NABARD and from 1991 onwards the period of financial sector reforms. The RBI is perhaps the first central bank in the world to have taken interest in the matters related to agriculture and agricultural credit, and it continuously doing (Ramesh Golait-2007)[3.22].

The demand for agricultural credit arises due to; i) the lack of simultaneity between the realization of income and act of expenditure, ii) lumpiness of investment in fixed capital formation and iii) increase in capital investment in agriculture due to technological innovations and liberalized market. Policy makers in India have long recognized the need to provide short and long term institutional credit to agriculture at reasonable rates for meeting farmers needs. This was in recognition primarily as the moneylenders and other non-institutional sources charged higher rates of interest to farmers who often had to mortgage, and sometimes, sell their lands to clear their debt.

3.21 Source Wise Institutional Credit Flow to Agriculture- 1975-76 to 2005-06 (Rs. in Crore)

Agency	1975-76	1983-84	1993-94	2001-02	2002-03	2003-04	2004-05	2005-06
Short Term	1177	3335	11271	40509	45586	54977	74064	105350
Cooperatives	881	2158	7839	18787	19668	22640	27157	34930
Regional Rural Bank	2	120	732	3777	4775	6088	10010	12712
Commercial Bank	213	872	2700	17904	21104	26192	36793	57640
Other agencies	82	185	00	41	39	57	104	68
Medium and Long Term	498	1909	5223	21536	23974	32004	51245	75136
Cooperatives	305	780	2278	4737	3968	4235	4074	4474
Regional Rural Bank	2	143	245	1077	1295	1493	2394	2511
Commercial Bank	192	986	2700	15683	18670	26249	44688	67837
Other agencies	--	--	00	39	41	27	89	314

Total Credit	**1675**	**5244**	**16494**	**62045**	**69560**	**86981**	**125309**	**180486**
Cooperatives	**1186**	**2938**	**10117**	**23524**	**23636**	**26875**	**31231**	**39404**
Regional Rural Bank	**2**	**263**	**977**	**4854**	**6070**	**7581**	**12404**	**15223**
Commercial Bank	**405**	**1885**	**5400**	**33587**	**39774**	**52441**	**81481**	**125477**
Other agencies	**82**	**185**	**00**	**80**	**80**	**84**	**193**	**382**

Source: RBI and NABARD report-2006[3.23]

Institutional credit expanded rapidly during the post bank nationalization period from Rs.1,675 crore in 1975-76 to Rs.1,80,486 crore in 2005-06. The rate of the growth was even higher than the growth rates of GDP originating in agriculture. Despite this growth, the credit needs of agriculture have not been met fully and overwhelming number of farm households have not been able to borrow from institutional sources. Which has increased borrowing of the farmers from the private sources at high rates of interest. While short term credit has remained the dominant component of total credit. Its relative importance declined from 70.3 per cent in 1975-76 to 58.1 per cent in 2005-06. Declined returns from agriculture sector caused for the debt accumulation of farmers.

3.22 Direct Short Term and Long Term Loans for Agriculture and Allied Activities by Formal Institutions (Rs. Crore)

Year	Co-operatives	% change	State Governments	SCBs	% change	RRB	Total	% change
1971-72	769		99	15		--	883	
1972-73	958	19.7286	177	21	28.57143	--	1156	23.61592
1973-74	877	-9.23603	91	219	90.41096	--	1187	2.611626
1974-75	1039	15.59192	78	274	20.07299	--	1391	14.66571
1975-76	1187	12.46841	82	405	32.34568	2	1675	16.95522
1976-77	1431	17.05101	82	508	20.27559	16	2037	17.77123
1977-78	1444	0.900277	98	569	10.72056	44	2155	5.475638
1978-79	1621	10.91919	119	800	28.875	101	2641	18.40212
1979-80	1821	10.98298	133	975	17.94872	--	2928	9.801913
1980-81	2029	10.25136	144	1263	22.80285	--	3436	14.78463
1981-82	2479	18.15248	153	1496	15.57487	168	4296	20.01862

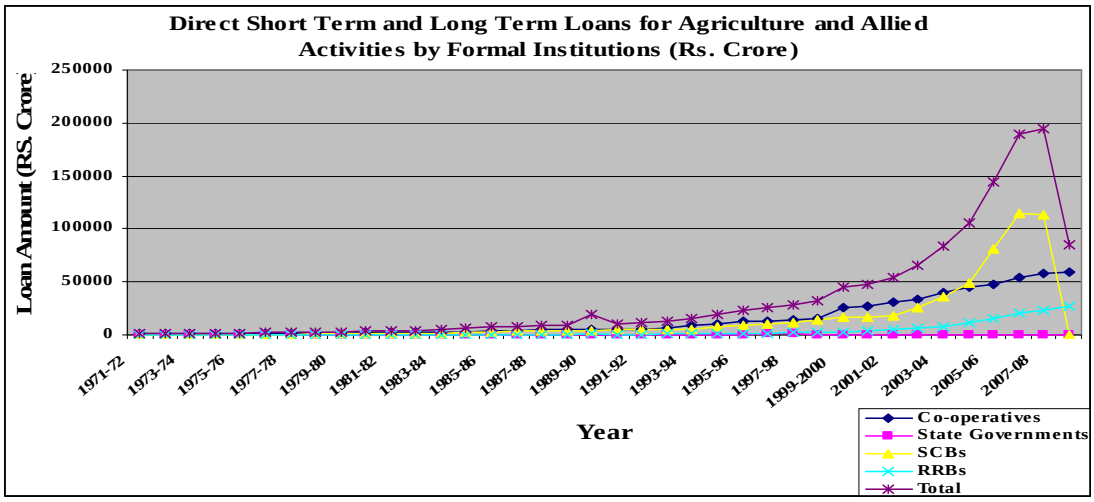
1982-83	2717	8.759661	188	1225	-22.1224	222	4352	1.286765
1983-84	2938	7.522124	185	1858	34.06889	263	5244	17.00992
1984-85	3154	6.848446	241	2461	24.50223	310	6167	14.96676
1985-86	3674	14.15351	354	2729	9.820447	402	7159	13.85668
1986-87	3701	0.729533	210	3332	18.09724	477	7720	7.266839
1987-88	4710	21.42251	478	3526	5.501985	483	9198	16.06871
1988-89	4873	3.344962	275	3813	7.526882	420	9381	1.950752
1989-90	5407	9.876087	292	4282	10.95283	647	19628	52.20603
1990-91	4819	-12.2017	359	4676	8.426005	335	10188	-92.658
1991-92	5797	16.8708	339	4806	2.704952	569	11538	11.70047
1992-93	6484	10.59531	389	4960	3.104839	698	12530	7.916999
1993-94	8484	23.57379	377	5400	8.148148	752	15013	16.539
1994-95	9876	14.09478	407	7408	27.10583	1083	18773	20.02876
1995-96	12483	20.8844	554	9274	20.12077	1381	23692	20.76228
1996-97	13254	5.817112	668	10675	13.12412	1748	26345	10.07022
1997-98	14159	6.391694	858	11537	7.471613	2103	28656	8.064629
1998-99	15099	6.225578	420	14663	21.31897	2515	32697	12.35893
1999-00	25678	41.19869	520	16350	10.31804	2985	45534	28.19212
2000-01	27295	5.924162	487	16440	0.547445	3966	48187	5.505634
2001-02	30569	10.7102	443	18638	11.79311	4546	54195	11.08589
2002-03	34040	10.19683	--	25256	26.20367	5879	65175	16.84695
2003-04	40049	15.00412	--	36203	30.23783	7175	83427	21.87781
2004-05	45009	11.02002	--	48367	25.14938	11927	105303	20.77434
2005-06	48123	6.470918	--	80599	39.99057	15300	144021	26.88358
2006-07	54019	10.91468	--	115266	30.07565	20228	189513	24.00469
2007-08	57643	6.286973	--	113472	-1.58101	23838	194953	2.790416
2008-09	58787	1.946008	--	--	--	26499	85286	-128.587

Source: RBI Hand Book 2010[3.24]

*** Except SCBs and Government SCBs- Scheduled Commercial Banks, RRBs- Regional Rural Bank**

High rates of interest, crop failure, negative returns, extent and incidence of indebtedness and low credit ability on the one hand and the neglect of agriculture by the formal sector of lending on the other had increased dependency of farmers on private sources of credit for more than 80 per cent during post reforms period. The ensuing agrarian distress on account of declining monetary support by-way of public investment and neglect of

the sector by institutional lending mechanism was first predicted in 1986 (Rath).



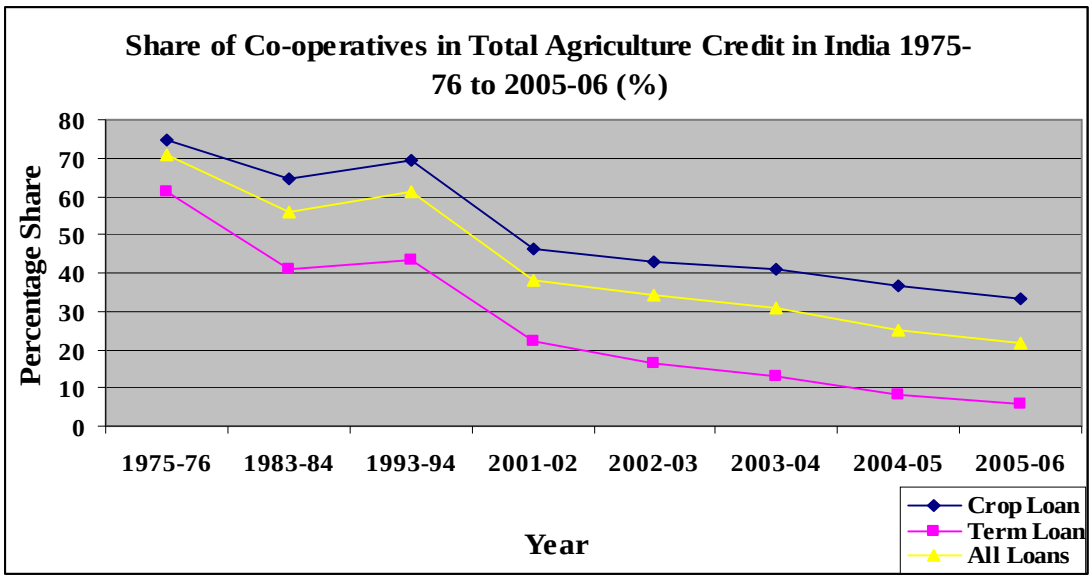
Looking at the short and long term advances for agriculture and allied sectors by formal institutions between 1970-71 and 2008-09, it comes out that the neglect of sector has continuously increased and thereby the distress and strengthening of the grip of private moneylenders. Cultivation being the main source of farm household income and if that itself is not supported by the institutional lending mechanism leads to the increase in cultivation expenditure as farmers to pay higher rates of interest to private moneylenders. Number of banks both in public and private sector achieving the statutory target of 18 per cent between March 2001 and March 2003 has not been more than six (Public Sector) and two (Private Sector) respectively (Deshpande-2008)[3.25].

3.23 Share of Co-operatives in Total Agriculture Credit in India 1975-76 to 2005-06 (in per cent)

Type of Loan	1975-76	1983-84	1993-94	2001-02	2002-03	2003-04	2004-05	2005-06
Crop Loan	74.9	64.7	69.6	46.4	43.1	41.2	36.7	33.2
Term Loan	61.2	40.9	43.6	22.0	16.6	13.2	8.0	6.0
All Loans	70.8	56.0	61.3	37.9	34.0	30.9	24.9	21.8

Source: NABARD-2006[3.26]

Issues relating to agricultural credit include the poor performance of credit co-operatives and regional rural banks and on the other hand inability of commercial banks to meet their targets for agricultural lending and high cost of rural banking. The result has been the continued dependence of farmers on non-institutional sources and the inability of small farmers to obtain timely and adequate institutional credit.



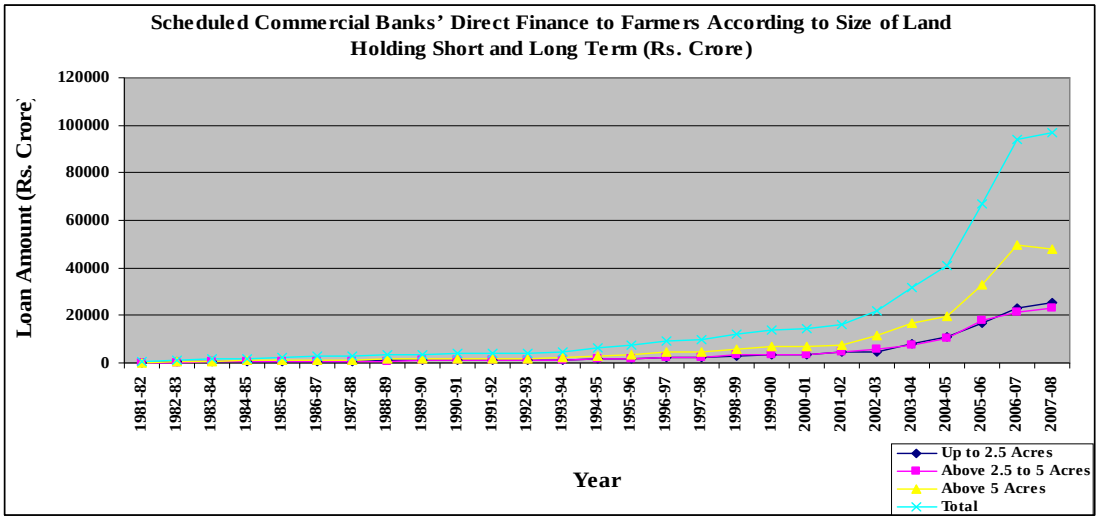
Historically, co-operatives have played a vital role in the provision of institutional credit to agriculture sector. With the entry of commercial banks in rural areas, the share of co-operative credit in total agricultural credit had gone down. It fell from 70.8 per cent in 1975-76 to only 21.8 per cent in 2005-06. Also the share in crop loan has declined from 74.9 per cent in 1975-76 to 33.2 per cent in 2005-06. It means the co-operative sector was not fulfilling the commitments. And also their functioning is regulated by politically dominant groups. These institutions have become a way to entry in politics hence they resort to favouritism for credit disbursement rather than the need based disbursement. While the share of co-operatives in Term Loan declined from 61.2 per cent (1975-76) to 6.0 per cent in 2005-

06. At the same time commercial banks have become dominant source of credit to the agriculture sector.

3.24 Scheduled Commercial Banks' Direct Finance to Farmers According to Size of Land Holding, Short and Long Term (Rs. Crore)

Year	Up to 2.5 Acres	Above 2.5 to 5 Acres	Above 5 Acres	Total
1981-82	134	100	249	484
1982-83	290	211	476	977
1983-84	404	372	743	1519
1984-85	506	482	950	1938
1985-86	617	589	1037	2243
1986-87	758	708	1278	2744
1987-88	824	760	1360	2945
1988-89	881	835	1471	3187
1989-90	1033	890	1607	3530
1990-91	1181	952	1782	3915
1991-92	1172	1013	1887	4072
1992-93	1171	1033	2003	4206
1993-94	1312	1176	2070	4558
1994-95	1692	1474	2970	6137
1995-96	2001	1952	3703	7657
1996-97	2176	2289	4511	8976
1997-98	2288	2413	4827	9528
1998-99	2787	3181	5862	11829
1999-00	3338	3467	7209	14014
2000-01	3740	3642	7135	14516
2001-02	4352	4371	7578	16300
2002-03	4834	5578	11445	21857
2003-04	7953	7340	16592	31885
2004-05	10833	10550	19735	41119
2005-06	16823	17619	32682	67124
2006-07	23246	21588	49335	94169
2007-08	25352	23215	48140	96707

Source: RBI Hand Book 2010[3.27]



After the nationalization of commercial banks their share in agricultural credit has increased substantially. But after the financial liberalization commercial banks reduced the supply of credit to agriculture. The main objective of the nationalization of the commercial banks was to provide adequate, timely and reasonable credit to the weaker section of agriculture i.e. small and marginal farmers. But the data in the above table reveals that these banks have neglected the small and marginal farmers and only concentrated on the big farmers. These banks are found only interested in providing the long term credit. As well as, getting the loan from these financial institutions is time consuming and costly. As a result the dominance of the private moneylenders on agrarian econmy still remains intact. Share of the private sources has increased particularly after the financial liberalization. Most of the commercial banks did not fulfill the minimum statutory target of 18 per cent of total credit to agriculture sector.

3.25 State-wise Estimated Number of Rural Households, Total and Indebted Farm Households

States	Estimated Number of Rural Households (00)	Estimated Number of Farmer Households (00)	Estimated Number of Indebted Farmer Households (00)	% of Farmer Households Indebted
Andhra Pradesh	142512	60339	49493	82.0
Arunachal P.	15412	1227	72	5.9
Assam	41525	25040	4536	18.1
Bihar	116853	70804	23383	33.0
Chhatisgarh	36316	27598	11092	40.2
Gujarat	63015	37845	19644	51.9
Haryana	31474	19445	10330	53.1
Himachal P.	11928	9061	3030	33.4
Jammu & K.	10418	9432	3003	31.8
Jharkhand	36930	28338	5893	20.9
Karnataka	69908	40413	24897	61.6
Kerala	49942	21946	14126	64.4
Madhya P.	93398	63206	32110	50.8

Maharashtra	**118177**	**65817**	**36098**	**54.8**
Manipur	**2685**	**2146**	**533**	**24.8**
Meghalaya	**3401**	**2543**	**103**	**4.1**
Mizoram	**942**	**780**	**184**	**23.6**
Ngaland	**973**	**805**	**294**	**36.5**
Orissa	**66199**	**42341**	**20250**	**47.8**
Punjab	**29847**	**18442**	**12069**	**65.4**
Rajasthan	**70172**	**53080**	**27828**	**52.4**
Sikkim	**812**	**531**	**174**	**38.8**
Tamil Nadu	**110182**	**38880**	**28954**	**74.5**
Tripura	**5977**	**2333**	**1148**	**49.2**
Uttar Pradesh	**221499**	**171575**	**69199**	**40.3**
Uttaranchal	**11959**	**8962**	**644**	**7.2**
West Bengal	**121667**	**69226**	**34696**	**50.1**
UTs	**2325**	**732**	**372**	**50.8**
All India	**1478988**	**893504**	**434242**	**48.6**

Source: Agricultural Statistics at a Glance, 2005, Directorate of Economics and Statistics, MoA, GoI[3.28]

Indebtedness of farmers is basically due to the unsatisfactory performance of organized sector lending. Looking at the credit deposit ratio and the ratio of agriculture lending to total credit of banking sector, it comes out that the availability of bank credit for agriculture has been far less than the demand for over a long period of time. Data in the above table brings out a state-wise number and percentage of indebted farm households where the states of Andhra Pradesh, Tamil Nadu, Punjab, Kerala, Karnataka and Maharashtra are more affected than rest of the states with corresponding percentage of 82, 74.5, 65.4, 64.4, 61.6 and 52.8 respectively. This picture underlines the finding that majority of suicide affected families were debt ridden families.

3.26 Indebtedness of Farm Households in Different Size Classes of Land Holdings

Holding Size (Ha.)	Estimated Number of Farm Households (Lakh)	%to Total in Each Class	Estimated Number of Indebted FHHs (Lakh)	% to Total in Each Class	% of Indebted FHHs to Total	Average Outstanding Loan Amount (Rs.)
Up to 0.01	**12.59**	**1.4**	**5.71**	**1.3**	**45.3**	**6121**

0.01-0.40	**292.87**	**32.8**	**130.11**	**30.0**	**44.4**	**6545**
0.41-1.00	**183.61**	**31.7**	**129.21**	**29.8**	**45.6**	**8623**
1.01-2.00	**160.60**	**18.0**	**81.92**	**18.8**	**51.0**	**13762**
2.01-4.00	**93.50**	**10.5**	**54.41**	**12.5**	**58.2**	**23456**
4.01-10.00	**42.58**	**4.8**	**27.73**	**6.4**	**65.1**	**42532**
More 10 ha.	**7.75**	**0.8**	**5.15**	**1.2**	**66.4**	**76232**
All Classes	**893.50**	**100.0**	**434.24**	**100.0**	**48.6**	**12585**

Source: Agricultural Statistics at a Glance, 2005, Directorate of Economics and Statistics, MoA, GoI[3.29]

FHHs=Farm Households

The share of farm households with less than one ha. of land holding in total farm households comes out to be 65.9 per cent and also substantial number of estimated number of indebted farm households comes out from the same category with average loan outstanding to be more than Rs.6000. Data shows holding-wise outstanding debt per account for different categories of states for over a period of more than fifteen years covering pre and early post reforms period brings out that except few states (Punjab, Orissa, West Bengal and Kerala) and for an occasional time period all other states have shown a fast increasing trend in the average outstanding debt per account. This kind of a situation takes out farmers credit ability in future as their loan accounts enter the category of bad accounts. Information about per hectare outstanding of credit for over a period of ten years covering the period 1980-81 to 1990-91 brings out that in case of almost all states (except Rajasthan) the amount of per hectare outstanding of loan has increased sharply. In case of some states per hectare outstanding is more than per hectare availability of loan amount.

3.27 State-wise Periodic Change in Agriculture Lending As Part of Total Credit and Total Deposit (Rs.)

	1981-85	1986-90	Periodic change	1991-95	Periodic change	1996-2000	Periodic change

States (1)	ACBC (2)	ACBD (3)	ACBC (4)	ACBD (5)	*% 2/4	% 3/5	ACBC (6)	ACBD (7)	% 4/6	% 5/7	ACBC (8)	ACBD (9)	% 6/8	% 7/9
H.I.S.														
Gujarat	15.2	8.0	14.4	8.4	-5.55	4.76	14.1	7.6	-2.12	-10.52	9.9	5.4	-42.42	-40.74
Haryana	31.3	29.1	28.5	22.7	-9.82	-28.19	25.0	16.0	-14	-41.87	19.2	10.4	-30.20	-53.84
Maharashtra	6.4	5.5	7.3	4.8	12.32	-14.58	5.0	3.0	-46	-60.0	4.1	3.1	-21.95	3.22
Punjab	33.4	19.5	28.3	12.6	-18.02	-54.76	22.8	10.1	-24.12	-24.75	18.6	7.6	-22.58	-32.89
Group Avg.	21.57	15.52	15.7	12.12	-43.13	-28.05	16.72	9.71	06.10	-24.81	12.95	6.6	-29.11	-47.12
M.I.S.														
A.P.	35.7	25.7	29.5	23.1	-21.01	-11.25	22.6	17.5	-30.53	-32.0	19.7	14.1	-14.72	-24.11
Karnataka	23.2	18.4	24.3	20.9	4.52	11.96	20.8	14.6	-16.82	-43.15	16.9	11.6	-23.07	-25.86
Kerala	17.5	11.5	18.3	11.8	4.37	2.54	15.8	7.6	-15.82	-55.26	13.5	5.9	-17.03	-28.81
Tamil Nadu	16.9	14.5	17.4	16.3	2.87	11.04	14.1	12.4	-23.40	-31.45	10.7	9.8	-31.77	-26.53
West Bengal	7.1	3.3	9.7	4.8	26.80	31.25	6.5	3.3	-49.23	-45.45	4.8	2.2	-35.41	-50.0
Group Avg.	20.12	14.68	19.84	15.38	-1.41	4.55	15.96	11.8	-24.31	-30.33	12.92	8.72	-23.52	-27.06
L.I.S.														
Bihar	24.5	9.2	25.7	8.8	4.66	-4.54	25.7	9.7	00	09.27	19.8	5.4	-29.79	-79.62
M.P.	25.6	15.3	224.8	16.0	-3.22	4.37	22.5	13.4	-899.11	-19.40	19.5	10.7	-15.38	-25.23
Orissa	31.3	23.7	25.3	23.2	-23.71	-2.15	20.7	13.4	-22.22	-73.13	19.0	9.0	-08.94	-48.88
Rajasthan	27.9	19.8	25.9	18.3	-7.72	-8.19	25.0	13.9	-03.06	31.65	21.3	10.5	-17.37	-32.38
Uttar Pradesh	24.2	10.1	22.2	9.0	-9.00	-12.22	21.8	9.2	-01.83	02.17	19.5	6.3	-11.79	-46.03
Group Avg.	26.7	15.45	24.78	15.06	-7.74	-2.58	23.14	11.9	-07.08	-36.90	19.82	8.38	-16.75	-42.0

RBI, Banking Statistics, 1981-2000[3.30]
H.I.S. =High Income States, M.I.S.=Middle Income States, L.I.S.=Low Income States
ACBC: Agriculture Credit to Total Bank Credit
ACBD: Agricultural Credit to total Bank Deposit , *: Proportionate Change

The proportion of agriculture credit to total bank deposits show the extent of funds made available for agriculture lending whereas the ratio of agriculture credit to total bank credit brings out spread of credit for the sector. The data in above table (No. 3.27) brings out substantial interstate differences as well as the insignificance of agriculture credit for the period from 1981 to 2000. The proportion of agriculture credit to total bank credit has substantially declined for majority of the states and wherever it increased, the increase has not been sufficient over the period, except West Bengal only in the beginning. Agriculture credit to total bank deposit ratio

for a state like West Bengal has been lowest among others with just 3.3, 4.8, 3.3 and 2.2 per cent whereas for states like Bihar and Uttar Pradesh it decelerated from 9.2 to 5.4 and 10.1 to 6.3 per cent during the period of 1981 to 2000. Proportionate change in agriculture credit to total bank credit and percentage change in agriculture credit as proportion to total bank deposits for over a period between 1981 and 2000 make it clear that in case of both the indices banks have undermined the significance of agriculture in their lending activity. Evidently it comes out from the progressive decline in ACBC and ACBD that the banks have diverted lending towards more profitable and secured sector than agriculture. This type of shift of credit will further consolidate the griep of private traders and moneylenders in the rural areas. During the post reforms period the number of branches of nationalized commercial banks in rural areas also declined progressively. As it comes out that in states like West Bengal, Uttar Pradesh and Bihar the agriculture lending has declined seems that more credit for other prominent areas is being made available at the cost of agriculture. In case of the states of Andhra Pradesh, Karnataka, Maharashtra and Punjab which are more affected by farmers suicides the change in ACBC and ACBD has been continuous for the period of 1981 to 2000.

The foregoing discussion on agriculture credit for the said period brings out that the sharp decline in institutional lending for the sector and thereby ignited the crisis as availing of credit from private moneylenders became costlier as a result during nineties the country witnessed increasing number of suicides. The bankers' perceptions about risk involvement in agriculture lending might have forced them to adopt credit

rationing for agriculture and thereby progressive decline in the credit performance indices at the national level.

3.28 Income, Expenditure and Indebtedness of Farmer Households: July 2002- June 2003

State	Annual cultivation income	Annual total income	Annual cultivation expenditure	Annual total expenditure	(2) – (4)	(3) – (5)
1	2	3	4	5	6	7
Andhra P.	8916	19608	12085	28632	-3169	-9024
Assam	21504	37932	3370	32568	18134	5364
Bihar	10152	21720	6809	29508	3343	-7788
Gujarat	13968	32208	11456	37524	2512	-5316
Haryana	17928	34584	18270	52963	-342	-18384
J & K	29112	65856	6342	49308	22770	16548
Karnataka	15192	31392	10344	31296	4848	96
Kerala	13440	48048	7793	51000	5647	-2952
M. P.	11952	17160	8886	28068	3066	-10908
Maharashtra	15156	29556	10793	32268	4363	-2712
Orissa	4032	12744	3143	20364	886	-7620
Punjab	33864	59520	25945	58080	7919	1440
Rajasthan	4308	17976	7668	39456	-3360	-21480
Tamil Nadu	7908	24864	8597	30072	-689	-5208
U. P.	10032	19596	9151	34788	881	-15192
West Bengal	8844	24948	8429	32016	415	-7068
All-India	11628	25380	8791	33240	2837	-7860

Source: NSSO (2005a & 2005c) [3.31]

Looking at the prospects of profitability of farmers through comparison between the annual cultivation expenditure and the annual income from cultivation, the prevalence of crisis in rural countryside of India comes out vividly. Deducting the all India household average annual income from cultivation (Rs.11628.00) from the annual household cultivation expenditure (Rs.8791.00) the average household net income remains Rs.2837 which is available for the family consumption and maintenance. In states like Andhra Pardesh, Haryana, Rajastan and Tamil Nadu the annual average net income is negative. And in states of Orissa, Uttar Pradesh and West Bengal the average annual net income from cultivation is less than Rs.1000 per farm household. When calculated the farm

household annual net balance comparing the annual total income and annual consumption expenditure the picture becomes further worst. This clearly supports the observation that something is terrible in rural countryside of India. It means the cost of cultivation rises sharply but the minimum support price mechanism has failed to give rmmunarative prices to the agriculture produce. Increased gap between income and expenditure forced farmers to borrow from private sources to fulfill this gap. Due to the inadequate institutional credit support farmers resorted to private moneylenders who charged heavy rates of interest. In all, these vagaries accumulate debt and it goes beyond the repaying capacity of farmers.

3.29 Per Worker Productivity in Agriculture and Non-Agriculture 2004-05 (Rs.)

Sr. No.	State	Agriculture	Non Agriculture	Non agri./agri.
1.	Andhra Pradesh	11245	56414	5.02
2.	Assam	9205	49592	5.39
3.	Bihar	4862	22392	4.61
4.	Gujarat	12934	104512	8.08
5.	Haryana	26192	85128	3.25
6.	Himachal P.	9796	69818	7.13
7.	Jammu& K.	14672	45400	3.09
8.	Karnataka	9653	82316	8.53
9.	Kerala	16139	56318	3.49
10.	Madhya Pradesh	6606	44980	6.81
11.	Maharashtra	9130	106912	11.71
12.	Orissa	7871	41341	5.25
13.	Punjab	35087	70138	2.00
14.	Rajasthan	10609	56830	5.36
15.	Tamil nadu	10789	58793	5.45
16.	Utter Pradesh	10367	42683	4.12
17.	West Bengal	17113	60307	3.52
18.	India	12371	61432	4.97

Source: CSO Employment and Unemployment Situation in India, 2004 and CSO Gross State Domestic Product, 2004-05[3.32]

Among states, there were only few achievers in agricultural productivity. Productivity of Punjab worker was Rs.35,000/- this is 7.5 times that of

Bihar. There was a decline in per worker productivity in agriculture in eight out of seventeen states. Per worker productivity for non-agricultural workers was high for all the states. In Maharashtra, productivity of non-agricultural worker was 11.71 times high than agricultural worker. This was higher than of national average. It means the income inequalities were high in the state of Maharashtra. The high income group lived in a luxurious life whereas the farming community was begging for basic needs. The general price level increased as per the increase in income of the non-agriculture worker and farmers and non-farmers groups have paid same price for the consumption. However, income of the farming community was not increased proportionate to non-agriculture group. Hence, farmers have to borrow the money for consumption purpose from the private sources at high rates of interest. The income inequalities were high in comparatively developed states as compare to under developed states. And these states were highly affected by farm suicides. The high ratio of agricultural and non-agricultural productivity is relatively more in industrial states like, Maharashtra, Gujarat and Karnataka indicates weak linkage between agricultural and non-agricultural sectors.

3.30 Incidence of Indebtedness in Major States – 2003

Sr. No.	States	Number of Indebted Farm Households	Proportion of Indebted Farm Households (%)	Average Loan per Households (Rs)
1.	Andhra P.	49493	82.0	23965
2.	Tamilnadu	28954	74.5	23963
3.	Punjab	12069	65.4	41576
4.	Kerala	14126	64.4	33907
5.	Karnataka	24897	61.6	18135
6.	Maharashtra	36098	54.8	16973
7.	Haryana	10330	53.1	26007
8.	Rajasthan	27828	52.4	18372
9.	Gujarat	19644	51.9	15526

10.	**Madhya P.**	**32110**	**50.8**	**14218**
11.	**West Bengal**	**34696**	**50.1**	**10931**
12.	**Orissa**	**20250**	**47.8**	**5871**
13.	**Uttar Pradesh**	**69199**	**40.3**	**7425**
14.	**Himachal P.**	**3030**	**33.4**	**9618**
15.	**Bihar**	**23383**	**33.0**	**4476**
16.	**Jammu & K.**	**3003**	**31.8**	**1903**
17.	**Assam**	**4536**	**18.1**	**813**
18.	**All India**	**434242**	**48.6**	**12585**

Source: NSSO Situation Assessment Survey of Farmers, 2005[3.33]

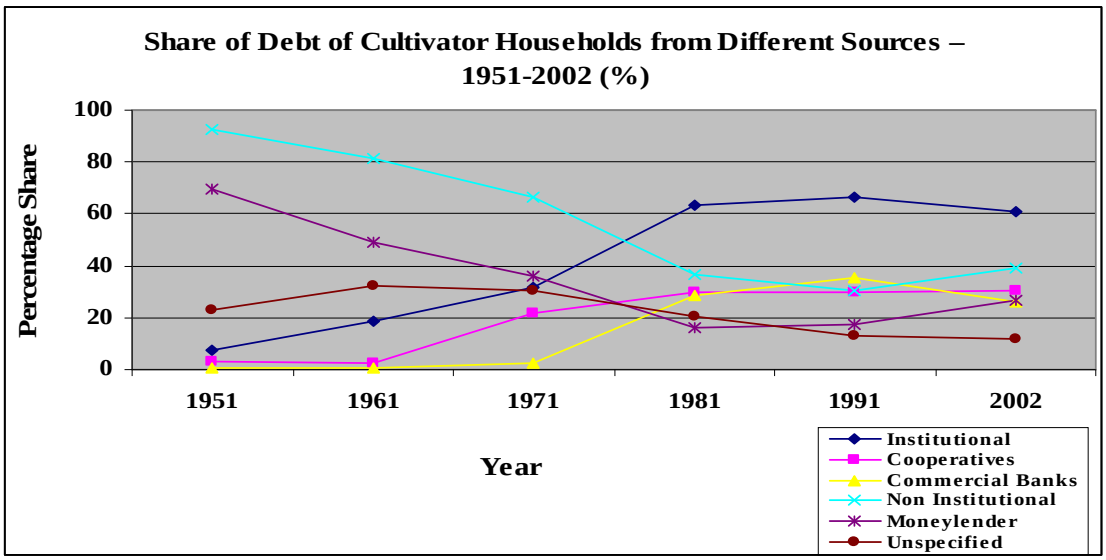
State wise analysis of indebtedness has shown; the incidence of indebtedness was high in the states where the agriculture is more capital intensive. As well as, these states experienced more success of green revolution as compare to other states i.e. Punjab, Maharashtra, Karnataka, Haryana, Andhra Pradesh, Gujarat and Kerala. Andhra Pradesh has the 82 per cent of indebted farm households followed by Tamilnadu with 74.5 per cent. But, Tamilnadu has less number of farm suicides despite incidence of indebtedness. The average outstanding debt of per farm household was high in Punjab followed by Kerala. Because of the characteristics of the agriculture of these states is highly capital intensive as compare to other states. On the other hand, the incidence of indebtedness and outstanding debt per farm household was low in the states from central, eastern and north eastern states. Where, agriculture is the way of livelihood and not a commercial one. And these states are mostly producing food-grains than cash crops. In all, the incidence and outstanding debt was high in the states that shifted their agriculture from food-grains to commercial crops, which needs high techniques as well as investment. But, the present agricultural marketing did not give adequate returns to the farmers. As a result, the gap between income and expenditure has widened and farmers were forced to borrow money to

fulfilling the gap. Hence, the incidence of indebtedness and outstanding has been growing beyond the repaying capacity of farmer.

3.31 Share of Debt of Cultivator Households from Different Sources – 1951-2002 (%)

Source of credit	1951	1961	%	1971	%	1981	%	1991	%	2002	%
Institutional	7.3	18.7	156.16	31.7	69.51	63.2	99.36	66.3	4.90	61.1	-7.84
Cooperatives	3.3	2.6	-21.21	22.0	746.15	29.8	35.45	30.0	0.67	30.2	0.66
Commercial Banks	0.9	0.6	-33.33	2.4	300	28.8	1100	35.2	22.22	26.3	-25.28
Non Institutional	92.7	81.3	-12.29	66.3	-18.45	36.8	-44.49	30.6	-16.84	38.9	27.12
Moneylender	69.7	49.2	-29.41	36.1	-26.62	16.1	-55.40	17.5	8.69	26.8	53.14
Unspecified	23.0	32.1	40.03	30.2	-5.91	20.7	-31.45	13.1	-36.71	12.1	-0.76

Source: Report of the Expert Group on Agriculture Indebtedness, 2007[3.34]
%- Percentage Change



The share of institutional sources in cultivators' debt improved considerably after the nationalization of banks, from 32 per cent in 1972 to 66 per cent in 1991. But, during the 1990s the period of financial liberalization, there was a loss of momentum of agriculture lending and share declined and resorted at 61 per cent in 2002. The share of commercial banks has increased during the pre reforms period. After the introduction of new economic policy, commercial banks reduced credit flow to agriculture from 35.2 per cent to 26.3 per cent. Because,

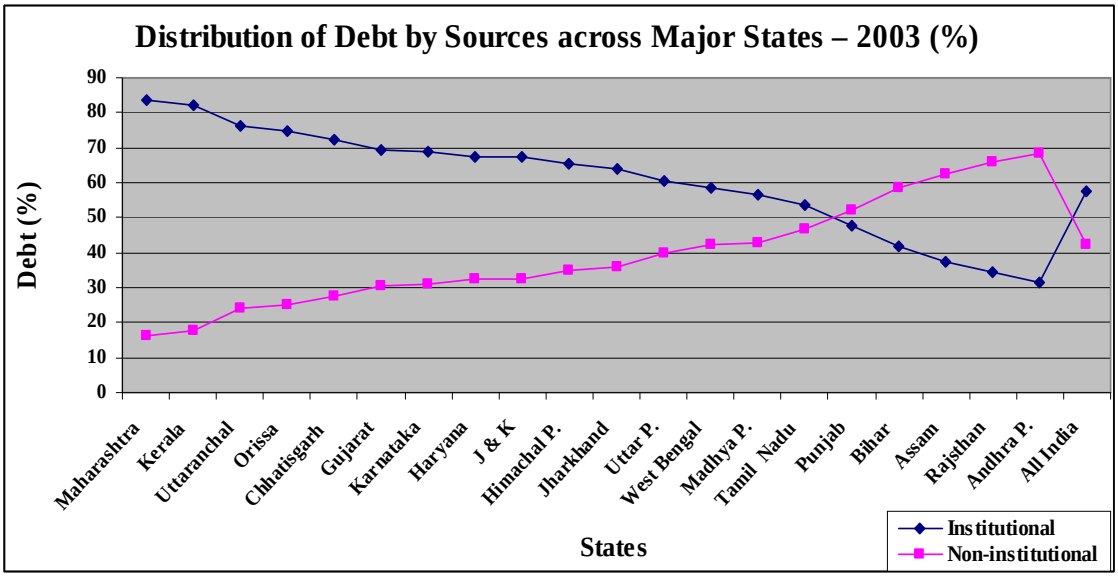
agricultural lending was no more profit making business. As well as, supply of credit from co-operatives was mere stagnant. As a result the dependency of farmers on moneylenders increased substantially. Basically, co-operatives were meant for fulfilling the credit needs of small and marginal farmers. As the time passed, co-operatives were far away from their goal and pushed farmers into the trap of private money lending. The share of co-operatives in total agricultural lending was 30.2 per cent in 2002 with increase of 0.66 per cent over 1991. The lending from co-operatives never crossed 30 per cent during throughout the period means 70 per cent share was taken by the commercial banks and private money lending. Every year the government budget target announces the increment in the agriculture lending but it is only a book adjustment and not in real terms. Hence, again private credit sources become an important and sustainable source of credit to farming community and it becomes the matter of concern.

3.32 Distribution of Debt by Sources across Major States – 2003 (%)

States	Institutional				Non Institutional			
	Govt.	Co-op	Banks	Total	Money lenders	Trades	Others	Total
Maharashtra	1.2	48.5	34.1	83.8	6.8	0.8	8.6	16.2
Kerala	4.9	28.3	49.1	82.3	7.4	1.7	8.5	17.6
Uttaranchal	31.5	4.8	39.8	76.1	5.9	1.7	16.3	23.9
Orissa	13.0	18.1	43.7	74.8	14.8	0.8	9.5	25.1
Chhatisgarh	1.3	20.6	50.5	72.4	13.0	4.2	10.5	27.7
Gujarat	0.5	41.8	27.2	69.5	6.5	4.4	19.6	30.5
Karnataka	1.9	16.9	50.1	68.9	20.0	1.9	9.3	31.2
Haryana	1.1	23.9	42.6	67.6	24.1	3.1	5.3	32.5
J & K	13.1	0.2	54.3	67.6	1.1	15.5	15.7	32.3
Himachal P.	6.1	11.6	47.6	65.3	7.2	5.5	22.0	34.7
Jharkhand	3.9	4.5	55.7	64.1	19.0	1.7	15.2	35.9
Uttar P.	2.4	6.7	51.2	60.3	19.1	2.9	17.7	39.7
West Bengal	10.3	19.2	28.5	58.6	13.0	10.7	18.4	42.1
Madhya P.	1.9	16.9	38.1	56.4	22.6	9.0	11.4	43.0
Tamil Nadu	2.0	23.3	28.1	53.4	39.7	0.4	6.4	46.5
Punjab	1.9	17.6	28.4	47.9	36.3	8.2	7.6	52.1

Bihar	**2.2**	**2.5**	**37.0**	**41.7**	**32.8**	**1.1**	**24.6**	**58.5**
Assam	**7.0**	**2.7**	**27.8**	**37.5**	**15.5**	**12.0**	**35.1**	**62.6**
Rajsthan	**1.3**	**5.9**	**27.0**	**34.2**	**36.5**	**19.2**	**10.1**	**65.8**
Andhra P.	**1.0**	**10.4**	**20.0**	**31.4**	**53.4**	**4.8**	**10.4**	**68.6**
All India	**2.5**	**19.6**	**35.6**	**57.7**	**25.7**	**5.2**	**11.5**	**42.4**

Source: NSSO Situation Assessment Survey of Farmers, 2005[3.35]



Co-operative credit societies were basically meant for the supply of credit to the agriculture in general and that small and marginal in particular. But, in fact this target is fulfilled only in the five states i.e. Maharashtra, Gujarat, Kerala, Haryana and Tamilnadu. The share of co-operatives in farmers suicides affected states was very low i.e. Karnataka- 16.9, Andhra Pradesh- 10.4 and in Punjab – 17.6 per cent. Only Maharashtra among the suicides affected states has 48.5 per cent share of co-operatives in agricultural lending. The efficient mechanism traced out in Western Maharashtra region where the co-operative movement is deeply rooted and other regions of the state have not been that much successful in co-operative lending. And only big and politically influenced farmers are the beneficiaries of the co-operative credit whereas small and marginal farmers did not receive expected returns from it. As well as, the share of Banks in total agricultural lending was not remarkable. The share of non

institutional lending was high in Andhra Pradesh with 68.5 per cent, higher than of national average of 42.4 per cent. Looking at the national scenario of non-institutional sources still 42.4 per cent farmers depend on private sources on record and off the record figure can be more. Means 42.4 per cent of farmers were out of the reach of institutional credit mechanism. And in recent survey of the NSSO (2005) 41 per cent of farmers are willing to leave the agriculture if they have other opportunity of employment available.

3.33 Non-Institutional Debt for Each Size Class of Holding across States-2003

State	Size Class of Land Possessed (Ha.)							
	<0.01	0.01-0.40	0.41-1.00	1.01-2.00	2.01-4.00	4.01-10.00	>10.00	All sizes
A.P.	83.1	80.7	74.9	73.4	58.5	51.4	50.5	68.6
Assam	100	70.9	62.2	54.8	53.6	77.0	100	62.5
Bihar	63.5	79.2	53.0	33.9	36.6	80.4	29.9	58.3
Chhatisgarh	52.9	73.4	49.9	19.6	29.3	11.5	00	27.6
Gujarat	89.9	65.2	59.3	34.8	15.1	19.8	00	30.5
Haryana	75.4	53.5	29.0	38.0	13.6	40.6	25.3	32.4
Himachal P.	0.0	49.2	22.2	20.6	45.2	7.7	100	34.7
J&K	0.0	39.1	38.4	26.1	11.1	99.9	100	32.4
Jharkhand	35.5	29.2	65.5	12.4	39.5	2.0	00	35.9
Karnataka	84.4	66.6	37.9	41.3	26.6	13.0	3.0	31.1
Kerala	35.2	23.9	13.2	7.1	3.6	32.7	29.7	17.7
Madhya P.	89.6	64.6	56.6	47.3	53.2	26.9	16.1	43.1
Maharashtra	41.7	16.8	19.8	21.2	16.2	11.3	8.9	16.2
Orissa	35.3	37.6	22.9	27.9	11.6	3.1	86.8	25.2
Punjab	75.2	70.8	34.4	50.9	38.8	52.5	69.9	52.1
Rajasthan	93.8	80.8	77.6	67.1	59.9	58.1	61.8	65.8
Tamil Nadu	80.9	62.6	54.0	38.5	34.8	25.7	17.1	46.6
Uttar P.	79.8	70.2	43.3	31.5	20.2	11.5	1.8	39.7
Uttaranchal	100	21.3	27.1	23.3	92.7	100	100	23.9
West Bengal	76.6	57.3	36.9	19.9	24.6	78.7	100	42.0
All India	77.4	56.7	47.2	42.4	34.9	31.2	32.4	42.3

Source: NSSO Situation Assessment Survey of Farmers, 2005[3.36]

Source of financing and outstanding debt varied across the land size groups. The outstanding debt of the sub-marginal land holder (less than 0.40 hectares) was financed by non-institutional agencies. In most of the states more than 70 per cent of their outstanding debt was from non-institutional sources. In Andhra Pradesh and Rajasthan, non-institutional

sources accounted for as high as 80 per cent of their outstanding debt. In Kerala and Maharashtra, dependency of very sub-marginal landholding households on non-institutional sources was much less. This could be attributed to the spread of commercial banks and co-operatives in the rural areas of these states. At all India level still 42.3 per cent of the farmers are out of the reach of institutional credit mechanism. It means lots of efforts are needed to improve the institutional credit supply to agriculture sector. It can help to reduce the hold of the private moneylenders over the rural economy and farmers can freely do their activity.

3.34 Distribution of Debt by Purpose among Rural Cultivator Households- 1961-2002

Purpose	1961	1971	1981	2002
Productive	40.1	54.0	71.6	62.9
Farm business	36.6	49.7	63.8	52.5
Capital expenditure	26.8	34.7	45.3	34.3
Current expenditure	9.8	15.0	18.5	18.2
Non-farm Business	3.5	4.3	7.8	9.4
Capital expenditure	1.4	3.2	6.3	7.4
Current expenditure	2.1	1.1	1.5	2.0
Non-productive	60.0	46.0	28.4	38.1
Household expenditure	49.2	37.8	20.0	27.7
Other Purposes	10.8	7.2	8.4	10.4
Repayment of Debt	5.0	1.5	0.1	1.5
Expenditure on Litigation	1.8	0.7	0.8	0.3
Financial Investment	0.2	0.2	1.0	0.6

Source: RBI, All India Rural Debt and Investment Survey,1961-62, 1971-72, 1981-82 and 2003, NSSO-2005[3.37]

A substantial proportion of cultivator households' debt was for productive purposes at all India level. However, debt for productive purposes as a per cent of total debt declined from 72 per cent in 1981 to 63 per cent in 2002. Similarly the share of debt incurred for farm business declined from 64 per cent in 1981 to 53 per cent in 2002. Within farm business expenditure, the share of capital expenditure declined from 45.3 per cent to 34.3 per cent. The increase in capital expenditure for non-farm business could not

fully compensate the fall in farm business expenditure, which resulted in a fall in the share of overall productive expenditure between 1981 and 2002.

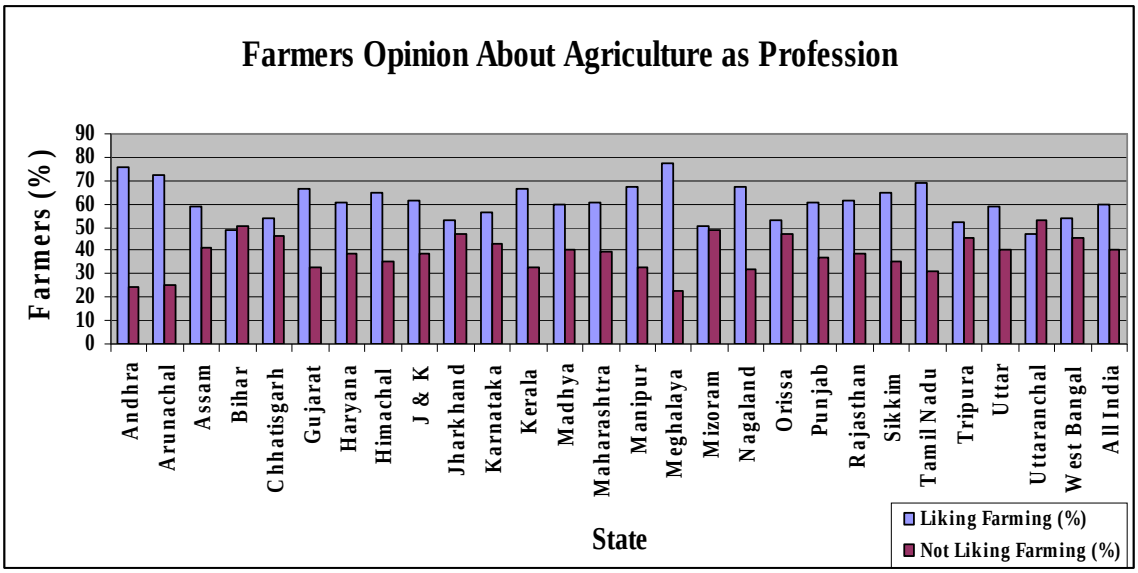
3.35 Farmers Opinion about Agriculture as Profession

States	Liking farming (%)	Not liking farming		Total (%)
		Not Profitable (%)	Others (%)	
Andhra Pradesh	75.4	16.7	7.5	24.2
Arunachal Pradesh	72.1	10.7	14.3	25
Assam	59	21.2	19.7	40.9
Bihar	48.6	35.5	15.3	50.5
Chhatisgarh	53.7	24.2	22.1	46.3
Gujarat	66.8	25.4	7.5	32.9
Haryana	60.3	29.9	8.4	38.3
Himachal Pradesh	64.6	18.4	16.7	35.1
J & K	61.5	20.9	17.6	38.5
Jharkhand	52.8	30.2	16.8	47
Karnataka	56.7	27.9	15.4	43.3
Kerala	66.6	27.9	5.1	33
Madhya Pradesh	59.5	21.4	18.9	40.3
Maharashtra	60.7	28.6	10.7	39.3
Manipur	67.4	28.2	4.2	32.4
Meghalaya	77.4	15.2	7.4	22.6
Mizoram	50.8	34.1	14.6	48.7
Nagaland	67.6	26.8	4.5	32.3
Orissa	53.1	33.8	12.9	46.7
Punjab	60.8	27.2	9.7	36.9
Rajasthan	61.2	21.5	17.3	38.8
Sikkim	64.6	30.2	5.2	35.4
Tamil Nadu	68.9	25	6	31
Tripura	52.5	20.2	25.1	45.3
Uttar Pradesh	58.8	24	16.5	40.5
Uttaranchal	46.8	42.3	10.9	53.2
West Bangal	53.8	35.4	10.1	45.5
All India	59.4	26.5	13.6	40.1

Source: NSSO (2005 a;, 2005b)[3.38]

Farmers in India have perhaps reported willingness at first to leave agriculture as a profession provided that the substitute way of livelihood is available mainly because that the cultivation is no more remunerative. Overall proportion of the negative desire is of 40.1 per cent with Uttaranchal, West Bengal, Tripura, Uttar Pradesh, Karnataka, Maharashtra, Haryana and Andhra Pradesh leading the list. All the states

from where farmers don't prefer agriculture is because it is not profitable to them due to increased cost of cultivation, stagnated productivity and mismatch between input and output prices.



3.3 Farmers Suicides Scenarieo in India

The foregoing discussion on policy matters since the colonial period revealed that the agriculture and farming community of the country has at the marginal. During the colonial period, Britishers concentrated only on the crop which earned them maximum returns i.e. Cotton. Since then welfare of the farmers has not been the central point of any policy. It was expected from the independent India, that they provide an attention towards agriculture where the farmers' welfare is the core issue. But looking at the overall nature and performance of the policies (1951-2010) towards agriculture, that have failed to address the agriculture. Despite institutional reforms in agricultural credit and marketing, the state of the agriculture remains unremmunarative. Some hopes were created by the Green Revolution during the mid sixties. But, afterwards it showed the negative side of the same. The green revolution did not succeed due to the

lack of inclusiveness. It concentrated only on few crops and states in the country. The situation further aggravated during the post reforms period in general and post WTO amendment in particular. Both the things i.e. economic reforms and WTO have long term negative impact on agriculture and farming community of the country.

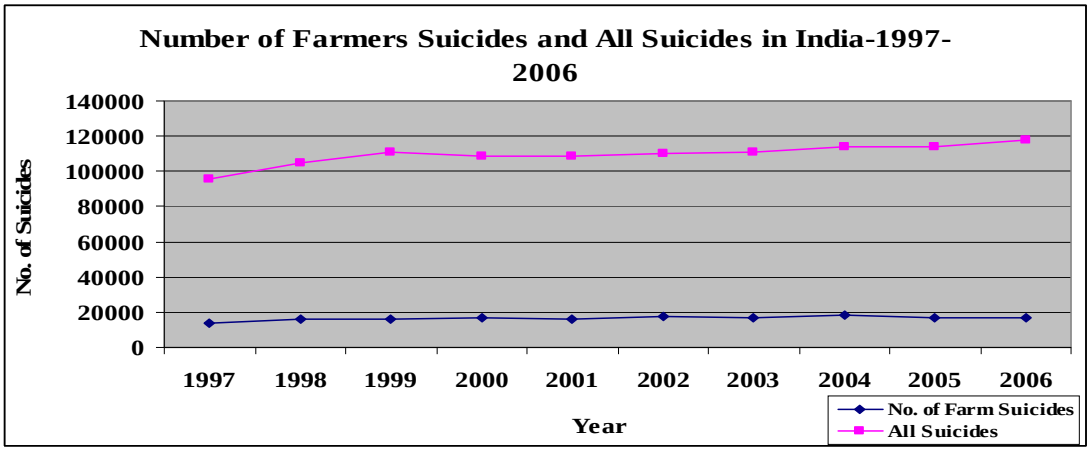
The large number of suicides by farmers in various states of the country has been the outcome of the negligence of the agriculture on policy front since independence. The incidences of farmers suicides became epidemic in some states of the country. The incidence of farm suicides started in 1986 and continuously increased during the subsequent decades of the 1990s and 2000s.

3.36 Number of Farmers Suicides and Total Suicides in India-1997-2006

Year	Farmers Suicides		All Suicides	
	No. of Farm Suicides	As (%) to All Suicides	All Suicides	Suicide Rate (per 1 lakh Population)
1997	13622 (100)	14.2	95829 (100)	10.0
1998	16015 (118)	15.3	104713 (109)	10.8
1999	16082 (111)	14.5	110587 (115)	11.2
2000	16603 (122)	15.3	108593 (113)	10.6
2001	16415 (121)	15.1	108506 (113)	10.6
2002	17971 (132)	16.3	110417 (115)	10.5
2003	17164 (126)	15.5	110851 (116)	10.4
2004	18241 (134)	16.0	113697 (119)	10.5
2005	17131 (126)	15.0	113914 (119)	10.3
2006	17060 (125)	14.4	118112 (123)	10.5
Total	166304	15.2	1095219	--

Source: K Nagraj, 2008[(3.39)]

Figures in parentheses indicate indices with 1997 as the base year



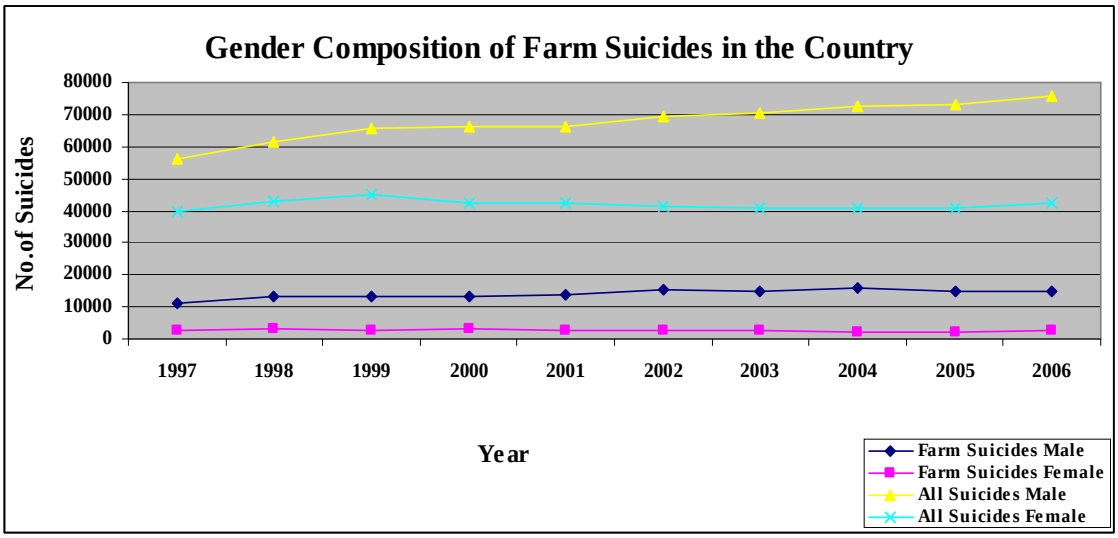
During the ten year period between 1997 and 2006 as many as 166304 farmers ended their lives through committing suicide. And this is not a good sign for a country where 58.5 per cent of the labour force still depends on agriculture for their livelihood and the sector which is the backbone of the economy. If we consider the 12 years period from 1995 to 2006 then the figure of 200000 (190735) would be an underestimation since a couple of major states like Tamil Nadu and Rajasthan and a number of smaller states like Pondicherry did not report any farm suicides for one or the other or both of these two years. During the field visits for the present study we observed that the police often adopted a rather strict and stringent definition of a farmer in identifying farm suicides. The title to land was taken as the criterion for identifying farmer and this often left out many genuine farmers from the count. For example, a tenant farmer who leased in land and hence did not have a title to the land could be denied the status of a farmer. The same happened when the title of the undivided land which was in the name of the head of the family. From the data in the table (No. 3.36), that the number of farm suicides has kept steadily increasing over this period in the country. The year 1998 in fact shows a sharp increase in the number of farm suicides with 18 per cent

jump from the previous year and the number remained more or less steady at around 16000 farm suicides per year over the next three years up to 2001. The year 2002 again saw a sharp increase close to 10 per cent as compared to 2001 and the number of farm suicides remained around 18000 per year during the period after that. The average number of farm suicides per year in five year period of 2002-2006 stood at 17,513 which is substantially higher than the average of 15747 for the previous five year period. There are certain regions in the country where the farm suicides are largely concentrated and where the problem has been a very sharp over this period with the farm suicides increasing at much faster rate, in comparison, both with farm suicides in the country and general suicides in these regions.

3.37 Gender Composition of Farm Suicides in the Country

Year	Farm Suicides		% of male farmers suicides of all farmers suicides	All Suicides		
	Male	Female		Male	Female	% of male suicides of all suicides
1997	11229	2393	82.4	56281	39548	58.7
1998	12986 (116)	3029 (127)	81.1	61686 (110)	43027 (109)	58.9
1999	13278 (118)	2804 (117)	82.6	65488 (116)	45099 (114)	59.2
2000	13501 (120)	3102 (130)	81.3	66032 (117)	42561 (108)	60.8
2001	13829 (123)	2586 (108)	84.2	66314 (118)	42192 (107)	61.1
2002	15308 (136)	2663 (111)	85.2	69332 (123)	41085 (104)	62.8
2003	14701 (131)	2463 (103)	85.7	70221 (125)	40630 (103)	63.3
2004	15929 (142)	2312 (97)	87.3	72651 (129)	41046 (104)	63.9
2005	14973 (133)	2158 (90)	87.4	72916 (130)	40998 (104)	64.0
2006	14664 (131)	2396 (100)	86.0	75702 (135)	42410 (107)	64.1
Total	140398	25906	84.4	676623	418596	61.8

Source: K Nagraj-2008[3.40] Figures in parentheses indicate indices with 1997 as the base year



According to the official data, farmers suicides take place overwhelmingly by the male farmers. Considering the period of 1997-2006 as a whole, close to 85 per cent of all the farm suicides were by male farmers and every fifth male suicide in the country was a farmers suicides. Suicides in general, among the population as a whole, were also largely concentrated among males, but the degree of concentration here was significantly lower than in case of farmers suicides. Male suicides in general population accounted nearly 62 per cent of all suicides in the country. The number of male farmers suicides increased rapidly as compare to female during the abovementioned period. The reason of concentration of farm suicides among male may have to do with the possible undercounting of female farm suicides in the police records. It was noted that the criterion generally adopted in these records for identifying the farmer is title to land and since the title is generally in the name of male head of the household it is very likely that a female farmer who committed suicides will not be recorded as a farmer suicide in these records. This is not the whole story; the head of the family have to carry all decisions of the family. Hence it

points towards economic distress as a major motivating factor underlying large number of these suicides and the acute agrarian crisis in the country would be the reason of this distress.

In all, the foregoing analysis of the macroeconomic policies towards agriculture in general and during the post reforms in particular revealed the changed nature of the policies that have the concording negative impact on Indian agriculture. It also has the positive correlation of significantly higher degree with the farmers suicides in India.

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Chapter-04
State Wise review of Agrarian Economy of Suicide Prone States in India

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Introduction

A large number of farmers suicides in various parts of the country is perhaps a most distressing phenomenon observed in India over the last two decade. These suicides, reached almost epidemic proportions in certain pockets of the country. Since the mid 1990s, large section of the farm households has been facing a distress as a consequence of decline in agricultural income, declined repaying capacity and thereby increased debt burden. The agrarian crisis in India has both the long term structural and institutional as well as, short term manifestation. The long term structural features are sharp decline in the share of agriculture in the Gross Domestic Product (GDP) accompanied by very low rate of labour force diversification away from agriculture. This has resulted in declined relative productivity of agriculture and non-agriculture sector. The growth rate of agriculture has decelerated noticeably during the post reforms period and particularly during the South Asian Crisis-1997. In the liberalized trade market farmers are exposed to price volatility because of the fluctuations in domestic production and international prices. As a result, farmers were adopting new techniques of production to improve the quality and the quantity of production. It caused an increase in the cost of cultivation as well as rapid environmental degradation. Rain-fed areas are particularly prone to successive fluctuations of the production, prodctivity and degradation of the natural resources due to uncertainty of monsoon. The liberalization of the economy has failed to give big push to agriculture sector and to increase income and employment in the agriculture sector. The most serious aspect of this crisis is deceleration in agricultural growth with the distress state of farmers in general and that

of small and marginal in particular. The gradual withdrawal of the state from active participation in development activities has resulted in sharp decline in public investment in agricultural infrastructure and research. Almost all regions in India have experienced a deceleration in agriculture growth. The impact of the green revolution had eroded in the late 1980s. The income from agriculture had declined with increased in the cost of cultivation. However, the institutional credit supply has been drying and farmers have to resort at the private moneylenders to fulfilling their credit demand. The factors responsible for the distress act are complex. Though, the agrarian crisis is multidimensional phenomenon, the indebtedness of the farming community is the root cause behind it. The factors that caused indebtedness are vital. The most important aspect is that the states where the agrarian crisis and farmers suicides are of higher order have been the comparatively developed in agriculture where green revolution brought development. Hence, it is significant to study the nature of agrarian economy of suicide affected states.

This section of the study pulls in and deliberates on state specific informations about the states of the agrarian economy of the state that have been most affected of farmers suicides in the country.

4.1 Kerala

In India the Kerala's agriculture sector is unique in several ways. Some of the special features of the state agriculture are; 1) a highly fragmented and small size of holdings except in the plantation sector, 2) homestead farming with mixed crops yielding high income, 3) large area under commercial crops, 4) mostly the crops are export oriented, 5) hired labour intensive cultivation and 6) higher indebtedness of farmers. Among these features,

export orientation of the agriculture is the root cause of development and there after deterioration of rural economy of Kerala. There was a sharp decline in export of agricultural commodities during the post reforms period due to price volatility at international market. Prices offered in the international market for agricultural products were not affordable for the state farmers because of high cost of cultivation at domestic level. On the other hand, the rise in imports which led to a fall in domestic prices of commodities and thereby the volatility. Trade liberalization adversely affected the agriculture sector of Kerala. Because more than 80 per cent of the agricultural commodities produced in the state are depended on domestic or international market situation (GoK-2003)[4.1]. Production of most of the crops was satisfactory till the mid 1990s and after that there was a setback to the agriculture sector. Growth of production of major commodities declined or has been mere stagnant after that. The reasons for decline in production and productivity are; ecological degradation, decline in soil fertility, following excessive use of fertilizers and pesticides, aged plantation sector and pest attack. There was also a considerable decline in public investment in the agriculture sector. Some of these factors are found to be handicap of the sector. The price crash and the spate of farmers suicides since the second half of the 1990s has been logical corollary inevitable for any local economy which is heavily dependent on the world market. The first farmers' suicide in India was reported from Kerala in 1987. But, the single incident was neglected by the state government. Since 1998, the problem worsened due to deficiency in rainfall, price volatility, lower production and consequent increase in debt

burden of farmers of the state. As a result of it around 2000 farmers committed suicides in the state of Kerala (GoK-2006)[4.2].

4.1.1 Agrarian Economy of Kerala

Traditionally the agriculture sector of the state of Kerala has been dominated by commercial crops such as; Coconut, Rubber, Tea, Coffee and Spices. Nearly 80 per cent of the cultivated land of Kerala is under these crops.

4.1 Share of Area under Major Crops in Total Cropped Area (per cent)

Sr. No.	Crop	1970-71	1980-81	(%) change	1990-91	(%) change	2000-01	(%) change	2005-06	(%) change
1	Rice	29.6	27.8	-6.08	18.5	-33.45	11.6	-37.29	9.6	-17.24
2	Coconut	24.7	22.6	-8.50	28.8	27.43	31.2	8.33	29.6	-05.12
3	Rubber	6.4	8.2	28.12	12.7	54.87	15.8	24.40	16.3	03.16
4	Pepper	3.9	3.7	-5.12	5.6	51.35	6.6	17.85	7.9	19.69
5	Cardamom	1.6	2.0	25.00	2.2	10.00	1.4	-36.36	1.3	-07.14
6	Cashew nut	3.4	4.9	44.11	3.8	-22.44	2.9	-23.68	2.7	-06.89
7	Tapioca	10.3	8.5	-17.47	4.9	-42.35	3.7	-24.48	3.1	-16.21
8	Coffee	1.1	2.0	81.18	2.5	25.00	2.8	12.00	2.8	--
9	Tea	1.3	1.3	--	1.1	-15.38	1.2	09.09	1.2	--

Source: Economic Review for Various years, state planning board, GoK [(4.3)]

With more market orientation and better profitability of cultivation, the share of commercial crops in total area under cultivation in the state has been rising at the expense of food crops such as Rice and Tapioca. Increase in the area under commercial crops forces farmers to invest heavily on high cost paid inputs. The same kind of situation is found at national level particularly during the post reforms period. The agriculture became a commercial business with declining profitability due to the difference between input-output prices. The area under Pepper has been substantially increased by 102.56 per cent during the period of 1970-71 to 2005-06. And the spate of farmers suicides was also concentrated among the Pepper growers. The area under Rice has declined from 29.6 per cent in 1970-71 to 9.6 per cent in 2005-06. It indicates that the state cropping

pattern had been shifting from food-grains to the high valued commercial crops and thereby leads to the high risk in the cultivation. The area under other commercial crops has also changed during the same period. The area under Rubber and Pepper has increased during the post reforms period and the same has led to the further aggravation of the crisis in the rural economy in the state of Kerala.

4.2 Cropping Pattern in Kerala 1990-91 to 2003-04 (area in 00ha)

Sr. no.	Crop	Area in 1990-91	(%) share	Area in 2003-04	(%) share	(%) change in 2003-04 over 1990-91
1	Cardamom	669	2.22	442	1.50	-33.93
2	Coconut	8700	28.81	9850	30.41	3.28
3	Paddy	5595	18.53	2873	9.72	-48.65
4	Rubber	4116	13.63	4784	16.19	16.23
5	Vegetables	2211	7.32	1729	5.85	-21.80
6	Pepper	1685	5.58	2164	7.32	28.43
7	Tapioca	1465	4.85	942	3.19	-35.70
8	Coffee	751	2.49	847	2.87	12.78
9	Banana and other plantation	656	2.17	1094	3.70	66.77
10	Areca nut	648	2.15	1025	3.47	58.18
11	Tea	346	1.15	383	1.30	10.69
12	Ginger	141	0.47	85	0.29	-39.72
13	Coca	119	0.39	94	0.32	-21.01
14	Other crops	3098	12.47	4097	13.87	32.25
	Gross cropped area	30200	100	29544	100	-2.17

Source: Agriculture Statistics for various years, GoK[4.4]

The area under major cash crops is accounted for 60 per cent of the gross cropped area in the state. It indicates that commercialization of agriculture has taken place after the introduction of liberalized policy in the country. It has changed the old view of livelihood to commercial agriculture. Farmers who depended on high export intensive crops were more severely hit than the farmers growing less export intensive crops. More than 80 per cent of the area and production of Coffee of Kerala is in Wayanand district, while Idukki district with a share of 11.31 per cent as a distant second. The 48 per cent of the total area under Pepper is also

concentrated in these two districts of the state. Similarly, 67.55 per cent of the area under Tea cultivation falls in Idukki district. Also farmers suicides in Kerala are concentrated in these two districts. A manifestation of lower exports and higher imports was a decline in domestic prices of most of the commodities. The prices of agriculture commodities have remained extremely volatile at international market after the implementation of WTO (AoA) provisions on agricultural trade. While the prices received by farmers have been either declining or rising at a lower rate and the prices paid by farmers were increasing at a very high rate. It has resulted in to widening the gap between income from and expenditure on agriculture. Hence it has become the root cause of agrarian crisis in Kerala and thereby farmers suicides in the state. Increase in the cost of cultivation and declining productivity and profitability of the agricultural business affected the state farmers very badly.

4.1.2 Agricultural Debt Pattern in Kerala

Incidence of indebtedness for over a period of two decades in rural areas of Kerala has been higher than the national average. This is due to the factors like concentration on cash crops, higher value of assets per households and availability of credit through the good network of both formal and informal credit agencies. Among the farm households, the incidence of indebtedness was higher in Kerala at 64.4 per cent as against the national average of 48.6 per cent (Jeromi-2007)[4.5]. Farm households in the rural areas in Kerala mostly borrowed from formal agencies than informal agencies. In 2003, 82.3 per cent of the outstanding loans of farm households were obtained from formal agencies, which is considerably higher than the national average of 57.7 per cent. The dependence on

moneylenders for borrowing has been lower in Kerala, which was only 7.4 per cent as against the national average of 25.7 per cent (NSSO-2005)[4.6].

4.3 Purpose of Loan Obtained by Farm Households- 2003 (in per cent)

Sr. No.	Purpose	Kerala	India
1	Capital expenditure in farm	11.0	30.6
2	Current expenditure in farm	10.4	27.8
3	Non-farm business	22.8	6.7
4	Consumption expenditure	10.2	8.8
5	Marriage and ceremonies	11.2	11.1
6	Education	1.4	0.8
7	Medical treatment	2.5	3.3
8	Other expenses	30.5	10.8

Source: NSSO Situation Assessment Survey of Farmers: Indebtedness of Farmer Household 2003 report No. 498, 59th round[4.7]

4.4 Indebtedness of Farm Households in Kerala (in per cent)

Sr. No.		Kerala	India
1.	Rural Households	43.9	60.4
2.	Indebted	64.4	48.6
3.	With cultivation as main income source	16.8	57.2
4.	Indebted with cultivation as main income source	14.4	56.9
5.	Indebted with land <1 ha.	87.7	61.0
6.	Indebted with 1-2 ha. of land	9.1	18.9
7.	Indebted with land>2 ha.	3.2	20.1
8.	Loan for farm activity	21.4	58.4
9.	Loan from Government	4.9	2.5
10.	Loan from Cooperatives	28.3	19.6
11.	Loan from Banks	49.1	33.6
12.	Loan from Moneylenders	7.4	25.7
13.	Loan from other sources	10.2	16.7

Source: NSSO Situation Assessment Survey of Farmers: Indebtedness of Farmer Household 2003 report No. 498, 59th round[4..8)]

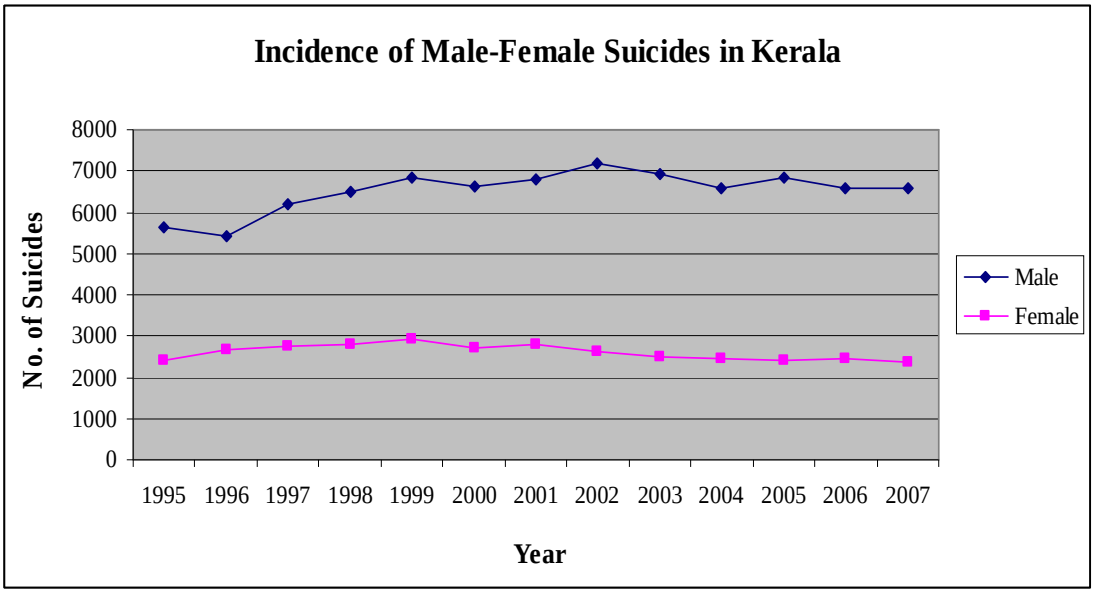
Loans obtained by the farm households at national level were mostly for the cultivation expenses. But, in Kerala, only 21.4 per cent of the loan was taken for the cultivation practices as against the national average of 58.4 per cent. It indicates that the increase in the share of other expenses was the dominant cause of indebtedness of the state farmers. But the question remained unanswered that, why farmers spend most of the part of their borrowed money on other expenses? Because declining productivity and price vulnerability, the agriculture business became unremmunerative. So

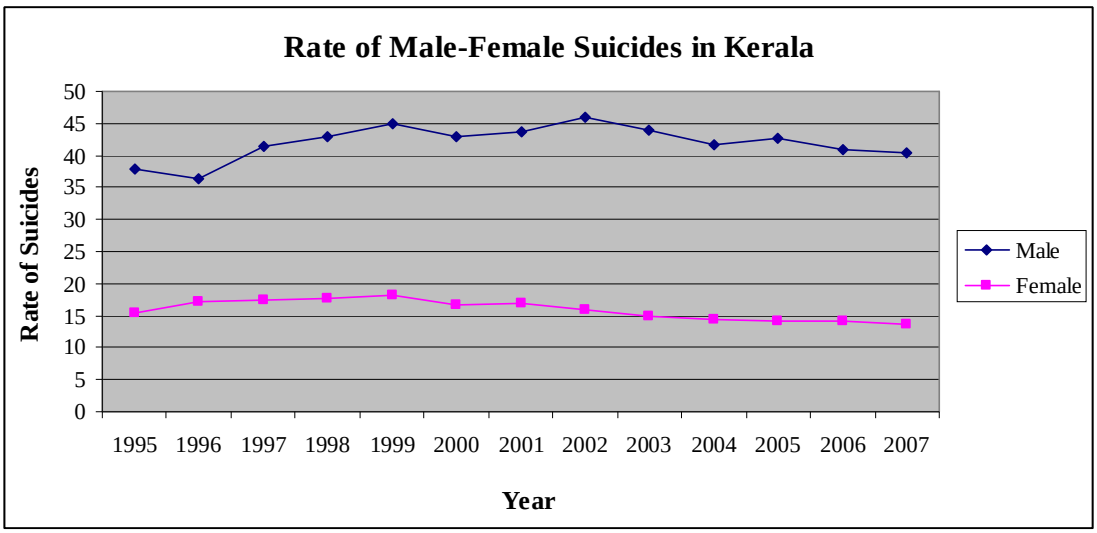
that, they used most of the part of their loan amount for livelihood expenditure than farming activity. Another important thing is that the share of moneylenders and other sources in total lending is very marginal and below the national average. But, the indebtedness among the small and marginal farmers was substantially high as compare to other states and all India average. Also the indebtedness among the cultivation as a main income source was four times less than the national average. Indebtedness of the farmers in Kerala occurs because of the declining income and increasing cost of cultivation. Farmers of the state are directly linked to the international market after the liberalization. International price volatility affected the farm incomes which do not cover the cost of cultivation. As a result, declining profitability of business leads to indebtedness beyond the repaying capacity of farmers.

4.5 Incidence & Rate of Male Female Suicides in Kerala (1995-2007)

Year	Suicide Incidence			Suicide Rate (per 100,000 of population)		
	Male	Female	Total	Male	Female	Total
1995	5615	2397	8012	37.99	15.51	26.50
1996	5414	2672	8086	36.34	17.12	26.51
1997	6215	2746	8961	41.39	17.42	29.11
1998	6503	2803	9306	42.97	17.60	29.96
1999	6853	2925	9778	44.92	18.18	31.20
2000	6609	2695	9304	42.98	16.59	29.42
2001	6787	2785	9572	43.79	16.97	30.00
2002	7165	2645	9810	45.86	15.96	30.47
2003	6935	2503	9438	44.04	14.95	29.05
2004	6598	2455	9053	41.57	14.52	27.61
2005	6830	2414	9244	42.69	14.13	27.94
2006	6583	2443	9026	40.82	14.16	27.04
2007	6588	2374	8962	40.53	13.63	26.61

Source: NCRB Report-2006; obtained from www.maithrikochi.org Accessed on 25/09/2008[4.9]



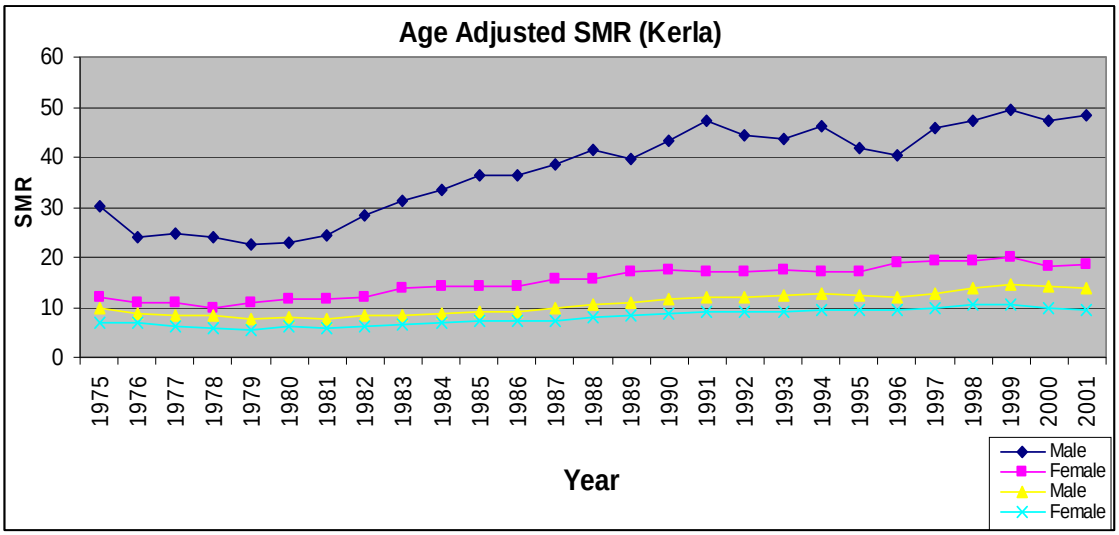


The above table (No. 4.5) explains the general suicide rate in Kerala during the year 1995 to 2007. According to the data, suicide rate for male is quite higher than females. The suicide rate for both the male and female has increased substantially after the year 1995. Suicide is a manifestation of the psychological stress of human being. The data cleared that the stress among the male is higher than of women. The suicide rate in the state is two or three times higher than that of female. As well as, the state general suicide rate is also higher than the national rate of suicide.

4.6Age Adjusted Suicide Mortality Rate by Gender in Kerala (1975-2001)

Sr. No.	Year	Kerala		India	
		Male	Female	Male	Female
1	1975	30.2	12.1	9.7	6.8
2	1976	23.9	10.9	8.7	6.8
3	1977	24.7	10.8	8.3	6.2
4	1978	24.0	09.8	8.4	6.0
5	1979	22.6	10.9	7.8	5.6
6	1980	23.0	11.5	8.0	6.2
7	1981	24.5	11.8	7.7	5.7
8	1982	28.2	12.1	8.4	6.2
9	1983	31.1	14.0	8.4	6.4
10	1984	33.3	14.3	8.9	6.9
11	1985	36.5	14.3	9.0	7.1
12	1986	36.2	14.2	9.0	7.2
13	1987	38.7	15.8	9.7	7.4
14	1988	41.4	15.7	10.4	7.9
15	1989	39.6	17.0	10.9	8.4
16	1990	43.2	17.6	11.5	8.7
17	1991	47.1	17.2	12.0	9.0
18	1992	44.2	17.2	12.0	9.0
19	1993	43.5	17.5	12.4	9.2
20	1994	46.3	17.2	12.8	9.6
21	1995	42.0	17.0	12.5	9.5
22	1996	40.2	18.8	11.9	9.3
23	1997	45.7	19.1	12.9	9.7
24	1998	47.4	19.3	13.8	10.4
25	1999	49.6	19.9	14.4	10.6
26	2000	47.4	18.1	14.2	9.8
27	2001	48.3	18.5	14.0	9.5

Source: Srijit Mishra 2006[4.10]



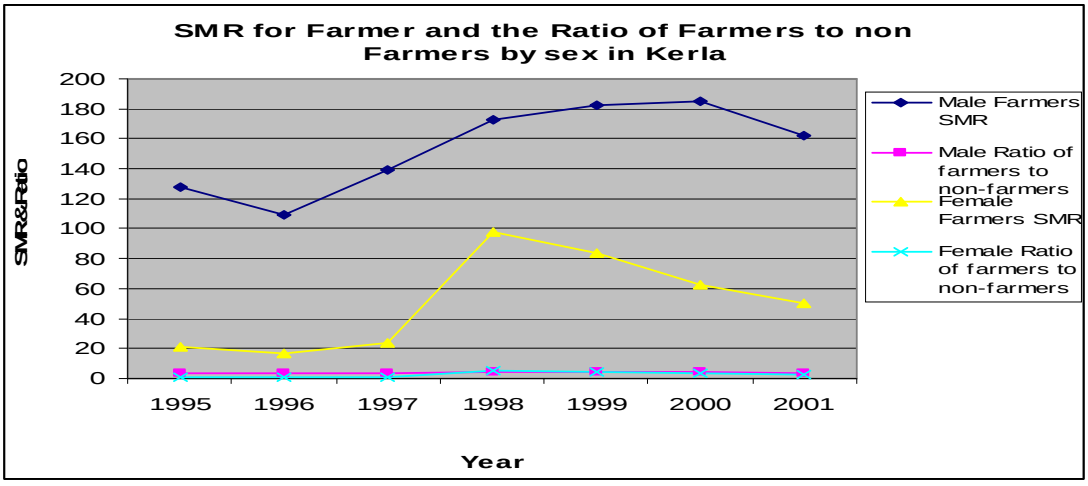
The suicide mortality rate for male and female in Kerala is higher than national average. The suicide mortality rate for male is higher than female

and has been increasing after the year 1996. However, SMR for farmers is substantially higher than national average. It is observed that the ratio of farmers to non farmers SMR increased particularly after the period of 1996. The same trend could be observed in SMR for female farmers. It means the rural and agrarian community of the state of Kerala is under severe stress.

4.7 Suicide Mortality Rate for Farmers and the Ratio of Suicide Mortality Rate for Farmers to Non-Farmers by Sex in Kerala- 1995 to 2001

Sr. No.	Year	Kerala			
		Male		Female	
		Farmers SMR	Ratio of farmers to non-farmers	Farmers SMR	Ratio of farmers to non-farmers
1	1995	127.6	3.61	21.2	1.25
2	1996	109.4	3.11	17.1	0.91
3	1997	138.9	3.50	23.4	1.23
4	1998	172.9	4.32	97.9	5.38
5	1999	182.5	4.30	84.1	4.39
6	2000	184.7	4.54	62.4	3.52
7	2001	161.8	3.75	50.0	2.73

Source: Srijit Mishra 2006[4.11]



Suicide Mortality for male farmers was high as compare to female farmers within the state. Suicide Mortality Rate for male and female farmers increased since 1998 and also the ratio to non-farmers found high. As well as, the general suicide rate is high in the state as compare to other states.

4.2 Andhra Pradesh

Agriculture in Andhra Pradesh during the period of the 1990s and also the 2000s has been in an advanced stage of crisis. The most extreme manifestation of this crisis is the suicides by farmers who are typically driven to this desperate act by inability to repay debt that was incurred in the process of cultivation, which has become volatile and economically less viable activity (Ghosh-2005)[4.12]. The problems of farming are evident ranging from frequent droughts and soil degeneration, lack of institutional credit and insurance leads to an excessive reliance on private moneylenders, problems in accessing reliable and reasonably priced inputs to problems of marketing and high volatility of crop prices. The crisis is also reflected in other features of the rural economy i.e. decline in agricultural employment and the stagnation in the non-farm employment and reduction in the food consumption. It leads to forced migration of workers. Although features such as monetization of the agrarian economy, a shift from food-grains to commercial crops, decline of reciprocal co-operations in the agricultural operations and increased money needs of the farmers had been there for over a century of agriculture in Andhra Pradesh. Changes in state agriculture after the 1980s are significant in several ways (Rao and Suri-2006)[4.13]. The growth rate of aggregate agricultural output of the state declined from 3.4 per cent per annum in the 1980s to 2.3 per cent per annum in the 1990s (AWARE-2006)[4.14]. Agricultural output prices in the state have become more volatile as they have more influenced by the world market trend. Even, the most minimal protection earlier afforded to cultivators has been removed after the WTO amendment. Public agricultural extension services are only working on

paper and have disappeared in actual situation. It leaves farmers of the state of Andhra Pradesh to the mercy of private dealers of seeds and other inputs such as fertilizers and pesticides who function without adequate regulation, creating a problem of wrong crop choices, excessively high input prices, spurious inputs and extortion. The same class of traders also functions as moneylenders. Prices of fertilizers and pesticides had been increased by 400 per cent between 1997-2002 in Andhra Pradesh (Revathi-2005)[4.15]. The crisis in water and irrigation sources can also be traced to these cultivation patterns. Due to the lack of irrigation facilities, farmers have to spend more money on irrigation. The state farmers are mostly relying on the underground water sources through tubewells. The excessive use of underground water causes for the depleting of water level at an alarming stage. Lack of institutional credit support forced farmers to borrow from the private sources at the rates of interest ranging from 36 to 120 per cent per annum. It increased debt burden which is far beyond the repaying capacity of farmers due to unviable nature of the agricultural operations during recent past. Other factors such as social and cultural celebrations have also added to the debt burden that becomes unbearable over a period of time. Production loans dominated in the current rural indebtedness of the state farmers. But among the non-productive loans, incurred by rural households those taken for medical expenses are the most significant. The deterioration of public health services and the promotion of private medical care have dramatically increased in the financial cost of well being. The Policies of the central government after 1991 have direct and indirect impact on farmers welfare. The state government policy of development of Information Technology hubs in

Hydrabad left the farmers of the state in uncertain atmosphere. Declining prices of agricultural output caused for the deterioration of the state farmers. It is the sign of the distress situation of state agriculture in Andhra Pradesh.

4.2.1 Agrarian Situation Assessment of Andhra Pradesh

4.8 Distribution of Operational Holdings and Area under Holding by Size Class in Andhra Pradesh (1956-1996)

		Holding Size Classes (ha)					
Year		<1	1-2	2-4	4-10	10+	Total
1956	No. of farmers	1638	775	753	711	369	4246
	Percentage	38.6	18.3	17.7	16.7	8.7	100.00
	Total area	816	1000	1696	2904	3948	10337
	Percentage	7.9	9.7	16.1	28.1	38.2	
	Avg. land holding	0.5	1.29	2.22	4.08	10.07	2.43
1971	No. of farmers	2491	1065	942	689	234	5421
	Percentage	46.0	19.6	17.4	12.7	4.3	100.00
	Total area	1086	1533	2607	4186	4174	13586
	Percentage	8.0	11.3	19.2	30.8	30.7	
	Avg. land holding	0.44	1.44	2.77	6.08	18.4	2.51
1981	No. of farmers	3804	1591	1174	646	155	7370
	Percentage	51.6	21.6	15.9	8.8	2.1	
	Total area	1886	2412	3261	3979	2795	14333
	Percentage	13.2	16.8	22.8	27.8	19.5	
	Avg. land holding	0.5	1.45	2.72	5.94	16.53	1.87
1991	No. of farmers	5210	1972	1346	644	118	9290
	Percentage	56.1	21.2	14.5	6.9	1.3	
	Total area	2368	2827	3640	3777	1848	14460
	Percentage	16.4	19.6	25.2	26.1	12.8	
	Avg. land holding	0.45	1.43	2.71	5.86	15.61	1.56
1996	No. of farmers	6300	2262	1395	563	83	10603
	Percentage	59.4	21.3	13.2	5.3	0.8	
	Total area	2904	3229	3736	3231	1273	14373
	Percentage	20.2	22.5	26.0	22.5	8.9	
	Avg. land holding	0.46	1.43	2.68	5.74	15.39	1.36

Source: Andhra Pradesh Agricultural Statistics at a Glance-2002, DES[4.16]

4.9 Proportion of Landless Households in Andhra Pradesh

Year	Andhra Pradesh	Percentage change	India	Percentage change
1987-88	45.9	--	38.7	--
1993-94	49.5	7.84	--	9.32

1999-2000	**52.3**	**5.65**	**40.9**	**5.68**

Source: Andhra Pradesh Agricultural Statistics at a Glance-2002, DES[4.17]

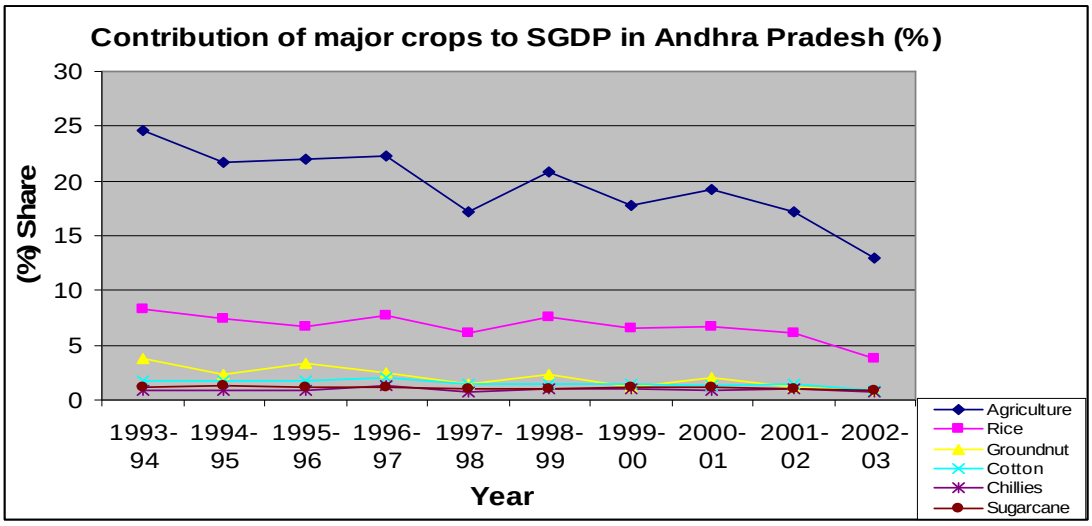
Operational holdings in the state of Andhra Pradesh have been at the verse of decline. There has been a decline in the absolute number and area covered by the large and medium holding since 1956. Land holdings are small and unviable because of subdivision and fragmentation of land during pre and post reforms period. It becomes difficult to invest heavily in such a tiny size of land holding. Also the irrigation facilities cannot be provided to these small holdings. In the absence of the adequate irrigation facilities, there is a decline in productivity and thereby production. Due to the withdrawal of state support to farmers in the input-output market, they have been squeezed by the traders and input dealers. High input prices and minimum of output prices caused for the unremunerative state of the agricultural operation in the recent past. Due to the declining income and increasing debt burden farmers have to sale their land. It has been causing to increase in landless households in the state. Landlessness is concentrated among the Dalit and Tribal population of the state. The proportion of landless households (52.3per cent) in the state is higher than the national average of 40.9 per cent in 1999-2000. In the last few years, agrarian economy has fallen in a bad time. Whereas farmers hardly find buyers for their land, and those willing to buy would offer very low price. Andhra Pradesh has the second highest extent of landless households after Punjab. Increase in the landlessness is the result of the growing difficulties of cultivation. Unbearable debt of small and marginal farmers forces them to sell their land because of inability to repay their accumulated debt through the agriculture. According to the national commission on farmers

(2006), 41 per cent of farmers of the country have shown willingness to leave the agriculture if they get an alternative source of income.

4.10 Contribution of Agriculture and Certain Major Crops to GSDP in AP (in per cent % At Constant Prices 1993-94)

Sr. No.	Year	Agriculture	Rice	Groundnut	Cotton	Chillies	Sugarcane
1.	1993-94	24.62	8.27	3.81	1.71	0.87	1.23
2	1994-95	21.77 (-11.57)	7.46 (-9.79)	2.32 (-39.10)	1.77 (3.50)	0.87 --	1.28 (4.06)
3	1995-96	21.97 (0.91)	6.77 (-9.24)	3.41 (46.98)	1.82 (2.82)	0.85 (-2.29)	1.22 (-4.68)
4	1996-97	22.32 (1.59)	7.68 (13.44)	2.54 (-25.51)	2.01 (10.43)	1.26 (48.23)	1.18 (-3.27)
5	1997-98	17.16 (-23.11)	6.11 (-20.44)	1.43 (-43.70)	1.40 (-30.34)	0.76 (-39.68)	1.06 (-10.16)
6	1998-99	20.88 (21.67)	7.54 (23.89)	2.37 (65.73)	1.44 (2.85)	1.04 (36.84)	1.08 (1.88)
7	1999-2000	17.79 (-14.79)	6.51 (-14.00)	1.15 (-51.47)	1.45 (0.69)	0.95 (-8.65)	1.23 (13.88)
8	2000-2001	19.20 (7.92)	6.69 (2.76)	2.07 (80.00)	1.37 (-5.51)	0.92 (-3.15)	1.11 (-9.75)
9	2001-2002	17.15 (-10.57)	6.14 (-8.22)	1.16 (-43.96)	1.50 (9.48)	0.99 (7.60)	1.06 (-4.50)
10	2002-2003	12.94 (-24.54)	3.79 (-38.27)	0.82 (-29.31)	0.81 (-46.0)	0.67 (-32.32)	0.83 (-21.69)

Source: Directorate of Economics and Statistics government of Andhra Pradesh (2004)[4.18]
Figures in parentheses indicate proportional change



Agriculture sector is the predominant sector of the Indian economy. The share of agriculture in GDP had declined during the reforms period. As well as, the share of agriculture in GSDP in Andhra Pradesh has been

volatile for the same period. The variation, in terms of overall agriculture and major crops was not unique during 1993-2003. It shows the uneven changes in the state agriculture sector. Uncertainty of monsoon and inadequacy of irrigation are at the root of the agricultural volatility. But, certain other man made factors such as; spurious seeds, fertilizers and pesticides and the high prices of inputs, inconsistent supply of electricity and inadequate irrigation facilities affected the agricultural output in the state of Andhra Pradesh. The share of agriculture and major crops in the GSDP had declined during the period of 2001-03. The agriculture production has declined by 32 per cent in 2002-03 which was highest since 1993-1994. And hereafter the cloud of agrarian crisis has darkened over the state agriculture. Since then the farmers suicides has become a spate which took the lives of thousands of farmers in the state of Andhra Pradesh. The farmers belong to small and marginal class and backward class by caste who cultivated cash crops were trapped more in this vicious circle of agrarian crisis.

4.11 Minimum Support Price and Market Price for Major Agricultural Commodities in Andhra Pradesh- 1993-94 to 2003-04

Sr. No.	Year	Paddy			Cotton			Groundnut		
		MSP	Market Price	Price difference	MSP	Market Price	Price difference	MSP	Market Price	Price difference
1.	93-94	310	377	67	900/1050 (975)	1210	235	800	978	178
2.	94-95	340	436	94	1000/1200 (1100)	1791	691	860	905	245
3.	95-96	360	458	98	1150/1350 (1250)	1477	227	900	904	04
4.	96-97	380	492	112	1180/1380 (1280)	1681	401	920	1334	414
5.	97-98	415	559	144	1330/1530 (1430)	1841	411	980	1201	221
6.	98-99	440	598	158	1440/1650 (1545)	2082	537	1040	1305	265
7.	99-00	490	875	385	1575/1775 (1675)	1732	57	1155	1341	186
8.	00-	510	662	152	1625/1825	1852	127	1220	1366	146

	01				(1725)					
9.	01-02	530	749	219	1675/1875 (1775)	1805	30	1340	1367	27
10.	02-03	550	827	277	1695/1895 (1795)	1836	41	1355	1455	100
11.	03-04	550	--	--	1725/1925 (1825)	1964	139	1400	1791	391

Source: Directorate of Economics and Statistics government of Andhra Pradesh (2004)[4.19]
Figures in parentheses indicate the average price of the crops

Minimum support price is announced by the government on the basis of the cost of cultivation. According to the table (4.11) given above the minimum support price is often less than the market price for the period between 1993-94 to 2003-04. Also the year wise percentage change has shown volatility. Decadal price changes for Paddy, Cotton and Groundnut have been of the order of 77.41, 91.66 and 75 per cent respectively. Between 1993 to 2002 in Andhra Pradesh the average increase of output prices was around 80 per cent, but the input prices were increased by 400 per cent. It is a result of decontrolled input-output market. In this new type of market, farmers have to face market vagaries without any state support. Interesting fact is that, the market prices of agricultural commodities were higher than the Minimum Support Price for almost all crops. Even the market price for all crops was higher than the MSP but it also could not cover the cost of cultivation. Reason is that already the minimum support price is set down at lower level and the traders have the tendency of to just cross the MSP line. Though, the traders offered higher price, but they being the input dealers and moneylenders in Andhra Pradesh hence they take off their input price which is taken by farmers on credit and also the some part of the loan amount or an interest of the same from the value of the produce that comes to them. As a result, nothing remains for livelihood of farm family and further agricultural operations. Hence, farmers need money for both the purposes i.e. consumption and

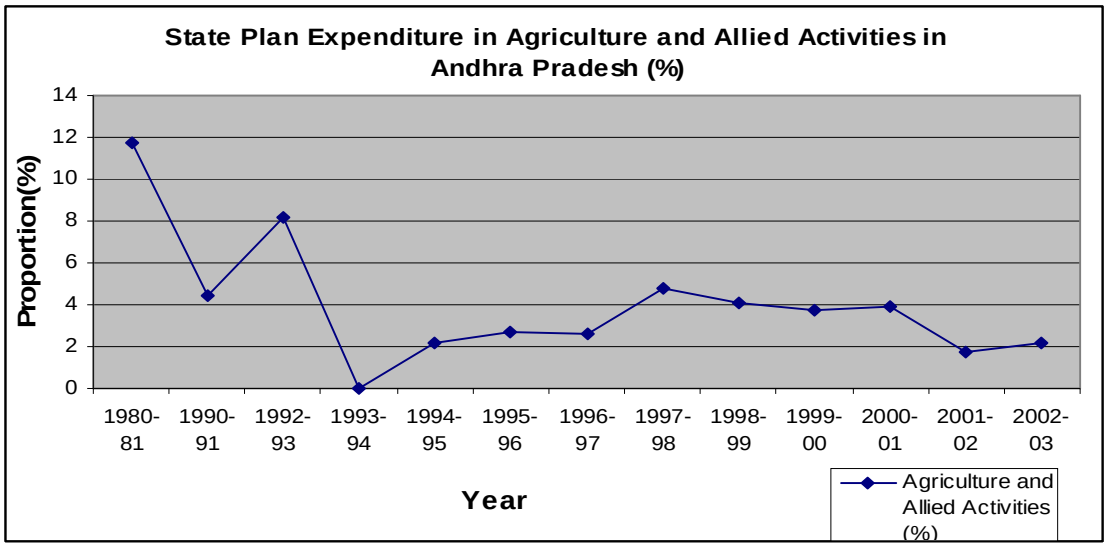
cultivation. The farmers are not eligible for the institutional credit as they are defaulters of earlier bank credit. As a result again farmers borrow from private sources at higher rates of interest and the vicious circle of indebtedness continuous in future.

4.12 State Plan Expenditure in Agriculture and Allied Activities in Andhra Pradesh- 1980-81 to 2002-03

Sr. No.	Year	Agriculture and Allied Activities (%)	Percentage change
1.	1980-81	11.78	--
2.	1990-91	4.42	-62.47
3.	1992-93	8.20	85.52
4.	1993-94	0.03	-99.63
5.	1994-95	2.19	ά
6.	1995-96	2.69	22.83
7.	1996-97	2.59	-3.71
8.	1997-98	4.80	85.32
9.	1998-99	4.10	-14.58
10.	1999-2000	3.78	-7.80
11.	2000-2001	3.91	3.43
12.	2001-2002	1.77	-54.73
13.	2002-2003	2.15	21.46

Source: Directorate of Economics and Statistics government of Andhra Pradesh (2004)[4.20]

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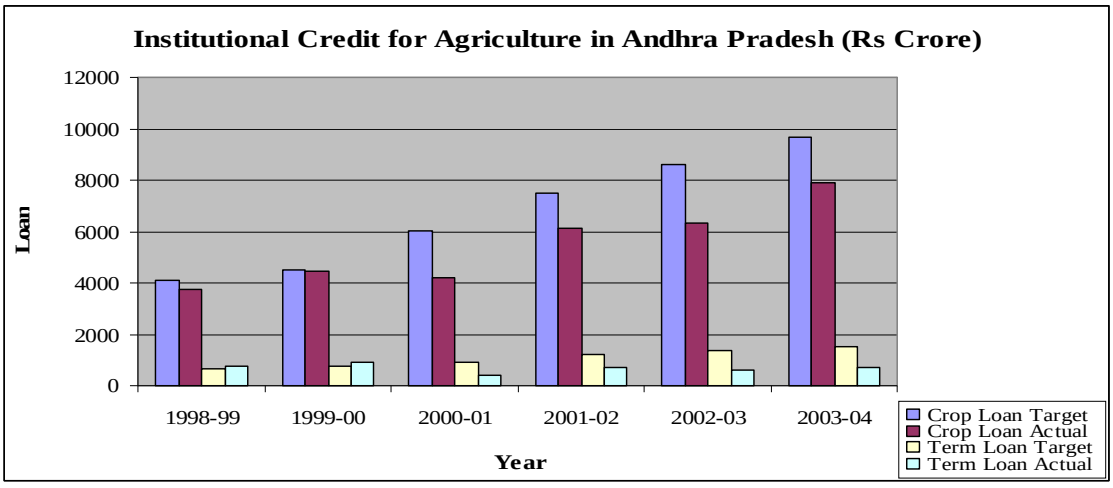
The share of agriculture and allied activities in state government expenditure under various plans has declined from 11.78 per cent to 2.15 per cent during 1980-2003. Overall decline has been of the order of 81.74 per cent. While the expenditure on agriculture to total expenditure is

around 7 per cent in Karnataka and 5 per cent at all India level but, it was only 3 per cent in Andhra Pradesh. In the year 1990-1991, 1993-94 and 2001-2002 the plan expenditure on agriculture was declined by 62.47, 99.63 and 54.73 per cent respectively. These are the worst years for the state agriculture. It means farmers have been at the marginal in the state policy domain. Andhra Pradesh has been achieving information technology development at the cost of agriculture and farmers. But such type of one-way development cannot assure the inclusive and sustainable growth either of the state or the country.

4.13 Institutional Credit for Agriculture in Andhra Pradesh 1998-2004 (Rs. Crore)

Sr.No.	Year	Crop loan			Term Loan		
		Target	Actual	(%)proportion to targeted loan	Target	Actual	(%)proportion to targeted loan
1	1998-99	4115	3743	90.96	659	749	113.65
2	1999-00	4500	4451	98.91	737	932	126.45
3	2000-01	6019	4184	69.51	906	417	46.02
4	2001-02	7500	6124	81.65	1200	689	57.41
5	2002-03	8600	6332	73.62	1345	593	44.08
6	2003-04	9667	7902	81.72	1515	733	48.38

Sources: Andhra Pradesh Co-operative Bank-2004[4.21]



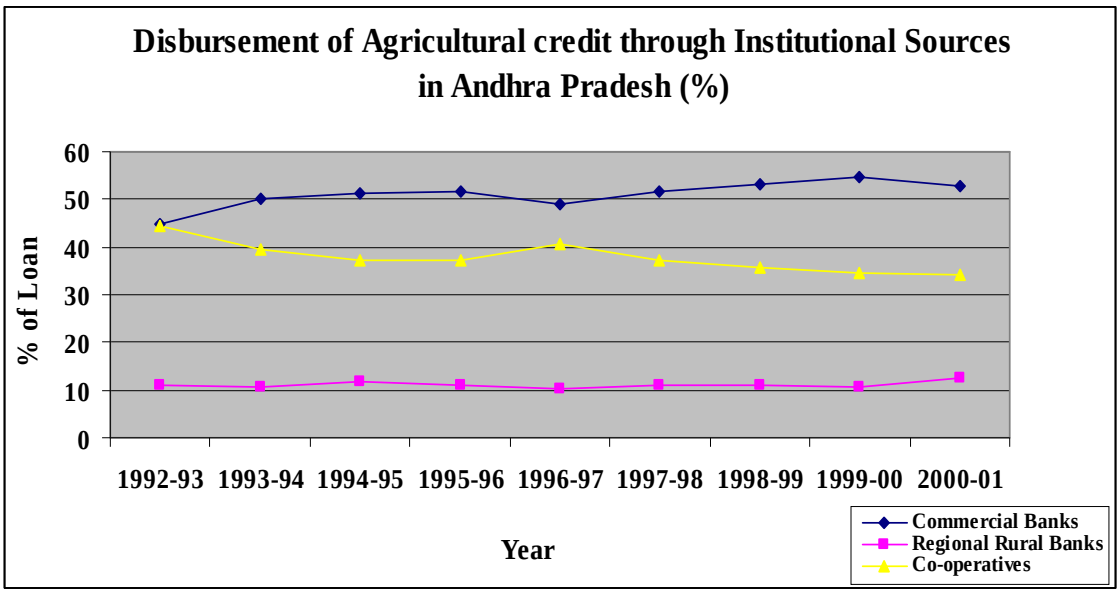
It is clear from aforestated figures that actual loan amount falls short to targeted loan amount in case of both the crop and term loans. In which term loan shows more uncertainty. In 1998-2000 actual term loan was 113.65% and 126.45% of targeted amount. After that, it hardly crosses 50 per cent of targeted amount. The same trend is observed in case of crop loan also. It causes for the increasing dependence of farmers on moneylenders for their needs. They charged heavy rates of interest varied from 36 to 120 per cent per annum. Shortfall of the institutional credit resulted in the declining private investment in agriculture or it forced farmers to borrow from the other sources such as traders and commission agents. The declining income from agriculture reduced the repaying capacity and the same has led to the higher degree of indebtedness and thereby the distress act of suicides by the farmers in the state of Andhra Pradesh.

4.14 Disbursement of Agricultural Credit through Institutional Sources in Andhra Pradesh – 1992 to 2001 (in per cent %)

Sr. No.	Period	Type of Loan	Commercial banks	Regional Rural Banks	Co-operatives
1.	1992-93	Crop loan	46.2	12.3	41.4
		Term loan	40.2	7.2	52.4
		Total	44.7	11.0	44.3
2.	1993-94	Crop loan	48.7	12.4	38.9
		Term loan	54.0	5.4	40.6
		Total	50.2	10.5	39.4
3.	1994-95	Crop loan	50.5	13.1	36.4
		Term loan	53.9	6.3	39.7
		Total	51.2	11.7	37.1
4.	1995-96	Crop loan	51.9	12.0	36.0
		Term loan	50.9	7.8	41.3
		Total	51.7	11.1	37.2
5.	1996-97	Crop loan	50.5	11.2	38.3
		Term loan	42.8	6.8	50.5
		Total	49.0	10.3	40.7
6.	1997-98	Crop loan	54.3	12.5	33.2
		Term loan	40.7	6.1	53.2

		Total	51.6	11.2	37.2
7.	1998-99	Crop loan	54.4	12.2	33.4
		Term loan	47.1	5.1	47.8
		Total	53.2	11.0	35.8
8.	1999-2000	Crop loan	56.2	11.5	32.2
		Term loan	48.2	6.4	45.4
		Total	54.8	10.7	34.5
9.	2000-2001	Crop loan	52.0	13.4	34.6
		Term loan	56.0	9.1	34.9
		Total	52.7	12.7	34.2

Source: Andhra Pradesh State Focus Paper-2001-02, NABARD, Hyderabad[4.22]



The share of credit disbursed by co-operatives has come down from 44.3 to 34.7 per cent. However, the shares of Regional Rural Banks and Commercial Banks have increased by 1.7 and 8 per cent respectively for the year 1992-2001 in the state of Andhra Pradesh. The Co-operative institutions which are basically meant for lending credit to small and marginal farmers have not been successful in fulfilling their duties.

The increased share of Commercial Banks in credit flow to agriculture indicates a preference for lending to big farmers over marginal farmers, which is an outcome of the banking sector reforms during the nineties. Though, the share of commercial banks increased, it was not sufficient to fulfill the demand for credit by the farmers. Declining share of co-

operatives in total credit flow pushed farmers to borrow from the private sources at high rates of interest. It means the banking sector reforms are at the root of the growing indebtedness and thereby suicides of farmers in the state of Andhra Pradesh. Looking at the crop loan disbursement, the share of commercial banks is quite higher than RRBs and co-operative banks. The co-operatives are meant for fulfilling the credit needs of the small, marginal and weaker sections of the agriculture. These institutions fail to address the target group. Hence, the share of commercial banks has increased and some of the farmers resorted to the private sources of lending. On the other hand RRBs did not approch to the rural masses. As a result, their share, both in crop and term loan is stagnated around 12 per cent. It means the financial institutions those who are especially meant for the rural development have failed to achieve their target and leaves farmers in the sustainable economic crisis.

4.15 Indebtedness of Farm Households in Andhra Pradesh- 2003

Sr. No.		Andhra Pradesh	India
1.	Rural Households	42.3	60.4
2.	Indebted	82.0	48.6
3.	With cultivation as main income source	53.7	57.2
4.	Indebted with cultivation as main income source	54.4	56.9
5.	Indebted with land <1 ha.	55.7	61.0
6.	Indebted with 1-2 ha. of land	21.8	18.9
7.	Indebted with land>2 ha.	22.4	20.1
8.	Loan for farm activity	61.5	58.4
9.	Loan from Government	1.0	2.5
10.	Loan from Cooperatives	10.4	19.6
11.	Loan from Banks	20.0	33.6
12.	Loan from Moneylenders	53.4	25.7
13.	Loan from other sources	15.1	16.7

Source: NSSO Situation Assessment Survey of Farmers: Indebtedness of Farmer Household, 2003 report No. 498, 59th round(4.23)

The causes of indebtedness include changes in cropping pattern from food grains to commercial crops. It can be called as a 'Demonstration Effect'

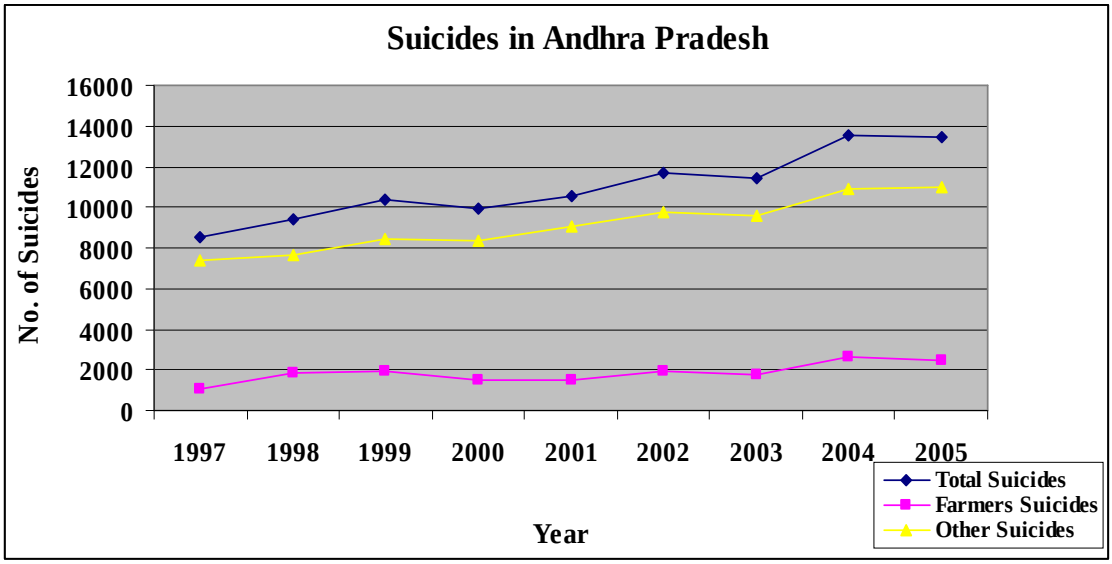
(Dusenbery's theory) of the big farmers over small and marginal farmers. Big farmers earn profit through the cultivation of cash crops but when small and marginal farmers follow their way they faced the heavy losses rather than profit. Cultivation of commercial crops is a capital intensive practice. However, small and marginal farmers did not attend the expected volume of the investment due to a shortfall in the supply of institutional credit and the minimum loan ability. Hence, either they borrow from private sources or invest as per the ability. Inadequate investment didn't attend the expected income from the cultivation practice. However, those who invested, in their case an uncertain monsoon affected the production and thereby farm income and profit. The share of moneylenders (53.4%) in total credit to rural households in Andhra Pradesh was two times higher than the national average of 25.7 per cent. The share of marginal farmers in total indebted farmers was 55.7 per cent which is the impact of failure of the institutional credit mechanism in the state. It means the marginal farmers have become more volatile in the changing nature of agriculture and facing acute economic crisis further it converted into a distress act of suicide. High cost of cultivation, crop failure, drying up of institutional credit particularly to the small and marginal farmers and declining returns have been increasing the indebtedness and likelihood of suicides in Andhra Pradesh during the last two decades.

4.16 Farmers Suicides in Andhra Pradesh 1997-2002

Sr. No.	Year	Total Suicides	Farmers Suicides	Other Suicides	% of Farmers suicides in total Suicides
1.	1997	8507	1097	7410	12.9
2.	1998	9433	1813	7620	19.2
3.	1999	10386	1974	8412	19.0

4.	2000	9905	1525	8380	15.4
5.	2001	10522	1509	9013	14.3
6.	2002	11693	1896	9797	16.2
7.	2003	11409	1800	9609	15.8
8.	2004	13526	2666	10860	19.7
9.	2005	13422	2490	10952	18.5

Source: K Nagraj 2006[4.24]



Suicides as a whole rose nationally during the period between 1997-2005. But the rate of increase in farm suicides was far higher than the rate of suicides by non-farmers in the state of Andhra Pradesh. The seed of agrarian crisis was sown in the initial stage of new economic policy initiated by reforms. Further, the situation aggravated during the period of the government of Mr. Chandra Babu Naidu in Andhra Pradesh. During that period, state government invested heavily in the development of Information and Technology sector at the cost of state agriculture. Declined public investment in agriculture resulted in the increase of farmer's investment for the farm infrastructure development. The investment for wells and tubewells irrigation by farmers in drought prone areas has gone up substantially. Farm income became a subject of wider fluctuations due to the poor quality of electricity supply, depleting of underground water table at an alarming stage and frequent failure of

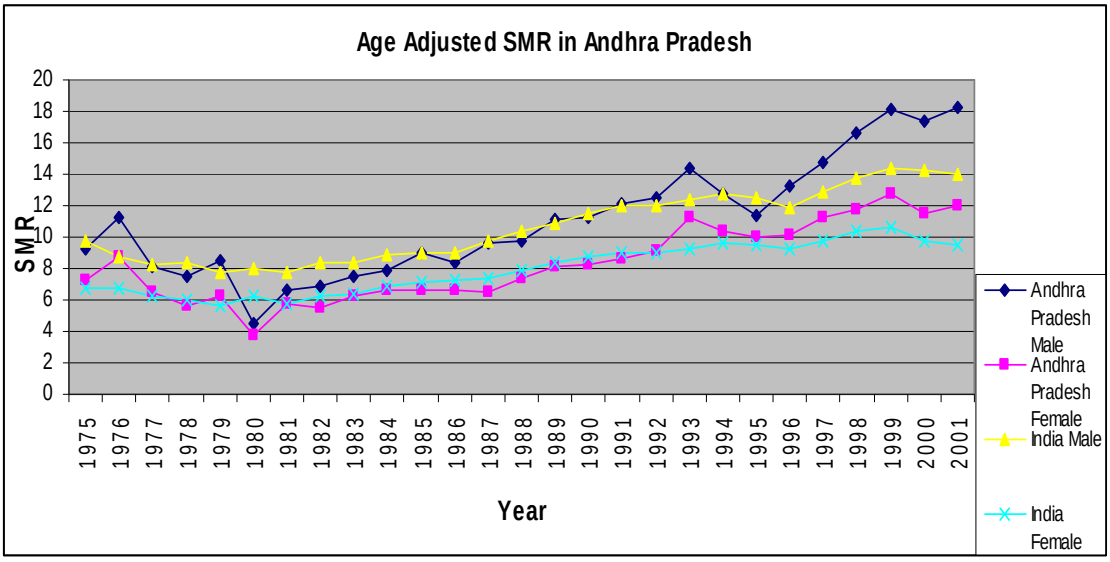
equipments and wells, increased input prices and declining or mere stagnant output prices, Crop failure, pest attacks, volatility of prices, lack of institutional credit support, deficiencies of market and the neglect on the policy front were not enough, the vagaries of the monsoon have devastated farmers lives. The frequent drought and declining public investment not only affected agriculture growth but also the rural farm and off farm employment. The loss of agriculture income has resulted in the depletion of the purchasing power of the farmers. Farmers annual income from the cultivation was only Rs. 9000 while annual cultivation expenditure was about Rs. 12000 (NSSO-2005)[4.25]. The tragedy of farmers suicides had started in the late 1980s in the state when Cotton and Chilli growers committed suicides. But the government took it casually as like an accident. Thereafter in 1997 the act was continuously on the rise and still the state and central government were silent. The number of incidences of farmers suicides have increased after 2004 where the Cotton growers of the state consistently were ending their lives. The year 2006 was the worst year in the history of Indian agriculture. Whereas the highest number of farmers have ended their lives through committing suicides in the country. All these factors have been responsible for the increasing ratio of farmers suicides in the state of Andhra Pradesh.

4.17 Age Adjusted Suicide Mortality Rate in Andhra Pradesh- 1975 to 2001

Sr. No.	Year	Andhra Pradesh		India	
		Male	Female	Male	Female
1	1975	9.3	7.2	9.7	6.8
2	1976	11.3	8.8	8.7	6.8
3	1977	8.1	6.5	8.3	6.2
4	1978	7.5	5.6	8.4	6.0
5	1979	8.5	6.3	7.8	5.6

6	1980	4.5	3.8	8.0	6.2
7	1981	6.6	5.7	7.7	5.7
8	1982	6.9	5.5	8.4	6.2
9	1983	7.5	6.2	8.4	6.4
10	1984	7.9	6.6	8.9	6.9
11	1985	9.0	6.6	9.0	7.1
12	1986	8.4	6.6	9.0	7.2
13	1987	9.6	6.5	9.7	7.4
14	1988	9.8	7.4	10.4	7.9
15	1989	11.1	8.1	10.9	8.4
16	1990	11.3	8.3	11.5	8.7
17	1991	12.1	8.6	12.0	9.0
18	1992	12.5	9.1	12.0	9.0
19	1993	14.4	11.2	12.4	9.2
20	1994	12.8	10.4	12.8	9.6
21	1995	11.4	10.0	12.5	9.5
22	1996	13.3	10.1	11.9	9.3
23	1997	14.8	11.2	12.9	9.7
24	1998	16.6	11.8	13.8	10.4
25	1999	18.1	12.7	14.4	10.6
26	2000	17.4	11.5	14.2	9.8
27	2001	18.2	12.0	14.0	9.5

Source: Srijit Mishra-2006[4.26]

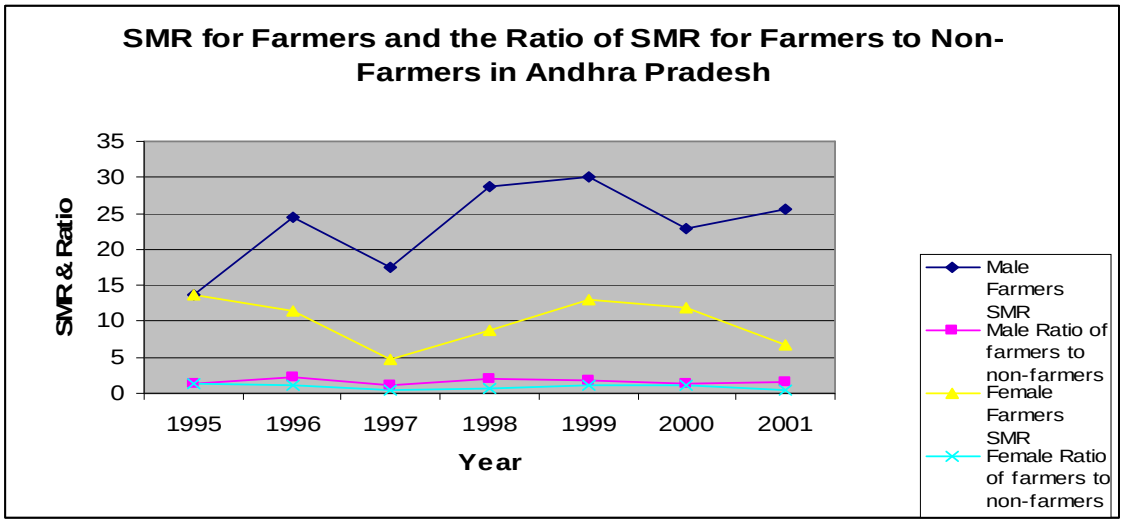


Suicide mortality rate across the state indicates that there was an increase in general suicides both for male and female during 1997-2001. Suicide Mortality Rate for male was higher than female in Andhra Pradesh and at all India level. After 1989 SMR for male in Andhra Pradesh was higher than the national average. It means male being head of the family is more in distress compare to female at the state and national level.

4.18 Suicide Mortality Rate for Farmers and the Ratio of Suicide Mortality Rate for Farmers to Non-Farmers by Sex in Andhra Pradesh- 1995 to 2001

Sr. No.	Year	Andhra Pradesh			
		Male		Female	
		Farmers SMR	Ratio of farmers to non-farmers	Farmers SMR	Ratio of farmers to non-farmers
1	1995	13.6	1.25	13.6	1.41
2	1996	24.4	2.20	11.5	1.16
3	1997	17.5	1.22	4.6	0.39
4	1998	28.8	2.02	8.7	0.72
5	1999	30.1	1.89	13.0	1.03
6	2000	22.8	1.38	11.8	1.03
7	2001	25.6	1.52	6.7	0.54

Source: Srijit Mishra-2006[4.27]



Suicide Mortality Rate for male farmers compare to female farmers was higher within the state of Andhra Pradesh. While female SMR was also higher for the state as compare to national average. The ratio of farmers SMR to non-farmers SMR is found more than one for male during the mentioned period (1995-2001). It is an indication of the worsen situation of farming community in the state. It is an outcome of the negligence of the rural economy on the policy front during the post reforms period in Andhra Pradesh.

The causes of this widespread crisis are complex and manifold. It reflects technological and weather related factors, changes in relative prices, and

reduced level of public investment. Also the climatic shifts have played negative role in terms of excess and inadequate rainfall. Though there were other factors for the farmers suicides, but the main thrust of this problem was found in the implementation of the new economic policy. Which substantially reduced the protection offered to farmers and exposed them to market volatility. The state of Andhra Pradesh had become almost a laboratory for every neo-liberal economic experiment. Farmers suicides have been the output of deeply sown seeds of agrarian crisis in 1991 in Andhra Pradesh.

4.3 Punjab

Punjab is a rather small state occupying less than 2 per cent of total geographical area and little more than 2 per cent of the total population of the country. The state was viewed as the most dynamic and progressive state of the country, particularly on account of its success in the agrarian sector during the green revolution. Of all the states of India, Punjab's agricultural growth rate was the highest during the 1960s to the middle of the 1980s which was the first phase of the green revolution. Annual rate of increase in the production of food-grains during the period of 1961-62 to 1985-86 for the state was more than double than that of the country as a whole. The discourse of green revolution also changed the political-cultural dynamics of the state. It was not only to the new agrarian technologies and the high yielding varieties of seeds that the success of green revolution was attributed (Jhodhka-2006)[4.28]. The Jats, the dominant agrarian caste is particularly known for the pride they take in their rural identity. Their love for land and the high value they attached to the

practice of self-cultivation played an important role in making the green revolution a success story in the region and also at the national level.

However, the excitement did not last for very long. After two decades of growth, the green revolution began to lose its charm, and was followed by the series of crisis. Beginning with the early 1980s the word crisis became the dominant mode of representing Punjab. From politics and economics to culture and ecology, everything seemed to be in a state of crisis in Punjab. The rise of Sikh militancy during the 1980s, for example, was often explained by referring to the success and failure of the green revolution (Jhodka-2001)[4.29]. The movement of 'Khalistan' for a separate Sikh nation generated a sense of crisis, which was felt much beyond Punjab (Saberwal-1987)[4.30]. Deceleration of economic growth of the Punjab economy in general and agriculture sector in particular accelerated the crisis during the period of liberalization. Mechanization and commercialization of agriculture and intensive use of biological technologies have not only reduced the use of labour but also to the rise in cost of cultivation. It has resulted in the declining of employment in agriculture sector as well as, inadequate off-farm employment opportunities further aggravated the situation. The paradoxical situation of rising of cost of cultivation with stagnant productivity and minimum support price reduced returns from agricultural operation. The reduction of differentials between returns and cost of production, the increasing uncertainty of weather as well as a dependence on borrowed money at higher rates of interest from moneylenders were the reasons responsible for increasing the indebtedness among farmers of Punjab. It has compounded problems to the extent that farmers of Punjab resorted to

committing suicides (Shergil-1998[4.31], Ghunam-200[4.32]1, AFDRI-2000[4.33] and Gill-2004[4.34]). Indebtedness is a function of availability of credit in relation to its demand as also the ability of recipient to service it. Indebtedness also is a function of credit availability in relation to cost of cultivation (P. Satish-2004)[4.35]. The institutional lending is inadequate and costly and farmers have to resort to private non-institutional sources of finance, which have their own ways to exploit and squeeze the farmers net income.

In Punjab, suicides by farmers became a public issue since the mid 1980s. The state government has reported 2116 suicides had taken place since 1986 but many more cases might have gone unreported (Gill & Singh-2004)[4.36]. Among the total number of farm suicides, small and marginal farmers were reported the maximum number of suicides. It indicates the vulnerability of the small and marginal farmers in the state. The state agriculture was affected during the post reforms period because of opening of the market to the international players without any safety nets to the indigenous farmers. As well as, the free entry of the private traders in the agriculture market without a regulatory mechanism, the role of middlemen and commission agents became vital in the determination of prices and farmers have become mute receivers. They are input dealers and traders as well as, the source of the informal credit as like in other states in the country. Hence, they can easily exploit the farmer by way of offering minimum price for his produce and charge the maximum price for the inputs. Declining income with increasing cost of cultivation and consumption expenditure pushed farmers into the distress. For balancing the expenditure and income farmers borrow from the private sources at

high rates of interest which lead to the indebtedness of farmers. The causes of suicides, of which indebtedness is predominant, other factors included economic distress, crop failure, alcoholism, marital and domestic discord and drug addiction, etc. are there as a stressors. All these causes, pointed towards the poor economic status of the victims and the deterioration of rural economy of the state.

4.19 Distribution of Operational Holdings in Punjab

Sr. No.	Size class	1970-71	1980-81	% change	1990-91	% change	1995-96	% change
1.	0-1 marginal	517568 (37.63)	197323 (19.21)	-61.87	296131 (26.50)	50.07	203876 (18.65)	-31.15
2.	1-2 small	260083 (18.91)	199368 (19.41)	-23.34	203842 (18.24)	2.24	183453 (16.78)	-10.00
3.	2-4 medium	281103 (20.44)	287423 (27.99)	2.24	288788 (25.85)	0.47	320340 (29.31)	10.92
4.	4-10 large	247755 (18.02)	269072 (26.20)	8.60	261481 (23.40)	-2.82	305792 (27.98)	16.94
5.	10+ extra large	68883 (5.00)	73941 (7.19)	7.34	67172 (6.01)	-9.15	79612 (7.28)	18.51
	Total	1375392	1027127	-25.32	1117414	8.79	1093073	-2.17

Source: Human Development Report (Punjab-2004c:41) [4.37]

The total number of landholdings in the state declined from 1375392 ha in 1971 to 1027127 ha. in 1981. Again it has increased in 1991 and declined in 1995. The share of marginal farmers to moving out from the business was high whereas sharp increase in medium and large farmers in the state. Though average size of holdings is growing in Punjab, the big farmers are not necessarily becoming more rural. While marginal and small cultivators seem to be moving out of the village in searching of new opportunity for livelihood. It has adversely affected the supply of agriculture labour force which has resulted into increase in the wage rate and thereby cost of cultivation. And the agriculture business has become more vulnerable and farmers pushing out from the business.

4.20 Proportion of Main Workers Engaged in Agriculture of Punjab

Sr. No.	Category	1971	1981	% change	1991	% Change	2001	% change
1	Cultivators	42.56	35.86	-15.74	31.44	-12.32	22.6	-28.11
2	Agricultural labour	20.11	22.16	10.19	23.82	7.49	16.3	-31.57
	Total	62.67	58.02	-6.52	55.26	-4.75	38.90	-29.60

Source: Human Development Report (Punjab-2004c:46) [4.38]

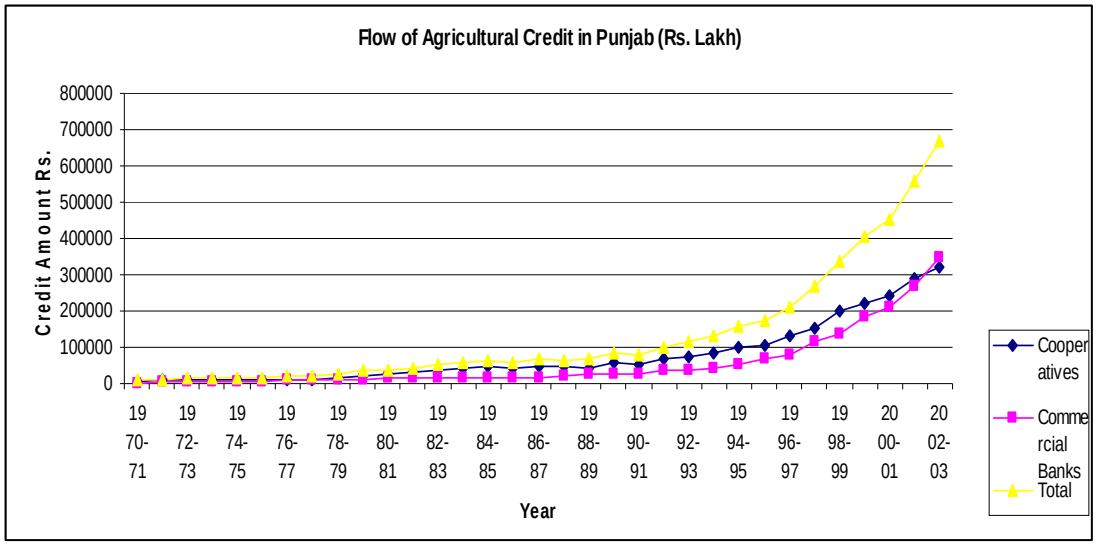
In the initial stage of green revolution there was increased labour intensity in agricultural processes such as sowing, weeding and more so in harvesting and threshing. Large farmers were dependent on the hired labour for the agricultural operations. A rise in income of rural households increased the capacity of the farm households to innovate to further exploit the potential of yield increases and enhance income from agriculture. These new innovations reduced the role of labour in farm operation and increased the cost of cultivation with declining returns. So that, those who depend on agriculture for livelihood, now think to move out from it due to the unremunerative state of the farm business. It means, not only cultivators but also the agricultural labourers are in distress situation. Commercialization of agriculture needs more money to invest and in the agriculture set up borrowing is a necessity. It is neither objectionable nor a sign of weakness. The institutional credit mechanism fails to fulfill the demand for credit in the state in both quality and quantity. So, small and marginal farmers resorted to the private sources for fulfilling the credit need. Failure of the institutional credit mechanism was the root cause of the crisis and its manifestation into the distress act of suicides by farmers in Punjab.

4.21 Flow of Agricultural Credit in Punjab 1971-2003 (Rs. Lakh)

Sr. No.	Year	Cooperatives	Commercial Banks	Total	Cooperatives share (%)	Commercial banks share

1	1970-71	3410.45	1799.39	10209.84	82.38	17.62
2	1971-72	9223.18	2750.96	11974.14	77.03	22.97
3	1972-73	12573.92	3756.96	16330.88	76.99	23.01
4	1973-74	8665.28	5327.86	13993.14	61.93	38.07
5	1974-75	9633.62	6808.43	16442.05	58.59	41.41
6	1975-76	8648.46	7497.11	16145.57	53.57	46.43
7	1976-77	10979.58	9866.24	20845.82	52.67	47.33
8	1977-78	12284.25	10943.76	23228.01	52.89	47.11
9	1978-79	16895.78	11923.31	28819.09	58.63	41.37
10	1979-80	22942.87	12935.47	35878.34	63.95	36.05
11	1980-81	24058.45	14458.14	38516.59	62.46	37.54
12	1981-82	29819.65	14228.31	44047.96	67.70	32.30
13	1982-83	38280.76	13220.84	51501.60	74.33	25.67
14	1983-84	42978.88	16120.20	59099.08	72.72	27.28
15	1984-85	48652.19	16528.87	65181.06	74.64	25.36
16	1985-86	44109.68	15406.13	59515.81	74.11	25.89
17	1986-87	49140.08	17515.00	66655.08	73.72	26.28
18	1987-88	45233.02	19784.09	65017.11	69.57	30.43
19	1988-89	42918.79	23725.09	66643.88	64.40	35.60
20	1989-90	57307.62	25767.76	83075.38	68.98	31.02
21	1990-91	51358.30	27545.22	78903.52	65.09	34.91
22	1991-92	66015.25	34311.88	100327.13	65.80	34.20
23	1992-93	74724.07	39011.19	113725.26	65.70	34.30
24	1993-94	84592.74	44359.61	128952.35	65.60	34.40
25	1994-95	102496.73	53996.85	156493.58	60.50	34.50
26	1995-96	106257.63	67240.12	173497.75	61.24	38.76
27	1996-97	129843.44	79904.86	209748.30	61.90	38.10
28	1997-98	154319.70	116179.80	270499.50	57.05	42.95
29	1998-99	198170.74	136682.04	334852.78	59.18	40.82
30	1999-00	221994.48	183243.25	405237.75	54.78	45.22
31	2000-01	240705.17	213073.35	453778.52	53.04	46.96
32	2001-02	289903.40	269272.01	559175.41	51.84	48.16
33	2002-03	321402.71	349281.86	670684.57	47.92	52.08

Source: All India Debt and Investment Survey, 2004[4.39]



Since the first phase of the nationalization of commercial banks in 1969,

the share of commercial banks in agriculture credit has been steadily growing. Co-operative credit institutions are the dominant source of credit for farmers. Which are basically meant for the supply of credit to small and marginal farmers. At the initial stage of green revolution, the share of Co-operative banks in total supply of agriculture credit was around 80 per cent. There after it has become more uneven and inadequate. But after the formation of the NABARD (1982) the share of co-operatives had increased. But after 1986-87 it has been continuously declining. However, the share of Commercial banks in total agricultural lending had increased during the above cited period (1970-2003). The share of co-operative institutions had declined and the share of Commercial banks increased substantially after the introduction of the new economic reforms. It is the outcome of the financial sector reforms which affected farming community badly. Both the formal sector institutions have been displaying an inconsistent performance in the growth of agricultural credit. It is an indication of lack of policy thrust in increasing credit to agriculture in a consistent manner. This has manifested into the increasing share of non-institutional sources in the agriculture credit. As a result, the farmers are more dependent on the private sources to fulfilling their expectations. The high rates of interest charged by moneylenders pushed farmers in to the trap of indebtedness.

4.22 Distribution of Outstanding Debt of Farmers amongst Different Agencies in Punjab– 2003 (per cent %)

Sr. No.	Agency	Proportion (%)
1	Government	1.9
2	Cooperatives	17.6
3	Banks	28.4
4	Relatives and Friends	6.3
5	Doctors, Lawyers and other professionals	0.6

6	Agriculturist/ Professional Moneylenders	36.3
7	Traders and Commission Agents	8.2
8	Others	0.7

Source: NSSO Situation Assessment Survey of Farmers: Indebtedness of Farmer Household, 2003 Report No. 498, 59th round(4.40)

4.23 Non-Institutional Debt for Each Size Class of Holding in Punjab- 2003

Sr. No.	Size of Class	Proportion of Indebtedness (%)
1	<0.01	75.2
2	0.01-0.40	70.8
3	0.41-1.00	34.4
4	1.01-2.00	50.9
5	2.01-4.00	38.8
6	4.01-10.00	52.5
7	>10.00	69.9
	All Size Class	52.1

Source: NSSO Situation Assessment Survey of Farmers: Indebtedness of Farmer Household, 2003 Report No. 498, 59th round(4.41)

4.24 Distribution of Debt by Purpose in Punjab- 2003

Sr. No.	Purpose	Debt Proportion (%)
A) Productive		
	Farm business capital	26.4
	Farm Business Current	36.0
	Other	4.4
	Total	66.8
B) Unproductive		
	Consumption	11.4
	Marriage and Ceremonies	14.0
	Education	0.1
	Medical	2.9
	Others	6.9
	Total	35.3

Source: NSSO Situation Assessment Survey of Farmers: Indebtedness of Farmer Household, 2003 Report No. 498, 59th round(4.42)

The institutional credit is the main source of the credit to the farmers. But, during the post reforms period flow of institutional credit was limited only to the big farmers. Though the co-operative credit societies are meant for the agriculture and rural lending but they failed to achieve their task. Hence, the share of non-institutional sources in agricultural lending increased substantially. The moneylenders charged higher rates of interest which ranged from 36 per cent the minimum to 120 per cent the maximum per annum therefore the principal amount becomes double within a year.

52.1 per cent of farmers have been indebted through non-institutional sources. After the success of the green revolution, the income of all classes of farmers in Punjab had increased initially, which set off, the aspirations of cultivators to lead a better life in terms of living conditions and consumption. Farmers started to spend on social ceremonies to maintain the social status. Dowry in marriages invariably began to include a car, among the other things. If the funds are inadequate always an informal lenders are willing to give a substantial amount of loan. Also the purchasing of tractor has become a symbol of social status in states like Punjab. The use of loan for essential consumption, medical expenses and building of house roof is categorized as an unproductive expenditure as par the theoratical and bankers perspective of the use of the loan amount. The reduction of the differential between returns from and cost of cultivation, as well as the increasing uncertainty of weather and thereby crop failures were responsible for the increasing indebtedness among the farmers in Punjab. Failure to pay back loan caused the indebtedness and further entrapping into debt trap. Suicides due to drug addiction, alcoholism and sudden family or domestic discord are just reflections of this malaise of economic crisis with grave social consequence (Gill and Singh-2006)[4.43].

The indebtedness and agrarian crisis is an outcome of the agriculture market imperfections in the state of Punjab. In the year of bumper crop, there was a glut in the market and government agencies were hesitant to procure large volumes of food-grains because of already overwhelming stock. The Cotton producers need not to wait for government agencies for procurement and they can sell their produce at a given or offered price by

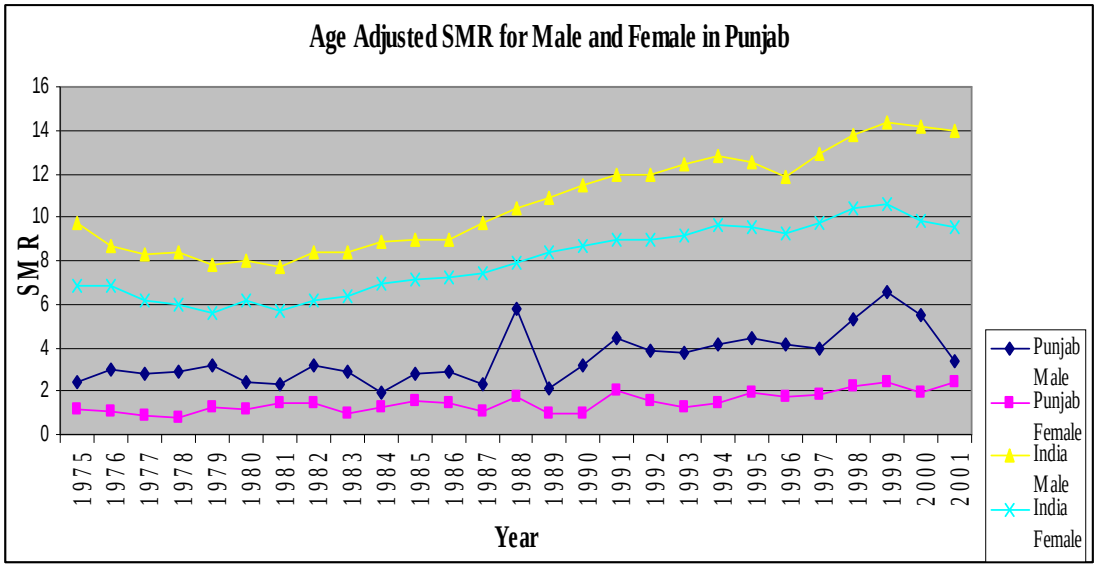
private traders in the open market. In past, a large amount of produce was being sold through regulated markets in Punjab. The incidence of selling in the unregulated market takes place due to the ignorance of the farmers or ineffectiveness of the price policy in recent past. In 2001-2002, the overall proportion of Paddy and Wheat purchased by the government agencies in Punjab was about 85 and 99 per cent respectively (Grover, Kumar and Vatta-2005)[4.44]. It is the sign of the effective implementation of the procurement and price policy. The indebtedness of farmers to the village traders and pesticides dealers plays an important role in the marketing of Cotton in Punjab. The private moneylender or pesticides dealers network that finances to the credit needs of the Cotton growers. These agencies used to provide low quality seeds and pesticides at higher price to the farmers on credit and in turn take output from them by at lower price. The late entry of the government agencies in the procurement further contributes towards the exploitation of the farmers by the private traders by offering lower price for agricultural produce. Also, the big chain of middlemen or commission agents existed in the market. The farmers must have to sell their produce through them and they charged relatively more commission or make unjustified deductions. In this way the farmers in general and small and marginal cultivators in particular found themselves in an advanced stage of crisis.

4.25 Age Adjusted Suicide Mortality Rate for Male and Female in Punjab (1975-2001)

		Punjab		India	
Sr. No.	Year	Male	Female	Male	Female
1	1975	2.4	1.2	9.7	6.8
2	1976	3.0	1.1	8.7	6.8
3	1977	2.8	0.9	8.3	6.2
4	1978	2.9	0.8	8.4	6.0

5	1979	3.2	1.3	7.8	5.6
6	1980	2.4	1.2	8.0	6.2
7	1981	2.3	1.4	7.7	5.7
8	1982	3.2	1.4	8.4	6.2
9	1983	2.9	1.0	8.4	6.4
10	1984	1.9	1.3	8.9	6.9
11	1985	2.8	1.5	9.0	7.1
12	1986	2.9	1.4	9.0	7.2
13	1987	2.3	1.1	9.7	7.4
14	1988	5.8	1.7	10.4	7.9
15	1989	2.1	1.0	10.9	8.4
16	1990	3.2	1.0	11.5	8.7
17	1991	4.4	2.0	12.0	9.0
18	1992	3.9	1.5	12.0	9.0
19	1993	3.8	1.3	12.4	9.2
20	1994	4.1	1.4	12.8	9.6
21	1995	4.4	1.9	12.5	9.5
22	1996	4.1	1.7	11.9	9.3
23	1997	4.0	1.8	12.9	9.7
24	1998	5.3	2.2	13.8	10.4
25	1999	6.6	2.4	14.4	10.6
26	2000	5.5	1.9	14.2	9.8
27	2001	3.4	2.4	14.0	9.5

Source: Srijit Mishra 2006[4.45]



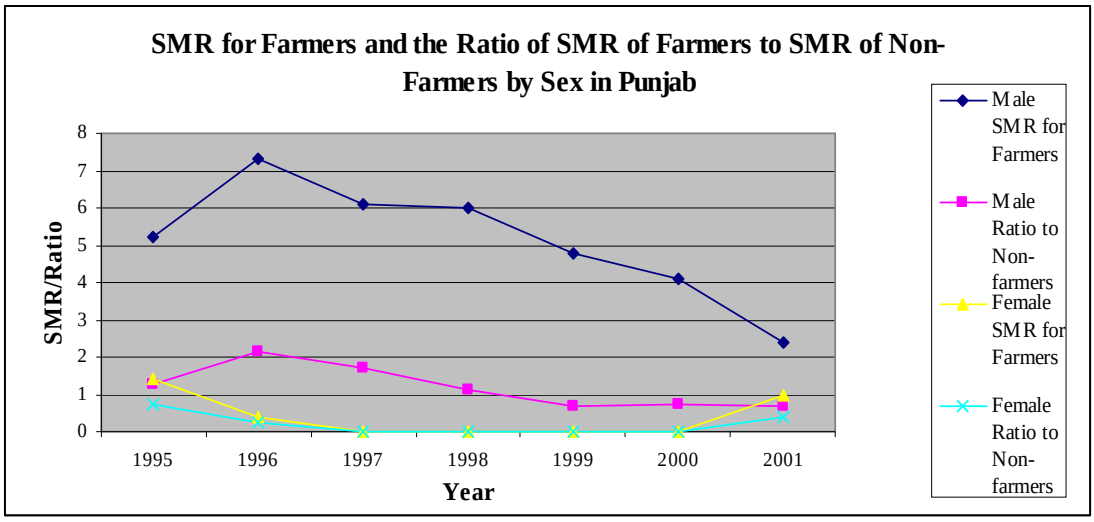
In Punjab, Suicide Mortality Rate for male and female is lower than national average. But on the other hand SMR for farmers and the ratio of farmers to non farmers is also high. It means the stress among the rural communities in general and that of farmers in particular is higher than the non-farmers group. General and farmers SMR has been showing

increasing trend during the post reforms period. It indicates that the new economic policy created a burden over rural masses. Further it has manifested into the distressful act of committing suicide.

4.26 Suicide Mortality Rate for Farmers and the Ratio of SMR of Farmers to SMR for Non-Farmers by Sex in Punjab (1995-2001)

Sr. No.	Year	Male		Female	
		SMR for Farmers	Ratio to Non-farmers	SMR for Farmers	Ratio to Non-farmers
1	1995	5.2	1.25	1.4	0.73
2	1996	7.3	2.14	0.4	0.26
3	1997	6.1	1.69	0.0	0.0
4	1998	6.0	1.14	0.0	0.0
5	1999	4.8	0.70	0.0	0.0
6	2000	4.1	0.71	0.0	0.0
7	2001	2.4	0.68	1.0	0.40

Source : Srijit Mishra 2006[4.46]



The impact of green revolution experienced in Punjab during the 1960s and 1970s was not confined to agriculture alone. It transformed society, culture and politics of the state. The economic development experienced during the green revolution period also brought the villages closer to the city life and its economy.

S.S.Gill (1985)[4.47] **summarized this process as; "With the penetration of capitalist relations in agriculture, modern education has spread. Most of the villages have schools and some even have colleges functioning in them.**

Some of the capitalist farmers are actually sending them to urban centers to acquire better education. With this, a large number of educated persons from rural areas have been coming forward to take up jobs in government and semi-government institutions and departments. This has produced a distinct category of middle class intellectuals of rural origin".

Income from the agricultural operations was declined or stagnated during the post reforms period. The small and marginal farmers are increasingly finding it hard to stay in agriculture. As a result there has been a miss-match between the previous and current standards of living. Farmers went to private sources for fulfilling the gap between expected and actual living. Looking at the urgency and neediness of farmers, moneylenders charged heavy rates of interest and exploited them. Declining returns from the agriculture has been the cause for the reducing repaying capacity of farmers. Also, it caused the increasing private borrowing for both cultivation and consumption expenditure. It leads to increase in indebtedness of farmers. In all, increasing indebtedness was the root cause of suicides by farmers but the factors which are responsible for the indebtedness needs to be concentrated more to come out from the problem.

4.4 Karnataka

The agrarian economy of Karnataka is a combination of vast drought prone areas of north Karnataka co-exiting with regions having assured irrigation in rest of the parts of the state. The state agriculture sector has been distinctive for its hugely varying phases of growth and stagnation. During the 1980s the problem of stagnation of agriculture sector was severe and attracted the attention of the policy makers. The phase of

liberalization has seen the emergence of the role of the markets, safety nets and the process of commercialization. Historically, Karnataka has always taken significant and sensitive initiatives in land reforms, democratic decentralization, well designed poverty alleviation programmes and policy towards rain-fed agriculture or rigorous participation in international trade. In most, cross section comparisons across states, Karnataka occupies an unenviable position at median level (Bhalla and Singh-2001)[4.48]. Over the years, agrarian economy of Karnataka witnessing faster changes, particularly in the cropping pattern. It had transformed from previously food-grains to commercialized cash cropping system. The commercialization has increased the risk of crop loss due to both the higher proportion of purchased inputs and the use of technology. As well as, it also is affected by the uncertain monsoon and market. There is also a tendency to adopt monoculture and consequent over exploitation of land in pursuit of higher gross returns. An inevitable externality of this has added risk and soil degradation. The marginal lands are being brought under cultivation and this puts pressure on inputs as well as on farming practices. Characteristics of Karnataka agriculture have changed particularly after the 1990s. It is changed from non-capitalist path to agrarian capitalist path. The state agriculture needs to be located within the larger framework of uneven capitalist development. Although, some sort of capitalist development was introduced during the colonial period, however, agrarian capitalism received boost with the introduction of green revolution, implementation of land reforms and establishment of co-operative institutions during the post independence period. The agrarian capitalism can be viewed in the increasing use of new technology, seeds

and fertilizers, fragmentation of land increases in landlessness or labouring class, linkage of local with national or international market. At present the technology is available lumpy in nature, and therefore failure of the one component can lead to a severe aggregate crop loss. As well as, it has also affected by the uncertainty of monsoon and market.

Karnataka is one of the fastest growing states in which the agrarian economy contributes 25 per cent of the GSDP and employees more than 75 per cent of rural population (Assadi-2006)[4.49]. The state was grown at an average of 7.9 per cent. It was 1.6 per cent higher than the national average during the period of 1993-94 to 2000-2001. Agrarian economy saw the negative growth rate (of –14.5 per cent) in 2001-02, 0.8 per cent in 2002-03 and -1.8 per cent in 2003-04 and an average growth rate of -3.6 per cent (GoK-2004)[4.50]. This is the period when the agrarian crisis was at its last destination. It is reflected in the large number of farmers committing suicide as compare to any other period. The beginning of the agrarian crisis located during the decade of 1980s, when terms of trade had been against the agriculture and farming community. It is also manifested in issues such as, unremmunarative prices, urban biased policy, declaring agriculture as an industry, writing off loans, etc. During earlier days crisis was manifested in the form of farmers taking out long marches, strikes, rallies under the banner of farmers movement. During all these years no farmer had committed suicide neither farmers movement advocated such tactics. The crisis was aggravated in the year 1997 due to politics of the withdrawal of the subsidy or rolling back of the state. The agriculture sector of Karnataka started fast losing its position in plan outlays relative to other sectors as well as on per capita basis. The

trends in approved outlay for the agriculture sector in the five year plans shown decline over the time. As a result, production from the agriculture sector became stagnant during the 1980s and further it started to decline. Also the public and private investment in agriculture has started to decline during the same period. These have been the reasons of the aggravation of the agrarian crisis during the 1990s in the state of Karnataka.

The prosperous path of development has not created debt free farmers, on the contrary debts of the farmers have been multiplying. Farmers as an occupational group are always under debts, but during the 1990s farmers debt burden increased substantially in the state due to heavy mechanization of the sector. The situation worsened during this decade due to the changes in market situation, natural calamities and drying up of institutional credit flow to agriculture sector. The commercial agriculture needs more money to purchase heavy inputs. But the institutional credit facilities are available to very little number of farmers. An institutional credit is not easily available for small and marginal cultivators. As a result they will have to resort to non-institutional sources at heavy rates of interest varying from 36 to 72 per cent per annum. Most of the farmers are into debt trap due to practicing of the commercial agriculture. However these new techniques of agriculture are not viable for the ecology. In the factor market, the farmer has to pay the prices decided by supplier, whereas, in product market the market forces determine the prices with farmer as a mute receiver. The role of the farmers in influencing the prices in either market is astonishingly minimal. Thus the farmers face not only the weather risk along with resources scarcity in terms of availability of inputs but also an inevitable market uncertainty. It

is compounded by the spurious inputs and lack of information. Hence, farmers of the state of Karnataka as an occupational group face high risk and uncertainty in their income flow. It means negligence at the policy front, successive drought and the failure of the agricultural market mechanism are the vital responsible factors for the agrarian crisis and farmers suicides in the state of Karnataka.

4.4.1 Indebtedness - Nature and Extent

Farm indebtedness has signaled out as the foremost cause for farmers suicides in the state of Karnataka. Borrowing during the farming season and returning the principal with interest at the time of harvest is a routine that most commonly followed by farmers over the centuries (NSSO-2005a)[4.51]. During the 1970s and 1980s, the productivity of the crops increased however, the prices did not support to step up the gross value of output, and as a result the net income of the farmers did not increase. Market instability certainly contributed to the net income flow to the farm household. It was not only the price instability that affected the farmers income flow, but also the unavailability of the regulated market mechanism shrunk the flow of the farm income in the state. On the other hand prices of the consumer goods have skyrocketed during the post reforms period. Hence, farmers will have to borrow for the consumption purposes from non-institutional sources. Whereas, the private sources charged heavy rates of interest on loan amount. As a result, principal amount doubled within a year or sometimes less than a year and shot beyond the repaying capacity of the farmers. Indebtedness of the state farmers is phenomenon of the multiple factors, i.e.; crop losses, drying up of institutional credit to small and marginal farmers, sharp increase in the

cost of production, declining prices of agricultural commodities, withdrawal of subsidies to agriculture sector and the exclusion of the large number of farmers from safety net as well as from public distribution system. The marginalization of the state farmers on the policy and socio-economic front became factor of humiliation and thereby suicides of farmers.

4.27 Credit Disbursement to Priority Sector in Karnataka (Rs. Crore)

Sr. No.	Type of loan	2000-01	2001-02	*%	2002-03	%	2003-04	%	2004-05	%	Periodic (%)
1.	Crop loans	2784.27 (57.47)	3200.41 (53.49)	14.94	3070.22 (44.16)	-4.06	3431.29 (38.41)	11.76	4503.98 (40.69)	31.26	61.76
2.	Agriculture Term Loan	789.75 (14.60)	700 (11.70)	-11.36	968.48 (13.92)	38.35	1053.75 (11.80)	8.80	1468.6 (13.27)	39.36	85.95
3.	Non farm Sector Advances	631.44 (11.67)	539.93 (9.03)	-14.49	740.09 (10.64)	37.07	988.54 (11.06)	33.57	1100.95 (9.95)	11.37	74.35
4.	Other Priority Sector Advances	1204.38 (22.26)	1542.62 (25.78)	28.08	2173.7 (31.26)	40.90	3459.66 (38.73)	59.15	3994.41 (36.09)	15.45	231.65
5.	Total Priority Sector Advances	5409.85 (100)	5982.97 (100)	10.59	6952.49 (100)	16.20	8933.24 (100)	28.48	11067.94 (100)	23.89	104.58

Source: NSSO Situation Assessment Survey of Farmers: Indebtedness of Farmer Household 2005 60th round(4.52)
***-% Percentage Change**

The ratio of agricultural credit to total bank credit in the state was 24.5 per cent during the period 1986-90 and declined to 16.9 per cent by 1996-2000 (NABARD-2005)[4.53]. It means the supply of agricultural credit as proportion to total bank credit was declined in Karnataka as a whole and sharply in the backward districts of the state. The share of agriculture and allied activities in the total priority sector credit has come down from 43 per cent to about 26 per cent. On the other hand the credit flow to other priority activities continuously shows an increasing trend. Also the institutional credit largely comes from Commercial Banks and the Co-operative sector which is still to emerge in its rightful position. The total priority sector advances increased by 104.58 per cent during 2001-2005 in Karnataka. It means there is a lot of concentration on priority sector by

the institutional sources. But it is not sufficient to fulfilling the demand from the agrarian community. Because still 50 per cent of private and public sector banks did not achieve the loan target of 18 per cent of total lending to agriculture sector, the prerequisite that was set at the time of nationalization in 1969. The credit flow for agriculture and allied activities increased by 109 per cent while for other priority sectors it has increased by 352.44 per cent for the period 2001-2005 in Karnataka. Also the share of crop loan to total priority sector credit has come down from 51 per cent in 2000-01 to 41 per cent in 2004-05. As a result farmers started to resort to the private sources for borrowing and trapped in indebtedness.

4.28 Per 1000 Distribution of Outstanding Loans by Sources of Loan for Each Size Class of Land Possessed (in ha.) by Farm Households in Karnataka

Sr. No.	Source of Loan	<0.01	0.01-0.40	0.40-1.00	1.01-2.00	2.01-4.00	4.01-10.00	10.00+	All Sizes
1.	Government	08	59	12	14	14	29	00	19
2.	Co-op. Society	31	123	150	223	227	142	29	169
3.	Bank	117	152	459	350	493	699	941	501
4.	Agri./Professional money lender	838	449	216	302	166	84	21	200
5.	Traders	00	12	29	14	32	01	09	19
6.	Relatives and Friends	06	162	98	82	41	30	00	68
7.	Other Professional	00	10	02	00	03	10	00	04
8.	Others	00	34	35	16	24	05	00	21

Source: NSSO Situation Assessment Survey of Farmers: Indebtedness of Farmer Household, 2003 Report No. 498, 59th round(4.54)

4.29 Distribution of Debt by Sources in Karnataka and India - 2003 (in per cent)

	Institutional				Non-institutional			
	Government	Co-op.	Banks	All	Money lenders	Traders	Others	All
Karnataka	1.9	16.9	50.1	68.9	20.0	1.9	9.3	31.2
India	2.5	19.6	35.6	57.7	25.7	5.2	11.5	42.4

Source: NSSO Situation Assessment Survey of Farmers: Indebtedness of Farmer Household, 2003 Report No. 498, 59th round(4.55)

The source wise distribution of debt in Karnataka shows the share of banks is substantially high. On the other hand the share of non-

institutional sources in total debt is the order of 31.2 per cent. As like other states the co-operative sector of the state of Karnataka had with the poor and inefficient performance. Hence, the farmers are resorted to the private sources for their credit needs. The number of farmers indebted through the private sources on record is low but off the record the proportion is around 80 per cent. The rates of interest charged by these non-institutional sources varied from 36 to 72 per cent which has been the root cause of the accumulation of indebtedness of the farmers in the state of Karnataka.

4.30 Non-Institutional Debt for Each Size Class of Holding in Karnataka and India -2003 (in per cent)

	Size class of Land Possessed							
	<0.01	0.01-0.40	0.41-1.00	1.01-2.00	2.01-4.00	4.01-10.00	>10.00	All Sizes
Karnataka	84.4	66.6	37.9	41.3	26.6	13.0	3.1	31.1
India	77.4	56.7	47.2	42.4	34.9	31.2	32.4	42.3

Source: NSSO Situation Assessment Survey of Farmers: Indebtedness of Farmer Household, 2003 Report No. 498, 59th round(4.56)

4.31 Distribution of Debt by Purpose in Karnataka and India – 2003 (in per cent)

	Productive				Unproductive					
	Farm business capital	Farm business current	Other	Total	Consumption	Marriage	Education	medical	Other	Total
Karnataka	30.7	37.5	9.8	78.0	5.6	7.4	0.6	0.2	8.1	100
India	30.6	27.8	6.7	65.1	8.8	11.1	0.8	3.3	10.8	100

Source: NSSO Situation Assessment Survey of Farmers: Indebtedness of Farmer Household, 2003 Report No. 498, 59th round (4.57)

The technological changes of the 1970s brought forth a large number of crop varieties vis-à-vis the new techniques of production. These new varieties and technology required large cash inputs and it also exerted stress on the net income flow. As a result, the dependence of the farmers on the credit increased sharply and at the same time the net income did not increase correspondingly therefore the farmers could not return back the credit as expected. It has reflected in the vulnerability of the small and marginal farmers. Farm indebtedness is mostly related to the institutional

sources in Karnataka. Around 68.9 per cent of farmers are in debt through institutional sources in the state. Also the farm indebtedness is directly linked with the productive purposes, 78 per cent of farmers are in debt due to the increase in farm expenses in Karnataka, while at national level it is 65.1 per cent. Predominantly the small and marginal farmers are in debt by non-institutional sources. It means institutional credit mechanism did not cover all size classes of the agriculture.

4.4.2 Suicide Phenomenon in the State of Karnataka

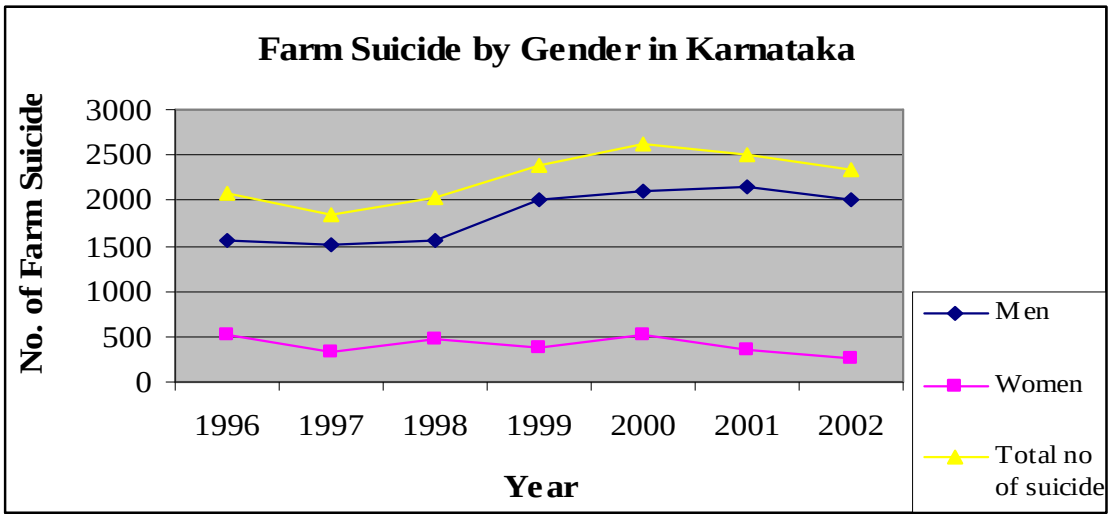
Suicide is an act that has a cumulative causation. It is a well thought decision based on different impacting decision in life. It is the combination of the different impacting incidence leading to the suicidal act. Indebtedness is one of the main causes of farmers suicides in the state. The important causes of distress and thereby suicide are; uncertainty of monsoon and thereby frequent crop failures, spurious quality of inputs and particularly of seeds, pest attack and diseases and associated economic cost, declining productivity, market prices clash due to bulk arrivals in the market, unavailability of proper marketing infrastructure and imperfection in the existing marketing, mounting credit burden and thereby debt trap, failure of extension services and the counseling failure by the institutions and the decline of traditional village institution, etc.

4.32 Suicide Cases Reported Under Farming and Agricultural Activities by Gender (1996-2002)

Year	Men	Women	Ratio of male to female	Total no of suicide	Proportion to total no. of Suicides (%)
1996	1548	531	2.91	2079	13.15
1997	1509	323	4.67	1832	11.59
1998	1564	475	3.29	2039	12.90
1999	2002	377	5.31	2379	15.05
2000	2105	525	4.00	2630	16.64

2001	**2153**	**352**	**6.11**	**2505**	**15.85**
2002	**2008**	**258**	**7.75**	**2340**	**14.80**
Total	**12889**	**2841**	**_**	**15804**	

Source: M Assadi-2006[4.58]



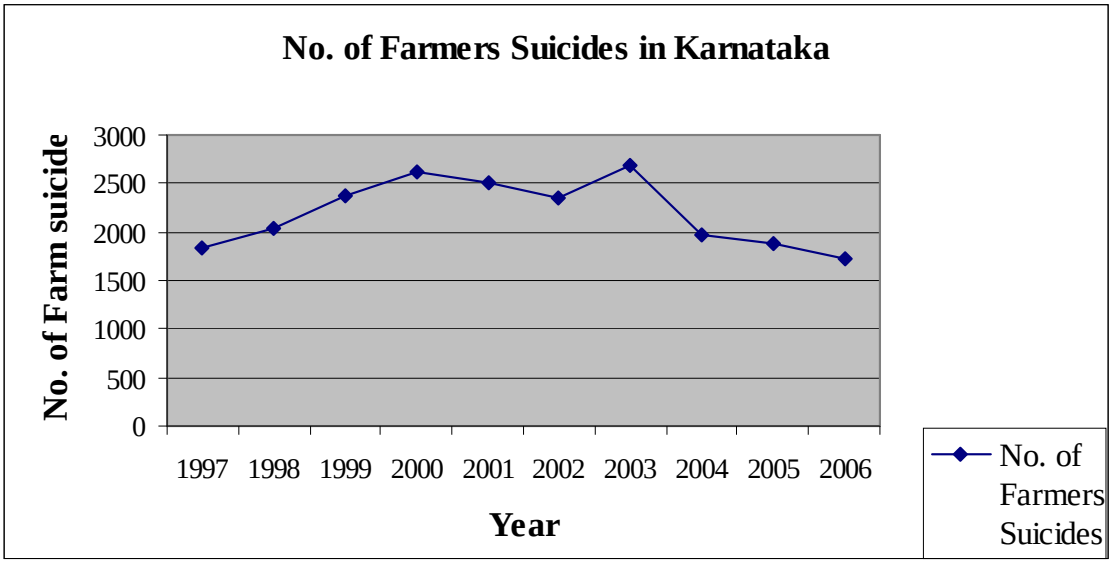
The spate of suicide in Karnataka began in 1998 at the time when Cotton growing farmers of Andhra Pradesh were committing suicide. Later it began in the Northern Karnataka, which is traditionally a non-irrigated dry land area. There after it enveloped other districts of the state. The trend of farmers suicides was continuously high till 2000, where 2630 farmers ended their lives through committing suicides but after that it started to decline in the next years, and settled on 2340 in 2002. The number of women committing suicides is not in a unique form. The fluctuation in women suicides is found to be very high but the women suicides is not accounted as a farmer suicide. Because traditionally in the male dominant patriarchal society women cannot became a land owner. As a result they did not receive any compensation from the government. The ratio of male to female farm suicides has increased substantially during the recent past.

4.33 Year Wise Farmers Suicides in Karnataka 1997-2006

Sr. No.	Year	No. of Farmers Suicides	Proportion to Total no. of Suicides (%)	Proportionate change (%)

1.	**1997**	**1832**	**8.33**	**--**
2.	**1998**	**2039**	**9.39**	**11.29**
3.	**1999**	**2379**	**10.82**	**11.67**
4.	**2000**	**2630**	**11.97**	**10.55**
5.	**2001**	**2505**	**11.40**	**-03.80**
6.	**2002**	**2340**	**10.65**	**-06.58**
7.	**2003**	**2678**	**12.18**	**14.44**
8.	**2004**	**1963**	**8.93**	**-26.69**
9.	**2005**	**1883**	**8.57**	**-04.07**
10.	**2006**	**1720**	**7.82**	**-08.65**
	Total	**21969**	**--**	**-6.11**

Source: K Nagraj 2006[4.59]



The state government of Karnataka had been taking initiative to implement the rehabilitation policy for farmers suicide affected regions. The efficient implementation of the policy provided the positive results in the form of reduction of the incidences of farmers suicides in the state. But at the initial stage the rate of farmers suicides was quite high which shows around 12 per cent of the total incidences of suicides in the state. Later it reduced to 7.82 per cent in 2006. The state government of Karnataka concentrated both on long and short term measures hence farmers got the immediate relief as well as they got the assurance about the sustainable future.

4.34 District Wise Farmers Suicides April 2003 to March 2006

Sr. No.	District	2003-04	2004-05	2005-06 (March 29th)
1.	Bagalkote	24	06	03
2.	Banglore (R)	30	06	05
3	Banglore (U)	02	00	00
4.	Bider	32	07	06
5.	Hassan	69	37	13
6.	Chamraj nr.	10	02	00
7.	Haveri	38	09	02
8.	Uttara Kannada	07	00	06
9.	Dharwad	31	09	00
10.	Koppal	20	15	10
11.	Mandya	46	11	00
12.	Chickmanglur	24	10	03
13.	Raichur	05	03	01
14.	Tumkur	41	11	06
15.	Shimoga	50	12	04
16.	Kolar	18	10	03
17.	Mysore	18	01	00
18.	Udupi	03	01	00
19.	Kodagu	12	12	12
20.	Belgaum	41	33	10
21.	Davangere	39	12	05
22.	Bellary	31	11	05
23.	Chitradurga	55	19	08
24.	Gulbarga	18	06	07
25.	Bijapur	22	09	09
26.	D.K.	09	05	04
27.	Gadag	13	02	01
	Total	708	171	124

Source: M Assadi-2006 (According to department of Agriculture Govt. of Karnataka)[4.60]

The data in the above table reveals the incidences of farmers suicides in the state of Karnataka during the period of 2003-2006. In the year 2003 total of 708 farmers suicides cases were reported from the state. It was the period of negative growth and acute agrarian crisis. In 2003, almost all the districts including the costal belt, suicides had been reported. The highest incidences of farm suicides (69) reported from Hassan district which is known as a commercial crop growing district. It followed by Chitradurga (55) and Shimoga (50) the drought prone districts. For the next year there was a sharp decline in incidences of farmers suicides and came down to around 171 in the state of Karnataka. Once again Hassan (37) witnessed

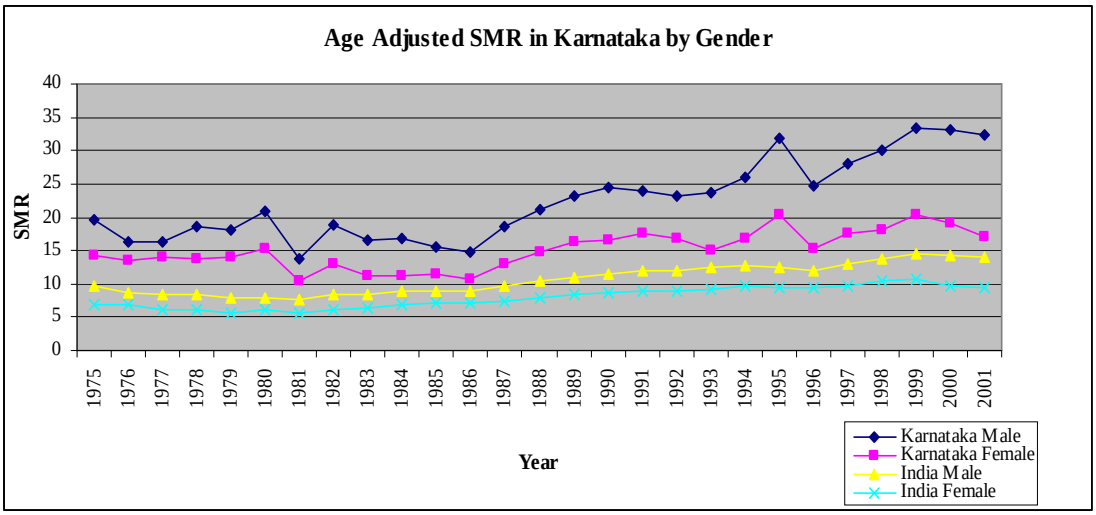
the highest number followed by Belgaum (33) and Chikmanglur (22). This shows the shift of farmers suicides from North Karnataka to South Karnataka. It also revealed the shifting trends towards the areas which are known for plantation economy. And the important thing is that the costal belt continues to be unaffected by the suicide as like konkan region of Maharashtra. Region wise highest suicide rates were reported from Old Mysore areas, followed by Old Bombay Presidency areas and Old Hyderabad region. The suicide reflects the failure of the state to distribute the water judiciously. Most of them who committed suicides live in the tail end of the canal.

4.35 Age Adjusted Suicide Mortality Rates in Karnataka by Gender (1975-2001)

Sr. No.	Year	Karnataka		India	
		Male	Female	Male	Female
1.	1975	19.5	14.3	9.7	6.8
2.	1976	16.4	13.5	8.7	6.8
3.	1977	16.4	14.0	8.3	6.2
4.	1978	18.6	13.8	8.4	6.0
5.	1979	18.1	14.0	7.8	5.6
6.	1980	20.9	15.4	8.0	6.2
7.	1981	13.8	10.4	7.7	5.7
8.	1982	18.9	12.9	8.4	6.2
9.	1983	16.6	11.2	8.4	6.4
10.	1984	16.7	11.3	8.9	6.9
11.	1985	15.5	11.5	9.0	7.1
12.	1986	14.8	10.7	9.0	7.2
13.	1987	18.5	13.1	9.7	7.4
14.	1988	21.2	14.7	10.4	7.9
15.	1989	23.1	16.2	10.9	8.4
16.	1990	24.5	16.5	11.5	8.7
17.	1991	24.0	17.6	12.0	9.0
18.	1992	23.2	16.7	12.0	9.0
19.	1993	23.8	15.0	12.4	9.2
20.	1994	26.0	16.8	12.8	9.6
21.	1995	31.8	20.5	12.5	9.5
22.	1996	24.8	15.3	11.9	9.3
23.	1997	28.1	17.6	12.9	9.7
24.	1998	30.0	18.0	13.8	10.4
25.	1999	33.4	20.4	14.4	10.6

26.	2000	33.2	19.2	14.2	9.8
27.	2001	32.3	17.0	14.0	9.5

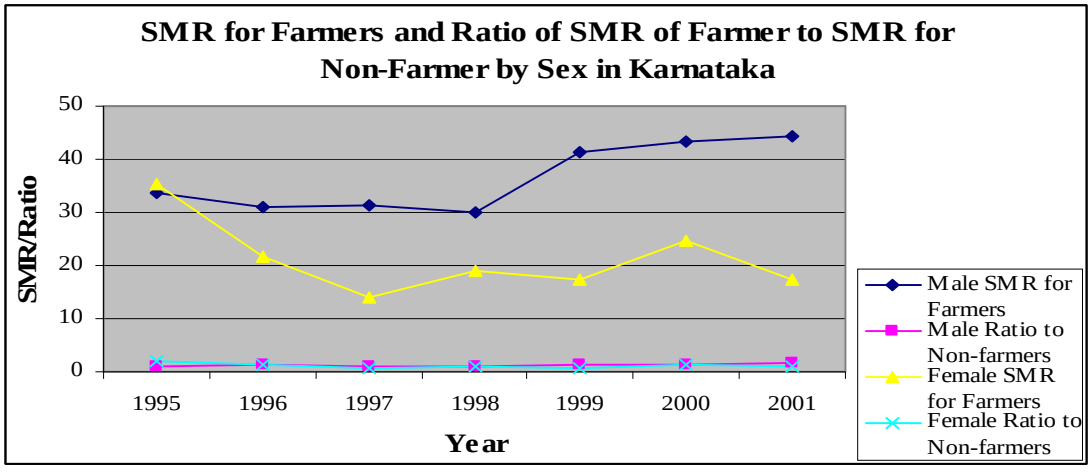
Source: Srijit Mishra 2006[4.61]



4.36 Suicide Mortality Rate for Farmers and the Ratio of SMR of Farmers to SMR for Non-Farmers by Sex in Karnataka (1995-2001)

Sr. No.	Year	Male		Female	
		SMR for Farmers	Ratio to Non-farmers	SMR for Farmers	Ratio to Non-farmers
1	1995	33.7	1.08	35.3	1.90
2	1996	30.9	1.34	21.7	1.50
3	1997	31.3	1.15	13.9	0.77
4	1998	30.1	1.00	19.0	1.07
5	1999	41.4	1.32	17.2	0.83
6	2000	43.5	1.43	24.8	1.33
7	2001	44.5	1.52	17.2	1.01

Source: Srijit Mishra 2006[4.62]



The spate of farmers suicides aggravated during the late 1990s in Karnataka. Social, economical and weather related factors were found responsible for this distress act. After 2003 number of farm suicides

started to decline. But according to the National Crime Record Bureau (NCRB) records 1963, 1883, 1720 farmers have committed suicides in the year 2004, 2005 and 2006 respectively. It means the gap between the government and National Crime Record Bureau records is very wide. It is the example of 'jugglery' by the state government. According to the National Crime Record Bureau record 1883 farmers committed suicide in 2004-05 but the state government recorded only 171 suicide cases. Though the number of farmers suicides has declined as before 2003 but still it is a long way to come out with the problem. Hence the future policies should follow the line in which farmers and the rural economy is at the center of the policy domain.

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Chapter-05

State of Agrarian Economy and Farmers Suicides in Maharashtra

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Introduction

Maharashtra is considered as one of the progressive states in the country. The state has achieved the massive development in the field of agriculture particularly after the green revolution. Also Maharashtra was a pioneer state in adopting the new economic policy. At that time it was expected that the new economic policy will help in booming the economy in general and agriculture in particular. But, after the one and a half decade of the introduction of the new economic policy it was clear that the policy brought in the benefits to the industrial and services sector at the cost of agriculture and cultivators. The contribution of agriculture and allied sector to the net state domestic product at current prices declined from 40 per cent in 1960-61 to 13 per cent in 2004-05. According to census 2001 around 55 per cent of the total work force was either cultivators or agricultural labourers. For the period of 1993-94 to 2003-04, the growth rate of the Gross State Domestic Product (GSDP) at 4.8 per cent was lower than that of India's Gross Domestic Product (GDP) (5.8 per cent per annum). The eight major crop groups in terms of gross area under cultivation are Cereals with nearly half of it under Jowar, Pulses (3/10 under Arhar lentils), Fiber (mostly Cotton), Oil Seeds (nearly half of it under Soyabean), Sugar cane, Fruits and Vegetables, Condiments, Spices, Drugs and Narcotics etc.

There are four divisions in Maharashtra indicating the crop specialization. In which, Western Maharashtra consists Sugarcane, Wheat, Onions and other irrigated crops, Konkan region is famous mostly for Paddy and Fruits, Marathwada consisting Cotton, Pulses and Oil Seeds while Vidarbha cultivating mostly the Cotton, Arhar and Soyabean. Western

Maharashtra is more irrigated as compare to rest of the Maharashtra. As a result, the income of the farmers of the Western Maharashtra increased and thereby standard of living through employment generation in agriculture sector i.e. Animal Husbandry, Dairy, Poultry and Goat Farming. Also the political leadership of Western Maharashtra has the greater say and dominance in the state policy as compare to other regions of the state. It is one of the reasons of the agricultural development of the region. The successful organisation of co-operatives also strengthened the efforts of the farmers in Western Maharashtra. However, the co-operative movement did not aquire expected success in Marathwada and Vidarbha regions of the state.

5.1 Cropping Pattern of Maharashtra

The green revolution had brought in a long term impact on the agrarian economy of the coutry in general and that of the state of Maharashtra in particular. The production and productivity of food-grains, vegetables and other cash crops was increased in the first phase of it. In the mid 1980s the agriculture became a commercial activity which needed more money for investment. At the same time government reduced the public investment in agriculture and rural allied sector. And after the implementation of the new economic policy the agriculture sector was further neglected by the national macroeconomic policy. Though the agricultural movements started, the government of Maharashtra was expected to spell prosperity for the farmers, but it created conditions that were likely to push the farmers to distress (Mishra-2006)[5.1]. The increased cultivation of cash crops and extensive use of HYV seeds required heavy doses of fertilizers, pesticides and complementary inputs. As a result, the cost of cultivation

increased substantially. To go by the reports of the Commission for Agricultural Cost and Prices of the government of India, the total per hectare cost of cultivation of Cotton in Maharashtra which was Rs. 716.32 in 1981-82 went up to Rs. 6,341.18 in 1995-96 in real terms. Similarly the cost of cultivation of Jowar rose to Rs. 2,118.87 in 1995-96 from Rs. 716.32 in 1981-82. Besides, the new methods of farming have made the traditional skills and knowledge almost obsolete. The farmers have to acquire the scientific knowledge about the methods of seeds treatment, application of fertilizers, pesticides and other inputs. Ignorance of these methods leads to the crop loss. The state extension services failed to aware the farmers about the use of the new techniques. Hence, the private dealers became dominant in rural economy by their multifunction.

Post reforms policies towards agriculture affected the state farmers on the lines of other states. Farmers had to face the problem of rising cost of cultivation on the one hand and declining returns on the other. Public sector banks and particularly co-operative credit institutions leave small and marginal farmers at the mercy of non-institutional credit mechanism. State farmers have to borrow money for production as well as consumption due to unremmunarative state of the agricultural operations. However, the repaying capacity of the farmers has declined and the debt amount increased at a faster rate. Also the credit ability from the institutional sources declined due to the unpaid loans borrowed earlier hence farmers had to resort to the private moneylenders for their credit needs. In the state the rates of interest charged by non-institutional sources ranged between 36 to 120 per cent per annum. Hence the role of the moneylenders in the rural agricultural economy is vital. Like other states

such as Andhra Pradesh they are also the input dealers and traders. As a result, farmers have to depend on them for both i.e. pre and post harvest operations. So, they can easily exploit farmers by offering lower price for agricultural produce and charging high price for the input. And the farmers are almost compelled to accept it. All these factors have contributed in creating a psychological stress on farmers and thereby resorting to the painful act of suicide in the state of Maharashtra.

5.1 Area, Production and Productivity of Major Crops in Maharashtra 1990-91 to 2006-07

A/P/Y	Crop	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-2000	2000-2001	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Area	Bajara	19404	18984	19313	17867	17658	16649	19468	16712	17597	17364	18000	15472	13254	15289	14338	14520
Production	Bajara	11149	8986	17910	12091	11133	9654	18311	11190	14925	11340	10872	11460	8963	11263	9320	10587
Yield	Bajara	575	473	927	677	631	580	941	670	848	653	604	741	676	734	650	729
Area	Cotton	27212	27591	25743	24809	27599	30654	30847	31392	31991	32539	30769	27999	27624	28395	28750	31069
Production	Cotton	18753	11561	18907	26264	26254	27992	31433	17531	26189	30993	18026	25961	30801	29385	31601	46175
Yield	Cotton	117	71	125	180	145	155	173	95	139	162	100	158	190	176	187	253
Area	Gram	6675	4331	5935	6597	7632	7171	7495	7151	9042	9325	6762	7962	7952	8299	10204	13081
Production	Gram	3548	2062	3014	4776	4686	3760	4984	2909	5619	6000	3508	4485	4211	4662	7052	9252
Yield	Gram	532	476	508	724	614	524	665	407	621	643	519	563	530	562	691	707
Area	Kh Groundnut	6267	6344	5418	5105	4740	4229	4401	4167	4077	4065	4037	3509	3241	3466	3367	3416
Production	Kh. Groundnut	5782	4104	6011	5123	4137	4635	5578	4200	4746	3862	3605	3363	3552	3588	2798	2541
Yield	Kh. Groundnut	923	647	1109	1004	873	1096	1267	1008	1164	950	893	958	1096	1035	831	744
Area	Kharip Jowar	27685	26841	28528	25572	22028	20325	21501	20132	19549	19180	19100	17183	15861	15329	14724	14092
Production	Kharip Jowar	38168	23187	50676	36562	30197	28862	39113	24223	27853	25394	23988	24283	21110	17918	17641	16841
Yield	Kharip Jowar	1379	864	1776	1430	1371	1420	1819	1203	1425	1324	1256	1413	1331	1169	1198	1195
Area	Rabi Jowar	35315	27835	30679	35910	31486	35248	35419	34871	28202	32727	31835	30860	28539	32232	25676	32089
Production	Rabi Jowar	21124	10618	16586	23123	15611	20956	23292	13580	16983	21532	15890	14542	7773	18315	19470	20976
Yield	Rabi Jowar	598	381	541	644	496	595	658	389	602	658	499	471	272	568	596	653.7
Area	Paddy	15973	15743	15700	15774	15381	15171	14775	14769	14831	15202	15115	15233	--	15087	15125	--
Production	Paddy	23436	21117	23968	25164	23971	25628	26144	23946	24676	25588	19297	18541	--	21472	26690	--

Yield	Paddy	1457	1341	1527	1595	1558	1689	1769	1621	1664	1683	1277	1217	--	1423	1765	--
Area	Safflower	6336	3269	5336	5761	4854	4786	5034	4615	3213	3174	2960	2629	2447	2519	2630	2788
Production	Safflower	2582	1241	2499	3898	2595	2695	3214	579	1763	1745	1219	1164	873	1201	1589	1689
Yield	Safflower	408	379	468	677	535	563	638	126	549	550	412	443	357	477	604	606
Area	Soya bean	2012	2595	3580	4955	5605	6354	6819	8556	10553	11636	11415	12555	--	21022	23468	25211
Production	Soya bean	1905	1821	3531	6613	5258	7188	8777	8453	14719	16200	12662	15760	--	18924	25273	28916
Yield	Soya bean	947	702	986	1335	938	1131	1287	988	1395	1392	1109	1255	--	900	1077	1147
Area	Sugarcane	4416	4550	4055	3562	5175	5800	5162	4603	5298	5901	5953	5731	4425	3269	5007	--
Production	Sugarcane	381544	364590	311099	288159	442603	466561	418048	381743	471511	631404	495687	426170	256684	230137	388137	--
Area	Summer Groundnut	2377	1046	1166	1517	1286	881	1356	1157	1348	1339	864	678	547	694	1046	--
Production	Summer Groundnut	4096	1294	1573	2487	2155	1129	1981	1458	1927	1859	1091	1138	816	1002	1597	--
Yield	Summer Groundnut	1643	1237	1349	1639	1676	1281	1461	0	1430	1386	1263	1678	1492	1444	1527	--
Area	Total Cereals	111358	99906	105954	107400	99310	99698	104675	29073	96044	100361	98243	92306	85614	92099	93032	--
Production	Total Cereals	107401	73947	122984	113456	98249	100068	125518	84689	105129	104904	84965	87730	83620	88628	97758	--
Yield	Total Cereals	964	740	1161	1056	989	1004	1190	855	1095	1045	865	950	977	962	1051	--
Area	Total FoodGrain	143931	130714	139815	141887	135266	132748	137925	131743	131108	136416	133815	127777	119978	125953	127343	--
Production	Total FoodGrain	121810	83422	141438	135444	115228	116460	145886	96601	127702	128990	101334	108202	103173	105310	117680	--
Yield	Total FoodGrain	846	638	1012	955	852	877	1058	733	974	931	757	847	860	836	924	--
Area	Total Oilseeds	28256	22477	25437	28305	26600	25552	26889	26041	26976	27392	25586	24864	27614	33252	76591	--
Production	Total Oilseeds	18817	10898	17557	23080	18141	19806	23959	16817	26077	26685	20988	23547	29213	26974	34038	--
Yield	Total Oilseeds	666	485	690	815	682	775	891	646	966	974	820	947	1058	811	930	--

Area	**Total Pulses**	**32573**	**30808**	**33861**	**34487**	**35956**	**33050**	**33250**	**32670**	**35064**	**36055**	**35572**	**35471**	**34364**	**33854**	**34311**	**--**
Production	**Total Pulses**	**14409**	**9475**	**18454**	**21988**	**16979**	**16392**	**20368**	**11912**	**22573**	**22085**	**16369**	**20471**	**19553**	**16682**	**19921**	**--**
Yield	**Total Pulses**	**442**	**308**	**545**	**638**	**472**	**496**	**613**	**365**	**644**	**613**	**460**	**577**	**569**	**493**	**581**	**--**
Area	**Tur**	**10040**	**10010**	**10250**	**10178**	**10463**	**10451**	**10401**	**10056**	**10067**	**10409**	**10961**	**10599**	**10463**	**10740**	**10999**	**11226**
Production	**Tur**	**4185**	**3605**	**5904**	**7367**	**5174**	**6220**	**7090**	**3551**	**8089**	**8681**	**6603**	**7771**	**6930**	**6582**	**7922**	**8146**
Yield	**Tur**	**417**	**360**	**576**	**724**	**495**	**595**	**682**	**553**	**804**	**834**	**602**	**733**	**662**	**613**	**720**	**726**
Area	**Wheat**	**8667**	**6451**	**6838**	**7571**	**7667**	**7017**	**7991**	**7473**	**10155**	**10491**	**7542**	**7598**	**6647**	**7557**	**9328**	**12308**
Production	**Wheat**	**9093**	**6272**	**8003**	**10538**	**11112**	**8977**	**11670**	**6706**	**13085**	**14361**	**9476**	**9839**	**7782**	**10163**	**13007**	**18710**
Yield	**Wheat**	**1049**	**972**	**1170**	**1392**	**1449**	**1279**	**1460**	**897**	**1289**	**1369**	**1256**	**1295**	**1171**	**1345**	**1394**	**1520.1**

Source: Directorate of Economics and Statistics 2008[5.2]
Area = "00" hectares , Production = "00" metric ton and Average yield = Kg/hectare

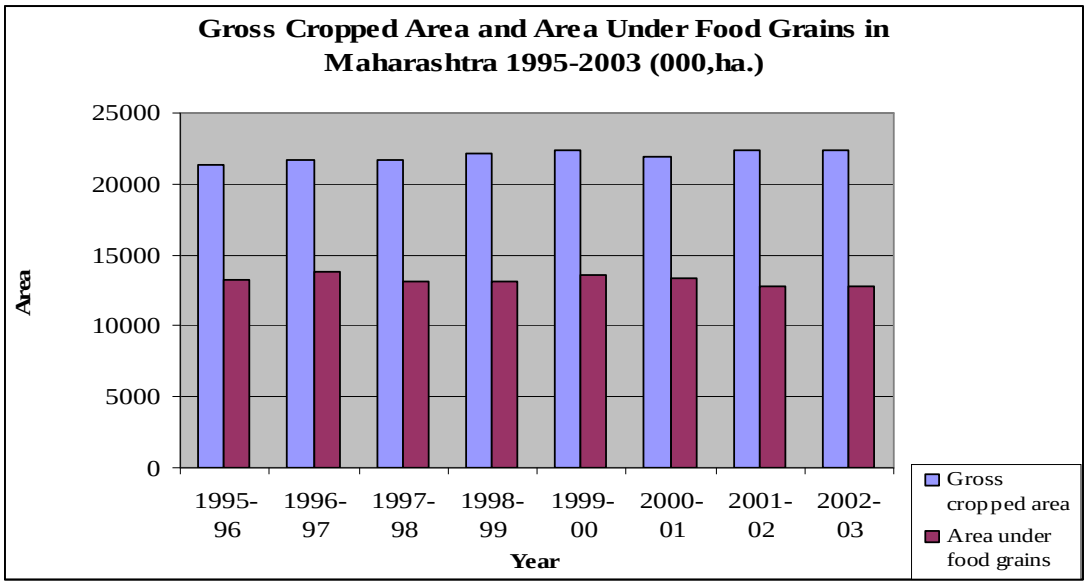
After the period of 1991 there have been drastic changes in the cropping pattern due the opening up of the economy. Basically the main objective of cultivation practices in India is livelihood. Hence the proportion of food crops is always high in the agricultural operations. Important aspect is that the area and yield of the food crops had been less than the commercial crops even during the pre independence period. It means that the commercial agriculture is neither a new dimension nor it is the outcome of the new economic policy of 1991. The crops like Bajara, Jowar, Wheat, Paddy, etc. are the major livelihood crops. The area under different food crops shows the inconsistency during the period of 1991 to 2007. The area under a particular crop always plays a dominant role in determining the crop production. The same trend could be observed in the above table that whenever the area under crop increased it has the resultant impact on the crop production. It was expected after the technological innovation that the crop production will increase but it didn't happen in the state of Maharashtra. Kharif Jowar is mostly cultivated in Marathwada and Vidarbha regions of the state like that of Bajara in the other parts whereas the Rabbi Jowar cultivated in the irrigated area of Western Maharashtra region of the state. The total area under food crops has been almost stagnant and productivity too, which cannot fulfill the growing demand of food grains. As well as the area and productivity of major cash crops like Cotton and Sugarcane has been stagnant for over the years. The productivity of Cotton for the year 2007 was 253 kg. per hectare which was below the national average of 279 kg. per hectare and the productivity of sugarcane was 29 metric ton which was also below the national average of 43 metric ton. It means the state agriculture was passing through

stagnancy during the post reforms period. Stagnated crop productivity and increase in the cost of cultivation pushed the state agriculture in to a business of negative returns. As a result the gap between income and expenditure of farm households widened during the post reforms period. This has been the root cause of the growing indebtedness of farmers of the state of Maharashtra.

5.2 Gross Cropped Area and Area Under Food-Grains in Maharashtra 1995-2003 (000,ha.)

Sr. No.	Year	Gross Cropped Area	Area Under Food Grains	Proportion to total GCA(%)
1.	1995-96	21327	13275	62.24
2.	1996-97	21662 (1.57)	13792 (3.89)	63.67
3.	1997-98	21740 (0.36)	13174 (-4.48)	60.60
4.	1998-99	22155 (1.90)	13094 (-0.60)	59.10
5.	1999-00	22351 (0.88)	13637 (4.14)	61.01
6.	2000-01	21911 (-1.96)	13382 (-1.86)	61.07
7.	2001-02	22405 (2.25)	12799 (-4.35)	57.13
8.	2002-03	22405 (00)	12790 (-0.07)	57.09

Source: Centre for Monitoring Indian Economy (2005) [5.3]



According to the data, the gross cropped area has been mere constant during the period of 1995-2003. On the other hand area under food-grains experienced slight variations. Averagely 60.23 per cent of the gross cropped area was under the food-grains. It proves the fundamental principle of Indian agriculture of 'livelihood agriculture'. Though the new agriculture policy and trends have been implemented in India, the state farmers are away from it and still practicing livelihood agriculture. Large portion of the produce was used for the consumption and only if some surplus is available that comes in the market for sale. The prices of the inputs were sky rocketed and on the other hand output prices either declined or remained stagnant. Hence, farmers have not been able to cover the cost of cultivation. And the cultivation of the food-grains is not as remmunarative as cash crops. Still 57.9 per cent of the total cultivable area is under food-grains, means the large portion of the farming community is engaged in food-grains production. The state farmers are facing the deep economic strain in the cultivation of the food-grains. It means the agrarian crisis is positively correlated with the cultivation practices carried out by the state farmers of Maharashtra.

5.1.1 Irrigation and Rain fall in the state of Maharashtra

Uncertainty and inadequacy are the fundamental characteristics of the Indian monsoon. Variations in the monsoon affect the agricultural production. However, the state agriculture is comparatively developed in India. But at the same time there have been a huge amount of disparities in agricultural development in the state of Maharashtra. Adequate irrigation facilities are the prerequisite for the sustainable development of the sector. In this context only Western and southern parts of the state has

the facilities of irrigation resources i.e. dams, ponds, check dams, etc. In Maharashtra, Konkan region has the highest rainfall of 2801mm which is followed by Vidarbha with 970mm during the months of June to September. Whereas, Central Maharashtra and Marathwada get the rainfall of 743mm and 706mm respectively. The problem of farmers suicides is found concentrated in the Vidarbha region of the state. Though the average rainfall is of the order of second highest in the state, lack of institutional mechanism to conserve the rain water makes region known for water shortage. Hence farmers have to remain deprived from the benefits of the good rainfall. However, Central Maharashtra has the less average rainfall as compare to other parts but the institutional support through the irrigation projects and watersheds brought in rapid changes in the rural economy of the region. Conflicts arising from man-made drought are on the rise. Deforestation does enormous damage. Villagers are increasingly losing control over the common water resources. A process of privatization of water resources is apparent in most of the real drought areas. There are now two kinds of droughts; the real and the rigged. Both can be underway at the same time and in the same place.

Since the 1998 the actual rainfall has been less than the normal rainfall for Vidarbha region of the state. However, in the year 2004 the actual rainfall was only 70 per cent of the normal expected rainfall. As well as, the rainfall has not been in the appropriate proportion in the region. It either has been in excess or acute. In both the situation farmers have incurred heavy losses by double or triple sowing or sometimes the total crop loss. The year 2004 was the drought year for the state as a whole but the severity of the same was high in Vidarbha region. This has a long term

impact on the agrarian economy of the region. The state has several districts that have an abundance of rainfall but where one section, the poor, can suffer acute drought. This happens when available water resources are colonized by the powerful. Around 73 per cent of Sugarcane is produced in the Drought Prone Area Programme (DPAP). And sugarcane is one of the most water intensive crops. The farming community of the region was suffered badly through the institutional and natural factors in recent past which is the root cause of the agrarian crisis and thereby farmers suicides in the region.

5.3 Net and Gross Irrigated Area in Maharashtra 1995-2003 (000' hectares)

Sr. No.	Year	Net Irrigated area	Proportion to Net Sown Area	Gross Irrigated Area	Proportion to Gross Irrigated Area
1	1995-96	2510	14.01	3287	15.41
2	1996-97	2549 (1.55)	14.26 (1.78)	3338 (1.55)	15.41 (00)
3	1997-98	2936 (15.18)	16.53 (15.91)	3350 (0.36)	15.41 (00)
4	1998-99	2946 (0.34)	16.61 (0.48)	3769 (12.50)	17.01 (10.38)
5	1999-2000	2972 (0.89)	16.80 (1.41)	3769 (00)	16.86 (-0.88)
6	2000-01	2959 (-0.44)	16.78 (-0.12)	3805 (0.96)	17.37 (3.02)
7	2001-02	2959 (00)	16.78 (00)	3805 (00)	16.98 (-2.24)
8	2002-03	2959 (00)	16.78 (00)	3805 (00)	16.98 (00)

Source: Centre for Monitoring Indian Economy March 2005[5.4]

The data in the table (No. 5.3) reveal that the net and gross irrigated are has near about constant and never cross the limit of 20 per cent (18.80 per cent) of the gross cropped area in the state of Maharashtra. As well as there are a regional disparities in the irrigation facilities in the state. The area under irrigation in Maharashtra is pathetic. Just inching towards 19 per cent of the crop land. But in DPAP blocks, in one estimate, it is 22 per

cent which is higher than the state average. Annual rainfall in Lonavla near Pune seldom is around 1650 mm and can touch 2000 mm. and which comes under DPAP. Many hundreds of crores spent in Maharashtra on increasing irrigation over the years but the same has not led to any appreciable rise in the land under irrigation. The water is colonized by the rich and politically strong people. More predominantly by the western Maharashtra sugar belt. Governments kid themselves that by throwing money at such regions, the small fish, which have big votes, can be pacified. In reality lions' share of funds going there is again appropriated by the powerful. About 2 per cent of the farmers in the state use around 70 per cent of the water.

5.1.2 Cotton Cultivation in Maharashtra

Maharashtra is one of the major Cotton producing states in the country. The state has around 30 lakh Cotton growers and it accounts for 15 to 20 per cent of the total Cotton output in India. The total area under Cotton (2001-02) was 31.04 lakh hectares, which is about 37 per cent of the total area under Cotton in the country (Shroff-2005)[5.5]. The crop has shown a wide fluctuation over the years due to heavy dependence on monsoon in the state in general and Vidarbha region in particular. Only 3 per cent of the area under Cotton is irrigated while 97 per cent of area depends on uncertain monsoon. However, in terms of yield the state shows a different picture, the yield from Cotton is lowest in Maharashtra and much below the national average. While all India yield was 191 kg. per he. in 2000-01, where as the yield in Maharashtra during the same period was 100 kg per hectare. Cotton crop in Maharashtra is essentially the rain fed and major regions are characterized by scanty and uncertain rainfall. As well as, the

area under certified seeds does not exceed 40 per cent of total sown area under the crop. Even in the case of hybrids, a sizeable share of the area is covered only by truthfully labeled seeds and not certified seeds. The post reforms policy towards the seeds and fertilizers allows the free entry to MNCs, as well as, indigenous producers in the seed production without any qualitative restrictions.

In fact, the drive to improve Cotton production in all Cotton producing states started soon after the independence, when development schemes such as Cotton Extension Scheme and Grow More Cotton Campaign were launched by the government of India in the year 1950-51 (Shroff-2005)[5.6]. These schemes however had deficiencies and to overcome them the government launched a new centrally sponsored scheme i.e. Intensive Cotton District Programme in 1970-71which was renamed as Intensive Cotton Development Programme (ICDP) in 1979-80. The main objectives of the scheme were to increase the production of Cotton by adopting improved farm practices and advanced production technology. In the year 2000 the fresh thrust to Cotton research and development has been given by the launching of a Technology Mission on Cotton (TMC). The purpose of the mission is to bring the entire gamut of research, technology transfer, marketing and processing of Cotton under one roof. Despite these efforts Cotton yield in India is lowest in the world because of severe pest attack and its predominant cultivation under rain fed conditions (Narayanmoorthy & Kalamkar-2006)[5.7]. While predominant cultivation of Cotton under rain fed condition increases the uncertainty in getting yield, different kinds of pest attack significantly reduces the yield of crop. Controlling bollworms is a major as well as persistent problem standing

before the farmers throughout different regions of the country. Of the total pesticide consumption of Rs. 2,800 crore in Indian agriculture, about Rs.1600 crore (57.14 per cent) were spent on Cotton alone, of which Rs. 1100 crore (39.28 per cent) were spent only on controlling of bollworms (Mayee et al-2002)[5.8]. The indiscriminate use of pesticides not only increases the financial burden of the farmers and reduces the profit margins by increasing cost of cultivation but also create health hazards and environmental risks. This has been proved in the Cotton growing regions of Gujarat in India and Punjab in Pakistan. In fact, due to a drastic decline in yield due to bollworms attack and increase in cost of cultivation the cultivation of Cotton is increasingly becoming uneconomical, which may have in some instances lead farmers to suicides (Deshpande-2002)[5.9]. The BT (Bacillus Thuringiensis) Cotton introduced recently for commercial cultivation considered to be an important variety, which can overcome the problems of bollworms in Cotton. This new variety of Cotton seed is also expected to increase the yield of crop significantly compared to hybrid Cotton, besides reducing bollworms attack and cost of cultivation significantly. Despite some contraversies about its environmental problems, BT Cotton cultivation steadily increases in all over the world including India. The cost of new variety seeds is substantially higher than the other hybrid seeds of Cotton. Farmers have started cultivating BT Cotton crop since April 2002 in India. The seed company has promised that the use of BT variety helps to reduce the use of pesticides and increase the yield of the crop. But, something wrong has happened in Maharashtra and particularly in the Vidarbha region of the state. The Vidarbha region was predominantly a Cotton producig region.

It gave them a tremendous gains in the past. In 1972, the price of one quintal of Cotton was equal to the 15 gram of Gold. For instance, Rs.340 for one quintal of Cotton and the price of 10 gram of gold was Rs.220. It means farmers could purchase 15 grams of gold in the price received from the one quintal of Cotton. As a result, they called Cotton crop as a 'White Gold'. In 2010, they need to sell 5.75 quintal of Cotton to purchase 10 grams of gold. Though, BT Cotton variety promises the increase in the yield, it needs a sustainable irrigation for the cultivation. And which is not available in Vidarbha region or even the other Cotton growing areas of the state. Also the prices of the seeds are high comparing to the other varieties. The price of 450 grams of BT seeds costs Rs.1600 and the other hybrid seeds the price range is between Rs.500 to Rs.800 for 500 grams. The BT variety is only free from the bollworms attack but, it is not free from the other pests which are prevalent in the region. As well as, it needs heavy doses of fertilizers and sustainable irrigation facilities. Only 3 per cent of gross cropped area under Cotton is irrigated in the state and Vidarbha region it is less than one per cent and remaining depends on the uncertain monsoon. As a result, the commitment of the company of Rs.10,000/- profit per hectare did not get realized and farmers of the region incurred a loss of Rs.6,000/- per hectare. The free entry of the MNCs and indigenous companies in the seeds market leads to increase in the supply of spurious seeds in the market. Unwillingness and the intentional relationship with traders of the government officials help in the further exploitation of the farmers. The National Commission on Farmers, call for making Vidarbha "an organic farming zone". But as usual the state government neglected the recommendation of the commission and continued with the existing

policy. Here we observed a paradox in the policy domain. In 1966, when the Green Revolution was introduced the government focused on the excessive use of the high yielding variety of seeds and chemical fertilizers to increases the productivity and thereby production of the agriculture sector. And after the forty years of green revolution the policy makers and environment scientist realized that the use of the chemical fertilizers is harmful to the human being. Hence, now they force to use the bio-fertilizers or the adoption of organic farming. The incidences of farmers suicides is an outcome of the first green revolution and now government talks about the second green revolution what does it give to the farming community and society as a whole is a big question. The Indian policy makers have been blind followers of the successful policy implemented in other countries. As all are aware about the uses and importance of the organic farming. Nonetheless, the several questions are unanswered and the policy makers should think over it otherwise India may be in a deep crisis in recent future. Whether the organic farming can fulfill the total demand of food-grains of the country? Does the farmer accept the new techniques of farming? If farmers incurred losses at the initial stage of the farming who will compensate them and what is the criteria for the same? Government should think on the existing rate of compensation for crop loss which is not proportionate to the losses. Does the country have the sufficient amount of the organic fertilizers to fulfilling the demand for the same? What about the chemical fertilizer industry and the engaged labour force? Where to merge them? Already we have excess labour force in the agriculture sector and still we can't incorporate them. Then who will bear the burden of this excess labour force? All these issues should have the

concern before implementing the policy of organic farming. The same situation has been observed in the White Revolution. In which new cross breed cows were used for the higher milk production. But on the other hand the quality of that milk was neglected. This type of controversy and inconsistency of the planning on the one hand and the ineffective implementation of the same on the other caused for the long term crisis in the agriculture sector. And the increasing incidences of farmers suicides in the country is an outcome of the same. The increasing cost of cultivation with declining returns did not help the farmers to recover the cost of cultivation in the Vidarbha region. Further which leads to indebtedness and thereby increasing incidences of farmers suicides in the state of Maharashtra.

5.4 Area, Production and Yield of Cotton in Maharashtra 1994-95 to 2005-06

Sr. No.	Year	Area (Lack Ha.)	Production (Lac. Bales)	Productivity (kg. ha.)
1.	1994-95	27.60	15.84	98
2.	1995-96	30.17 (11.23)	28.75 (81.50)	159 (62.24)
3.	1996-97	30.90 (0.65)	33.00 (14.78)	182 (14.46)
4.	1997-98	31.00 (0.32)	20.50 (-37.87)	112 (-38.46)
5.	1998-99	31.99 (3.19)	25.00 (21.95)	133 (18.75)
6.	1999-2000	32.53 (1.68)	38.00 (52.00)	199 (49.62)
7.	2000-01	27.93 (-14.14)	24.00 (-36.84)	145 (-27.13)
8.	2001-02	29.80 (6.69)	34.25 (42.70)	194 (33.79)
9.	2002-03	26.17 (-12.48)	26.00 (-24.08)	169 (-12.88)
10.	2003-04	27.66 (5.69)	31.00 (19.23)	191 (13.01)
11.	2004-05	29.80 (7.73)	52.00 (67.74)	297 (55.49)

12.	**2005-06**	**28.89 (-3.05)**	**46.00 (-11.73)**	**271 (-8.75)**

Source: Cotton Advisory Board[5.10]

The above table (No. 5.4) shows the area, production and yield of Cotton during 1994-95 to 2005-06 in Maharashtra. There were three phases of the mentioned period i.e. first was 1994-95 to 1999-2000 the initial stage of World Trade Organization (Agreement on Agriculture- AoA), and the second phase (2000-2002)of introduction of BT Cotton seeds and the third phase after 2002 of agrarian crisis and farmers suicides in the country. The trend in year wise yield shows wider fluctuations as compare to the area under the crop. The area under crop shows mere stagnancy in throughout the period. There has been an increase in the area under Cotton from 27.66 lakh hectare in 2003-04 to 29.80 lakh hectare in 2004-05, which was propelled by a higher open market prices for Cotton in 2003-04. In 2002-03, private traders were allowed to operate for first time since the enactment of the Monopoly Cotton Procurement Scheme (MCPS) almost thirty years ago. After the introduction of the BT Cotton seeds it was expected that, the yield should increase consistently but the above figures reveal the fact. The new variety of Cotton seeds helped to increase the productivity and production of the Cotton crop in the state at initial stage. There were also the fluctuations observed in post BT period. It is due to the wrong demonstration of seeds in the state and particularly in Vidarbha region. As noted earlier, the BT seed needs sustainable irrigation facilities and which is not available in Vidarbha region. Initially the yield of Cotton grew by 55.49 per cent in 2004-05 and at the later stage it was declined by 8.75 per cent in the year 2005-06. The policies towards agriculture and particularly Cotton cultivation have been changing over

the years and the farmers have not been able to adjust themselves in the fast changing nature of agriculture. They found in difficulties of income generation and employment. As a result, the seed of agrarian crisis was generated in Cotton cultivators in the Vidarbha region of the state of Maharashtra. And the most of the farmers who ended their lives through committing suicide are Cotton growers. Hence the Cotton becomes a suicide crop in the state. Also the gap between expected and actual production had widened in last few years. As well as, the gap between the expenditure and income also widened. Hence Cotton growers found themselves in the vicious trap of indebtedness. It has become one of the reasons of the distress act of suicides by farmers in the Vidarbha region of the state.

After the WTO amendment (AoA) quantitative restrictions on the import of Cotton and other agriculture commodities were removed. The farmers were directly linked to the international market without any safety net. As well as, government had withdrawn the support through reduction in the subsidy and import duties which was a part of the international trade libralisation. The prices of Cotton in the international market were low. The excess supply of Cotton at international market got at low price, because the government of United States increased the direct and indirect subsidies for farmers. During the period of 1998 to 2003 Cotton export prices from USA were lower than the cost of production by more than 50 per cent on average and had reached a maximum of 62 per cent in 2002 (Murphy, Lilliston and Lake-2005)[5.11]. As against this, domestic policies in India have led to the removal of quantitative restrictions and subsequently reduction of import tariff from 35 per cent in 1997-98 to 5 per cent in

2002-03. All these changes exposed the domestic prices of Cotton to the volatility of international price mechanism. It has adversely affected the Cotton farmers of the country in general and that of Maharashtra in particular.

Looking at the area and the production as well as the dependency of population on the Cotton cultivation, the state government of Maharashtra introduced a new procurement scheme. The scheme known as Monopoly Procurement of Cotton was framed and given a statutory form under the Maharashtra Raw Cotton Procurement, Processing and Marketing Act-1971. With the enforcement of this act, all the private trading of Cotton was prohibited and the cultivator was given the only option of marketing the produce through the government agency. The main objectives of the scheme were, a) to ensure fair and remmunarative price to the cultivators of the state, b) to effect additional transfer of income to the growers by eliminating the middlemen and securing full advantage of terminal price, c) to bring about stability and overall growth in the production and d) to supply scientifically graded quality Cotton to processing mills.

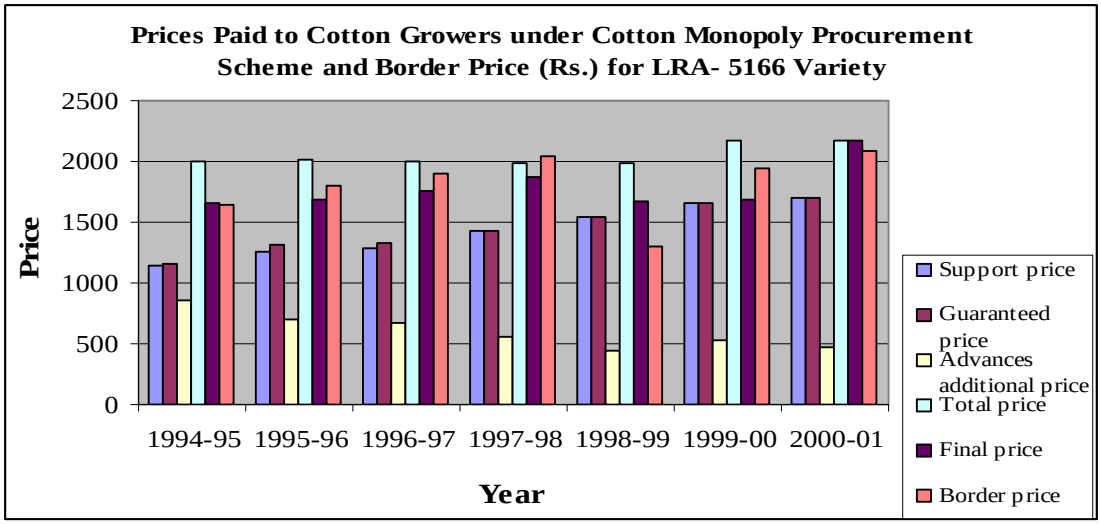
It is now more than four decades since the scheme has been in operation. Performance of the scheme during the first two decades i.e. from the period 1972-73 to 1993-94 showed that it incurred losses in 8 out of 22 years. The major losses were experienced dring the two years of 1984-85 and 1985-86, when the scheme had incurred the losses of Rs.77 crore and Rs.308 crore respectively (Shroff-2005)[5.12]. There was a bumper crop of Cotton in the country and prices in all primary markets began to crash. The monopoly scheme was under strain as it had paid high guaranteed

prices to the cultivators but incurred high marketing cost and realized low sale price.

5.5 Prices Paid to Cotton Growers under Cotton Monopoly Procurement Scheme and Border Price (Rs.)

Year	Support price	Guaranteed price	Advances additional price	Total price	Final price	Border price
LRA- 5166 Variety						
1994-95	1140	1150	850	2000	1650	1648
1995-96	1260	1310	700	2010	1687	1800
1996-97	1290	1330	670	2000	1752	1900
1997-98	1430	1430	560	1990	1867	2050
1998-99	1545	1545	445	1990	1668	1300
1999-00	1650	1650	525	2175	1689	1950
2000-01	1700	1700	475	2175	2175	2080
2001-02	1750	1750	425	2175	--	N.A.
H-4/H-6 Variety						
1994-95	1200	1210	890	2100	1946	N.A.
1995-96	1350	1400	700	2100	1762	1750
1996-97	1380	1430	670	2100	1940	1850
1997-98	1530	1530	570	2100	1903	2000
1998-99	1650	1650	450	2100	1789	2200
1999-00	1775	1775	525	2300	1866	2025
2000-01	1825	1825	475	2300	--	2153
2001-02	1875	1875	425	2300	--	N.A.

Source: MSCCGMF- Agricultural Price Committee Cell, GoM[5.13]

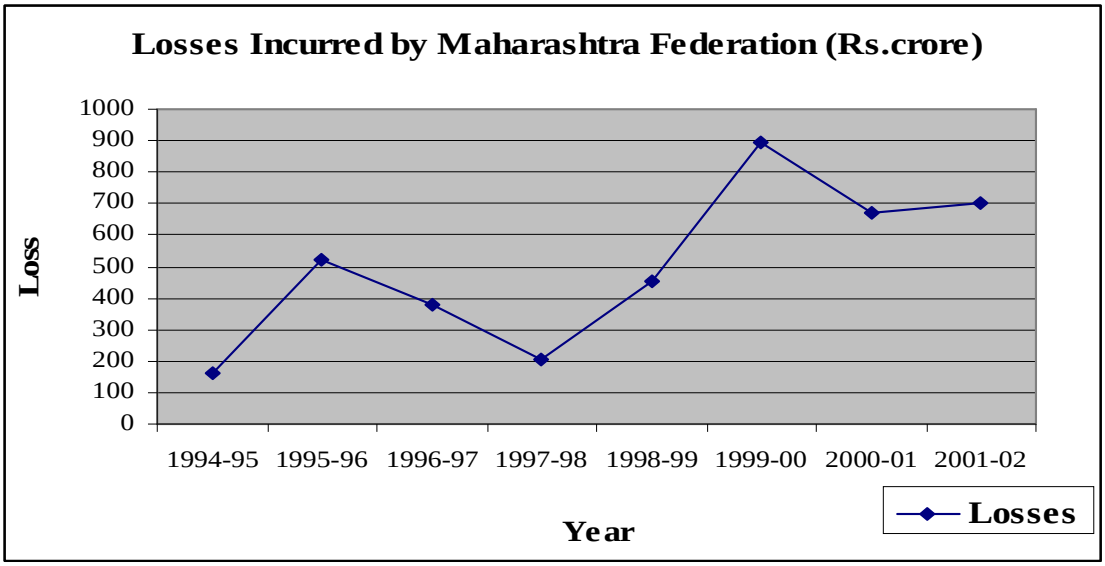


5.6 Losses Incurred by Maharashtra Federation (Rs.crore)

Sr. No.	Year	Losses
1	1994-95	160.17

2	1995-96	522.09
3	1996-97	377.95
4	1997-98	204.32
5	1998-99	451.00
6	1999-2000	893.00
7	2000-2001	672.00
8	2001-2002	703.35
	Total	3984.69

Source: MSCCGMF- Agricultural Price Committee Cell, GoM[5.14]



There were several years when price paid to the Cotton growers in Maharashtra was higher than those prevailing in Border States market. Paying unduly high guaranteed prices, which stopped outflow of Cotton to border states, led to other problems as these prices could be recovered at the time of sale. The problems were further accentuated as the Federation was slow in marketing its full pressed bales. As a result, the Federation has experienced the heavy losses during last decade. The loss was high in the year 1999-2000, when the Federation incurred a loss of Rs.893 crore. From the year 1994-95 government began to fixing guaranteed price higher than support price. As well as, the growers were paid advance additional price which benefited farmers through receiving a higher prices than other

states markets. The scheme provides that, whenever the final prices are lower than guaranteed prices, the deficit is to be made from the price fluctuation fund. The price fluctuation fund was completely wiped out as a scheme incurred losses year after year. It is striking that the federation and the Cotton growers incurred heavy losses in cultivation and marketing of the crop in the state of Maharashtra. Hence, in the year 2002 government allowed private traders in the marketing of Cotton. But, the situation has further deteriorated after the entry of private traders in the Cotton marketing. And the state in general and Vidarbha region in particular experienced an epidemic of farmers suicides. Hence the functioning of the federation was collapsed during the last few years. After 2003 when government allowed the private traders in Cotton procurement indirectly the federation has helped the private traders. Most often these procurement centers are closed or they started late procuring. As a result, farmers had to resort to private traders for the marketing of the Cotton. As observed in foregoing that the traders are also in retaintion of control of the rural economy through the chain of input dealership and private moneylending. Within a few years of their entry in Cotton marketing, all the nerves of the farmers and the rural economy were in the hands of private traders. This started to squeeze rural economy.

The Cotton, which was called 'White Gold' became a suicide crop in Vidarbha region of the state of Maharashtra. Increasing cost of cultivation with declined returns led to deterioration of the farmers. Drying up of institutional credit forced farmers to borrow the money from the private sources. Whereas, the rates of interest charged by the moneylenders in Maharashtra ranged from 36 the minimum to 120 per cent the maximum.

As a result the loan repaying capacity of farmers has declined and the debt burden of the borrowers got accumulated. Hence, the accumulated debt caused the indebtedness. Hence the foot loose farmers were not able to survive under the high degree of economic burden and social humiliation. Hence the farmers started to believe that committing suicide is the only way to come out from the problems.

5.2 Nature and Extent of Indebtedness of Farmers in Maharashtra

Commercialization of agriculture coupled with increasing requirements of credit have put a lot of onus on various agricultural and financial institutions to play a pivotal role in meeting the increasing capital needs of the farmers and ensuring timely supply of various inputs besides providing other facilities. The diversification of agriculture over the years has further accentuated the need for the rapid development of rural infrastructure and large flow of credit to farming community. Short and medium term set ups constitutes the credit co-operatives in Maharashtra. The three tier set up of co-operative not only meeting the credit requirements of the farmers for seasonal agriculture operations but also investing on farm assets that do not entail huge capital outlay. Although there has been substantial increase in the memberships of the credit co-operatives in the state of Maharashtra, the trend over the last two decades in terms of co-operative finance is not very encouraging especially in more recent past. The trend over past two decades shows a slower growth in institutional finance through credit co-operatives during the post reforms period as against the previous decade. The outstanding loans of these co-operatives have grown at a much faster rate as compare to their loan

advances during both pre and post reforms period, though post economic reforms period showing slowing down in this outstanding loan. Though the growth in co-operative lending during 1980-90 was quantitatively higher, but the quality of lending of co-operatives was substantially declined during the mentioned period. As a result of this cautious steps taken by banks, the growth in co-operative lending was slower during the period of economic reforms (Shah-2005)[5.15]. It is the period when all the supporting agencies of agriculture had took out their support, and left the agriculture in the hands of open market operations both for credit and marketing. The co-operative credit mechanism is basically meant for fulfilling the credit needs of the small and marginal farmers. But in the recent past the state co-operatives have become a spring board to enter in to the politics and they looked after only the influential groups of the farming community. As a result all the benefits have been cornered by the big and politically influenced farmers. Hence, small and marginal farmers resorted to the door step of the private moneylenders for their credit needs. The private moneylenders charged heavy rates of interest that varied from 36-120 per cent per annum which doubles the principal amount within a short span of time. On the other the agriculture became an unrewarding business due to technological and policy matters. The technological changes have been unviable and on the policy front both the farmers and agriculture have been marginalised. As a result, farmers have not been able to repay the loan amount but need a more money for both i.e. consumption and production purpose. And with the passing of time the burden of the loan amount shot beyond the capacity of the farmers and the same pushed them

in to a distressful situation where they found committing suicide as the suitable way to get relief from the stress.

5.7 Distribution of Credit by Sources in Maharashtra- 2003

Sr. No.	Sources of Loan	Proportion (%)
A	Institutional	83.8
1.	Government	1.2
2.	Cooperative	48.5
3.	Bank	34.1
B	Non Institutional	16.2
1.	Moneylenders	6.8
2.	Traders	0.8
3.	Others	8.6
	Total	100

Source: NSSO Situation Assessment Survey of Farmers: Indebtedness of Farmer Household, 2003 Report No. 498, 59th round(5.16)

The data in the above table (No. 5.7) indicates that co-operative institutions are the main source of credit to the farmers of the state of Maharashtra. It constituted 48.5 per cent of share of total credit disbursement in the state in 2003. This is the highest amongst all the states co-operative lending to the agriculture sector. The nationalized banks have the share of 34.1 per cent. These figures have shown the effective institutional credit mechanism available for the agriculture. But in most cases only the big and politically influenced farmers received the benefits of the institutional lending. And also those who are ready to pay the commission of the agent and bank offices (usually around 10 to 15 per cnt of the credit amount) get the bank credit on prority. On record only 16.2 per cent of farmers borrow the money from non-institutional sources whereas around 85 per cent of the farmers are in the trap of the non-institutional credit mechanism. Many studies also observed that the nationalized banks never completed the statutory target of credit lending of 18 per cent to the agriculture. The increase in the total loan disbursement to the agriculture remains only on paper but in real terms

there is no increase in loan amount to agriculture particularly to the small farmers (S Mahendra Dev – 2008)[5.17].

5.8 Non-Institutional Debt for Each Class Size of Holding – 2003

Sr. No.	Size Class of Land Holding	Proportion (%)
1.	<0.01	41.7
2.	0.01-0.40	16.8
3.	0.41-1.00	19.8
4.	1.01-2.00	21.2
5.	2.01-4.00	16.2
6.	4.01-10.00	11.3
7.	>10.00	8.9
	Total	100

Source: NSSO Situation Assessment Survey of Farmers: Indebtedness of Farmer Household, 2003 Report No. 498, 59th round[(5.18)]

Sources of financing outstanding debt varied across the land holding size groups. The outstanding debt of the sub-marginal land holder (less than 0.40 hectare) households is financed mostly by non-institutional agencies. The dependency of marginal and small farmers was more on non-institutional sources than of large farmers. And the incidence of committing suicide is high among these groups in the state of Maharashtra. It means the drying up of the institutional credit to these groups is the major cause of the indebtedness of them. Traditionally the dependency of the very sub-marginal land holding households on non-institutional sources has been much high. Hence it needs to cover these weaker sections of cultivators through institutional credit mechanism. Also the substantial number of landless labourers has committed suicides. This category of the agriculture sector is out of the purview of the institutional credit mechanism. Hence the family members did not receive compensation by the government as they are not institutional defaulter. This demands the efforts to encorporate this section both under the institutional credit mechanism and the government compensation.

5.9 Distribution of Debt by Purpose in Maharashtra – 2003

Sr. No.	Purpose of Loan	Proportion (%)
A	Productive	
1	Farm Business Capital	37.9
2	Farm Business Current	37.5
3	Other	4.8
	Total	80.2
B	Unproductive	
1	Consumption	4.2
2	Marriages and Ceremonies	4.9
3	Education	0.9
4	Medical	1.5
5	Other	8.3
	Total	19.8

Source: NSSO Situation Assessment Survey of Farmers: Indebtedness of Farmer Household, 2003 Report No. 498, 59th round[5.19]

Indebtedness for productive purposes was substantially high in the state of Maharashtra (80.2 per cent) as against 19.8 per cent for unproductive purpose. It clearly indicates that the indebtedness of the farmers is an outcome of an unrewarding nature of agriculture than other social and cultural factors. The agriculture has become unrewarding due to increasing gap between the cost of cultivation and the income received from the produce prices. The average gap between cost of cultivation and received price was the minimum of 38 per cent and maximum of 50 per cent for all crops for the year 2005-06. During the post reforms period and particularly after WTO amendment (AoA) agriculture became more commercial than pre reforms period due to open market operations and direct linking to the international market which needs more money for investment. But the returns from agriculture were disproportionate to the investment hence farmers could not be able to cover the cost of cultivation from their agricultural income. It is widely acknowledged in the academic debate on agrarian crisis that for the farmers suicides and indebtedness the unproductive use of the loan was at the root of the distress of

agriculture. But the forgoing analysis proves that increase in the productive loan and declining or mere stagnant returns were the causes of the growing indebtedness and suicides by farmers in the state of Maharashtra.

5.3 Regional Backlog and Farmers Suicides in Maharashtra

Disparities in development across Marathwada, Vidarbha and rest of the Maharashtra state have been a matter of socio-economic and political concern ever since the existence of separate statehood in 1960. After the formation of Maharashtra state in 1960, development efforts continued in the three regions during the subsequent five year plans as expected in the Nagpur Agreement (SDBs Report- 2007)[5.20]. During the sixth plan (1980-85), State Planning department undertook a study on district wise development achievements and pointed to the noticeable disparities across regions in irrigation, roads, public health and technical education. During the sixth plan, government announced a 38-point, 35-point and 17 point development programmes for all three regions i.e. Vidarbha, Marathwada and Konkan mainly for the removal of the regional imbalance. Hence, the government set up a Fact Finding Committee (FFC) (1984) under the chairmanship of Prof. V.M.Dandekar to measure the nature and extent of the regional imbalance in the state of Maharashtra. The Fact Finding Committee worked out a total state backlog of Rs.3186.78 crore for 9 development sectors i.e. roads, irrigation, village electrification, general education, technical education, health services, water supply, land development and soil conservation and veterinary services. The FFC suggested its implementation through appropriate allocation of resources in the three regions to remove the backlog within 5-7 years. Though the

government did not formally accept the FFC recommendations, it started allocating special outlays for removal of backlogs accumulated in the three regions from 1985-86 onwards. However, low budgetary outlays for the removal of backlog, inadequate deployment of implementing machinery and inequitable allocation of funds for non-backlog schemes resulted in the increase of regional imbalance. Which had the negative multiplier effects on the regional economy. The Western Maharashtra has developed whereas Vidarbha and Marathwada regions remained backward. It can be called as a Backshock Effect of the development earlier mentioned by Gunnar Myrdal during the mid 1960s.

5.10 Region and Sector Wise Financial Backlog of the Fact Finding Committee – 1984

Sr. No.	Development Sector	Vidarbha	Marathwada	Rest of Maharashtra	Total	(%) to total
1.	Roads	29143 (48.55)	10982 (18.29)	19904 (33.16)	60029	18.84
2.	Irrigation	52731 (38.05)	31671 (22.85)	54190 (39.1)	138592	43.49
3.	Village Electrification	10829.73 (45.00)	7246.46 (30.11)	5988.86 (24.89)	24065.05	7.55
4.	General Education	3121.74 (34.10)	3415.59 (37.31)	2617.23 (28.59)	9154.56	2.87
5.	Technical Education	2342.22 (28.08)	1938.41 (23.24)	4059.2 (48.67)	8339.83	2.62
6.	Health services	4921.6 (22.25)	7247.3 (32.76)	9952.1 (44.99)	22121	6.94
7.	Water Supply	15392.08 (40.68)	7655.39 (20.24)	14776.4 (39.06)	37823.87	11.87
8.	Land Development and Soil Conservation	5978 (33.63)	4631.39 (26.05)	7167.47 (40.32)	17777.15	5.58
9.	Veterinary Services	194.85 (25.13)	298.2 (38.46)	282.3 (36.41)	775.35	0.24
	Total	124654.5 (39.12)	75085.74 (23.56)	118937.56 (37.32)	318677.81	

Source: FFC Report, 1984[5.21]

5.11 Region and Sector Wise Financial Backlog of the Fact Finding Committee – 1994

Sr. No.	Development Sector	Vidarbha	Marathwada	Rest of Maharashtra	Total	(%) to total
1.	Roads	990.76 (42.68)	554.32 (23.88)	776.08 (33.44)	2321.16	16.57
2.	Irrigation	4083 (55.04)	2401 (32.37)	934.00 (12.59)	7418	52.96
3.	Village Electrification	703.04 (57.5)	295.66 (24.18)	224.02 (18.32)	1222.72	8.73
4.	General Education	39.58 (22.32)	36.35 (20.55)	101.33 (57.13)	177.36	1.27
5.	Technical Education	112.49 (21.06)	95.85 (17.95)	325.77 (60.99)	534.11	3.81
6.	Health services	213.16 (17.43)	359.44 (29.39)	650.40 (53.18)	1223	8.73
7.	Water Supply	172.99 (54.67)	98.79 (31.22)	44.65 (14.11)	316.43	2.26
8.	Land Development and Soil Conservation	307.65 (39.02)	162 (20.54)	318.90 (40.44)	788.55	5.63
9.	Veterinary Services	1.35 (24.81)	1.04 (19.12)	3.05 (56.07)	5.44	0.04
	Total	6624.02 (47.60)	4004.55 (28.77)	3378.20 (24.12)	14006.77	

Source: IBC Report 2000[5.22]

The information on region and sectorwise financial backlog reveal the financial backlog of 9 broad development sectors of the regions in 1984 and 1994. In abovementioned three regions the backlog of Vidarbha region emerges as highest with 39.12 per cent followed by rest of the Maharashtra 37.32 per cent and Marathwada region the 23.56 per cent. In the nine development indicators the most important is the irrigation which determines the agricultural and rural development has shown a highest backlog of 43.49 per cent among other indicators of the state. In the total financial backlog the share of Vidarbha was highest of Rs.124654.5 lakh (39.12 per cent). After the span of ten years the state government assessed

the situation of the regional financial backlog of the state. And the report of Indicator and Backlog Committee arrived at the conclusion that the financial backlog of the Vidarbha region has increased substantially from 39.12 per cent to 47.60 per cent. In which the situation of the irrigation was more serious. The irrigation backlog increased from 38.05 to 55.04 per cent. However, the financial backlog of the rest of the Maharashtra declined from 37.02 to 24.12 per cent and for Marathwada it increased from 23.56 to 28.77 per cent. This suggests that the government has been partially successful in removing the regional financial backlog. For rest of the Maharashtra there has been a significant improvement while Vidarbha and Marathwada remained at backfoot during the same period. After the green revolution and particularly during the period of the 1990s farmers used high doses of fertilizers and pesticides and the new varieties of the seeds were more water intensive. In this situation farmers were dependent on the uncertain monsoon for irrigation due to the unfulfilled backlog of the government towards providing the irrigation facilities in Vidarbha and Marathwada region. As a result, the farmers of the regions did not receive the returns proportionate to the investment and experienced the heavy losses for the consecutive years. It means the available water resources are colonized by the powerful group of society and leaves the rest of the portion of society in the mercy of the uncertain monsoon. Hence, the agrarian crisis and the farmers suicides have been found concentrated in the Vidarbha region more as compare to other regions this made it a graveyard of farmers in the country.

5.12 A Comparative Financial Backlog of Irrigation and Roads of Three Regions

Region	Sector	Years			
		1984	1994	2000	2002
Vidarbha	Irrigation	38.05	55.04	59.78	60.78
	Roads	48.55	42.68	38.78	42.53
Marathwada	Irrigation	22.85	32.37	32.85	33.08
	Roads	18.29	23.88	24.46	20.74
Rest of Maharashtra	Irrigation	39.10	12.59	7.43	6.24
	Roads	33.15	33.44	36.76	36.73

Source: Report on the performance evaluation of statutory development boards in maharashtra 2003[5.23]

The data in above table (No. 5.12) explains the regional financial backlog of irrigation and roads. Vidarbha region has consistently been at the altitude of financial backlog both in irrigation and roads. Whereas, rest of the Maharashtra showed a declining trend in the financial backlog of irrigation with 10 times less than Vidarbha and 6 times less than of Marathwada region. But the backlog in roads for rest of the Maharashtra shows increasing trend. However, Marathwada has the incremental financial backlog during the mentioned period. Irrigation and roads are the two wheels of the rural economic development and here the state government neglects both the sectors in general and for Vidarbha region in particular. Hence, the farmers of Vidarbha region remain dependent on uncertain monsoon for agricultural practices. As a result, uncertainty of income has increased and the farming community became more vulnerable. Farmers of this region have to spend more money on making of infrastructural facilities and less on actual cultivation purpose.

5.4 Farmers Suicides Scenario of Maharashtra

5.13 District wise Farmers Suicides in Maharashtra (2001-2009)

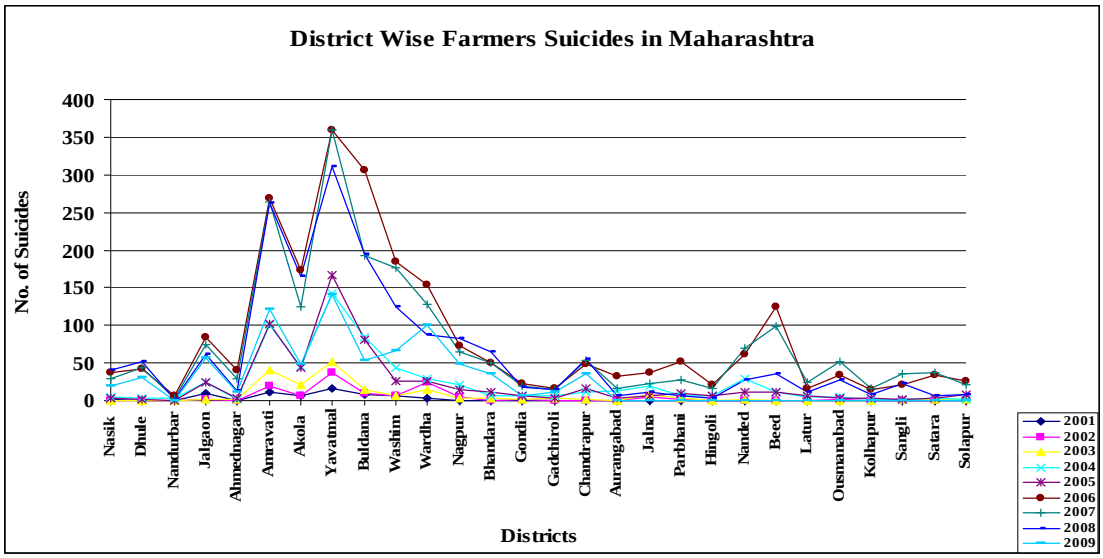
Sr. no.	District	2001	2002	2003	2004	2005	2006	2007	2008	2009
1.	Nasik	01 (00)	00	00	05 (80)	03 (00)	38 (73.68)	29 (79.31)	40 (62.5)	19

2.	**Dhule**	**00**	**00**	**00**	**03 (33.33)**	**02 (00)**	**42 (47.61)**	**44 (65.90)**	**52 (59.61)**	**31**
3.	**Nandurbar**	**00**	**00**	**00**	**04 (00)**	**00**	**06 (16.66)**	**03 (33.33)**	**01 (00)**	**00**
4.	**Jalgaon**	**09 (00)**	**02 (50)**	**01 (00)**	**25 (28)**	**24 (75)**	**85 (57.64)**	**75 (61.33)**	**62 (56.45)**	**56**
5.	**Ahmednagar**	**00**	**00**	**01 (00)**	**01 (00)**	**04 (50)**	**40 (77.5)**	**29 (58.62)**	**13 (30.76**	**12**
	Nasik division	**10**	**02**	**02**	**38**	**33**	**211**	**180**	**168**	**118**
6.	**Amravati**	**11 (63.63)**	**20 (80)**	**41 (53.65**	**101 (48.51)**	**102 (57.84)**	**269 (28.99)**	**264 (28.03)**	**263 (24.71)**	**122**
7.	**Akola**	**06 (83.33)**	**07 (100)**	**21 71.42**	**46 (84.78)**	**43 (86.04)**	**174 (46.55)**	**125 (40.80)**	**165 (47.87)**	**48**
8.	**Yavatmal**	**17 (41.17)**	**38 (60.52)**	**52 (57.69)**	**142 (57.74)**	**167 (58.08)**	**360 (40.27)**	**359 (28.69)**	**311 (24.75)**	**141**
9.	**Buldana**	**08 (50)**	**09 (66.66)**	**14 (85.71)**	**85 (44.70)**	**81 (48.14)**	**306 (32.35)**	**193 (21.76)**	**195 (24.10)**	**54**
10.	**Washim**	**07 (100)**	**06 (83.33)**	**06 (100)**	**44 (65.90)**	**26 (96.15)**	**185 (58.37)**	**177 (13.55)**	**125 (25.06)**	**66**
11.	**Wardha**	**03 (66.66)**	**24 (62.5)**	**14 (57.14)**	**29 (58.62)**	**26 (73.07)**	**154 (35.06)**	**128 (33.59)**	**88 (17.04)**	**100**
	Amravati division	**52**	**104**	**148**	**447**	**445**	**1448**	**1246**	**1147**	**531**
12.	**Nagpur**	**00**	**05 (40)**	**04 (50)**	**21 (47.61)**	**15 (33.33)**	**73 (39.72)**	**65 (33.84)**	**83 (19.27)**	**49**
13.	**Bhandara**	**00**	**00**	**03 (66.66)**	**07 (42.85)**	**12 (75)**	**50 (44)**	**50 (40)**	**65 (18.46)**	**35**
14.	**Gondia**	**00**	**01 (100)**	**01 (100)**	**06 (33.33)**	**06 (100)**	**22 (77.27)**	**19 (89.47)**	**18 (55.55)**	**07**
15.	**Gadchiroli**	**00**	**00**	**04 (100)**	**06 (66.66)**	**04 (25)**	**17 (64.70)**	**14 (57.14)**	**14 (35.71)**	**12**
16.	**Chandrapur**	**00**	**00**	**01 (00)**	**11 (45.45)**	**17 (52.94)**	**49 (46.93)**	**53 (52.83)**	**55 (49.09)**	**36**
	Nagpur (division)	**00**	**06**	**13**	**51**	**54**	**211**	**201**	**235**	**139**
17.	**Aurangabad**	**00**	**00**	**00**	**13 (38.46)**	**04 (25)**	**32 (40.62)**	**16 (75)**	**07 (42.85)**	**--**
18.	**Jalna**	**00**	**05 (00)**	**08 (00)**	**19 (42.10)**	**06 (50)**	**38 (39.47)**	**22 (63.63)**	**11 (9.09)**	**--**
19.	**Parbhani**	**00**	**02 (50)**	**04 (25)**	**06 (66.66)**	**10 (80)**	**52 (50)**	**28 (46.42)**	**06 (83.33)**	**--**
20.	**Hingoli**	**00**	**00**	**00**	**07 (42.85)**	**06 (16.66)**	**21 (66.66)**	**16 (75)**	**04 (25)**	**--**
21.	**Nanded**	**00**	**00**	**02 (100)**	**29 (89.65)**	**11 (90.90)**	**62 (67.74)**	**70 (68.57)**	**28 (3.57)**	**--**
22.	**Beed**	**00**	**00**	**00**	**11 (10.10)**	**12 (00)**	**124 (20.16)**	**98 (41.83)**	**35 (51.42)**	**--**
23.	**Latur**	**00**	**00**	**00**	**05 (20)**	**06 (33.33)**	**17 (47.05)**	**24 (33.33)**	**12 (50)**	**--**
24.	**Ousmanabad**	**00**	**02 (50)**	**00**	**05 (40)**	**03 (66.66)**	**34 (41.17)**	**52 (55.76)**	**28 (25)**	**--**
	Aurangabad division	**00**	**09**	**14**	**95**	**58**	**380**	**326**	**131**	**--**
25.	**Pune**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**---**
26.	**Kolhapur**	**00**	**00**	**00**	**02 (100)**	**03 (100)**	**14 (71.42)**	**16 (62.5)**	**08 (25)**	**--**
27.	**Sangli**	**00**	**00**	**01 (00)**	**02 (100)**	**02 (50)**	**21 (52.38)**	**35 (31.42)**	**23 (34.78)**	**--**
28.	**Satara**	**00**	**00**	**01 (00)**	**04 (50)**	**04 (75)**	**34 (70.58)**	**38 (68.42)**	**06 (50)**	**--**
29.	**Solapur**	**00**	**01**	**01**	**01**	**08**	**26**	**21**	**08**	**--**

			(100)	(100)	(100)	(75)	(65.38)	(76.19)	(62.5)	
	Pune division	00	01	03	09	17	95	110	45	--
	State Total	62	122	180	640	607	2345	2063	1726	788

Source: Commissioner Offices[5.24]

Figures in parentheses indicate percentage of the eligible farmers for the state government compensation. (1 Lac Rupees)



Data on district wise suicides by farmers for the period between 2001-2009 reveals that at the earlier stage, the number of incidences of suicides was less, but among them districts from Vidarbha region have been at the top. Afterwards the spate of farmers suicides spread all over the state also covering irrigated area and cash crops growing farmers of the state. Incidences of committing suicides increased during the year 2006. During this year, total of 2345 farmers of the state ended their lives through committing suicides. All the districts of the state have reported considerably high number of farmers suicides during the year. The most noticeable aspect is that the districts consisting tribal population i.e. Dhule, Nandurbar, Chandrapur, Gadchiroli, Gondia, Bhandara have reported less number of incidences of farmers suicides. It proves that the poor have the less inclination of committing suicide. In the Vidarbha region, the western Vidarbha (Amravati, Yavatmal, Akola, Buldhana, Wardha and Washim) reported highest incidences of suicides whereas, east Vidarbha mostly the tribal belt shows relatively less number of cases of suicides. The

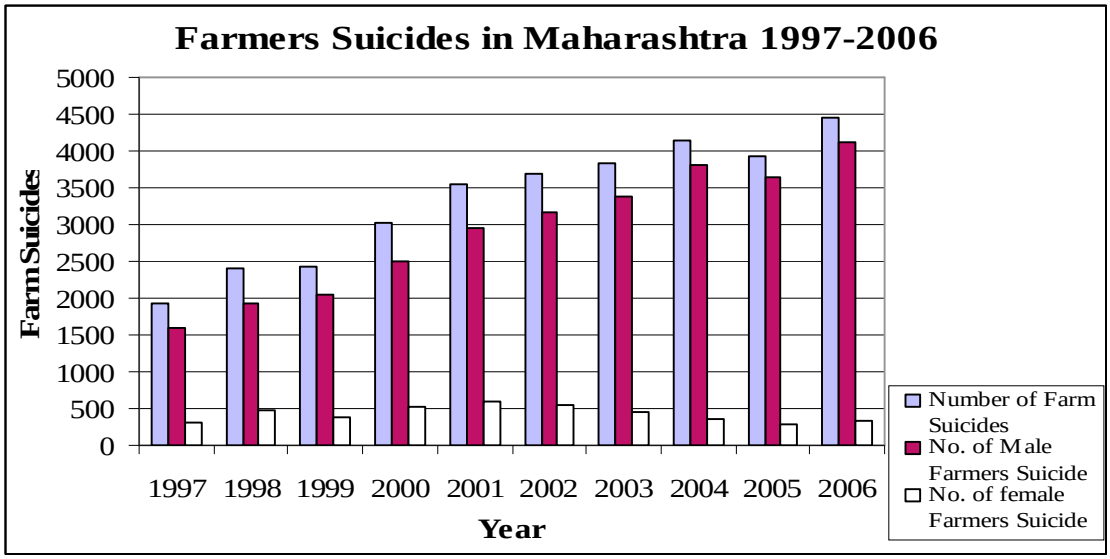
problem of increasing number of farm suicides in the state can be observed particularly after the year of 2004. The year 2004 was the drought hit year which gave a setback to the agrarian economy and aggravated the spate of suicides in the state. During our field visit, it was observed that for the matter of compensation Vidarbha region was neglected by the state officers at the earlier stage. The proportion of the victims' families who were eligible for the state compensation of Rs.1 lakh was higher in Western Maharashtra as compare to Vidarbha and Marathwada regions of the state. During the post package year (2007-08) the incidences of farmers suicides had increased and number of families eligible for the state compensation declined substantially. If the family is not found eligible for state compensation then it would not be considered as farm suicide but as a general suicide case. Further the rule states that, those who are eligible for the state compensation only to be termed as 'Genuine Suicides'. It is an example of the beauracratic confusion. In this context, during the post package period government authorities directed state officers orally, to reduce the incidences of farmers suicides. Hence, the officials started either not to report the case or tried to make it ineligible for state compensation. Efforts of the government to stop the distress act of suicides were limited and concentrated only on the short term measures.

5.14 Farmers suicides in Maharashtra 1997-2006

Sr. No.	Year	Number of Farm Suicides	Proportion to total No. of Suicide in State (%)	Proportion to total No. of Farm Suicide in Country (%)	No. of Male Farmers Suicide	No. of female Farmers Suicide
1	1997	1917	15.2	14.1	1600	317
2	1998	2409	17.6	15.0	1938	471

3	1999	2423	17.8	15.1	2050	373
4	2000	3022	21.6	18.2	2492	530
5	2001	3536	24.2	21.5	2945	591
6	2002	3695	25.4	20.6	3155	540
7	2003	3836	26.0	22.3	3381	455
8	2004	4147	28.2	22.7	3799	348
9	2005	3926	27.2	22.9	3638	288
10	2006	4453	28.7	26.1	4111	342
Gross total		33364	26.3	20.1	29109	4255

Source: K Nagraj MIDS,2008[5.25]



The data on suicides reveal that, the problem of farmers suicides is acute and distressing in the state of Maharashtra. Over the ten years i.e. between 1997 and 2006, the number of farm suicides in the state has more than doubled from 1917 to 4453. It gives an annual compound growth rate of an exceedingly high figure of 9.8 per cent for farm suicides, here a rate at which the number would double every 7-8 years. Considering the period 1997-2006 as a whole, every fifth farm suicide committed in the country occurred in the state of Maharashtra. The problem of farmers suicides became more acute after the year 2003 and mostly the Cotton growing farmers were found in to the trap. The entry of private traders in Cotton procurement was the major reason of the distress among the Cotton growing farmers. Hereafter the gap between cost of cultivation and income

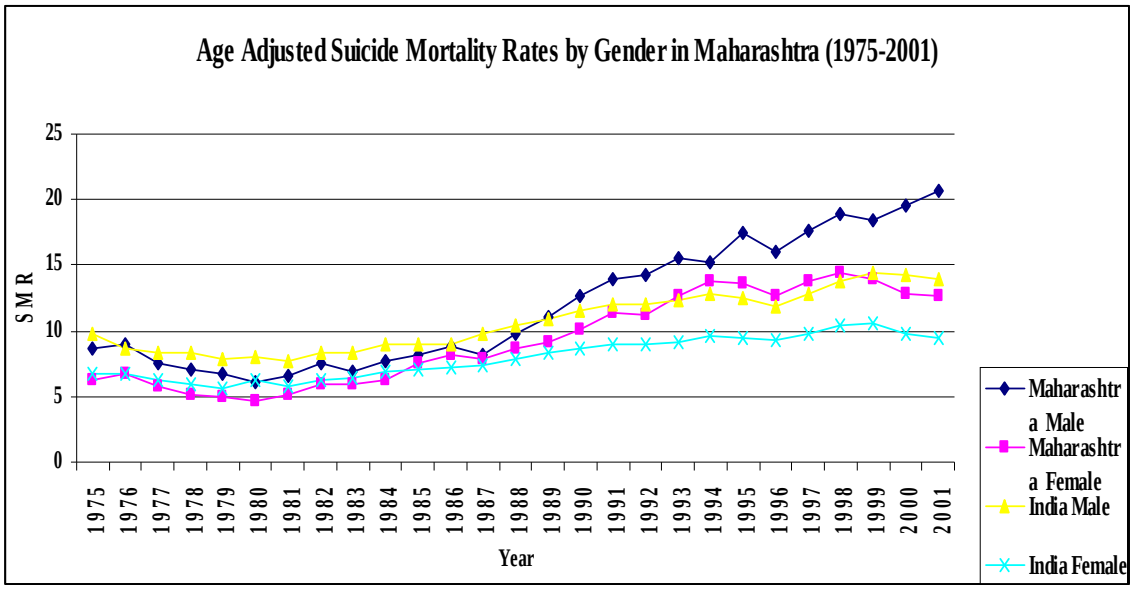
has widened. And also the functioning of the government procurement became poor during that period. The private traders have their hold over these centers. The picture of male farm suicides in the state is even blacker. The male farmers suicides substantially increased than female in the mentioned period. It clears that the stress among the male farmers was severe than women.

5.15 Age Adjusted Suicide Mortality Rates by Gender in Maharashtra (1975-2001)

Sr. No.	Year	Maharashtra		India	
		Male	Female	Male	Female
1	1975	8.6	6.2	9.7	6.8
2	1976	9.0	6.8	8.7	6.8
3	1977	7.6	5.8	8.3	6.2
4	1978	7.1	5.2	8.4	6.0
5	1979	6.8	4.9	7.8	5.6
6	1980	6.1	4.6	8.0	6.2
7	1981	6.6	5.2	7.7	5.7
8	1982	7.6	6.0	8.4	6.2
9	1983	6.9	6.0	8.4	6.4
10	1984	7.7	6.2	8.9	6.9
11	1985	8.2	7.5	9.0	7.1
12	1986	8.8	8.1	9.0	7.2
13	1987	8.1	7.8	9.7	7.4
14	1988	9.8	8.7	10.4	7.9
15	1989	11.1	9.2	10.9	8.4
16	1990	12.7	10.1	11.5	8.7
17	1991	14.0	11.3	12.0	9.0
18	1992	14.2	11.2	12.0	9.0
19	1993	15.6	12.7	12.4	9.2
20	1994	15.2	13.8	12.8	9.6
21	1995	17.4	13.6	12.5	9.5
22	1996	16.0	12.6	11.9	9.3
23	1997	17.7	13.8	12.9	9.7
24	1998	18.9	14.4	13.8	10.4
25	1999	18.5	13.9	14.4	10.6
26	2000	19.6	12.9	14.2	9.8

27	2001	20.6	12.6	14.0	9.5

Source: Srijit Mishra 2006[5.26]

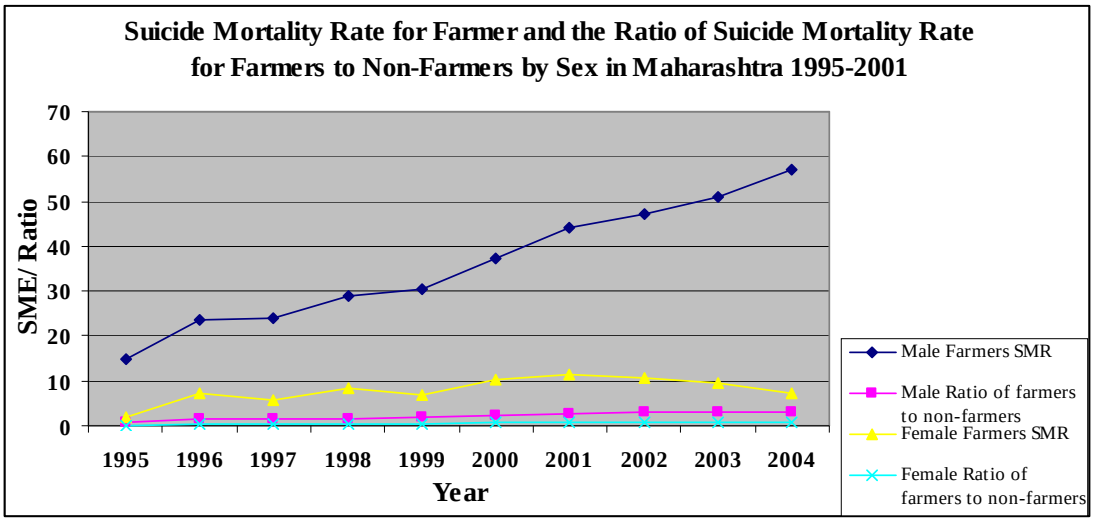


5.16 Suicide Mortality Rate for Farmer and the Ratio of Suicide Mortality Rate for Farmers to Non-Farmers by Sex in Maharashtra 1995-2001

Sr. No.	Year	Male		Female	
		Farmers SMR	Ratio of farmers to non-farmers	Farmers SMR	Ratio of farmers to non-farmers
1	1995	14.7	0.82	1.8	0.11
2	1996	23.5	1.61	7.1	0.52
3	1997	23.9	1.45	5.6	0.37
4	1998	29.0	1.70	8.5	0.55
5	1999	30.6	1.88	6.9	0.46
6	2000	37.3	2.26	10.1	0.75
7	2001	44.1	2.67	11.5	0.90
8	2002	47.3	2.89	10.8	0.91
9	2003	50.8	2.96	9.4	0.83
10	2004	57.2	2.98	7.4	0.68

Source: Srijit Mishra 2006[4.27]

In 2001 census Maharashtra constituted about 9.4 per cent of all India population but accounted for 13.5 per cent of the total suicide deaths in the country. Suicides accounted for 2 per cent of the total deaths in the state whereas at all India level suicides, accounted for 1.3 per cent of the total deaths.



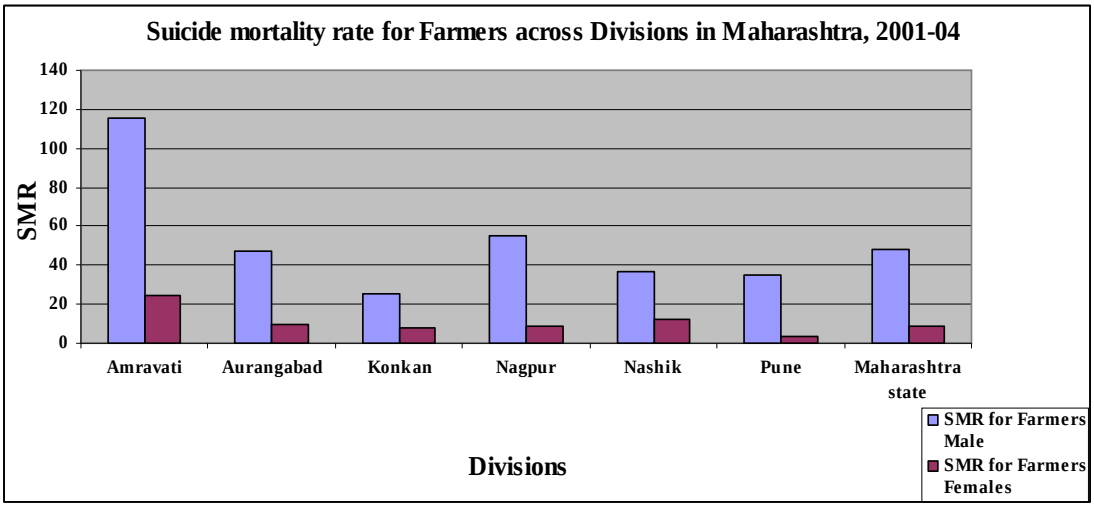
Suicide is a social phenomenon that differs across gender groups and it is appropriate to discuss patterns among males and females separately. In 2001 the age adjusted suicide mortality rate for Maharashtra was 20.6 for males and 12.6 for female whereas for India it was 14.0 for males and 9.5 for females. In Maharashtra, the age adjusted SMR for males increased from 17.4 in 1995 to 20.3 in 2004 and that for females decreased from 13.6 in 1995 to 10.8 in 2004. The absolute number of male suicide decreased in 1996, but thereafter the same has been increasing. For females, absolute number of suicides decreased in 1996 and then after increased during the next two years and again shown a declining trend since 1999. The age adjusted SMR for males has not always been increasing, indicating that the increase in the number of suicide has not been commensurate with the increase in population. The total number of farmers suicides in Maharashtra increased from 1083 in 1995 to 4147 in 2004. The increase was largely because of a 288 per cent increase in male farmers suicides from 978 to 3799. During this period, male farmers suicides as a proportion to total male suicides in Maharashtra increased from 14 per cent to 38 per cent. The SMR for farmers increased by nearly four times

from 15 in 1995 to 57 in 2004, but for females the trend fluctuated to reach a peak of 12 in 2001 and thereafter it has been declining. SMR for both male and females increased substantially after the 1990s. There is an always high degree of positive correlation between psychological stress and the act of suicide. After 1990 the government of India introduced a new economic policy (LPG). And then after the general suicide rate in the state of Maharashtra has increased. It means there should be a correlation between the new economic policy and the psychological stress.

5.17 SMR for Farmers across Divisions in Maharashtra 2001-04

Sr. No.	Divisions	SMR for Farmers		Ratio of SMR for Farmers to SMR for Age-Adjusted Population	
		Male	Females	Male	Females
1	Amravati	115.6	24.3	2.8	1.1
2	Aurangabad	47.6	9.2	2.5	0.8
3	Konkan	25.1	7.7	2.0	0.8
4	Nagpur	55.5	8.5	2.0	0.6
5	Nashik	36.6	12.0	2.2	1.4
6	Pune	34.7	3.6	1.6	0.4
7	Maharashtra state	48.1	9.1	2.4	0.8

Source: Srijit Mishra 2006[4.28]



The SMR for farmers across divisions of the state during 2001-04 indicates relatively higher suicide deaths than the state average for males in Amravati and Nagpur divisions and for females in Amravati, Aurangabad

and Nasik divisions. Across divisions, the ratio of farmers to age adjusted SMR is the maximum in Amravati among male and Nasik among females. Nagpur has the higher SMR for farmers, which is lower only than in Amravati, but the ratio of farmers to age adjusted SMR is much lower. This indicates that in a relative sense the SMR in Nagpur is also high across other subgroups of population which are not self employed in farming.

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Chapter -06
Socio-Economic Charecteristics of the Districts Selected for the Primary Data Collection

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Introduction

Most of the regions of Maharshtra come under rain fed conditions. Twenty out of the total thirty districts, covering more than twenty thousand villages, are classified as drought stricken. The current irrigation cover of Maharashtra stands at around 20 per cent (19.20%) which is less than the national average of 38 per cent. Hence excluding a few regions having availability of irrigation cover, much of the state agriculture depends on the vagaries of monsoon resulting in low productivity and cropping intensity. As a result, the incidence of rural poverty (31%) in the state is still above the national average. Despite a long experience of employment guarantee scheme, the state is far from meeting the requirements of rural infrastructure for its agriculture and allied sectors. Majority of the agriculture in the state being seasonal, the issue of employment becomes more acute. As a result of the drought stricken rural economy of the state and the lack of policy efforts and targeted public investment the state of Maharashtra has become one of the worst affected regions of suicides by farmers in the country. All the nine districts of three regions of the state are also no exception to these peculiarities of the state where the villages selected for present study come under these districts. Average annual rainfall of these districts is limited with major parts having no irrigation coverage. Hence, despite concerted efforts of targeting poverty through national planning, an estimated 301.72 million of Indians still remain in poverty where the state of Maharashtra is not an exception to it. The decline in poverty from 36 per cent in 1993-94 to 27.5 per cent by 2004-05 has been much less than was anticipated. 28.3 (220.92 million persons) of rural whereas 25.7 per cent (80.79 million persons) of urban population of

India and around 32 (rural) and 27 per cent (urban) of Maharashtra cannot afford to spend Rs.356.30 and Rs.538.68 on their monthly consumption as determines the poverty line. GDP oriented economic transformation of the country and the state during the economic reforms has widened the gap between rich and poor.

All the nine districts that have been covered under the present study are characterized by scanty rainfall and limited irrigation cover. Same is the story about other socio-economic characteristics such as income, employment, poverty, rural electrification, health and water availability.

6.1Ahmednagar

The city which was established by Malik Ahmed in 1494 and later became the capital of Nizamshahi is known as Ahmednagar. Earlier it was a part of Pune region but from 1981 it has been included in the Nashik Region for revenue administration. The Ahmednagar district is located at the Uppar part of Godavri and Bhima rivers which is at the centre of the Maharshtra state. The geographical location of the district is 18.2 to 19.9 degree North Latitude and 73.9 to 75.5 degree East Longitude.

6.1.1 Area and Administrative Services

The area covered by Ahmednagar district is 17413 sq. km. which makes the district as largest in the state. In the proportion of one in each of the tehasil there are 14 panchayt samitees under the Zila Parishad Administration for the rural development.

6.1.2 Natural Features

There are Godavari and Bhima rivers in the district. Pravra is a tributary of Godavari whereas Mula a tributary of Pravra which flow from the northern part of the district. The Bhima River which emerges from Pune

district touches the Southern border part of Ahmednagar district. Seena, Kukadi and Ghod are the tributaries of Bhima River. According to the geographical location, the district is divided in to two parts; one the western hilly area and second is the eastern plain area. Except outscirts of the Ahmednagar city and Parner tehasil there are no other economically significant minerals available in the district.

6.1.3 Land

The land of the district can be divided into three parts 1) high fertile soil in the basin of the rivers, 2) black soil with the mixture of stones and boulders on the slope of hilly areas and 3) barren land.

6.1.4 Rainfall and Weather

The weather of the district is generally hot and dry. Ahmednagar district is known as drought stricken region of the Maharashtra. In 2008-09 the average rainfall of the district was 524mm. According to statistics, it can be said that the proportion of rainfall was low during the two years of 2007-2009.

6.1.5 Population

According to the census 2001, from the total population 4040642 of the district 80.11 per cent population (3236945) live in the rural parts and 19.89 per cent (803697) live in the urban areas. The sex ratio of the district is 941. The highest proportion of women per 1000 male is in Parner tehasil i.e. 990 and lowest in Nagar tehasil i.e. 906. From the total population of district, the population of SCs is 484655 (12%) whereas STs population is 303255 (7.51%). The total literate population of the district is 2598597 (75.30%) in which the proportion of literate male population is 85.70 per cent (1517029) whereas female literacy is 64.30 per cent (1081568). The

density of population is 232 persons per sq. km. in the district which is 315 persons per sq. km. for Maharashtra state.

6.1.6 Agriculture

The geographical area of the district is 16.68 lakh hectares. In 2004-05 the total area under crop cultivation was 1185846 hectares. The area under multi crop is around 140310 hectares which is 11.16 per cent of the gross cropped area. According to the 1997 agriculture census, the total number of land holders were 681639 who held 1356322 hectares of land.

In the Kharif season the food crops like Bajara, Jowar, Paddy, Nachni, Varai, etc. and Cereals like Kulith, Mung, Math and oil seeds like Groundnuts and Sunflower are cultivated. Paddy and Nachani are the crops cultivated especially in Akole tehasil. Jowar, Wheat and Gram are the crops of Rabbi Season. In summer season the crops like Groundnut, Corn, Sunflower and Vegetables are cultivated where the irrigation facilities are available. In 2004-05, food crops covered 75.45 per cent and cereals 6.35 per cent of the total irrigated area of 1326156 hectares. The total area under Sugarcane is around 6.12 per cent and area under fruits and vegetables around 2.83 per cent. The area under fodder crops is about 9.26 per cent. Because of the use of organic and bio-fertilizers, the use of chemical fertilizers is reduced by 6.5 per cent in 2008-09 as compare to 2007-08. The agriculture produce is stored in the warehouses of Maharashtra government and co-operative societies particularly available in the northern parts of the district. There are 76 state government warehouses which have the capacity of 49.01 thousand metric ton. The marketing of the agricultural produce is carried out through 14 Agriculture Produce Marketing Committees and 26 Sub-centers of the

same located in the districts. Around 1994 sq. km. of the area is covered by forest. The income sources from the forestry are based especially on Sandal wood, Grass, Meditational plants, Curry leaves, Tendu leaves and other Ayurvedic plants.

6.1.7 Irrigation

The wells and large, medium and small lift irrigation projects are the main sources of irrigation available for the district. In 2004-05, 5.96 lakh hectares of the area was under irrigation. The percentage of it was 44.98 of the gross cropped area. Of the 4.32 lakh hectares of gross irrigated area, 0.90 lakh hectares of area was under cannel irrigation and 3.36 lakh ha. was under well irrigation.

6.1.8 Animal Husbandry

The distribution of total 30 lakh animal husbandry, according to the 2003 animal census, is as under;

Cattle- 47.44%, Goats and Sheeps- 43.39%, Horses- 0.10% and remaining 9.07% has consists others. The percentage of Cows and Bulls from the district is highest in the state. There are 2822 co-operative dairies in the district with the total membership of 143922. These dairies collected 2583.6 lakh liters of milk in the year of 2008-09. The average daily collection of milk in the year is 7.08 lakh liters.

6.2 Aurangabad

In 1610 the city named Khadki was renamed as Fattepur and later became known as Aurangabad during the course of time. The Agurangabad district mainly located in the basins of Godavari and Tapi Rivers.

Aurangabad district is located at 19 to 20 degree North latitude and 74 to 76 degree East Longitude. The total area of the district is 10,100 sq. km., which is 3.28 per cent of the total area of Maharashtra state. Out of this 141.1 sq. km. (1.40%) covers urban area and 9958.07 sq. km. (98.60%) comes under the rural parts. The government of Maharashtra has established Marathwada Statutory Development Board on 25th June 1994 for the removal of the regional financial backlog of development.

6.2.1 Rainfall

Generally the district is known as one of the drought stricken regions of the state with scanty rainfall. According to the data, there was 643.58 mm. of rainfall in the district in 2009 and comparing other tehasils the highest rainfall was registered in Kultabad tehasil which was 826.87 mm and the lowest 496.52 mm. in Sillod Tehasil.

6.2.2 Population

According to the 2001 census, the total population of the district is 2897013. Of the total population, the rural population is 1809863 whereas urban population is 1087150. The decadal growth rate is 30.86 per cent. The total area covered by Aurangabad district is 3.28 per cent of the state whereas population consists 3.02 per cent of the total state population. The density of population is about 287 persons per sq. km. The sex ratio of district is 924. The sex ratio for urban is 905 and for rural 980 (women per 1000 male population). The population of SCs is 376181 which is 13 per cent of total population of the district whereas STs population is 100416 (3.5%). The working population of the district is 1176 lakh which is 40.62 per cent of total population of the district. According to the survey of the

ministry of rural development 2002, there were 110190 households which were below poverty line.

6.2.3 Agriculture

The type of land in the northern part of the district is low fertile and the land in the basin of Godavri is black and high fertile. Crops are cultivated both during the rabbi and kharif seasons. Out of the total (10.7 lakh. ha.) geographical area, 0.81 lakh ha. is covered by forest i.e. 8.04 per cent of the total area in 2000-01. Out of the gross cropped area (8.52 lac ha.), 7.5 lac hectare is net cropped area. Mainly the crops for the kharif season are Hybrid Jowar, Bajara, Arhar, Mung, Urad, Kulad, Cotton and Groundnut. The Sugarcane and Banana are cultivated throughout the year and in summer the crops cultivated are Groundnut, Sunflower, Vegetables and Fruits, etc. In 2000-2001, out of the gross cropped area (852170 he.) the percentage of rbbi Jowar was 23.80, kharif Jowar-3.19, Bajara-18.89 and cereals were cultivated in the area of 490957 hectare which accounted for 57.61 per cent. The percentage of cereals was 13.95 out of the gross cropped area. Whereas Cotton and Oilseeds were 15.59 and 7.49 per cent respectively. According to the available figures for the year 2005-06, per hectare production of crop was registered as; Wheat 1654, Jowar 2214, Bajra-1142, Gram-729, Tur-617, Mung-666 and Cotton-219 k.g.

6.2.4 Irrigation

In 2000-01, the total irrigated area was 146683 hectares in which 14830 hectares was through cannel and 107351 hectares was irrigated by the wells. The percentage of it was 17.01 of the gross cropped area. From the total irrigated area 62.82 per cent was under food-grains, 13.96 % under

Sugarcane, 3.07 per cent under Cotton and remaining is used for Fruits and Vegetables.

6.2.5 Animal husbandry

Dairy farming is used as a supplementary source of income generation in the district. Which is beneficial for farmers and agricultural labourers. There are 1134 co-operative dairy societies in the district. Which have 62370 members. The milk is collected through government dairy. In 2008-09, 26382 thousand liters of milk was collected every day. There are 10 APMCs and 19 sub centers of the same to regulate the marketing of the agricultural produce in the district. The total turnover of produce was 64,258.41 metric ton and the value of the same has been Rs.6286.10 lakh (2008-09).

6.2.6 Electrification

12 mega vat electricity is produced through Jayakwadi multipurpose river vally project. 100 per cent of electrification is achieved by the district by the end of March 2009. Out of total electricity consumption 29.64 per cent of the electricity is used for agricultural purpose.

6.2.7 Employment

During the year 2008-09, there were 147328 workers in the district in different occupations. The classification of these workers is as; 38260 government, 49313 semi-government and remaining 59755 are engaged in private sector.

6.2.8 Education

In the year 2008 there were 2755 primary, 603 secondary and 185 higher secondary schools in the district. However there were 106 colleges and several other professional education institutions in the district.

6.2.9 Health Facilities

The medical/health facilities are provided through 23 rural hospitals, 66 primary health centers and 66 sub-centers of the same in the district.

6.3 Buldhana

Buldana city is the districts headquarter from the year 1867. The geographical location of the district is 19.51 to 21.17 degree North Latitude and 75.57 to 76.59 degree East Longitude. The area covered by Buldhana district is 9661 sq. km. It is 3.14 per cent of the state. For the convenience of administration, 13 tehasils are divided into five sub divisions. Painganga is the main river of the district. The weather of the district is hot and dry. In 2008 the highest rainfall i.e. 671.20mm was registered at Malkapur centre and lowest of 401mm at Deulgaon Raja center.

6.3.1 Population

According to the census of 2001, the total population of the district is 2232480. In which there are 1147403 male and 1085077 female. During the last decade (1991-2001) the growth rate of population has been 18.35 per cent which was less than the state average. The density of population was 231 persons per sq. km. 79 per cent of population lives in rural whereas 21 per cent in urban areas. The sex ratio was 946. The population of SCs is about 10.82 per cent of the total. It is higher than (10.20 per cent) of the state average. The working population is around 45.51 per cent. And 32.53 per cent population is involved in agriculture related activities. The literacy rate is 75.80 per cent of which 86.90 per cent are male and 64.10 per cent the female.

6.3.2 Agriculture

The total geographical area of the district is 967099 hectares of which 79.77 and 79.65 per cent was the cultivable area during the year 2000-01 and 2002-03 respectively, whereas 582 and 712 thousand hectare was net cropped area for the period. During the same period 437416 and 455996 hectares area was under food-grains which was 57.24 and 60.19 per cent of the gross cropped area. Jowar contributes highest share with 33.44 and 31.58 per cent of the total area under food-grains. Whereas in other crops; Pulses- 54.18 and 58.18, Wheat- 5.42 and 4.62, Cotton- 28.80 and 30.92 and Oilseeds contributes 11.48 and 6.83 per cent of the gross cropped area during the period 2000-01 and 2002-03. In the year 2007-08 Wheat and Jowar registered an increase in production over the year 2006-07. During the year 2007-08 the productivity of major crops was as under;

Jowar- 1710 kg., Wheat- 1999 kg., Tur-994 kg., Gram- 960k.g. and Cotton- 379 kg. per hectare. During the year 2001-02 the total area under fruits and vegetables was 11888 hectare. In the year 2008-09, 158387 metric ton of chemical fertilizers were distributed in which 10 per cent through the institutional and 90 per cent were distributed by the private sources. The marketing of agricultural produce carried out through 13 APMCs and 20 sub centers of APMCs in the district. These trading centers handled total of Wheat- 47108, Jowar- 31218 and Arhar- 48838 metric ton in the year 2008-09. The district has 1165 sq. k.m of forest cover which is 12 per cent of the total area of the district. The state government earned Rs.15.85 lakh from the district forest royalty during the year 2008-09.

6.3.3 Irrigation

During the year 2001-03 only 5.80 and 6.29 per cent of the area was under irrigation. Of the total irrigated area 79.23 and 75.38 per cent was irrigated through wells and 9.82 and 9.39 per cent through cannels. By the end of the year 2008-09, Nalganga, Dnyanganga, Koradi, Mas, Paldhag and Mandwa small irrigation projects were completed with creating of the additional irrigation potential of 26022 hectares.

6.3.4 Animal Husbandry

As per the animal census 2003 there were 1047280 animals in the district. In which Cows and Bulls were 50.51, Buffalos- 0.30, Sheeps and Goats- 41.19 and others-07 per cent.

6.3.5 Fishery

13681.50 hectares of the area was under controlled and natural fishery. In the year 2008-09 fish production of the district was 6889 metric ton with the value of Rs. 20.69 lakh.

6.3.6 Industry

During the year 2007, 421 factories were registered in which 379 were operating which generated employment for 6958 persons.

6.3.7 Electrification

The target of 100 per cent electrification is achieved by the district by the end of March 2009. Out of the total electricity consumption 41.20 per cent of the electricity is used for agricultural purpose.

6.3.8 Education

In the year 2006 there were 1574 primary, 295 secondary, 131 higher secondary schools and 14 colleges and few other professional education institutions in the district.

6.4 Wardha

The geographical location of the district is 18 to 20 degree North Latitude and 21 to 21.8 degree East Longitude. The total geographical area of the district is 6309 sq. km. which accounts for 2 per cent of the state. There are Satpuda hill ranges in the North whereas the district is located in the basin of Wardha and Venna Rivers. Wardha is the big river which emerges from Satpuda hills and passes through north-west border of the district. Yashoda, Venna and the Bakali are tributaries of the main river flowing from the district.

6.4.1 Weather and Rainfall

The weather conditions of the district are uncertain characterized by extreme hot during the summer and cold wave during the winter. The average rainfall of the district is 828.82mm.

6.4.2 Population

According to the census of 2001, the total population of the district is 1236736 in which 638990 are male and 597746 female with a decadal growth of 15.87 per cent. Out of total population 911695 (73.72%) lived in villages and 325041 (26.28%) is urban population. The density of population is 196 persons per square kilometer. Sex ratio of the district is 935 which is higher than state average (922). The total SC population of the district is 158630 (12.83%) whereas STs consists 154415 (12.49%). The total working population of the district is 44.50 per cent, which was 42.21 per cent in 1991. From the total working population 50.97 per cent is engaged in agriculture and allied activities. The total literate population of the district is 80.10 per cent in which 87.20 per cent are male and 72.50 per cent the female. As per the current prices, gross per capita income of the

district in 2007-08 was Rs.41578/- whereas net per capita income was Rs.36685/-. However per capita income as per constant prices was Rs.28249.

6.4.3 Forest

Around 16 per cent of the geographical area of the district is under forest cover which is mostly in the northern parts of the district. High value trees like Tik wood, Dawada, Salai, Tendu, Malai, etc. are found in the forest of the district. The state government earned revenue for Rs.876 lakh from the district forestry during the financial year 2008-09.

6.4.4 Agriculture

In 2001, 73 per cent of the area was cultivable in which net cropped area was 80 per cent. In the year 2000-01 total of 138 thousand hectare area was under food-grains. In which Oilseeds consisted 56 thousand hectare, Jowar- 38 thousand hectare and Wheat- 19 thousand hectare whereas area under Cotton cultivation was 150 thousand hectare. In the year 2005-06 the total production of food crops was 40200 metric ton which was 41200 metric ton in the earlier year. During the same year the production of Cereals increased by 0.74 per cent. According to the available figures for the year 2008-09 per hectare productivity of major crops was; Jowar- 737, Paddy- 949, Wheat- 1714, Gram-712, Arhar- 1030, Urad- 386, Mung- 437, Til- 500 and Groundnut- 1263 kilo gram. And for cash crops Sugarcane- 58 ton and Cotton 327 kg/he. In the year 2008-09, 837.97 hectare of the area was under horticulture and floriculture. During the year 2008-09, total of 101961 metric ton chemical fertilizers were used. In which 99 per cent fertilizers were distributed through private sources and only one per cent through the institutional sources such as the co-operatives and

panchayats. There are 07 APMCs in the district which control the marketing of agricultural produce. The crop wise turnover of these APMCs in 2008-09 was; Wheat- 13401, Cotton- 107141, Arhar- 38185, Groundnut- 355 and Soya bean- 118946 metric ton. The storage capacity of government and co-operative warehouses is 8000 and 9250 metric ton respectively.

6.4.5 Irrigation

In the year 2001-02, out of total irrigated area, 16 per cent was under cereals, Sugarcane- 17%, fruits and vegetables- 57%, Oilseeds- 3% and 7 per cent of the irrigated area was under other crops. The irrigation projects such as; Bore, Dham, Panchdhara, Dongargaon and Pothara were completed in the year 2008-09 which now can provide additional irrigation to 10789 hectare of the land in the district.

6.4.6 Animal Husbandry

According to the animal census 2003 there were 569876 animals in the district. The classification of them is as follow;

Cows and Bulls- 60.11%, Buffalos- 10.98% and Sheeps and Goats- 28.46 per cent. The daily collection of milk was around 27000 liters during the year 2008-09.

6.4.7 Industry and Employment

There were 169 registered industries in the year 2007. Out of total registered industries 134 were operating and providing employment to 7252 persons. In the year 2009 there were 364789 employees in different sectors. In which 17469 were in private, 11584 in semi government, and 7426 were in the government sector. It means 52 per cent were employed in public and 48 per cent were in the private sector.

6.4.8 Electrification

By March 2008, there was 93 per cent electrification available in the district. Out of total electricity consumption, only 8.03 per cent of the electricity is used for agricultural purpose which is far less than the state average and the average of other districts.

6.4.9 Education

In the year 2008, there were 1098 primary, 271 secondary and higher secondary schools and 72 colleges in the district. There were 280396 students enrolled for education in the district during the year 2008-09. As well as, there are 2 medical, 03 technical, 01 engineering, 14 education and 12 industrial training institutions in the district.

6.4.10 Health Facilities

There are 11 hospitals, 44 dispensaries, 14 maternity homes, 27 primary health centers available in the district.

6.5 Washim

Washim district is located at the Middle East region of the state of Maharashtra. The geographical location of the district is 19.61 to 21.16 degree North latitude and 76.7 to 77.14 East Longitudes. The total geographical area of the district is 5196 sq. km. which is 1.65 per cent of the state. Painganga, Katepurna, Morna, Adan, Arunvarti and Benbala are the major rivers of the district. The geography of the district is characterized by Runoff Zone hence rain water runs/flows away from the district. As a result the level of underground water table is very poor thereby creating the problem of water for drinking and irrigation in the district.

6.5.1 Weather and Rainfall

Generally the weather conditions of the district are characterized by high temperature. During the summer, the temperature increases up to 48 degree Celsius, whereas in winter it is around 8 to 10 degree Celsius. The average rainfall of the district is 750 to 1000 mm.

6.5.2 Population

According to the census 2001, total population of the district is 1020216 in which 526094 are male and 494122 females. It is 1.05 per cent of the total state population. Density of population is 196 persons per square kilometer. Out of the total population 82.50 per cent live in rural and 17.50 per cent in urban parts. The sex ratio of the district is 939. Among the total population SCs and STs are 15.94 and 8.95 per cent respectively. The literacy rate of the district is 73.40 per cent in which 57.60 per cent is rural literacy and 82.40 per cent of the urban. However male literacy is 85.40 per cent and female 60.60 per cent. The total working population of the district is 44.63 per cent of which 71.77 per cent are engaged in agriculture and allied activities. As per the current prices of 2007-08 the per capita income of the district was Rs.29853.

6.5.3 Agriculture

The total cultivable area of the district is 429706 hectare. Out of the total cultivable area, the area covered by food-grains is 267256 hectare in which 61527 hectare is under Jowar whereas cereals consisted 180735 and 15097 hectare was under Wheat. Jowar and Cotton cultivated in dry land and Wheat and other rabbi crops in the irrigated area. Mainly the district agriculture is charectarised by dry land farming due to the inadequate irrigation resources. 94 per cent of the total cultivable land comes under

dry land farming. In the year 2006-07 per hectare productivity of foodgrains was 1259 kilograms. The agriculture produce marketing is controlled by 06 APMCs and 10 sub centers of the same located in the district. There is no major irrigation project available in the district. In the year 2009, 56843 hectare of the area was under irrigation through 2 medium, 60 minor, 203 small irrigation projects and 152 Kolhapur type wares. The state government earned Rs.135.19 lakh from the forest royalty of the district in 2008-09.

6.5.4 Animal Husbandry

According to the animal census 2003, there are 688122 different types of animals in the district. Out of total animals 3,37,055 are Bulls and Cows, Buffalos 83579 and Sheeps and Goats consist 185951. There are 2 government milk chilling plants in the district with daily capacity of 15000 liters. During the year 2008-09, total of 543485 liters of milk was collected from 216 dairy co-operative societies.

6.5.5 Industry and Employment

In the year 2008-09 there were 142 registered industries in the district. Out of the total, 121 are in working and provide employment to 1719 persons. As per the data from different organizations, there are 9371 employees in the district. In which 3076 are in government, 2987 in semi-government and 3308 working in the private organized sector.

6.5.6 Electrification

By March 2009, 93 per cent of electrification of the district was completed. Out of total electricity consumption 33441 thousand kilo vat electricity is used for agricultural purpose.

6.5.7 Education

In the year 2008, there were 911 primary, 194 secondary, 94 higher secondary schools and 09 colleges in the district. During the year total of 290896 students were enrolled in the education sector of the district.

6.5.8 Health facilities

Up to the year 2008-09, there were 8 hospitals, 11 dispensaries, 25 maternity homes, 27 primary health centers which have been providing medical facilities in the district.

6.6 Akola

Akola district is located at the Middle East of the state at 20.17 to 21.16 degree North Latitudes and 76.7 to 77.4 degree East Longitude. The total geographical area of the district is 5428 sq. km. which accounts for 1.76 per cent of the state. Weather conditions of the district are very uncertain. In summer temperature goes above 48 degree and in winter it is around 8 to 10 degree Celsius. The average rainfall of the district is 750 to 1000 mm per year.

6.6.1 Population

According to the census 2001, total population of the district is 1630239 in which 51.60 per cent are male and 48.80 per cent the female. It is 1.68 per cent of the state population. The density of population is 300 persons per square kilometer. Out of total population 1002742 (61.51%) are in rural and 627497 (38.49%) in urban areas. The sex ratio of the district is 938 which is higher than state average of 922. Among the total population SCs and STs consist 10.33 and 6.14 per cent respectively. The proportion of the literate population is around 81.41 per cent in which 78.80 per cent is rural and 85.53 per cent of urban literacy. According to gender perspective,

88.91% male and 73.43% females of the district are literate. The per capita income of the district at current prices of 2007-08 is Rs.37042/-.

6.6.2 Agriculture

In 2001-02 the gross cultivable land of the district was 528077 hectare in which 242671 hectare was under food-grains whereas 144502 hectares under cereals and 231354 hectare was under Cotton. Generally the nature of agriculture is dry land farming. The irrigation facilities are not satisfactorily available in the district. In 2001-02 only 29712 hectares of area had the irrigation facility. Jowar is the major food crop and Cotton is cultivated as a major cash crop in the district. Per hectare productivity of the major crops in 2007-08 of; Jowar- 2925, Wheat- 2709, Arhar- 1078, Gram- 885 and Groundnut was 1444 kilogram. There are 7 APMCs and 8 sub centers of APMCs to control the agricultural produce marketing in the district.

6.6.3 Irrigation

In the year 2001-02, 79.71 per cent of the total irrigated land was under well irrigation and 20.29 per cent under cannel irrigation. Up to the year 2007-08, 1 major and 3 medium irrigation projects have been completed. Which can provide now the irrigation to 44797 hectares of the land of the district.

6.6.4 Animal Husbandry

According to the animal census -2003, there are 555780 different types of animals in the district. Of which together the Cows and Bulls- 301024, Buffalos- 60714 and 186021 are Goats and Sheeps. There are 285351 Hens in poultry farms in the district.

6.6.5 Industry and Employment

There were 539 registered industries in 2006 in the district. It provided an employment to 7919 persons. According to the available data, 41849 workers were engaged in different sectors. In which 10660 in government sector, 17691 in semi government, and 13498 were in private sector. It means 67.57 per cent of organized sector workers were in public sector and only 32.25 per cent work in private sector. The average wage rate for agricultural labourers was Rs.100 for male and Rs.70 for female. Total of Rs.122.84 lakh was spent under employment guarantee scheme which generated an employment of 1.81 lakh man days.

6.6.6 Electrification

There is 98 per cent of electrification available in the district. Out of total electricity consumption, 137906 units of electricity is used for agricultural purpose.

6.6.7 Education

Education facilities are provided through 1176 primary, 255 secondary, 127 higher secondary schools and 15 colleges in the district. There were 394409 students enrolled in the education sector of the district during the year 2008-09.

6.6.8 Health Facilities

Up to the year 2008-09, there were 10 hospitals, 32 dispensaries, 33 primary health centers and 185 sub-centers of primary health centers provide medical and health facilities in the district.

6.7 Amaravati

The district is located at 20.32 to 21.46 degree North Latitude and 76.37 to 78.27 degree East Longitude. The total geographical area of the district is

12212 sq. km. which is 3.96 per cent of the total state area. The weather conditions of the district are normally hot and dry. The average rainfall of the district is 850 to 1000 mm. per year.

6.7.1 Population

According to 2001 census, total population of the district is 2607160. The density of population is 214 persons per square kilometer. Out of total population, 65.50 per cent live in rural whereas 34.50 per cent in urban areas. The sex ratio of the district is 938 which his higher than state ratio of 922. The total working population of the district is 42.02 per cent in which 70 per cent are engaged in agriculture and allied activities. Among the total population, SCs and STs consist 17.1 and 13.7 per cent respectively. 82.5 per cent of the district population is literate, in which 88.9 per cent are male and 75.7 per cent the females. As per the current prices of 2007-08 the per capita income of the district is Rs.30017/-.

6.7.2 Forest

High value trees such as Tikwood, Bamboo, Dhawad, Salai and Tendu leaves are available in the forest of the district. In the year 2008-09 the revenue of Rs.80411 thousand was earned by the government from the forest royalty of the district.

6.7.3 Agriculture

Out of the total land, 63.61 per cent is under cultivation in the district. In which 41 per cent is under food crops. Among the food crops, Jowar constitutes 28.78 per cent area which is followed by Arhar 23.63 per cent. Whereas, cash crops consist 30.10 per cent of the total area under cultivation. Per hectare productivity of different crops is as; Paddy- 823, Wheat- 1890, Jowar- 1359, Bajara- 540, Gram- 1057, Arhar- 1070 and

Mung- 362 kilogram. In the year 2007-08, area under fruits and vegetables was 4.49 and 0.47 per cent respectively. Among the total fruit crops the area under Orange was 28935 hectares which was highest with 92.15 per cent of the total area under fruits. Warud, Morshi and Achalpur tehasils are famous for the Orange and Anjangaon Surji for Bananas. In all 140495 metric ton chemical fertilizers were used in the district during the year 2008-09. In which 40 per cent were channelized from institutional sources and 60 per cent through non-institutional private sources. There are 14 APMCs in the district which provide storage facility along with the marketing of agriculture produce. The crop wise turnover of these APMCs for the year 2008-09 was as; Wheat- 7292, Jowar- 1194, Til- 04, Groundnut- 01, Arhar- 14610, Gram- 9774, Bajara- 11, Urad- 131, Mung- 674 and Soyabean- 18256 ton.

6.7.4 Irrigation

In the year 2001-02, only 8.15 per cent of the total area of cultivation was under irrigation. Upper Wardha is major irrigation project and Shahanur is the medium irrigation project available in the district. From the total area under cultivation 63821 hectare have the irrigation facility.

6.7.5 Animal Husbandry

According to the animal census 2003, there are 997977 different types of animals in the district. In which Cows and Bulls are 48.50, Buffalos- 8.48, Sheeps and Goats- 31.44, Horses- 0.38 and other animals consist 11.20 per cent.

6.7.6 Industry and Employment

By the year 2006, there were 374 registered industrial units in the district. Of which 295 units were functioning. These units have created an

employment for 2420 workers. There were 66726 workers engaged in different sectors in the district. In which 18643 are in private, 23860 in semi government and 24223 are engaged in government sector.

6.7.8 Electrification

There is 100 per cent cover of electrification available in the district. Out of total electricity consumption, 46.68 per cent electricity is used for agricultural purpose.

6.7.9 Education

Education facilities have been provided through 1924 primary, 492 secondary, 232 higher secondary schools and 106 colleges in the district. In all 615127 students had enrolled in the education sector of the district during the year 2008-09.

6.7.10 Health Facilities

During the year 2008-09, there were 19 hospitals, 117 dispensaries, 56 primary health centers and 333 sub-centers of primary health centers providing medical facilities in the district.

6.8 Yeotmal

The Yeotmal district is located at 19.26 to 20.42 degree North Latitude and 77.18 to 79.98 degree East Longitudes. The total geographical area of the district is 13584 sq. km. which is 4.4 per cent of the state. The weather conditions of the district are hot and dry with very high and low temperature during summer and winter season respectively. The average rainfall of the district is 900 to 1100 mm per year.

6.8.1 Population

According to the census 2001, the total population of the district is 2458271 in which 51.48 per cent are male and 48.52 per cent of female. 81.40 and

18.60 per cent of the population lives in rural and urban areas respectively. The density of population is 181 persons per square kilometer. The sex ratio of the district is 942 which is quite higher than the state ratio of 922. There are 10.29 per cent of SCs and 19.24 per cent of STs in the total population of the district. 1118937 (44.45%) is the total working population of the district. In which 63.99 per cent are engaged in agriculture and allied activities. Out of the total population of the district, 70.62 per cent are literate with 85.54 per cent male and 58.48 per cent of female literacy. With 70.61 per cent of rural and 86.38 per cent of urban literacy. As per the current prices of 2007-08, per capita income of the district was Rs.34938 and Rs.25464 at the constant prices.

6.8.2 Forestry

Out of total geographical area the district has a forest cover of 2956 sq. km. (21.76%). The district is the largest producer of Tik wood in the state. As well as, the trees such as Bamboo, Hirda, Behada, Tendu and Moha, etc. are found in the forest of the district. The state government earned a revenue of Rs.1364 lakh from the district forest royalty during the year 2008-09.

6.8.3 Agriculture

During the year 2007-08, 74.75 per cent is the cultivable area from the total geographical area of the district. In which 337010 hectare (37.52%) area is under food-grains. Among the total cropped area 44.74 per cent is under Cotton which is followed by Jowar with 14.10 per cent, Wheat 2.49 per cent and Pulses 19.70 per cent. 1.24 per cent area is under Sugarcane and 15.40 per cent under Oil seeds. The total production of cereals during the year 2008-09 was 224200 metric ton. The per hectare productivity of

major crops of the district is as; Jowar 1082kg, Mung 577kg, Wheat 1803kg, Gram 848kg, Urad 399kg, and Cotton 412kg. During the year 2008-09, 152255 metric ton chemical fertilizers were made available and used in the district in which only 4 per cent distributed from institutional and 96 per cent from the non-institutional sources.

6.8.4 Irrigation

The gross irrigated area of the district is 60520 hectares whereas the net irrigated area of the district is 45958 hectares. Which is 5.12 per cent of the total cultivable area of the district. Crop wise irrigated area is as; Food crops 45.54%, Cereals 15.80%, Sugarcane 18.52%, Fruits and Vegetables 5.68%, Cotton 1.11% and Oil seeds 6.69 per cent. Out of total irrigated area, 64.82 per cent comes under well irrigation whereas 35.18 per cent under cannel irrigation.

6.8.5 Animal Husbandry

According to the animal census 2003, there are 1349321 different types of animals in the district. In which Cows and Bulls consisted 54.56%, Buffalos 9.99%, Sheeps and Goats 28.07% and other constitute 7.38 per cent.

6.8.6 Industry and Employment

For industrial development, grossly the district lags behind other parts of the state. People are engaged in the traditional occupations such as; carpenter, oil meals, bakery, etc. The district has some agro processing industries such as; geaning and pressing of Cotton, Oil seeds processing etc. In the year 2007, there were 275 registered industrial units in the district. In which 232 were in actual working and provided the employment to 2068 persons.

6.8.7 Electrification

Up to the year 2009, 80 per cent of electrification is achieved by the district. Out of total electricity consumption, 259757 thousand kilo vat electricity is used for agricultural purpose.

6.8.8 Education

Education facilities have been provided at different level through 2562 primary, 620 secondary, 189 higher secondary schools and 24 colleges available in the district. 686912 students were enrolled in the education sector of the district during the year 2008-09.

6.8.9 Health facilities

In all 21 hospitals, 20 dispensaries, 73 maternity homes and 63 primary health centers are providing medical facilities in the district.

6.9 Beed

This is one of the most drought stricken districts with dry land farming of the state. The location of the district is 18.28 to 19.28 degree North Latitude and 74.54 to 76.57 degree East Longitude. The total geographical area of the district is 10440.35 sq. km. which is 3.39 per cent of the state of Maharashtra. The 41.24 sq. km. is under urban and 10399.11 sq. km. is the rural area. Generally the weather of the district is hot and dry. The average rainfall of the district is 650 mm per year.

6.9.1 Population

According to the 2001 census, the total population of the district is 21.61 lakh which is 2.23 per cent of the state population. The density of population is 207 people per square kilometer. The proportion of urban and rural population is 81.96 and 17.88 per cent respectively. The sex ratio of the district is 936 which is higher than the state ratio of 922. The

proportion of SCs and STs population in total population is 13.01 and 1.12 per cent respectively. The proportion of working population is 44.24 per cent of the total. 84.36 per cent population of the district is literate. Where the urban literacy is 84.69 per cent and rural is 84.26 per cent.

6.9.2 Agriculture

There are two cropping seasons in the district i.e. kharif and rabbi. In kharif; crops like Jowar, Bajara, Arhar, Urad, Cotton and Groundnut and in rabbi season; Jowar, Wheat, Gram, etc. are cultivated. The crop wise total production for the cropping year 2008-09 was; Food-grains 3.81, Cereals 1.57 lakh metric ton and Cotton 1614 bales. Per hectare productivity of different crops was; Wheat 1054, Jowar 1401, Bajara 676, Gram 533, Arhar 991 and Groundnut 581 kilograms. In the year 2008-09, 98364 metric ton of chemical fertilizers have been distributed and used in the district through institutional and private sources. The marketing of agricultural produce is regulated through the 08 APMCs in the district. The total turnover of these APMCs for the year 2008-09 was 52847 metric ton with net value of Rs. 8661.77 lakh.

6.9.3 Irrigation

Majalgaon and Manjara are the two major irrigation projects in the district. As well as, there are 10 medium and 1007 minor irrigation projects in the district with village level tanks, percolation tanks and bunds. The total potential of these irrigation projects is 43517 hectares which is 14.62 per cent of the gross cropped area of the district.

6.9.4 Animal Husbandry

According to the animal census-2003 there were; 1.70 lakh Cows in the district. Dairy farming is the significant supplementary source of income

generation available to the farmers of the district. In other animals; Buffalos consisted 213, Bulls 265 thousand, Sheeps and Goats 4.89 lakh, also there were 8.14 lakh birds in different poultry farm of the district.

6.9.5 Industry

The district is one of the backward districts in industrial development in the state. Among 119 registered factories, 34 factories already have been closed. 3012 workers are engaged in different factories. Out of total of 85 factories, 45 are timber factories in which 546 workers are employed. According to the data for 2008-09 from the employment exchange, 49423 workers are engaged in different occupations in the district.

6.9.6 Electrification

Parali-Waijanath is the atomic energy project located in the district. There is 100 per cent electrification achieved in the district by the end of March 2009. Out of total electricity consumption, 32.09 per cent electricity is used for agricultural purpose.

6.9.7 Education

Education facilities for the district are provided through 2153 primary, 609 secondary, 94 higher secondary schools and 64 colleges operating in the district. There are 310 thousand students enrolled in the education sector of the district.

The foregoing analysis on the socio-economic and demographic charecterisation of the districts that have been selected for the primary data collection for the present study brings out that almost all the districts fall under the category of underdevelopment. The agriculture of all districts is dependent on monsoon thereby making the cultivation more difficult than the irrigated regions. Looking at the other socio-economic

indices of all these districts, it is clear that these districts are far away from rest of the regions of the state of Maharashtra.

Reference Notes

6.1 Socio-economic survey of Ahmednagar district, 2008-09
6.2 Socio-economic survey of Aurangabad district, 2008-09
6.3 Socio-economic survey of Beed district, 2008-09
6.4 Socio-economic survey of Amravati district, 2008-09
6.5 Socio-economic survey of Yeotmal district, 2008-09
6.6 Socio-economic survey of Wardha district, 2008-09
6.7 Socio-economic survey of Washim district, 2008-09
6.8 Socio-economic survey of Akola district, 2008-09
6.9 Socio-economic survey of Buldana district, 2008-09

Chapter-07

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Introduction

Since 1997 the problems of agrarian crisis and farmers suicides have become an obstacle to the growth in general and that of rural economy of suicide dominant states in particular. It is widely acknowledged that the growth of agriculture sector is a prerequisite of achieving macroeconomic growth of the country. The problem of farmers suicides was aggravated in the country particularly after the second phase of the Economic Reforms i.e.1997-98. Most striking thing is that, the states which are agriculturally developed, suffer badly by the spate of farmers suicides. The green revolution of the 1960s and the commercialization of agriculture had sown the seeds of agrarian crisis and thereby farmers suicides in India. The problem is related to the ineffective implementation of the policy as well as unviable and uneconomical technology introduced in the country in general and during post reforms in particular. Looking at the overall spread of farmers suicides in the country, it is found that all category of farmers by size of holding, irrigated, dry land, cash crops and food-grains growers, etc. have been in suicidal trap. And the core issue of the distress act of suicides is unremmunarative state of the agriculture and thereby mounting debt burden. The incidences of farmers suicide are found in Northern states like Punjab and Haryana and in Western parts of the country consisting Maharashtra, Gujarat and Madhya Pradesh and in Southern states like Andhra Pradesh, Karnataka, Tamil Nadu and Kerala. The geographical spread of farmers suicides clearly indicates that the farmers of all category and regions are affected of the distress. Therefore the entire Maharashtra was selected for the present study rather than a particular region or a district of the state. Maharashtra constitutes four

regions. They are Western Maharashtra, Marathwada, Vidarbha and Konkan. Since the Konkan region did not have any reporting of farmers suicides therefore the study does not consist any information on the same. Hence the primary data based study consists Western Maharashtra, Marathwada and Vidarbha regions of the state. Most of the incidences of farmers suicides have been reported from the six districts of Western Vidarbha region of the state. These districts are Amravati, Yavatmal, Akola, Wardha, Buldana and Washim. Eastern Vidarbha is a tribal area and there is no direct dependence on agriculture hence the number of suicide cases has been far less than any other district of the region. It was decided to cover all regions of the state to understand the ground reality of the problem. The present study is conducted in Western Maharashtra, Marathwada and Vidarbha regions of the state of Maharashtra. In all, 200 farm households affected of suicide were selected from 9 districts, 24 tehasils and 166 villages on the basis of Simple Random Sample Method.

7.1 Design and Contains of the Questionnaire

The contents and coverage of the questionnaire that was designed for the purpose of the primary data collection have been as under;

The identification and analysis of the socio-economic risk factors that have been responsible for the distress act of farmers suicides in the state have been the main thrust of the present study. Hence the questionnaire was designed with a view of covering all socio-economic aspects of the farm households affected of suicides. Question No. 1 and 2 were related to the basic information of the family which consisted caste, education, marital status, family size and occupation of the family members. Question 3and 4 covered the information regarding the fixed assets and the consumables of

the suicide affected households. This has been helpful to understand the economic situation and the consumption pattern of the family. As well as, the same could throw a light on the awareness of the health issues of the families. Question 5 focuses on the family owned implements and the next, the distress sale of the same. Question No.7 expected the information on animal husbandry of the farm household. The purpose of the question was to study the subsidiary employment opportunities and income generation from the same. The land holding pattern of the farmers has been the most important aspect of the study. It is the factor which affects the farm economy in several ways. Income of the farmers depends on the farm size, as well as, the type of the land i.e. irrigated and dry land. Also the question focused on whether the land is leased in or leased out by the farmers. This question was followed by the cropping techniques of the farmers i.e. the use of the seeds, fertilizers and pesticides and the mode of purchasing of the inputs. It helped to understand another type of the money lending and exploitation of farmers by input dealers. The next question pertained to the cropping pattern for the earlier year i.e. 2007- 2008 (since the period of data collection was May-November 2008). The question focused on the area under crops, type of land, source of irrigation, type of irrigation, and the production and productivity. This question has also thrown a light on the overall production and productivity of the crops that were cultivated. As well as, the changes in cropping pattern and techniques have been considered to evaluate the awareness of farmers regarding agriculture and the benefits from the same. Agricultural marketing is an important aspect of the Indian agriculture. Hence the question related to marketing consisted subpoints on marketable surplus, destination of the sale, the

distance between the place of production and market. Subsequent question was based on the awareness of farmers about the Minimum Support Price mechanism. The awareness of the farmers about the crop wise Minimum Support Price announced by the government (CACP), helps them to understand the gap between MSP and the actual cost of production and thereby the net returns from it. Also the inadvance information helps farmers to plan cultivation and crop pattern for the year. The frequent crop failure is observed to be one of the major causes of the agrarian distress and thereby farmers suicides in the state of Maharashtra. Hence, the reasons for the crop failure and its economic impact on the household are also considered in the present analysis. Information about the agricultural labourers and the paid wage rate by gender and season helped to understand the availability of employment and prevailing wage rate. Most of the farmers who committed suicides belonged to the category of dry land owners. As a result, they can cultivate only one crop in a year and the employment is available for them for the concerned cropping season only. Then after, it is difficult to get employment in agriculture. Hence the role of Employment Guarantee Scheme (EGS) and Mahatma Gandhi National Rural Employment Guarantee Act (MGNAREGA) becomes significant for the employment and income generation for such farmers. The growing indebtedness of farmers has been observed to be the vital cause for suicides by farmers of the state. Question on the debt pattern of farmers helped to obtain the different aspects and sources of the loan. It also brings out the rates of interest, mortgage and the mode of repayment. Investment by farmers in farming activities and the public investment in providing irrigation and other infrastructural facilities have been reviewed

in the present study. The last part of the questionnaire consisted questions pertaining to the individual information of the deceased farmer i.e. the age, education, mode of suicide, marital status, etc. The next part of this section is on the overall observation of the interview of the affected households. That has covered the risk factors that are responsible for the distress act of suicide. Also it helped to cross tally the earlier information provided by the respondent. Last two questions were related to the compensation by the state to the family on account of suicide and the expectation of the family from the government for the revival of their economic status. In all, the questionnaire attempted to cover most of the aspects of the agrarian economy in general and to that of agrarian crisis in particular.

7.1 District Wise Number of Cases Studied by Gender

Region	Districts	Region total	No. of Tehasils	No. of Villages	No. of Cases Studied		
					Male	Female	Total
Western Maharashtra	Ahmednagar	34 (17)	07	33	33	01	34 (17)
Marathwada	Beed	33 (16.5)	01	11	11	--	11 (5.5)
	Aurangabad		01	12	12	--	12 (6)
Vidarbha	Buldana	133 (66.2)	04	21	26	--	26 (13)
	Amravati		03	23	29	01	30 (15)
	Akola		02	34	50	02	52 (26)
	Yavatmal		01	10	10	01	11 (5.5)
	Washim		02	19	20	--	20 (10)
	Wardha		03	04	04	--	04 (2)
	Total	200	24	167	195	05	200

Source: Field Survey
Figures in parentheses indicate percentage

There are a number of reasons for highest number of reporting of farmers suicides from Vidarbha region of the state which consist six districts. The cropping pattern of the region is dominated by Cotton which has undergone various technological and institutional transformations, which made the crop more of unremmunarative of nature for cultivators. As is revealed by earlier studies that the technological changes in Cotton seed research in favour of GM varieties (BT Cotton) promised higher output per hectare and profit of rupees ten thousand. Ultimately it resulted in per hectare loss for rupees six thousand. Suicide cases have also been reported from other regions of the state which are covered under the present study. It revealed to us that the deceased families have been trapped in negative income as the agriculture has become unremmunarative for them. The basic reasons for the state of unremmunarative farming are the cultivation of commercial crops, stagnation of productivity (i.e. Sugarcane per acre productivity has declined to27 m. tons in the sugar belt of Western Maharashtra), absence of irrigation and thereby more dependence on well irrigation with low water tables and low attainment of rural electrification in the state. Around 80 per cent of the state agriculture is rain fed and 64 per cent of rest of the 20 per cent of irrigated agriculture has a dependence on well irrigation and the irrigability of the same is determined by underground water table and the nature of the supply of rural electricity which are not at the satisfactory levels. The status of irrigation of Maharashtra shows a wide range of inter-regional disparities with Vidarbha region the lowest irrigation cover and highest irrigation attainment (expenditure) backlog (Danderkar-1984) ever since the separate statehood.

7.2 Caste of the Deceased Farmer

Sr. No.	Caste	No. of Farmers	Proportion to Total No. of Farmers (%)
1.	Maratha	65	32.5
2.	Kunbi (Maratha)	41	20.5
3.	Nav Baudh	13	6.5
4.	OBC	28	14.0
5.	ST	02	1.0
6.	SC	02	1.0
7.	Muslim	05	2.5
8.	VJNT	44	22.0
	Total	200	

Source: Field Survey

Like in other states the caste structure plays a significant role in determining the occupational structure of Maharashtra. Predominantly the Marathas (Maratha + Kunbi) are the agriculturist community, like the Reddys in Andhra Pradesh and Jats in Punjab and Haryana. Therefore, if there is any crisis in the agriculture of the state then it is bound that the certain sections of the society has to face subsequent apathy. Hence it is found in the present study that about 53 per cent of the farmers affected by the agriculture crisis in the state belong to the Maratha community which is predominantly a farming community. Forty seven per cent of the rest of deceased farmers constitute Nava Baudhas, O.B.Cs. (Other than Kunbis), S.C. / S.Ts, Muslims and 22 per cent of them consist other caste farmers of the state community system i.e. VJNT. Maharashtra is a state which shares its basic characteristics of political economy with other suicide hit states like Punjab and Andhra Pradesh that the deceased communities in all these states have strong political representation and they form the base of the local farming leadership. Hence it proves that despite the strong political hold of the farming community in state politics, the state lacks in proper agriculture policy and this has weakened the economic status of this section of the rural society.

Other suicide hit states like Punjab, Andhra Pradesh, and Karnataka have been found more serious than Maharashtra in designing the agriculture policies by adopting the recommendations either of an independent experts or state appointed study group but unfortunately the political economy of Maharashtra has never shown its willingness either to appoint such a type of study groups or to consider the outcomes of an independent research attempts. For example, Karnataka state agriculture department has for a long time in existence the formal agriculture study group. Whereas in Punjab the state government has appointed a full time farmers' commission and also appointed another study group to suggest measures of the revival of co-operative lending system of the state (under the chairmanship of H. S. Shergil). In all, the highest number of farmers suicides in the state of Maharashtra, with highest incidence in Vidarbha region across all communities is an outcome of the continuous neglect of agriculture.

7.3 Basic Information of Victims' Family

Sr. No.	Type of Family		No. of Households	Proportion to Total No. of Households (%)
1.	Combine		105	52.5
2.	Nuclear		95	47.5
	Total		200	
Sr. No.	Adult		Children	
1.	Men	321 (44.64)	Boys	151 (52.43)
2.	Women	398 (55.35)	Girls	137 (47.56)
	Total	719	Total	288
Sr. No.	Size of Family	No. of Households		Proportion to Total No. of Households (%)
1.	1	06		3.0

2.	**2-3**	**38**	**19.0**
3.	**4-5**	**89**	**44.5**
4.	**6-7**	**38**	**19.0**
5.	**8-10**	**16**	**8.0**
6.	**11-13**	**07**	**3.5**
7.	**14-16**	**05**	**2.5**
8.	**17-19**	**01**	**0.5**
	Total	**200**	

Source: Field Survey
Figures in parentheses indicate percentage

Since the ancient times, the structure of the Indian family is recognized as a joint family. In a patriarchal society, head of the family is responsible for all decisions and thereby the burden of the family. Whereas others have to follow the same for an overall well being of the family. In a modern individualized society, the old structure of joint family has eroded fast and nuclear family set up has come up in to the existence. In this new set up, the family head will have to bare entire burden without any support, either from the society or from anyone else like relatives. According to the suicidal theories, probability of suicide is always of the higher degree in the nuclear family. Because when a person is in trouble or under a strain, finds an outlet for his worries, in the form of suicide. But this did not happen in case of the farmers who committed suicide. But the field level data revealed that, there is no correlation of significant order between the suicidal act and type of the family. Farmers have ended lives through suicide belonging to both the type of family structure. On an average, families consisting four persons are found in case of 88.5 per cent of the affected households and generally this type of size is considered as an ideal size of the family. The size of family is optimum but the income level of them is not sufficient so as to allow them to obtain basic commodities such as food and clothing, shelter, education and medical facilities for

consumption on the one hand and to maintain cultivation expenditure on the other.

7.4 Educational Status of Victims' Family Members

Sr. No.	Educational status	No. of Persons	Proportion to Total No. of Respondent (%)
1.	Illiterate	155	15.39
2.	Primary	295	29.29
3.	Secondary	342	34.45
4.	Higher secondary	100	9.93
5.	Technical	02	0.19
6.	Graduation	24	2.38
7.	Post Graduation	05	0.49
8.	Anganwadi	84	8.34
	Total	1007	

Source: Field Survey

In a knowledge based society, education in general and primary education in particular has become an essential aspect of the quality of life. Public policy in recent times does also concentrate on extending educational facilities at the rural micro level. Among the total surveyed families 63.74 per cent of the family members have completed their primary and secondary education i.e. up to matriculation. Though, every village has a school but there is no infrastructure of education which can be termed as up to the mark. Drop out is higher in rural areas because of the increase in the expenditure on education. During the peak period of Cotton picking, children have to work on the farm to earn money for consumption and supporting to the family during summer. This is true for all districts of Vidarbha. Upward trend of literacy is only on paper, which is not helping farmers to have relief from the exploitation. Also the mere literacy is not sufficient for absorbtion in off farm labour market. Higher and technical education has become an unachievable task for them because it demands higher expenses which made them helpless.

7.5 Occupational Structure of the Deceased Family

Sr. No.	Occupation	No. of Persons	Proportion to Total No. of Respondent (%)
1.	Farming	176	33.58
2.	Farming + Labour	293	55.91
3.	Business	14	2.67
4.	Govt. Services	07	1.33
5.	Private Services	09	1.71
6.	Farm Labour	25	4.77
	Total	524	

Source: Field Survey

About 58.5 per cent of the population at the national level is dependent on agriculture for livelihood. Our field level data for the studied regions revealed that 60.68 per cent of the families are engaged in cultivation either as farmer or farm labourers. Some of them work in the private and government sector but the proportion of the same category of workforce is negligible. Lack of off farm employment has created the excess burden on agriculture. It increased the rate of disguised unemployment in the rural and agriculture sector. Vidarbha and Marathwada regions of the state are far away from industrial development when compared to rest of the state. Where, four districts of Thane, Mumbai, Nasik and Pune account for 60 per cent of industries of the state. There is a vast disparity in the regional industrial development. Also the financial backlog brought out by Dandekar Committee (1984) remains unattained. Excess burden of workforce has not only created pressure on agriculture but also increased the cost of cultivation and thereby resultant decline in returns from cultivation. Sometimes, excess supply of labour causes a decline in the wage rate below the subsistence level of living and increases the headcount of rural poverty among agricultural labourers.

7.6 Information about the Fixed Assets

Sr. No.	Type of House	No. of Households	Proportion to Total No. of Households (%)
1.	Owned	200	100
2.	Rent basis	00	00
	Total	200	
Sr. No.	No. of Rooms	No. of Households	Proportion to Total No. of Households (%)
1.	One	19	9.5
2.	Two	110	55.0
3.	Three	57	28.5
4.	Four	11	5.5
5.	Five	03	1.5
	Total	200	
Sr. No.	Type of Roof	No. of Households	Proportion to Total No. of Households (%)
1.	Leaves / Bamboo	47	23.5
2.	Soil / Mud	41	20.5
3.	Cement Concrete	18	9.0
4.	Teen	88	44.0
5.	Tiles	06	3.0
	Total	200	

Source: Field Survey

The data in above table (No. 7.6) reveal the information about fixed assets of the deceased farm households. Housing is not only the assets of the family but also is an indicator of living and economic conditions. All the studied (200) farm households have their own houses. Among them 55 per cent have the house of two rooms and 28.5 per cent of household have house with three rooms. In most of the cases the roof of the house is made of leaves/bamboo and soil/mud (23.5 and 20.5 per cent respectively). 44 per cent of the households have the roof of teen sheets and only 9 per cent have cement concrete houses. All the houses are old and previous generation constructed and not even a single suicide affected household has built a house in last 20 years. Some of the households are recently renovating their houses but the number being very small the same is not very significant. 3 per cent of the affected farm households (06) have obtained

loan for housing from the private sources. It is clear from the information that minimum expenses are incurred by farmers on housing which is termed as unproductive expenditure both by the government officials and also by the media and bankers.

7.7 Availability and Awareness about Basic Facilities

Sr. No.	Electricity	No. of Households	Proportion to Total No. of Households (%)
1.	Yes	156	78
2.	No	44	22
	Total	200	
Sr. No.	Toilets	No. of Households	Proportion to Total No. of Households (%)
1.	Yes	23	11.5
2.	No	177	88.5
	Total	200	
Sr. No.	Sources of Drinking water	No. of Households	Proportion to Total No. of Households (%)
1.	Well	31	15.5
2.	Hand pump	71	35.5
3.	Public stand post	77	38.5
4.	Public well	21	10.5
	Total	200	

Source: Field Survey

The availability of basic facilities such as electricity, toilets and safe drinking water is very poor in rural parts of the country. Present study also brings out the same fact for rural Maharashtra. Of the total surveyed families, 78 per cent have legal electricity supply with 12 to 14 hours of daily load shading i.e. supply cut off. Since the general elections of 2004, often the government has announced free and uninterrupted electric supply for agriculture, but the fact is different. About the basic health, generally the rural masses are unaware of the factors harming it. Only 11.5 per cent of households have toilets of their own. Therefore the open toilets are a main cause for a number of diseases and thereby decline in their efficiency especially during the monsoon. It means, 'Saint

Gadagebaba Rural Cleanliness Drive' introduced by the state government of Maharashtra remained only on paper and has not worked in reality. It is interesting, particularly in Vidarbha that not even a single farmers' family lives on the farm. Reason being the unavailability of water and electricity in rural area throughout the year. Drinking water is available through wells, hand pumps, public wells and common tabs but without any safety measures. And after the month of January, it is hard of getting drinking water without a tanker. According to the rural medical practitioners these two factors i.e. open toilets and polluted water is responsible for the frequent illness of farmers and deterioration of rural health. Health services, provided through the Primary Health Care Centers are poor which has increased the dependence of farm households on private health practitioners. It demands the household expenditure on medicine purchases and other health services. National Rural Health Mission also has failed to provide the adequate amount of medical facilities to rural poor. 40 per cent of the posts of medical officers are vacant in Vidarbha region of the state. Frequent illness has affected the efficiency of farmers and thereby productivity and production of the agriculture.

7.8 Consumption of Amenities

Sr. No.	Consumables	No. of Households	Proportion to Total No. of Households (%)
1.	Gas	31 (6.27)	15.5
2.	Electric Fan	130 (26.31)	65.0
3.	Radio / Tape	55 (11.13)	27.5
4.	T.V.	117 (23.68)	58.5
5.	Bicycle	90 (18.21)	45.0
6.	Two Wheeler	18	9.0

		(3.64)	
7.	**None of above**	**53 (10.72)**	**26.5**
	Total	**494**	

Source: Field Survey
Figures in parentheses indicate percentage

After the green revolution of the 1970s, in some parts of the country like Punjab and Haryana the returns from agriculture increased and it reduced the gap between urban and rural lifestyle. Rural masses followed the urban life style in some areas of the state of Maharashtra also. As a result, consumption of semi luxurious commodities increased among the farming community. This is Dusenbary's 'Demonstration Effect'. *Arya Chanakya (Kautilya)* also mentioned that the availability of entertainment to farming community may affect their efficiency. Because, they might spend productive time and part of the income on the consumption of expensive commodities such as; radio, television with cable network, motorbike, etc. If there is a lack of money to purchase, some farmers may not even bother to borrow it from the private sources at the higher rates of interest. However, 26.7 per cent of surveyed households have no consumables and amenities as mentioned in the above table (No. 7.8). In the rapidly changing economic order, farmers are confused whether to invest on field or go for the conspicuous consumption of such a type of commodities and services. In this dilemmatic situation, farmers have to divide their income between consumption and investment. Hence the volume of investment fall short for expected benefits from agricultural cultivation. So the activity becomes unremmunarative which forces farmers to borrow from the private sources at higher rates of interest. This pushes farmers in the grip of private moneylenders and thereby changes in agrarian relations.

7.9 Household Level Availability of Agricultural Implements

Sr. No.	Agri. Implements	No. of Households	Proportion to Total No. of Households (%)
1.	Bullock Cart	72 (16.0)	36.0
2.	Plough	79 (17.55)	39.5
3.	Seed Drill	80 (17.77)	40.0
4.	Crushing Machine	01 (0.22)	0.5
5.	Spray Pump	73 (16.22)	36.5
6.	Electric Pump	45 (10.0)	22.5
7.	Tractor	02 (0.44)	1.0
8.	Hoe	15 (3.33)	7.5
9.	Harrow	04 (0.88)	2.0
10.	None of above	79 (17.55)	39.5
	Total	450	

Source: Field Survey
Figures in parentheses indicate percentage

Bullock cart, plough, seed drill, spray pump, hoe, and harrow are the essential implements for agricultural operations. But it is striking that about 39.5 per cent of the total suicide affected farm households do not have any of these implements. Farmers with all agricultural implements are mostly found in Western Maharashtra and some parts of Marathwada where the average size of holding is better with irrigation than of other parts of the state. It is hardly found in Vidarbha. Cotton is the dominant crop in Vidarbha which needs frequent spraying of pesticides to control pest attack. Even then only 36.5 per cent of surveyed farm households have their own spray pumps. Others are dependent on hired spray pump and the operator of the same. Excess demand and thereby dependency on hired spray pumps causes delay in spraying of pesticides, as well as,

increase in labour cost. By the time such cultivator gets the spray pump the pest attack goes beyond the controlling capacity of pesticides. As a result, it sevearlly affects productivity and thereby production of Cotton in the region. Also the higher dependency on hired labour and implements affects production badly because in such a case the time factor always plays a significant role in agricultural operations. This is one of the major reasons for declining productivity and increasing cost of cultivation in agriculture of the state. Some farmers have cited that the prevealing financial position doesn't permit them to purchase farm implements. Big farmers are dominant in the local politics hence they get all the benefits of government schemes implemented through panchayat raj mechanism which are especially meant for the small and marginal farmers to supply implements on subsidy. It means government schemes did not reach to the expected beneficiaries and misappropriated and colonized by the dominant farmers those who have political strong hold.

7.10 Livestock Assets of the Suicide Affected Households

Sr. No.	Live Stock	No. of Households	Proportion to Total No. of Households (%)
1.	Bullocks	76 (29.29)	38.0
2.	Cow	87 (34.25)	43.5
3.	Buffalo	12 (4.72)	6.0
4.	Sheep	14 (5.51)	7.0
5.	Goat	01 (0.39)	0.5
6.	None of above	64 (25.19)	32.0
	Total	254	

Source: Field Survey
Figures in parentheses indicate percentage

Animal husbandry is a source of supplementary income for the farming community. This is especially ture in case of small farmers. The significance of animal husbandry in the Indian agriculture is vital because of its assistance to tackle the serious problems of unemployment and under employment among weaker sections of the rural economy and providing subsidiary occupation of income generation. It also plays a dominant role in dry-land agriculture, particularly in semi-arid and arid areas like northern Karnataka and dry parts of Maharashtra. Animal husbandry and dairy development has helped in many parts of the state for poverty eradication by providing the additional employment and income sources to the farming community. Even though the bullocks are important in the agriculture, but only 38 per cent of surveyed farm households have their own bullocks. After the modernization of agriculture, farmers use advanced technology such as tractors, harvester, etc. for agricultural operations. But the farmers of Vidarbha neither have bullocks nor do they use modern techniques and in most cases depend on the hiring mode of the same. As compare to Vidarbha, bullocks are mostly used in Western Maharashtra and some parts of Marathwada. Therefore scope for the development of animal husbandry and dairy development is very limited in Vidarbha. Due to the inadequate irrigation facilities in Vidarbha, farmers hardly get fodder after the month of February when rabbi crops are harvested. Insufficient source of fodder is the main reason for malnutrition and less productivity of animals and particularly the milking cows. Hence extent and development of the complementary income source is very limited in the region. As a result, the dependence of farmers on the

private moneylender increases for consumption, agricultural operations and investment.

7.11 Reason for Sale of Livestock

Sr. No.	Reasons	No. of Households	Proportion to Total No. of Households (%)
1.	Consumption	03 (33.33)	1.5
2.	Agri. Expenses	02 (22.22)	1.0
3.	Debt. Repayment	03 (33.33)	1.5
4.	Health	01 (11.11)	0.5
	Total	09	

Source: Field Survey
Figures in parentheses indicate percentage

Live stock is a kind of an asset in agriculture which can be called as All Time Money (ATM). Income from agriculture has declined during the post reforms period and the difference between cost and revenue has increased. Therefore the farmers have attempted to fulfill the gap with the help of private borrowing. Institutional sources of credit are dried out as they are default account holder. Moneylenders charged high rates of interest on the borrowed money. In present agriculture situation farmers have no more remained capable to repay the loan amount which becomes double within a short span of time. Hence, farmers have to sale their live stock for the repayment of loan, as well as, for consumption, agricultural operations and health expenses. The study reveals that deceased farm households have sold their animals mainly for consumption expenditure, debt repayment and agriculture expenses. Mainly, it accrues to that of the repeating drought like conditions in most of the parts of Maharashtra and hence more than twenty thousand villages in the state are often under stress.

7.12 Land Holding Pattern of Deceased Farm Households

Sr. No.	Type of land holding	No. of Farmers	Proportion to total No. of Households (%)	Min. land Holding	Max. land Holding	Avg. land Holding	Total land
1.	(0-2.5) Marginal	35	17.5	0.35	2.5	1.30	62.20
2.	(2.5-5) Small	88	44.0	3	5	3.37	347
3.	(5-10) Semi Medium	61	30.5	5.30	10	7.18	455.15
4.	(10-20) Medium	11	5.5	10.20	20	14.22	160.20
5.	(above 20) Big	02	1.0	28	30	29	58
6.	Landless	03	1.5	--	--	--	--
	Total	200		--	--	--	--

Source: Field Survey

Majority of the households that have been surveyed belonged to the category of small and marginal land holders which accounts for 61.50 per cent as against 80 per cent of national average. Fragmented land holding for generational employment opportunities on account of frozen labour force in agriculture and the absence of irrigation facilities proliferated the number of wells with pump sets deepened the underground water tables thereby making cultivation of commercial crops difficult on the one hand and costlier on the other and also has become difficult the repayment of institutional and private loans obtained for investments in wells, pump sets and buying of other farm implements and regular crop requirements. 30.5 per cent of the deceased farm families have size of holding only a little more than five acres but finding a category of large holding is equally difficult. There have been three households falling under the category of landless from where the suicides have been reported which were farm labourer families shows that the household economic problems and

conditions are similar of both the categories i.e. the farmers and agricultural labourers. During the period of economic reforms there have been structural changes in the economy of India where the sectoral transformation in contribution to GDP took place leaving a large amount of (58.50 per cent) labour force in agriculture with lowest rate of growth and even negative for some period made it further difficult for farmers and agriculture labourers of the region.

7.13 Type of Land by Irrigation owned by Farmers

Sr. No.	Type of Land	No. of Farmers	Proportion to Total No. of Farmers (%)
1.	Irrigated	40	20
2.	Dry Land	144	72
3.	Mix	13	6.5
4.	Land less	03	1.5
	Total	200	

Source: Field Survey

Uncertainty is the fundamental characteristic of Indian monsoon. And the degree of uncertainty is high in Vidarbha region as compare to the rest of Maharashtra. In present study only 25.87 per cent of farmers have the well irrigation facility and those farmers belonged to the Ahmednagr and Aurangabad districts of Western Maharashtra and Marathwada regions respectively. It means rest of the 75 per cent of farmers is dependent on monsoon for cultivation. Proportion of dry land farmers is high in Vidarbha as compare to other regions of the state of Maharashtra. Average rainfall of Vidarbha region is better than western Maharashtra and Marathwada. But inadequacy of storage resources makes it vulnerable. Dams, ponds and check dams are rarely found in Vidarbha and also the storage capacity of the existing resources is limited. The irrigation backlog of Vidarbha brought out by Dandekar Committee in 1984 still remains unfulfilled. The financial backlog of irrigation for

Vidarbha region has increased up to 60 per cent in 2002. Only 11.4 per cent of total cultivable land has the irrigation facility. As a result farmers can take only one crop in a year. This has reduced the income and prosperity from cultivation.

7.14 Landholding Wise Irrigated Land

Sr. No.	Type of land holding	Irrigated	Proportion to total No. of HH (%)	Dry land	Proportion to total No. of HH (%)	Total
1.	(0-2.5) Marginal	12 (23.52)	6.09	33 (20.75)	16.75	45 (21.42)
2.	(2.5-5) Small	20 (39.21)	10.15	76 (47.79)	38.57	96 (45.71)
3.	(5-10) Semi Medium	16 (31.37)	8.12	41 (25.78)	20.81	57 (27.14)
4.	(10-20) Medium	02 (3.92)	1.01	08 (5.03)	4.06	10 (4.76)
5.	(above 20) Big	01 (1.96)	0.50	01 (0.62)	0.50	02 (0.95)
	Total	51	--	159	--	210

Source: Field Survey
Figures in parentheses indicate percentage
HH- Household

The irrigation potential by all sources with the present methods of watering in the country cannot irrigate more than 50 per cent of the cropped area (Irrigation Commission 1972). The resultant impact is that the irrigation cover at the national level is stagnant at around 40 per cent and of Maharashtra less than half (18.5 per cent) of the same which is also brought out for regions by our study that 80 per cent of the deceased farm households have dependence on vagaries of monsoon for cultivation. The potential utilization of irrigation dams in the state has come down to 27 per cent whereas the problem of storage reduction, due to runoff siltage, remains unattained. During the course of the collection of data, majority of farmers reported that insufficient availability of electricity in the state further makes it difficult to irrigate their crops on time and other modes of

energisation such as through diesel engines is beyond their affordability because of the petroleum prices and unavailability of (farm) oil subsidy. Each of the size holding category of farm household has tried at the individual household to have their own source of irrigation but the operational costs on the same has made it unviable. Even the small and marginal farmers have tried to have their own irrigation cover through well irrigation but it has been impossible for more than 80 per cent of farmers, whose agriculture remains rain fed. If the irrigation backlog of Vidarbha and Marathwada regions of the state is honestly covered then it will be possible to bring more land under irrigation from the respective regions which can lead to solving the crisis to some extent. Also is required irrigation education and special efforts on water and energy saving and productivity improving methods of irrigation such as drip and sprinkler.

7.15 Caste Wise Land Holding Pattern (in acre)

Sr. No.	Caste	0 to 2.5	2.5 to 5	5 to 10	10 to 20	Above 20	Land less	Total
1.	Maratha	09 (13.84)	25 (38.46)	23 (35.38)	05 (7.69)	02 (3.07)	01 (1.53)	65
2.	Kunbi	08 (19.51)	18 (43.90)	14 (34.14)	01 (2.43)	--	--	41
3.	Nav Baudh	--	09 (69.23)	03 (23.07)	01 (7.69)	--	--	13
4.	OBC	05 (17.85)	10 (35.71)	12 (42.85)	--	--	01 (3.57)	28
5.	S.C.	02 (100)	--	--	--	--	--	02
6.	S.T.	01 (50)	--	--	01 (50)	--	--	02
7.	Muslim	02 (40)	01 (20)	01 (20)	01 (20)	--	--	05
8.	VJNT	8 (18.18)	25 (56.81)	08 (18.18)	02 (4.54)	--	01 (2.27)	44
	Total	35	88	61	11	02	03	200

Source: Field Survey
Figures in parentheses indicate percentage

As mentioned in foregoing that the Maratha is a dominant caste in agriculture in Maharashtra. This is also reflected in the land holding pattern by caste. In all size classes Marathas have the higher land holding as compare to other castes. Nav- Baudh, Schedule Caste and Schedule Tribes have newly attained the status of farmers. They have been given the land by the state government under the scheme of 'Karmveer Dadasaheb Gaikwad Landless Farmers'. Agricultural holdings of these socially disadvantaged groups of cultivating households are characterized by greater under-utilization of land compare to farmers belonging to other social groups. However, for most of the parts of Indian agriculture, the degree of under-utilization of long term fallows or cultivable wastes for such households is less pronounced compare with other social groups. This is the reason of the deterioration of economic conditions of these groups rather than the improvement. Because they have to spend more money to makes land cultivable and followed by actual processing of the produce. In other social groups such as Nomadic Tribes, Other Backward Classes and Muslims averagly have smaller holding of land. Among these social groups VJNT and OBC (local Mali community) are involved in the agricultural practices.

7.16 Land on Lease by Affected Family

Sr. No.	Type of land holding	Irrigated	Proportion to total No. of household (%)	Dry land	Proportion to total No. of household (%)	Total
1.	0-2.5	01 (16.66)	0.5	--	--	01 (11.11)
2.	2.5-5	05 (83.33)	2.5	01 (33.33)	0.5	06 (66.66)
3.	5-10	--	--	--	--	--
4.	10-20	--	--	02 (66.66)	1.0	02 (22.22)

	Total	**06**		**03**		**09**

Source: Field Survey
Figures in parentheses indicate percentage

7.17 Reason for Land Leased out by Affected Family

Sr. No.	Reason	No. of Households	Proportion to Total No. of Households (%)
1.	Physical Disability	01 (20)	0.5
2.	Economical	03 (60)	1.5
3.	Low land holding	01 (20)	0.5
	Total	05	

Source: Field Survey
Figures in parentheses indicate percentage

Table No. 7.16 and 7.17 indicate that the fragmentation and uneconomization of holding leads to an absentee landlordism leads to leasing in and out of the land in the state. The main reason for this is the very small and uneconomic size of the land holding either makes them to lease it out and become completely dependent on farm labourership or to lease in the land and try to make cultivation economically viable. The leasing of land is either on the basis of sharing of cultivation expenditure and income or it is based on cash payments to land owner ranging between Rs.3000 to Rs.8000 per acre depending on quality of soil, land productivity, capital investments made by the owner and availability of irrigation infrastructure such as tube wells or pumset. Share cropping is a more preferred mode of land leasing as it distributes the burden of risk equally both on the owner and the lessee. To sum up, the leasing of land is mainly an activity practiced by farmers to avoid the losses incurring due to the uneconomic size of holding where we found that the farmers indulged in leasing mode of cultivation have also found themselves in a suicide trap mainly because they are the farmers of poor category.

7.18 Reason for Sale of Land

Sr. No.	Land Holding	No. of Households	Proportion to Total No. of Households (%)
1.	0-2.5	18 (69.23)	9.0
2.	2.5-5	05 (19.23)	2.5
3.	5-10	01 (3.84)	0.5
4.	10-20	02 (7.69)	1.0
	Total	26	
Sr. No.	Reasons	No. of Households	Proportion to Total No. of Households (%)
1.	Agri. Expenses	04 (12.12)	2.0
2.	Debt. Repayment	15 (45.45)	7.5
3.	Marriage	14 (42.42)	7.0
	Total	33	

Source: Field Survey
Figures in parentheses indicate percentage

Mounting of unpaid debt burden and the psychological pressure of performing social responsibilities such as the marriage of a daughter or sister have been major reasons for the sale of land by crisis-ridden farm households in the state of Maharashtra. The burden of borrowing from private sources with usurious rates of interest and the difficulties in maintaining farm expenses have compelled farmers to sell their land but the study revealed that even after the sale of the land it is not possible to repay the whole burden of debt and they will have to undertake rural informal jobs or work at the same sold out land for returning the remaining burden of private debt is nothing but a new form of bondage. It has been observed during our study that the open prevalence of credit agents at co-operatives and commercial banks also has increased the cost of credit. Around 30 per cent of the amount of total credit is paid to these agents in advance to make processing possible and faster and get the loan

even majority of farmers' loan demand is for productive purposes. As a result of difficulties in processing, agent charges and already declined credit ability of farmers on account of previous overdues the state farmers are falling in the grip of private money lending by traders, urban middleclass and the traditional moneylenders where the rates of interest charged by them are very high. The corresponding rate of interest in Punjab is found to the tune of 36 per cent per annum which has been taken seriously by the state and has appointed a working group apart from the state farmers commission for the revival of co-operatives under H.S.Shergil but no such type of effort has ever been thought of on the part of the state of Maharashtra. Hence the small and marginal farmers in Maharashtra have to sell their lands for repayment of accumulated debt and also for social responsibilities such as marriages. Our field level investigation found that 45.45 per cent of the suicide affected families have sold out their lands for repayment of debt obtained from the private sources and all of them were from the category of small and marginal land holders. Some farmers of this category also have been forced to sell their animals otherwise meant for income generation and agricultural operations.

7.19 Cropping Combination

Sr. No.	Cropping combinations	No. of Farmers	Proportion to total No. of Farmers (%)
1.	Cotton + Bajra	14	7.10
2.	Cotton	03	1.52
3.	Soyabean + Wheat	01	0.50
4.	Jowar + Wheat + Gram	02	1.01
5.	Bajra	02	1.01
6.	Wheat + Bajra	06	3.04
7.	Sugarcane + Soyabean + Wheat	01	0.50
8.	Sugarcane	01	0.50
9.	Cotton + Tur + Soyabean	38	19.28

10.	**Cotton + Tur + Soyabean + Jowar**	**17**	**8.62**
11.	**Cotton + Tur + Jowar**	**19**	**9.64**
12.	**Soyabean + Tur + Jowar**	**16**	**8.12**
13.	**Cotton + Wheat + Gram**	**01**	**0.50**
14.	**Bajra + Sugarcane + Wheat**	**07**	**3.55**
15.	**Cotton + Tur + Soyabean + Mung**	**01**	**0.50**
16.	**Cotton + Tur + Mung**	**01**	**0.50**
17.	**Cotton + Tur**	**07**	**3.55**
18.	**Soyabean + Tur**	**15**	**7.61**
19.	**Cotton + Jowar + Bajra**	**03**	**1.52**
20.	**Cotton + Soya + Udad + Mung +Tur**	**02**	**1.01**
21.	**Cotton + Soyabean + Jowar + Gram**	**01**	**0.50**
22.	**Jowar + Bajra**	**02**	**1.01**
23.	**Cotton + Wheat**	**02**	**1.01**
24.	**Bajra + Wheat + Jowar**	**01**	**0.50**
25.	**Cotton + Tur + Soyabean + Udad**	**01**	**0.50**
26.	**Bajra + Gram**	**01**	**0.50**
27.	**Wheat + Sugarcane + Tomato**	**01**	**0.50**
28.	**Cotton + Soyabean + Tur + Gram**	**01**	**0.50**
29.	**Sugarcane + Wheat + Onion**	**01**	**0.50**
30.	**Soyabean + Tur + Udad**	**01**	**0.50**
31.	**Soyabean + Tur + Mung + Udad**	**01**	**0.50**
32.	**Bajra + Cotton + Wheat**	**06**	**3.04**
33.	**Cotton + Soyabean + Tur + Wheat**	**04**	**2.03**
34.	**Cotton + Tur + Wheat + Gram**	**02**	**1.01**
35.	**Cotton + Bajra + Sugarcane**	**01**	**0.50**
36.	**Cotton + Jowar**	**01**	**0.50**
37.	**Cotton + Tur + Wheat**	**01**	**0.50**
38.	**Soya. + Tur + Wheat + Jowar**	**01**	**0.50**
39.	**Soya. + Tur + Gram**	**06**	**3.04**
40.	**Soyabean + Tur + Wheat**	**02**	**1.01**
41.	**Soyabean + Tur + Safflower**	**01**	**0.50**
42.	**Cotton + Soya. + Tur + Jowar + Wheat**	**01**	**0.50**
43.	**Cotton + Tur + Gram + Safflower**	**01**	**0.50**
	Total	**197**	

Source: Field Survey

The cropping pattern of suicide hit regions in all parts of the country such as Punjab, Andhra Pradesh and Maharashtra has been of mono cropping of nature for a long time dominated by commercial crops like Cotton, the crop demanding all expensive inputs, thereby making the cultivation costlier. Also, the repetition of crop cultivation for many years has hampered the productivity of land and the immunity of crop due to an

extensive use of insecticides in states like Punjab and Maharashtra as was seen in South American agriculture before the 1960s. The repetation of crop cultivation consisting crops like Cotton has proved to have a damaging impact on land productivity and returns to scale. In all, the present study has found forty three (43) crop combinations in the suicide hit regions of the state with highest dominance of Cotton of 65.48 per cent followed by 57.29 per cent of farmers growing Soya bean. Continuous repetition of Cotton for decades together has bottomed the land productivity for the crop as has been the case of Sugarcane in Western Maharashtra (the average per acre productivity of Sugarcane of the region has receded from 65-70 m.ton. to 27 m.ton.). The agro climatic conditions of Vidarbha and Marathwada regions of the state are suitable for twenty seven (27) different types of Cereals and Pulses whereas due to the inadequate cropping education and extension facilities majority of farmers have been undertaking mono cropping pattern for which the cost of cultivation has gone up due to the productivity stagnation on the one hand and yielding of lower revenue as the market price of cotton declined from Rs.2700 per quintal (in 2005) to Rs.1900 (in the year 2007) on the other. Usually the farmers from suicide hit regions of Maharashtra have more concentration on commercial crop combinations that consist Cotton+Tur+Soyabean with 19.28 per cent followed by 9.67 per cent of Cotton+Tur+Jowar. Despite most of the land and farmers being in the cultivation of Cotton the output is carried out from the region for processing has become a limitation of off farm employment on the one hand and income diversification on the other unlike the sugar revolution through co-operatives of Western Maharashtra.

7.20 Information about the use of Seeds, Fertilizers and Pesticides

Sr. No.	Use of Seeds	No. of Households	Proportion to Total No. of Households (%)
1.	Hybrid	197	100
2.	Indigenous	--	--
	Total	197	
Sr. No.	**Source of information**	**No. of Farmers**	**(%) of Total No. of Households**
1.	Own	07 (2.32)	3.55
2.	Development officer	03 (0.99)	1.52
3.	Friends / Relatives	107 (35.54)	54.31
4.	Dealer	184 (61.12)	93.40
	Total	301	

Source: Field Survey
Figures in parentheses indicate percentage

After the green revolution, farmers started using hybrid varieties of seeds rather than indigenous seeds because the same promised higher returns. All the studied farm households are using hybrid seeds of most of the crops. Though the productivity of such varieties is high, but it is also harmful for the ecology because it also needs heavy doses of fertilizers and pesticides. This has increased the cost of cultivation. Extension service centers and the state agriculture department do not provide any information regarding the use of seeds, fertilizers and pesticides. As a result farmers remain dependent on dealers for information about the use of such chemical inputs and seeds, who often recommend higher use for more sell. Dealer is their main source of information followed by friends and relatives with 61.12 and 35.54 per cent respectively. Dealers usually recommended the inputs only which are available at their shop and the inputs that give them more profit. Sometimes, dealer insists the unnecessary purchasing of pesticides or other inputs like a composite

package. Farmers do not have the substitute but to accept it symulteneously because they also depend for credit requirements from dealer. Overall the situation leads to the substantial increase in the cost of cultivation.

7.21 Mode of Purchasing of Inputs

Sr. No.	Mode of Purchasing	No. of Households	Proportion to Total No. of Households (%)
1.	Cash	52	26.39
2.	On Credit	38	19.28
3.	Cash + Credit	107	54.31
	Total	301	
Sr. No.	Rate of Interest Monthly Annual	No. of Farmers	Proportion to Total No. of Households (%)
1.	2% 24%	62 (42.75)	31.47
2.	3% 36%	24 (16.55)	12.17
3.	4% 48%	01 (0.68)	0.50
4.	Extra Price --	03 (2.06)	1.52
5.	Mortgage --	1 (0.68)	0.50
6.	No Interest Rate --	54 (37.24)	27.41
	Total	145	

Source: Field Survey
Figures in parentheses indicate percentage

More than two third (73.59%) of the farm households from the suicide hit regions of Maharashtra cannot procure farm implements and other inputs on cash purchasing mode. They obtain it on credit charged on monthly basis either by traders or village moneylenders which accounts for 24 per cent the minimum and 48 per cent the maximum rates of interest per annum. In some cases (37.24%) interest is not openly charged by traders but it is found that the credit/interest price is hidden in the price of implements whereas in a few cases (2.06%) the extra price on credit purchase of implements is directly or openly charged. It is because of the

inadequacy of institutional crop loans or the availability of loans only for capital investments as well as longer time required for bank loan processing, agent charges and low credit ability of farmers on account of pending over dues. The practice of mortgaging is very old and still prevalent in all parts of the country, particularly in case of private loans and when buying something from the village trader but it mostly underwent unreported by farmers during our study (only one deceased household openly reported the fact which accounts for 0.68 per cent but the social structure of Vidarbha and Marathwada is pro mortgage loans and purchases).

7.22 Crop wise per Acre use of Fertilizers

Sr. No.	Per Acre Use (Kg.)	Cotton	Soya.	Sugar cane	Mung	Jowar	Wheat	Bajra	Udad	Gram	Onion	Tomatto	Safflower	Total
1.	40	61 (47.28)	59 (55.14)	--	04 (80)	59 (92.18)	--	30 (71.42)	03 (60)	07 (46.66)	--	--	--	223
2.	80	45 (34.88)	42 (39.25)	05 (41.66)	01 (20)	05 (7.81)	28 (73.68)	12 (28.57)	02 (40)	07 (46.66)	--	01 (100)	02 (100)	150
3.	120	14 (10.85)	04 (3.73)	01 (8.33)	--	--	01 (2.63)	--	--	01 (6.66)	--	--	--	21
4.	160	03 (2.32)	02 (1.86)	04 (33.33)	--	--	08 (21.05)	--	--	--	--	--	--	17
5.	200	04 (3.10)	--	--	--	--	01 (2.63)	--	--	--	--	--	--	05
6.	240	02 (1.55)	--	--	--	--	--	--	--	--	--	--	--	02
7.	320	--	-	01 (8.33)	--	--	--	--	--	--	01 (100)	--	--	02
8.	Ten	--	--	--	--	--	--	--	--	--	--	--	--	--
9.	480	--	--	01 (8.33)	--	--	--	--	--	--	--	--	--	01
	Total	129	107	12	05	64	38	42	05	15	01	01	02	421

Source: Field Survey
Figures in parentheses indicate percentage

The use of fertilizers was increased in Indian agriculture particularly after the introduction of the green revolution. Extension services have failed to update farmers for the use through soil testing. Usage of fertilizers needs to be determined by the type of soil but farmers apply the doses of the same as is suggested by dealers or friends. As a result sometimes they

apply excess of fertilizers or sometimes it falls short of the minimum requirement. In the first situation it leads to increase in the cost of cultivation and in second it affects the productivity. It means in both the situations farmers have to face losses. Prices of fertilizers have rapidly increased but the change in minimum support price has been disproportionate. During the period of 1994-2002 the prices of fertilizers in Andhra Pradesh increased by 400 per cent where Maharashtra also is not an exception to it.

7.23 Crop Wise Spraying of Pesticides

			No. of Spraying						
Sr. No.	Crop	No Spraying	One	Two	Three	Four	Five	Six	Total
1.	Cotton	--	06 (4.65)	24 (18.60)	39 (30.29)	35 (27.13)	13 (10.07)	12 (9.30)	129
2.	Soyabean	--	19 (17.75)	29 (27.10)	38 (35.51)	17 (15.88)	04 (3.73)	--	107
3.	Udad	01 (20)	--	03 (60)	--	--	--	01 (20)	05
4.	Mung	--	05 (100)	--	--	--	--	--	05
5.	Gram	--	04 (28.57)	--	--	--	--	--	14
	Total	01	34	56	77	52	17	13	260

Source: Field Survey
Figures in parentheses indicate percentage

Uncontrolled use of Nitrogen dominated fertilizers and I.P.M. (Integrated Pest Management) after the green revolution had its implications on crop productivity, underground water quality and human health. There has always been a gap between the recommended and the actual use of fertilizers by farmers. Crop requirements of fertilizers depend on various factors like quality of land, temperature, water, type and crop duration and season in which the crop is grown. But in most of the cases of Indian conditions fertilizers have been used on the basis of the assumption of 'more fertilizers more production' which has long term negative

implications on land productivity. It is found that Cotton, Soya bean, Wheat and Gram are the crops where farmers prefer to use more amount of fertilizers per acre than the other crops. Mostly the use of fertilizers by farmers is determined by traders as the farmers follow their advice in this regard and often this advice is in the direction of more sale and profit from the same. The extensive use of fertilizers and pesticides in states like Andhra Pradesh, Gujarat, Maharashtra and Punjab, mainly for Cotton has been the main reason for cost multiplications, decline in productivity and thereby negative returns from cultivation which caused agriculture crisis. Table 7.23 brings out the same picture about the use of pesticides. It has been found very high both at the national and at the field level of study area in the state. Our findings in this regard correspond to that of the earlier studies on Cotton that 45 per cent of the total pesticide expenses at national level have been on this crop and mainly on controlling the bollworms. Our study reveals that the 49.61 per cent of the total pesticides are used for Cotton which disproves the commitments of Monsanto-Mahyco, the company producing and supplying Bt-cotton seeds in the state. Now the farmers are made to use more amounts of pesticides on Cotton than before because even if it is argued that the Bt-cotton is immune to bollworms, but there are many other pests affecting crop in Indian conditions that needs to be controlled to which BT variety is more vulnerable than the locally developed varieties of Cotton. Also the seed price of BT is almost three times higher than other hybrid varieties plus the farmers will have to use recommended dose of fertilizers and pesticides which leads to incurring of more costs on cultivation. The pesticide prices have also shown faster increase than other inputs due to the rapidly

increasing in demand. It has certainly increased the cost of cultivation which is instrumental to some extent in increasing the suicidal mortality rate among the state farmers as more number of them ended their lives by consuming readily available pesticides. More use of pesticides on Cotton also caused hazardous health problems among Cotton pickers in Andhra Pradesh, Punjab, Gujarat and Maharashtra in India and the Punjab province of Pakistan. And in Gujarat more than 6500 deaths of farmers and agriculture labourers have been recorded by police as an accidental deaths, either due to unknowingly consuming pesticides as medicine or because of the intoxication of pesticides while working on Cotton fields.

7.24 Area, Production and Productivity of Major Crops-2007-08

	1	2	3	4	5	6	7	8
Sr. No.	Crop	No. of Farmers	(%) of Total HH	Total area under crop by affected family (acre)	Summation of productivity (Qtl.)	Avg. area per affected HH (acre) (4/2)	Productivity realized (qtl.) (5/2)	Avg. production (qtl.) (6x7)
1.	Cotton	124 (25)	62.94	341	471	2.30	3.79	8.71
2.	Soyabean	105 (21.16)	53.29	352	404	3.14	3.84	12.05
3.	Jower	64 (12.90)	32.48	120	301	1.34	4.70	6.29
4.	Bajra	40 (8.06)	20.30	66	198	1.26	4.95	6.23
5.	Tur	86 (17.33)	43.65	56	370	0.26	4.30	1.11
6.	Mung	06 (1.20)	3.04	11	15	1.33	2.50	3.32
7.	Safflower	02 (0.40)	1.01	04	06	2	3	3
8.	Udad	06 (1.20)	3.04	16	17	2.26	2.83	6.40
9.	Wheat	33 (6.65)	16.75	79	233	2.15	7.06	15.17
10.	Sugarcane	12 (2.41)	6.09	30	341	2.20	28.415 (ton)	62.515 (ton)
11.	Gram	14 (2.82)	7.10	35	58	2.20	4.14	9.10
12.	Groundnut	02 (0.40)	1.01	2	31	1	15.50	15.50
13.	Onion	02 (0.40)	0.01	2	175	1	87.50	87.50
	Total	496	--	--	--	--	--	--

Source: Field Survey, Figures in parentheses indicate percentage

Cotton and Soya bean dominate the cropping pattern of suicide hit Vidarbha region of Maharashtra. Soya bean is a crop which has featured as one of the significant crops in Maharashtra in the recent past for khariff season. Other crops such as Bajra and Jowar are the crops grown all over the state except the Konkan belt which is a coastal area of the state climatically suitable only for Paddy, Vegetables and Fruits. Crops like Wheat, Sugarcane and Vegetables are grown particularly where there are assured irrigation facilities. Cotton, the most preferred crop in Vidarbha, registered a per acre productivity of 3.79 quintals, which is higher than the national average of 2.30 quintals per acre. Vidarbha has a comparative advantage of Cotton over the other regions but the increase in cost of inputs makes Cotton cultivating agriculture the field of negative returns. During the British rule Vidarbha Cotton had a good demand for Manchester textile. The productivity of Soya bean, Arhar, Mung, etc. shows little deviation from the national average and that is mainly because of the territorial fluctuations in weather conditions and the changes in availability of other inputs like irrigation, fertilizers, etc. But when the net returns from crops like Cotton with high productivity are compared to the local cost conditions and the market price of the crop it leads to net negative income per acre by around Rs. 6000. Also, farmers do not get payments for the crop for over a period of six months if they sell at state procurement centers. At such times the gap leads to an increase in the interest payments on the loan they borrow from private and institutional sources for preparatory and investment purposes. The rates of interest charged in Vidarbha and other parts of the state by private moneylenders

are found as high as 36 to 120 per cent per annum. These moneylenders are either traders or local political leaders and hence despite repeated announcements by the state it has not been possible to eliminate them from lending activity which has been a dominant reason for the mental stress of farmers. It is not the efficiency of farmers and the productivity of the land that is pushing them to suicide but the unavailability of extension facilities and the lack of rural infrastructure such as electricity, irrigation and storage if to be arranged on their own leads to cost spiraling and hence net negative returns has been killing the state farmers. Also, the post reforms agriculture market vagaries and the gap between input and output price change worsened the crisis. Hence neither the incidence of poverty amongst farmers nor does the inefficiency of them or unproductive expenses / use of loans as the farmers are always accused of has pushed them to the suicides but it is because of punctured pride on account of an accumulated economic tension due to unexpected losses and continuance of the same for a long time plus negligence in policy kind of the things and declining rural and agriculture investments ever since 1986 in the country.

7.25 Agricultural Produce Marketing of Major Crops for the Year 2007-2008

	1	2		3	4	5	6	7
Sr. No.	Crop	Marketable Surplus		Total (2a+2b)	Total sur-plus prod. (qtl.)	Avg. sur-plus (qtl.)	Avg. price (Rs.)	Avg. gross income (Rs.) (5x6)
		Yes (a)	No (b)					
1.	Cotton	124 (100)	--	124	1305	10.52	1957.00	20587.00
2.	Soya bean	102 (97.14)	03 (2.85)	105	1264	12.39	1803.00	22339.00
3.	Tur	58 (67.44)	28 (32.55)	86	174	3	1689.00	5067.00

4.	**Jowar**	**06 (9.37)**	**58 (90.62)**	**64**	**69**	**11.50**	**691.00**	**7946.00**
5.	**Bajra**	**11 (27.5)**	**29 (72.2)**	**40**	**114**	**10.36**	**552.00**	**5718.00**
6.	**Wheat**	**25 (75.75)**	**08 (24.24)**	**33**	**423**	**16.92**	**892.00**	**15092.00**
7.	**Gram**	**13 (92.85)**	**01 (7.14)**	**14**	**114**	**8.76**	**1876.00**	**16433.00**
8.	**Mung**	**06 (100)**	**--**	**06**	**30**	**05**	**1416.00**	**7080.00**
9.	**Udad**	**04 (66.66)**	**02 (33.33)**	**06**	**39**	**9.75**	**1687.00**	**16448.00**
10.	**Safflower**	**02 (100)**	**--**	**02**	**12**	**6**	**1150.00**	**6900.00**
11.	**Sugarcane**	**09 (75)**	**03 (25)**	**12**	**735**	**81.666 (ton)**	**819.00**	**66884.00**
12.	**Groundnut**	**02 (100)**	**--**	**02**	**39**	**19.50**	**1550.00**	**30225.00**
13.	**Onion**	**02 (100)**	**--**	**02**	**175**	**87.50**	**500.00**	**43750.00**
	Total	**364**	**132**	**496**				

Source: Field Survey
Figures in parentheses indicate percentage.

It is difficult to call as marketable surplus to whatever the amount of output that farmers sell of their product in the market. Because certain category of commercial crops such as Cotton, Soya bean, Groundnut, Onions and Sugarcane are the crops where application of the concept of marketable surplus is difficult as these category of crops are not required for household consumption. Therefore the amount of marketable surplus of these crops emerges more than the other crops. But in the case of an actual marketable surplus of the consumable crops, it has been observed to be less than expected. For example, the marketable surplus of Jowar and Bajra is limited to 9.37 and 27.5 per cent of the growers which implies that for majority of farmers' (90.62 Jowar and 72.2 Bajara growers) agriculture is mainly the occupation of livelihood and not for the profit earning commercial enterprise. More than 50 per cent of the families surveyed have the agriculture of this type. As observed in the foregoing sections the marketability of Cotton and Soya bean is of the high order,

i.e.100 and 97.14 per cent respectively and we also find the higher incidence of farmers suicides in this category of cultivators. The production of food-grains in Maharashtra is basically for consumption or is the activity of livelihood agriculture and is not a part of commercial agriculture like that of Punjab the food-grains dominating Rice and Wheat growing agriculture. As the gap between expected and market price widened and the average price per quintal realized as per our calculations at Rs.1975 for 2007-08 the income from the commercial crops like Cotton in recent past has receded and has become far less than the cultivation costs there by leading to negative revenue from agriculture. The state government of Maharashtra announced MSP of Rs. 2850 for the best quality Cotton but the farmers report corruption in gradation by state officials (Graders) which leads to the transfer of benefits towards private Cotton traders apart from marketing charges charged by them.

7.26 Crop Wise Cost of Cultivation -2007-08 (Rs. / acre)

Sr. no.	Particulars	Cotton	Soya	Tur	Jowar	Bajra	Wheat	Gram	Mung	Udad	Safflower	Suger Cane	Ground nut	Onion
1	Ploughing	500	500	500	500	500	500	500	500	500	500	500	500	500
2	Harrowing	600	350	350	350	350	350	350	350	350	350	950	350	350
3	Seed	800	450	350	900	320	480	450	350	380	400	3500	500	3200
4	Sowing	1120	300	1200	300	300	500	300	300	300	300	3000	300	1000
5	Fertilizers	969	727	778	522	623	1224	775	581	678	848	1979	968	3878
6	Pesticides	1401	872	872	--	--	--	340	320	960	--	--	320	640
7	Weeding & Intercultural	1500	1350	750	950	750	1750	1050	750	750	950	1200	800	700
8	Harvesting	1137	1275	1175	975	975	1085	775	900	900	1300	1800	950	1000
9	Transport & other	500	200	300	200	200	240	200	160	160	160	--	420	1600
10	Total	8527	6024	6275	4697	4018	6129	4740	4211	5938	4808	12929	5108	12868
11	Income	7417	6929	7262	3247	2732	6297	7766	3540	4774	3450	23271	24025	43750
12	Net Returns	-	905	977	-	-	168	3026	-671	-	-	10342	18917	30882

		1110			1450	1286				1164	1358			

Source: Field Survey

The above table (No. 7.26) explains crop wise actual on farm cost of cultivation in the study region of the state. It covers all important components of expenditure occurred during the cultivation except the irrigation charges and imputed value of family labour. The gap between cost of cultivation and minimum support price for all crops varies from -38 to -50 per cent i.e. cost exceeds minimum support price. Cotton incurred a heavy loss of Rs.1360/- per acre. Hence the negative income from the crop cultivation became a suicide trap which was the 'White Gold' of Vidarbha region of the state during the 1970s and 1980s. The price of one quintal of Cotton was equal to the price of 15 grams of gold during the 1970s and now the same is 8 to 9 times less than even 10 grams of gold. And most of the farmers who have committed suicide were cotton growers (62 per cent). The crops like Soyabean and Tur (Arhar) which follow the Cotton in the region bring per acre net returns up to Rs.655 and Rs.1057 respectively. It means the cultivation practices have become more vulnerable in Vidarbha region of the state which has affected badly the individual household economy. The unremmunarative state of agriculture and inadequacy of the institutional loans forced farmers to borrow from the private sources at higher rates of interest. Food-grains crop like Wheat, Bajara and Jower are mostly cultivated for the consumption purposes and only if something remains after consumption then that is sold in the market. However, the Bajra and Jowar cultivators found incurring a per acre loss of Rs.1286 and Rs.1450 respectively whereas, Wheat yields Rs.168 higher than the cost of cultivation. The crops like Sugarcane, Groundnut and Onion which are cultivated in the irrigated

region of Western Maharashtra bring better returns to the farmers. The foregoing analysis is indicative that the dry land farmers have to face the problem of heavy losses as compare to the irrigated farmers. The present study did not take in to account the wages of the family labourers in the form of an 'Imputed Value' but had that been included in the cost of cultivation, then no crop could have brought any positive returns from cultivation. Farmers have to face losses or the net returns below their expectation due to increased cost of cultivation and declined output prices. As well as the gap between consumers price and the price that the producer get at APMC has widen over the years. Farmers get only 40 per cent of the part of the price that is paid by consumer in the retail market and the remaining 60 per cent is grabbed by the middlemen. Hence the agrarian crisis is an outcome of the failure of the agriculture marketing mechanism in the country for which the state is not an exception. If the farmers of the Vidarbha region get fair price for their produce, they will neither need any financial assistance nor will they demand special economic package from the government. On the one hand, government announces the special package for farmers and on the other farmers have to face losses due to the unremunerative prices of the output. In 2006, the state government of Maharashtra announced a relief package of Rs.1070 crore for the suicide hit six districts of Vidarbha. And simultaneously reduced the support price for Cotton by Rs.500 per quintal (i.e. from Rs.2700 to 2200 per quintal) it means the saved amount was used for the package money. As a result, the special package did not give any expected results in the region. Therefore it is clear that increased cost of cultivation

with reduced returns is the dominant cause of the agrarian crisis and there by farmers suicides in the state of Maharashtra.

7. 27 Destination of Sale of Agriculture Produce

Sr. No.	Type of Market	No. of Farmers	Proportion to Total no. of Farmers (%)
1.	Govt. procurement Center	--	--
2.	Agriculture Produce Marketing Committee	44 (24.30)	22.33
3.	Traders	93 (51.38)	47.20
4.	Traders + Agriculture Produce Marketing Committee	44 (24.30)	22.33
	Total	181	
Sr. No.	Place of Market	No. of Farmers	Proportion to Total no. of Farmers (%)
1.	Local Market	59 (32.59)	29.94
2.	Taluk Level Market	67 (37.01)	34.01
3.	Both Level Markets	55 (30.58)	27.91
	Total	181	

Source: Field Survey
Figures in parentheses indicate percentage

Agricultural Produce Marketing Committees (APMCs) were established for providing better marketing facilities for farmers and also were expected to eliminate middlemen existing in the agricultural marketing mechanism. In principle the Maharashtra Cotton Procurement Federation was meant for the Cotton procurement. Major thrust of the scheme was to provide relief for farmers from exploitation by private traders. But, it is observed during the present study that, about 75.68 per cent of the farmers resort to traders to sale their produce. And the most striking fact is that, not even a single Cotton producer sale his produce at the Federation outlets. Because, selling of Cotton at government procurement outlets take too much of time and leads to incurring of unnecessary

expenses. Also the government machinery takes more time for making payment where the farmers need to convert their produce in income at the earliest possible. Because they need to repay the loans and other advances they obtain from traders at the initial stage of cultivation. Since 2006, procurement centers in Vidarbha are closed. Therefore the traders have a dominant role to play. Because, they are input dealers and also the source of private borrowing and at the same time the wholesalers of inputs. As a result, they make compulsions at the time of purchasing of input or credit borrowing and sale their available stock of inputs at a price they want. Farmers being at the receiving end with no exception but have to accept it. Hence, farmers earn income below the expected level which is often less than the cost of cultivation. They are not able to fulfill their basic needs at such income level. And have to borrow money from the private sources for consumption and other purposes. Thus the influence of the private traders in agricultural marketing mechanism indicates that there is a need of structural changes and better market regulations in the existing marketing mechanism.

7.28 Mode of Transport of Agriculture Produce to Marketing Destination

Sr. No.	Mode of Transport	No. of Farmers	Proportion to total No. of Farmers (%)
1.	Bullock cart	37 (23.12)	18.18
2.	Tractor	33 (20.62)	16.75
3.	Rickshaw/small motor vehicle	90 (56.25)	45.68
	Total	160	
Sr. No.	Type of Road	No. of Farmers	Proportion to total no. of Farmers (%)
1.	Pucca	122	61.92
2.	Kuccha	Local	--

			Marketing	
	Total		122	
Avg. Distance from market (Km)		Maximum (Km)	Minimum (Km)	Avg. Transport cost (Rs.)
13.40		30	03	19.00

Source: Field Survey
Figures in parentheses indicate percentage

Data in table 7.28 reveal the place / destination where farmers sale their produce and the mode of transportation by type of road and distance of market from the place of cultivation. Around 40 per cent of the agriculture produce in India perishes in storage and transit and 60 per cent of the remaining is sold in unorganized markets. The same has been indicated by various studies on Punjab and the present study does also bring out that the fact is true in suicide affected regions of the state of Maharashtra. Despite the state centers of Cotton procurement available for farmers, no farm household under the present study is found giving preference to sale its output at those centers due to the time they need to spend at the centre and delay in payments by the state government machinery. On an average, two third of farmers prefer to sale their produce through the unorganized mode of marketing that consists traders and local weekly village markets. Even at the Agriculture Produce Market Committees, traders are more organized and hence dominant and the farmers always at the receiving end of all usurious practices of them. The proportion of farmers those bringing product at A.P.M.Cs. from the studied regions of the state is limited to 24.30 per cent leaving around 75 per cent of the cultivators to face exploitation by private traders. It is a fact that the farmers' relationship with unorganized mode of marketing is obligatory due to the on credit mode of purchases of implements and inputs such as seeds-fertilizers and in advance borrowing from traders and local moneylenders.

The problems and difficulties of transportation in accessing market are faced by majority of the farmers. Generally the conditions of roads in Vidarbha have been observed to be of satisfactory. Therefore the foregoing analysis suggests that majority of agriculture marketing problems can be solved if the proper market regulations are enforced and exercised, delays and corruption at state procurement centers are avoided, institutional credit without agents is made available and the village moneylenders are eliminated or regulated (also see R.S.Deshpande 2008).

7.29 Information about MSP and Distress Sale

Sr. No.	Information about MSP	No. of Farmers	Proportion to total No. of Farmers (%)
1.	Yes	52	61.92
2.	No	145	73.60
	Total	197	
Sr. No.	Reasons for sale to the private traders	No. of Farmers	Proportion to total No. of farmers (%)
1.	Late Payment by Govt.	19 (33.33)	9.64
2.	Economic Problem	11 (19.29)	5.58
3.	Monopoly of Traders	04 (7.01)	2.03
4.	Excess time at Procurement centre	06 (10.52)	3.04
5.	Unorganized farmers	01 (1.75)	0.50
6.	Closed procurement centre	02 (3.50)	1.01
7.	Excess price at open market	04 (7.01)	2.03
8.	Sale as per MSP	10 (17.54)	5.07
	Total	57	

Source: Field Survey
Figures in parentheses indicate percentage

The Minimum Support Price mechanism of the country can neither stop distress sell of produce nor has it helped in bringing agriculture market perfections. Large numbers of farmers of the state are unaware of the existence of such a mechanism and for the study regions the proportion of

such farmers is found 73.60 per cent (145 out of 200). Minimum Support Price for Cotton depends on the grade of the product but untrained graders and corruption by them leads to random or faulty grading which has defeated the basic aim of the MSP at state procurement centers in Maharashtra. The payments of state procurement centers are made through village co-operative credit society, i.e. the PACs which deduct outstanding credit at source of payments often leaving nothing at farmers' disposal has become another reason for farmers not to prefer the procurement centre for the sell of their crop. And when the state policy like loan wavers comes it excludes the regular repaying farmers and benefits get passed on to the accounts with pending overdue (NPA). Our study also reveals that the source deduction of loan amount makes farmers to borrow from moneylenders for their subsequent crop cultivation at higher rates (ranging between 36 to 120 per cent per annum as has been observed by the present study) as a result we found that 89 per cent of the suicide affected farm families of the study regions were debt trapped and the private debt is a dominant culprit for the same. Another vital aspect of the state procurement centers is that many of them are closed for the last few years and hence farmers have no option but have to approach private marketing outlets where barter traders can determine everything in the market with the farmers at the receiving end. Hence the kind of agriculture market structure available opens up different problems which have multiplying negative impacts on the state farm economy.

7.30 Crop Wise Spurious Seeds and Number of Sowing Repetition

Sr. No.	Spurious Seeds	No. of Households	Proportion to total No. of Households (%)
1.	Yes	48	24.36

2.	**No**			**149**				**75.63**
	Total			**197**				
Sr. No.	**No. of Times**	**Cotton**	**Soya.**	**Jowar**	**Bajra**	**Wheat**	**Onion**	**Total No. of farmers**
1.	**One**	**26 (66.66)**	**01 (25)**	**01 (100)**	**01 (100)**	**01 (100)**	**02 (100)**	**32 (66.66)**
2.	**Two**	**10 (25.64)**	**03 (75)**	**--**	**--**	**--**	**--**	**13 (27.08)**
3.	**Three**	**03 (7.69)**	**--**	**--**	**--**	**--**	**--**	**03 (6.25)**
	Total	**39**	**04**	**01**	**01**	**01**	**02**	**48**

Source: Field Survey
Figures in parentheses indicate percentage

The entry of private seeds producers followed by multinationals in the seeds industry without the level playing field in the form of properly designed seeds policy and the regulatory mechanism had its expected impacts on the Indian agriculture where the regions under the present study are not an exception. It incurred losses to around one forth (24.36 per cent i.e.48 households) of the farm households in the state of Maharashtra from where farmers suicides have been reported. And the farmers can understand the quality of seeds they bought for sowing only when either the seeds don't germinate or the crop is fully grown and it does not show the promised yields but in both the cases farmers have to forego the season with incurred losses on what they spent on seeds and crop maintainance. It is clear from the field study that the higher probability of spurious seeds is often there in case of commercial crops like Cotton and Soya bean where the incidence of the same has been of the higher order. The spurious seeds caused losses to 24.36 per cent of the farmers of which 81.25 per cent of them belong to the category of Cotton growers and surprisingly most of them are of BT Cotton growers, the crop of which suicidal mortality rate among farmers has been higher in all suicide affected states of the country.

7.31 Reasons for Crop Failure

Sr. No.	Reasons	No. of Farmers	Proportion to total No. of Farmers (%)
1.	Lack of rainfall	45 (30.61)	22.5
2.	Excess rainfall	28 (19.04)	14
3.	Spurious seeds	36 (24.48)	18
4.	Lack of rainfall & spurious seeds	12 (08.16)	6
5.	Pest attack	24 (16.32)	12
6.	Lack of electricity	02 (01.36)	0.50
	Total	147	

Source: Field Survey
Figures in parentheses is percentage

Traditionally, the Indian agriculture depends on vagaries of monsoon with one of the countries of the category of lowest cover of irrigation. Hence the crop productivity is determined by the quantum and the schedule of monsoon. Little change in the schedule and quantum of the same leads to the failure of a whole season. Often it is experienced in Maharashtra that when the crops like Cotton and Grapes are about to mature and farmers are awaiting for harvest in the months of Jan-Feb they get untimely rains and the crops are ruined. Same is the case of Onions cultivators in Western Maharashtra, Karnataka and Gujarat. Partial or total failure of crops on account of lack of rainfall always has a high probability. In the case of Maharashtra there are twenty thousand such villages from twenty districts which are under the stress of water for agriculture and other usage and more than two third of them are from Vidarbha and Marathwada regions from where the largest number of suicides by farmers have been reported. It is clear from the above given table No. 7.31 that more than 50 per cent (53.44%) of the crop failure has to be accrued

to an inadequate or untimely rainfall. As has been noted in the foregoing sections the lacunae in seeds policy at national level and the resultant failure of crops in the studied regions has been of very high order where 31.03 per cent of the farmers have faced losses on account of the spurious seeds and this is mostly in the case of the commercial crops like Cotton, Soya bean and Onions. These are the crops which relatively incur higher cost for cultivation and are also vulnerable to pests, irrigation and change in natural conditions. Therefore the partial or total failures of such crops push farmers into losses followed by debt traps originating both from private and institutional sources. Again, the origin of the debt trap is often reported from the private moneylenders. The mono cropping pattern in the Vidarbha and Marathwada regions of the state makes crops like Cotton more vulnerable to pests due to the fast spread of the same in the vicinity caused crop losses to some (16.32%) farmers. In some cases it was noted that the farmers have water available in their wells, the wells are energized by electric pump sets but there is no electricity to operate the pump sets hence they cannot irrigate the field on time and have to see the crops dying with open eyes. This situation demands a thoughtful and determined political will and approach towards rural electrification and uninterrupted continuance of the same so that the farmers, at least those who have invested in irrigation network on their own, will not suffer.

7.32 Wage Rate of Agricultural Labour

Sr. No.	Gender	Maximum (Rs.)	Minimum (Rs.)	Avg. Wage Rate (Rs.)
1.	Male	125	30	69.32
2.	Female	70	20	40.47

Source: Field Survey

The farm households are engaged in both the type of works i.e. as a cultivator and farm labourer. Implementation of Mahatma Gandhi National Rural Employment Guarantee Act-2005 (MGNAREGA) has made negative impact on agriculture. During the post MGNAREGA period, agricultural labourer started demanding for higher wages, which has created an economic burden on cultivators. Also the supply of labour force to agriculture has declined due to the locally available manual work under the MGNAREGA. This is the actual outcome and impact of the scheme in other parts of the state. But in Vidarbha, the controversial situation was observed during the survey of present study. During the study, huge differences in wage rates by gender, season and region are observed. During the peak season, the wage rate for male and female is around Rs. 125/- and Rs. 75/- respectively. But during the post harvest season (February-May) wage rate ranges between Rs.30/- for male and Rs.20 for female. This is the ground reality of Vidarbha region of the state. The condition of labour force of Western Maharashtra, in terms of the working days and wage rate is slightly better than that of Vidarbha. It is difficult to find any work during the off season in Vidarbha. Hence agricultural labourers have to borrow from private sources for their consumption purposes at the high rates of interest. Because, the economic status is not up to the level to satisfy their basic needs. And also they cannot repay the loan amount due to their low level of income. As a result, the debt burden increases and goes beyond their repaying capacity. In the present study, 3 households belong to the land less category, means they are purely agriculture labourers. The distress burden reaches at the peak if a marriageable daughter or sister is there in the family. It is the matter

of prestige or social status in rural society. And one who is not able to maintain and fulfill the basic requirements of the marriage it certainly leads to the deterioration of social status.

7.33 Employment under Employment Guarantee Scheme

Sr. No.		No. of Farmers	Percentage	Wage Rate (Rs.)
1.	Yes	15	7.5	50/-
2.	No	185	92.5	--
	Total	200		

Source: Field Survey

In the year 1972, Government of Maharashtra introduced the Employment Guarantee Scheme as a part of poverty eradication programme by creating employment opportunities in the rain fed areas of the state. Basic thrust of the scheme was to provide employment to agricultural labourers during the post harvest period. As well as, the same has been useful for creating of rural and agriculture infrastructure i.e. trenches, roads, check dams, small and medium irrigation projects, etc. Around 80 per cent of the households demand that they need work through the scheme but only 7.5 per cent of households get employment under the scheme. As compare to Vidarbha and Marathwada, the scheme was effectively implemented in Western Maharashtra. It created employment, as well as, irrigation facilities in this part of the state. This has not only been helpful to the agriculture but strengthened the base of rural economy of the region. The scheme neither has created any employment opportunities nor did the irrigation infrastructure in Vidarbha. It means the scheme has failed in meeting basic aims and objectives of the same in Vidarbha. It is necessary to have effective implementation of such an employment generating schemes to reduce the

pressure from agriculture, as well as, the creation of rural infrastructure for strengthening the rural economy at micro level.

7.34 Source Wise Loan and Rates of Interest Paid

Sr. No.	Source	No. of Farmers	Proportion to total No. of farmer (%)	Amount (Rs.)				Interest Rate (%)		
								Max.	Mini.	Avg.
				Maximum	Minimum	Total	Average			
1.	Co. Op.	104 (37.14)	52	3,38,000.00	800.00	26,59,300.00 (27.98)	25,570.00	16	12	14
2.	Nationalized Bank	72 (25.71)	36	4,00,000.00	5,000.00	27,65,800.00 (29.10)	38,413.00	14	12	13
3.	Money lender	67 (25.71)	33.5	2,75,000.00	6,000.00	27,76,000.00 (29.20)	41,432.00	120	36	78
4.	SHGs	1 (0.35)	0.50	18,000.00	18,000.00	18,000.00 (0.18)	18,000.00	24	24	24
5.	Urban Co-Op.	12 (4.28)	6	2,05,000.00	10,000.00	10,05,000.00 (10.57)	83,750.00	19	10	14.5
6.	Sugar Factory	2 (0.71)	1	2,50,000.00	30,000.00	2,80,000.00 (2.94)	1,40,000.00	12	12	12
7.	No loan	06 (2.14)	3	--	--	--	--	--	--	--
8.	Information Not available	16 (5.74)	8	--	--	--	--	--	--	--
	Total	280				95,04,100.00				

Source: Field Survey
Figures in parentheses indicate percentage

Borrowing by farmers for agricultural operations and capital investments in agriculture is neither a new nor is it wrong but the use of credit, time, adequacy, price and resultant long term impacts of the same have wide range of repercussions on the lives of peasantry and farms. It is a fact that the performance of co-operatives and nationalized commercial banks in agriculture credit could not wipe out the legacy of private moneylenders from the Indian countryside. Many research attempts on rural credit in India have noted the fact that the farmers receive discriminatory treatment by the nationalized commercial bank officials. And the co-operatives had never been free of political interference and historic record of unsatisfactory performance. The rural institutional credit sector of the country neither could eliminate nor has been able to control the lending rates and the dominance on lending by private moneylenders. It has been noted by our study that the proportion of suicide affected farmers

borrowing from private moneylenders ranks at three (one third) in table no.7.34 with 33.50 per cent of farmers borrowing from them after 52 and 36 per cent of the farm households borrowing from co-operatives and commercial banks but both, the amount borrowed from and the rates of interest charged by moneylenders have been far higher than both the institutional sources. The average amount borrowed from moneylenders has been of Rs.41,432 whereas the same has been of the order of Rs. 25,570 from co-operatives and Rs.38,413 from the nationalized commercial banks with huge difference in the rates of interest the average of which comes out as 14 per cent by co-operatives, 13 per cent by commercial banks and 78 per cent by the moneylenders which can double the amount borrowed within a period of less than one year (the maximum rates charged have been 16% by co-operatives, 14% by banks and 120% by the moneylenders). Despite the aforementioned usurious practices by moneylenders the farmers in the regions are not ready to reveal anything about them due to the strong hold the moneylenders retain on the rural farm economy and society on account of their ancestral dominance and the contemporary political links. But still the farmers borrow from them because loans are available on demand (which they term as Demand Loan) and they will have to pay commission to the tune of around 30 per cent of borrowing amount to agents at banks and co-operatives plus the time of processing is longer also the credit ability of them is at the bottom due to the pendency of earlier loans. For the purpose the agriculture sector it needs to be guaranteed for an adequate lending, strict observance of the performance of commercial banks in this direction and fulfillment of the

statutory provision of lending of 18 per cent for agriculture by commercial banks.

7.35 Reason and Source Wise Loan Obtained by Farmers

Sr. No.	Reason	Co-Op.	Nationalized Bank	Money lender	SHGs	Urban Co-Op.	Sugar factory	Total
Agriculture Related Loans – (83.81)*								
1.	Agri Exp.	91 (85.84)	32 (40.50)	24 (32.43)	--	04 (25)	--	151
2.	Seeds & Fertilizers	01 (0.94)	02 (2.53)	05 (6.75)	--	01 (6.25)	01 (50)	10
3.	Modern Agriculture Implements	05 (4.71)	08 (10.12)	01 (1.35)	01 (100)	03 (18.75)	--	18
4.	Irrigation	05 (4.71)	23 (29.11)	06 (8.10)	--	02 (12.5)	--	36
5.	Live stock	02 (1.88)	08 (10.12)	03 (4.05)	--	02 (12.5)	--	15
6.	Land Parching	--	01 (1.26)	01 (1.35)	--	01 (6.25)	--	03
Non-Agriculture Related Loans- (16.18)**								
7.	Housing	--	01 (1.26)	03 (4.05)	--	02 (12.5)	--	06
8.	Marriage	01 (0.94)	-	23 (31.08)	--	--	--	24
9.	Business	01 (0.94)	03 (3.79)	02 (2.70)	--	01 (6.25)	01 (50)	08
10.	Health	--	--	03 (4.05)	--	--	--	03
11.	Education	--	--	02 (2.70)	--	--	--	02
12.	Reason not Cited	--	01 (1.26)	01 (1.35)	--	--	--	02
	Total	106	79	74	01	16	02	278

Source: Field Survey
Figures in parentheses is percentage of total No. of respondent
***, ** Proportion of deceased farmers obtained loans**

Usually the society has a presumptive opinion about the unproductive use of farm loans but information cited in the above table No. 7.35 makes it clear that most of the loans are borrowed and used for productive purposes. Hence it is clear from our study that the farmers neither borrow nor do they make any unproductive use of loans which can bring an imbalance at their farm economy. 83.81 per cent of the farm households

from where suicides reported have been found borrowing and strictly using the loan amount for agriculture related productive purposes such as investments, buying of implements, seeds and fertilizers, irrigation and on livestock. As has been noted in the foregoing parts the farmers incur more expenses because they need to spend on the infrastructure which is otherwise expected to be made available by the state investment which stands as merit public agriculture infrastructure such as irrigation, rural electrification and other extension facilities. For example, as there is no regular electricity many farmers have spent on buying of generators for energizing of pump sets and the additional expenditure on diesel for operating those generators has become a costly affair when they attempt to irrigate crops with inadequate state electricity infrastructure. Also spending on cattle or livestock takes place because of the scarcity of public animal hospitals. Only 16.18 per cent of the farmers were found borrowing for non-agricultural purposes but these borrowings also cannot be termed as unproductive borrowings which consisted health, education of children, attempt of non agriculture employment and housing. The borrowing for marriage for which the farmers have always been accused of has been found more from the moneylenders which is a matter of concern. But uncertainty of returns from agriculture and unavailability of basic infrastructure on the part of the government makes them to spend more and remains very little or often nothing for the household social responsibilities makes to borrow even for marriages but this activity being a significant part of the social life (and particularly when corporate houses, bureaucrats and politicians arrange for exorbitant spending on marriages of their children) cannot be called as unproductive one but on

the contrary it is significant for the social pride of everyone in all societies in the world.

7.36 Land Holding and Source Wise Loan Obtained by Farmers

Holding 0-2.5	1	2	3	4	5	6
Sr. No.	Source	No. of farmers	Amount (Rs.)			
			Maximum	Minimum	Total	Average (5/2)
1.	Co.-Op.	12 (27.27)	35,000.00	2000.00	1,60,000.00 (12.75)	13,333.00
2.	Nationalize Bank	12 (27.27)	60,000.00	5,000.00	2,89,000.00 (23.04)	24,083.00
3.	Money lender	09 (20.45)	1,60,000.00	20,000.00	4,55,000.00 (36.28)	50,555.00
4.	Urban Co.-Op.	04 (09.09)	2,05,000.00	30,000.00	3,50,000.00 (27.91)	87,500.00
5.	No loan	02 (4.54)	--	--	--	--
6.	Not available	05 (11.36)	--	--	--	--
	Total	44			12,54,000.00	
2.5-5 acre						
1.	Co.-Op.	48 (39.66)	1,10,000.00	6,000.00	10,20,000.00 (33.08)	21,250.00
2.	Nationalize Bank	28 (23.14)	70,000.00	8,000.00	6,97,300.00 (22.61)	24,892.00
3.	Money lender	28 (23.14)	80,000.00	6,000.00	7,56,000.00 (24.51)	27,000.00
4.	Urban Co.-Op.	03 (02.47)	1,50,000.00	30,000.00	3,30,000.00 (10.70)	1,10,000.00
5.	Sugar Factory	02 (1.65)	2,50,000.00	30,000.00	2,80,000.00 (09.08)	1,40,000.00
6.	No loan	04 (3.30)	--	--	--	--
7.	Not Available	08 (6.61)	--	--	--	--
	Total	121			30,83,300.00	
5-10 acre						
1.	Co.-Op.	37 (40.65)	1,00,000.00	800.00	8,03,300.00 (22.43)	21,714.00
2.	Nationalize Bank	24 (26.37)	4,00,000.00	10,000.00	14,32,000.00 (39.99)	59,666.00
3.	Money lender	25 (27.47)	1,50,000.00	15,000.00	11,40,000.00 (31.84)	45,600.00
4.	Urban Co.-Op.	03 (03.29)	1,60,000.00	10,000.00	2,05,000.00 (5.72)	68,333.00
5.	Not Available	02 (2.19)	--	--	--	--
	Total	91			35,80,300.00	

10-20 acre						
1.	**Co.-Op.**	**07 (36.84)**	**3,38,000.00**	**10,000.00**	**6,76,000.00 (46.81)**	**96,571.00**
2.	**Nationalize Bank**	**06 (31.57)**	**50,000.00**	**30,000.00**	**2,40,000.00 (16.62)**	**40,000.00**
3.	**Money lender**	**03 (15.78)**	**2,75,000.00**	**15,000.00**	**3,90,000.00 (27.00)**	**1,30,000.00**
4.	**Urban Co.-Op.**	**02 (10.52)**	**1,10,000.00**	**10,000.00**	**1,20,000.00 (8.31)**	**60,000.00**
5.	**SHG**	**01 (5.26)**	**18,000.00**	**18,000.00**	**18,000.00 (1.24)**	**18,000.00**
	Total	**19**			**14,44,000.00**	
Above 20 acre						
1.	**Nationalize Bank**	**02 (100)**	**50,000.00**	**35,000.00**	**85,000.00 (100)**	**42,500.00**
	Total	**02**			**85,000.00**	
Landless						
1.	**Money lender**	**02 (66.66)**	**20,000.00**	**15,000.00**	**35,000.00 (100)**	**17,500.00**
2.	**Not Available**	**01 (33.33)**	**--**	**--**	**--**	**--**
	Total	**03**			**35,000.00**	

Source: Field Survey
Figures in parentheses indicate percentage

The data in table (No. 7.36) brings out the information on the holding-wise amount and the sources of borrowings. Farmers of all size groups of holdings have borrowed from the available sources of credit for them. The data bring out reasons for the dominance of moneylenders among the poor and marginal farmers. Even the co-operatives are expected to be advantaged more by marginal farmers both by principle and by the proportion of marginal farmers (about 80 per cent at national level) in total. We found that only 27.27 per cent of the marginal farmers could obtain 12.75 per cent of the total loan amount of their borrowings from the co-operative sector which becomes one of the main reasons for the grip of private moneylenders. But 39.66 per cent of the small farmers, 40.65 per cent of the semi medium, 36.84 per cent of medium and 100 per cent of the large land holders have an access to co-operative borrowings. Another significant characteristic that emerges from the information is that the

amount of borrowing from moneylenders stands higher than any other institutional source and the rates of interest charged by them had been a matter for the worry in suicide hit regions of the state and needs immediate attention either in the direction of abolition of moneylenders or bringing them under state regulations.

7.37 Land Holding and Reason Wise Loan Obtained by Farmers

Sr. No.	Reasons	0-2.5	2.5-5	5-10	10-20	Above 20	Land less
Agriculture Related Loans- *81.74%							
1.	Agri. Expenses	11 (28.20)	58 (53.70)	49 (57.64)	09 (50)	01 (50)	--
2.	Seed, Fertilizers & pesticides	01 (2.56)	06 (5.55)	03 (3.52)	--	--	--
3.	Modern Agriculture Implements	03 (7.69)	06 (5.55)	02 (2.35)	05 (27.77)	--	--
4.	Irrigation	04 (10.25)	12 (11.11)	17 (20)	01 (11.11)	--	--
5.	Live stock	08 (20.51)	05 (4.62)	02 (2.35)	--	--	--
6.	Land purchasing	01 (2.56)	02 (1.85)	--	--	--	--
	Total	28 (71.79)	89 (82.40)	73 (85.88)	15 (88.23)	01 (50)	--
Non-Agriculture Related Loans- **18.25%							
7.	Housing	01 (2.56)	02 (1.85)	01 (1.17)	01 (5.55)	01 (50)	--
8.	Marriage	04 (10.25)	11 (10.18)	10 (11.76)	--	--	--
9.	Business	04 (10.25)	04 (3.70)	01 (1.17)	--	--	--
10.	Health	--	01 (0.92)	--	--	--	02 (100)
11.	Education	01 (2.56)	--	--	01 (5.55)	--	--
12.	Reason not cited	01 (2.56)	01 (0.92)	--	--	--	--
	Total	11 (28.20)	19 (17.59)	12 (14.11)	02 (11.76)	01 (50)	02
	Gross Total	39	108	85	18	2	2

Source: Field Survey

Figures in parentheses is percentage. *, ** Proportion of deceased farmers obtained loans

Increase in borrowing by all holding categories of farm households and of higher order for farm operations is due to the outstripping input prices to

the output prices causing net negative returns from agriculture and thereby pushing farmers into the debt trap. 81.74 per cent of the total farm households from across the regions of the state surveyed had borrowed money for productive purposes but majority of them could not return the same on time which led to debt accumulation. Mostly the farmers need credit of the category of crop loan that are given through primary agriculture credit societies working at the village level. The benefits of crop loan are observed more in favour of large holders with 28.20 per cent of marginal farmers having access to crop loans, 53.70 per cent for semi medium, 57.64 per cent from medium holding category and 50 per cent of the large farmers have the crop loans available from co-operatives. Mainly the crop loans are to be renewed every year and if that is not possible then the farmers' loan account gets in to a category of non-performing account (NPA) which zeroes the future credit ability of them. Therefore despite borrowing for productive purposes the vagaries in agriculture traps farmers in debt and the probability is of higher order for small and marginal farmers. The crop loan category of productive loans is followed by loans for investment purposes like that of implements, irrigation, wells, live stock, etc. In this category the loan demand for irrigation has been found to be of the higher order. There are few farmers, as noted in the foregoing who borrowed money for non-agricultural unproductive purposes and that consisted housing, marriage, business or allied agriultural activity, health and education of children where there is a question mark whether these categories should be considered as purely unproductive purposes when it is a part of human social life and maintenance of social standard.

7.38 Caste and Reason Wise Loan Obtained by Farmers

Sr. No.	Reason	Maratha	Kunbi	OBC	Nav Baudh	VJNT	Muslim	S.C.	S.T
Agriculture Related Loans- *81.42%									
1.	Agri. Exp.	37 (43.52)	25 (54.34)	23 (66.88)	09 (45)	29 (49.15)	04 (80)	--	01 (100)
2.	Seeds Fertilizer	06 (7.05)	--	01 (2.77)	01 (05)	02 (3.38)	--	--	--
3.	Modern Agri. Implements	06 (7.05)	03 (6.52)	--	01 (5)	06 (10.16)	--	--	--
4.	Irrigation	14 (16.47)	06 (13.04)	02 (5.55)	06 (30)	05 (8.47)	--	01 (100)	--
5.	Live stock	03 (3.52)	04 (8.69)	03 (8.33)	--	05 (8.47)	--	--	
	Land purchasing	01 (1.17)	--	--	--	02 (3.38)	--	--	--
	Total	67 (78.82)	38 (82.60)	29 (80.55)	17 (85)	49 (83.05)	4 (80)	01	01
Non-Agriculture Related Loans- **18.57%									
7.	Marriage	11 (12.94)	03 (6.52)	05 (13.88)	01 (05)	05 (8.47)	--	--	--
8.	Housing	03 (3.52)	01 (2.17)	02 (5.55)	--	--	--	--	--
9.	Business	03 (3.52)	01 (2.17)	--	02 (10)	02 (3.38)	01 (20)	--	--
10.	Health	--	01 (2.17)	--	--	02 (3.38)	--	--	--
11.	Education	01 (1.17)	--	--	--	01 (1.69)	--	--	--
12.	Reason Not Cited	--	02 (4.34)	--	--	--	--	--	--
	Total	18 (21.17)	08 (17.39)	07 (19.44)	03 (15)	10 (16.94)	01 (20)	--	--
	Gross Total	85	46	36	20	59	05	01	01

Source: Field Survey
Figures in parentheses is percentage
***, ** Proportion of deceased farmers obtained loans**

The study indicates that across all castes and types of holdings the productive agricultural borrowings have been of higher order than of the unproductive non agricultural borrowings. Table 7.38 reveals the data on borrowings by suicide affected farm families of various castes which indicates, as in the foregoing data tables, that 81.42 per cent of the farmers of all caste categories borrowed for productive purposes whereas only

18.57 per cent of farmers borrowed for non-agricultural purposes. We did not observe any significant degree of correlation between the caste and borrowing hence stands significant to note that even the majority of the farmers are not very educated or professionally trained but their daily life in agriculture is at par with the economic discipline because irrespective of size of holding and the caste structure they have been honest farm professionals, trying to be of positive income earners but unfortunately have to face the high degree of economic volatility. Another significant character of the deceased farmers that the study reveals is that despite productive borrowings and the use of loan for agricultural operations and investments by all holdings and caste category of households the unfavourable natural and market conditions keep no option but to get debt trapped is proved in case of 89 per cent of the farm households from the study regions.

7.39 Caste and Source wise Indebtedness of Deceased Farm Households

Maratha 1		2	3	4	5	6
Sr. No.	Sources	No. of Farmers	Maximum Amount (Rs.)	Minimum Amount (Rs.)	Total Amount (Rs.)	Avg. Amount (Rs.) (5/2)
1.	Co.-Op.	32 (32.98)	1,50,000.00	8,000.00	11,49,500.00 (25.84)	35,921.00
2.	Nationalized Bank	25 (25.77)	4,00,000.00	10,000.00	14,35,000.00 (32.26)	57,400.00
3.	Moneylender	23 (23.71)	2,75,000.00	10,000.00	12,00,000.00 (26.98)	52,173.00
4.	Urban Co.-Op.	08 (8.24)	1,60,000.00	10,000.00	6,15,000.00 (13.82)	76,875.00
5.	SHG	01 (1.03)	18,000.00	18,000.00	18,000.00 (0.40)	18,000.00
6.	Sugar factory	01 (1.03)	30,000.00	30,000.00	30,000.00 (0.67)	30,000.00
7.	No loan	01 (1.03)	--	--	--	--
8.	Not Available.	06 (6.18)	--	--	--	--
	Total	97			44,47,500.00	

Kunbi						
1.	**Co.-Op.**	**18 (33.33)**	**3,38,000.00**	**5,000.00**	**6,23,000.00 (40.29)**	**34,611.00**
2.	**Nationalized Bank**	**17 (31.48)**	**60,000.00**	**10,000.00**	**3,98,000.00 (25.74)**	**23,411.00**
3.	**Moneylender**	**14 (25.92)**	**70,000.00**	**10,000.00**	**5,25,000.00 (33.95)**	**37,500.00**
4.	**No loan**	**01 (1.85)**	**--**	**--**	**--**	**--**
5.	**Not Available**	**04 (7.40)**	**--**	**--**	**--**	**--**
	Total	**54**			**15,46,000.00**	
OBC						
1.	**Co.-Op.**	**20 (52.63)**	**43,000.00**	**800.00**	**2,87,800.00 (29.10)**	**14,390.00**
2.	**Nationalized Bank**	**04 (10.52)**	**25,000.00**	**10,000.00**	**70,000.00 (7.07)**	**17,500.00**
3.	**Moneylender**	**10 (26.31)**	**1,50,000.00**	**6,000.00**	**3,91,000.00 (39.54)**	**39,100.00**
4.	**Urban co. op.**	**02 (5.26)**	**2,05,000.00**	**35,000.00**	**2,40,000.00 (24.27)**	**1,20,000.00**
5.	**Not Available**	**02 (5.26)**	**--**	**--**	**--**	**--**
	Total-	**38**			**9,88,800.00**	
Nav Baudh						
1.	**Co.-Op.**	**08 (36.36)**	**40,000.00**	**8000.00**	**1,58,000.00 (29.04)**	**19,750.00**
2.	**Nationalized Bank**	**07 (31.81)**	**1,00,000.00**	**15,000.00**	**2,46,000.00 (45.22)**	**35,142.00**
3.	**Moneylender**	**05 (22.72)**	**70,000.00**	**10,000.00**	**1,40,000.00 (25.73)**	**28,000.00**
4.	**No loan**	**02 (09.09)**	**--**	**--**	**--**	**--**
	Total	**22**			**5,44,000.00**	
VJNT						
1.	**Co.-Op.**	**23 (38.98)**	**40,000.00**	**2,000.00**	**4,01,000.00 (22.05)**	**17,434.00**
2.	**Nationalized Bank**	**17 (28.81)**	**1,00,000.00**	**5,000.00**	**5,54,000.00 (31.29)**	**32,588.00**
3.	**Moneylender**	**12 (20.33)**	**1,60,000.00**	**10,000.00**	**4,15,000.00 (23.44)**	**34,583.00**
4.	**Urban co. op.**	**02 (3.38)**	**1,10,000.00**	**40,000.00**	**1,50,000.00 (8.47)**	**75,000.00**
5.	**Sugar factory**	**01 (1.69)**	**2,50,000.00**	**2,50,000.00**	**2,50,000.00 (14.12)**	**2,50,000.00**
6.	**Not Available**	**04 (6.77)**	**--**	**--**	**--**	**--**
	Total	**59**			**17,70,000.00**	
Muslim						
1.	**Co.-Op.**	**03 (50)**	**25,000.00**	**5,000.00**	**40,000.00 (33.95)**	**13,333.00**
2.	**Nationalized**	**01**	**12,800.00**	**12,800.00**	**12,800.00**	**12,800.00**

	Bank	**(16.66)**			**(10.86)**	
3.	**Moneylender**	**02 (33.33)**	**50,000.00**	**15,000.00**	**65,000.00 (55.17)**	**32,500.00**
	Total	**06**			**1,17,800.00**	
S.C.						
1.	**Moneylender**	**01 (50)**	**40,000.00**	**40,000.00**	**40,000.00 (100)**	**40,000.00**
2.	**No loan**	**01 (50)**	**--**	**--**	**--**	**--**
	Total	**02**			**40,000.00**	
S.T.						
1.	**Nationalized Bank**	**01 (50)**	**50,000.00**	**50,000.00**	**50,000.00 (100)**	**50,000.00**
2.	**No loan**	**01 (50)**	**--**	**--**	**--**	**--**
	Total	**02**			**50,000.00**	

Source: Field Survey
Figures in parentheses indicate percentage

Table No. 7.39 shows the various sources of borrowings available to different caste farmers in the regions of the state under survey. In this case 62.76 per cent of the farmers found borrowing from institutional sources whereas 36.22 per cent of deceased farm households borrowed from the village moneylenders. It is revealed by our study that farm households which borrowed from moneylenders had no inclination of borrowing from them but the reasons featured in the foregoing compelled them to opt for the said sources of borrowing. Urban co-operative banks also offer loans for farmers in the state but mainly for non-agricultural business purposes and therefore it proves that the farmers also borrow for business but when they try for the same without any experience or entrepreneurial experience they fail in the activity and loans remain unpaid and the land title gets attached in the name of the lending urban co-operative. We also got a shock when we discovered that the practices of these urban co-operatives are similar to that of the private moneylenders. Mostly, these non agriculture credit co-operatives which proliferated in the last ten-fifteen years have no interest in development credit but these are of

usurious business entities in the name of co-operation mortgaging lands and house property like gold. The compounded interest with high rates of 18-19 per cent or even in some cases above 20 per cent made farmers more vulnerable at par the moneylenders.

7.40 Age of Deceased Farmers

Sr. No.	Age Group	No. of Farmers	Proportion to Total No. of Farmers (%)
1.	18 – 25	14	07
2.	26 – 30	12	06
3.	31 – 35	27	13.5
4.	36 – 40	18	09
5.	41 – 45	32	16
6.	46 – 50	30	15
7.	51 – 55	20	10
8.	56 – 60	18	09
9.	61 – 65	18	09
10.	66 – 70	07	3.5
11.	71 – 75	04	02
	Total	200	

Source: Field Survey

The age of the deceased farmers is not found significant aspect of the determination of apathy during our study but it is found that in most of the cases the head of the family finds himself psychologically trapped. In some cases the young ones who have entered into agriculture in the recent past, intending to start their life when faced economic disappointment from agriculture and it punctured their pride and this led to suicide. More than 50 per cent of the farmers who have ended their life had been below the age of 45 years, 34 per cent belonged to middle age group i.e. 46 to 60 years and only 14.5 per cent of the deceased farmers were from the senior age group category. On the contrary, earlier studies on farm economy (Talule 1996) revealed that the young farmers are to be more enterprising and risk baring ones but the post reforms changes in policy and agrarian market structure made it difficult for the farming community to withstand

the situation which has gone more against them. Market chain and the infrastructure takes away more than 60/70 per cent of the final value of agriculture products that is paid by the end consumer where as only 30 to 40 per cent of it goes to farmers.

7.41 Education Status of Deceased Farmers

Sr. No.	Educational Status	No. of Farmers	Proportion to Total No. of Farmers (%)
1.	Illiterate	36	18
2.	Primary	58	29
3.	Secondary	86	43
4.	Higher-secondary	12	06
5.	Graduation	06	03
6.	Diploma	02	01
	Total	200	

Source: Field Survey

The educational facilities in the rural parts have been very poor in the study regions. People are unaware about the benefits of the education. As well as, their economic condition does not permit them to spend money and time on education. In the present study, around 18 per cent of farmers have been found illiterate. And the proportion of the primary and secondary education is limited to 29 and 43 per cent respectively. As per the government records majority of farmers are educated but, the ground reality being different cannot help them to avoid exploitation. In reality only 6 per cent of the farmers have completed their higher secondary education. The instructions given on the seeds bag, pesticides containers are in English; hence farmers are unable to read and understand the same. As a result, input dealers can easily exploit them. The same is repeated in the case of the records of informal credit agencies such as moneylenders and traders. Farmers are unaware of the price situation for the produce at

national and international markets. Hence it demands the better reach and enhancement of the educational facilities and quality at the grass root level.

7.42 Mode of Suicide

Sr. No.	Mode of suicide	No. of Farmers	Proportion to Total No. of Farmers (%)
1.	Poison	149	74.50
2.	Hanging	41	20.50
3.	Drouning	08	4
4.	Burning	01	0.50
5.	Heart attack	01	0.50
	Total	200	

Source: Field Survey

The extensive use of pesticides demanded by Cotton dominated mono cropping system in suicide hit areas of the state of Maharashtra and thereby the easy availability of the same at farmers' disposal has made available to them the easy mode of suicide by consuming the same. Another important reason for the heavy toll of pesticides is the lack of health facilities in rural areas, required for the management of trauma after consuming the poison by farmers. Forty per cent of the posts of rural health officers are vacant in Vidarbha with high incidence of absenteeism among the existing officers. Therefore, if the consumption of pesticides is adopted by a farmer it leaves with almost zero probability of survival or recuperation from the same. Therefore, the rate of pesticide toll stands at 74.50 per cent followed by 20.50 per cent of another mode of suicide, i.e. from hanging oneself.

7.43 Risk Factors Responsible for the Distress Act of Suicide

Sr. No.	Risk Factors	Total No. of Respondent	Proportion to Total (%)
1.	Deterioration of Social Status	79	39.5
2.	Economic Crisis	151	75.5
3.	Marriageable daughter/sister	82	41
4.	Indebtedness	178	89

5.	**Family Discord wife/husband**	**16**	**08**
6.	**Discord with other Family Members**	**36**	**18**
7.	**Disputes with villagers**	**03**	**1.5**
8.	**Disputes with any one before the incidence**	**07**	**3.5**
9.	**Suicidal case in nearby village**	**162**	**81**
10.	**Death occur in family before the incidence**	**06**	**03**
11.	**Suicide in Family**	**06**	**03**
12.	**Serious illness**	**16**	**08**
13.	**Behavioural changes**	**119**	**59.5**
14.	**Addiction**	**96**	**48**
15.	**Social Isolation**	**186**	**93**
16.	**Crop failures**	**147**	**73.5**

Source: Field Survey

Mounting of stress on account of the accumulation of economic burden caused by repeated crop failures, negative income from agriculture, pending of overdues of bank credit, co-operatives and moneylenders, etc. have been found to be leading to the socio-psychological tensions and the tragic end of life by farmers in the state of Maharashtra. On the whole it may be said that the farm indebtedness on account of the reasons accruing to agricultural vagaries and the lack of infrastructural investment on the part of the government ever since 1985-86 and the absence of institutional extension facilities have been instrumental in negative returns from agriculture of the regions and thereby the crisis and farmers succumbing to the way of tragic end of their life. Our study confirms the main reason, i.e. farm indebtedness brought out by earlier studies by the Government of India and independent research attempts with the incidence of the same of the order of 89 per cent for the regions and households under study. 73.50 per cent of the farmers have faced a frequent crop failures resulting into the gap between income and expenditure of the order of 75.50 per cent thereby causing mounting of stress and behavioural changes in the case of 59.50 per cent of the farmers (usually the heads of the family) who ended their lives through suicide.

7.44 Number of Risk Factors Identified in One Suicide Case

No. of HH.	Social status	Economic crisis	Marriage	Indebtedness	*H/W discord	Family Discord with	Disputes with other	Suicide in near place	Suicide in family	Serious illness	Behavioural changes	Addiction	Social isolation	Crop failure	No. of Risk factors
02										√			√		02
08				√		√				√					03
06	√				√				√	√					04
32	√		√	√								√	√		05
39	√	√		√				√					√	√	06
18		√		√				√			√		√	√	06
36		√		√				√			√	√	√	√	07
29		√	√	√				√			√	√	√	√	08
21		√	√	√		√		√			√		√	√	09
09		√		√	√	√	√	√			√	√	√	√	10

Source: Field Survey, * Husband/Wife Discord

Suicide is an individual act and also the outcome of the multiple socio-economic and phycological factors. Hence, through the study, one can just throw some light on the factors that lead to distress and thereby towards suicide. It is difficult to find the exact reason of the suicide due to the multidimensionality of the act. The factors that are responsible for distress can be categorized as social, economic, cultural and psychological. We found the multiple reasoning of suicides by farmers. In the earlier analysis we mentioned the factors responsible for the distress act of suicide and here the number of risk factors identified in each suicide case. It is minimum two and maximum of ten. Average six risk factors are identified in each case of suicide which proves that the act of suicide is a multidimensional. It also proves the fundamental theory of suicide; that suicide is an outcome of complex and multiple factors. There are about six factors responsible for taking of lives of 19.5 per cent of the farmers through suicide followed by eight risk factors in case of 14.5 per cent. Nine risk factors are identified in 10.5 per cent of the farm families/farmers.

7.45 Eligibility for State Compensation

Sr. No.	Status	No. of Farmers	Proportion to Total No. of Farmers (%)
1.	Eligible	164	82
2.	Not eligible	36	18
	Total	200	

Source: Field Survey

The distressful act of suicide by farmers has become a spate in the state during the recent past. For which the state government decided to provide compensation (Rs. 1 Lac.) to the victims' family. In all 82 per cent of farmers suicide affected households have been eligible for the government compensation. And rest of the 18 per cent of the farm families could not become eligible for the same. At the initial stage of the scheme the criteria for the compensation were very stringent. Afterwards it was changed and made little liberal. Still the victims' families have to face diverse problems and bureaucratic obstacles in receiving the compensation. In one case the family was eligible for compensation and the *patwari (talathi*) demanded Rs. 10,000/- as commission. But, the family did not have the money to give him. As a result, the compensation money went back (rather sent back). The rule of the disbursement of the amount of compensation is Rs.30,000/- in cash and Rs.70,000/- in post office deposit on which monthly the family receives interest income of Rs.478/-. In some cases the victims' families have withdrawn all the amount and the remaining households mentioned that it is only in post office and also these people don't know when they can withdraw the amount. It is a serious thing that it is their own money but they cannot use it when they need and thereby resort to the private sources for the same. Hence, the vicious circle of the private money lending and indebtedness again gets activated to take lives of farmers in the future. Those farmers who have some political influence can easily get full amount

of compensation without any hurdles whereas others have to face difficulties for the same and follow the political leaders and bureaucrats. These people charge their commission of around 10 to 15 per cent of the total amount and also the other administrative expenses for the eligibility have to be borne by the deceased family. That comes to another Rs.10,000/-. Hence, family receives only 75 to 80 per cent of the part of sanctioned amount. The expenses on the post death traditional and religious rituals are also observed to be of very high. Because, it is not a natural death but it is a suicide. So it brings out major crisis in the family or fear of the death of other family members. All these superstitious aspects are psychologically hammered by the religious guru on the victims' families and forces them to follow him to secure them form the upcoming problems. This kind of operations (pujas) further needs another Rs.10 to 15 thousand. It means the amount of around Rs.40,000/- is spent on the unproductive aspects which include exploitation, corruption and superstitions of the farming community. As a result, the amount of the compensation cannot help to give any kind of final stability either short or long term to the suicide affected households.

7.46 Expectation from Government

Sr. No.	Expectations	No. of Households	Proportion to total No. of Households (%)
1.	Subsidy on wells and Tubewells	76 (31.66)	38
2.	Fare price for Agriculture produce	37 (15.41)	18.5
3.	Govt. Services	34 (14.16)	17
4.	Loan availability	12 (05)	06
5.	Debt. Waiver	05 (2.08)	2.5

6.	**Economic Assistance**	**22 (9.16)**	**11**
7.	**Govt. scheme should reach at grass root level**	**06 (2.5)**	**03**
8.	**Subsidy on agricultural implements**	**11 (4.58)**	**5.5**
9.	**Modern irrigation facilities**	**06 (2.5)**	**3.0**
10.	**Children's education**	**11 (4.58)**	**5.5**
11.	**Animal husbandry**	**05 (2.08)**	**2.5**
12.	**None**	**15 (6.25)**	**5.5**
	Total	**240**	

Source: Field Survey
Figures in parentheses indicate percentage

From the expectations of farmers of the suicide affected households from state government it is clear that the lack of irrigation facilities is the vital cause for the agrarian crisis and negative returns from cultivation. 38 per cent of the studied households demand or expect subsidy on digging of wells. Not even a single farmer from across the three regions where the present study was conducted received any kind of subsidy on digging of wells and tube wells. As well as, 3 per cent of farmers expected modern irrigation techniques and implements such as drip irrigation and sprinkler sets from the government. Traditionally the state government concentrated on development of river valley irrigation projects in Western Maharashtra and neglected the Vidarbha and Marathwada regions. Another core issue of the problem is the fair prices for agricultural produce. The present agricultural marketing mechanism is full of shortcomings; hence, it has not been able to provide adequate returns to the producers. As a result, the cultivation became unremmunarative and caused the increase in indebtedness among farmers which is beyond their repaying capacity. 18.5 per cent of the households mentioned the need of

actual and regional cost based fair (or MSP) prices for their produce. 17 per cent of the affected families expect government job for at least one person from the suicide affected family. Because they believe that, it is the only way of sustainable livelihood. Some (5.5 per cent) are confused and hence mentioned neutrality on the question. It is nothing but shows unsatisfactory approach towards government attitude. 11 per cent of households expect direct economic compensation for which they already are expected to be eligible for the same of Rs.1Lakh. Debt waiver, subsidy, free education, animal husbandry and the generalization and effective implementation of the government schemes are the other expectations mentioned by the victims' families which are equally important for improving their economic conditions on sustainable basis.

Chapter-08

Findings and Conclusion

8.1 Salient Findings from Secondary Data

8.2 Salient Findings from Primary Data

8.3 Conclusion

8.1 Salient Findings from Secondary Data

*** A large number of farmers suicides have been reported from the states which are; a) relatively agriculturally developed, b) which have seen strong peasant movements either during the colonial period or after independence, and c) where leadership of political parties comes predominantly from farming community of the rural areas.**

*** The worst affected states of farmers suicides are Karnataka, Kerala, Tamil Nadu, Andhra Pradesh, Maharashtra, Gujarat and Punjab.**

*** The minimum support prices for several crops for several years have been below the actual cost of cultivation.**

*** Household expenditure on agricultural operations, education, health and consumption shot up sharply, whereas the returns from cultivation remained stagnant and sometimes the same has been even negative.**

*** Punjab faced a major problem of militancy but even during the same period the agriculture sector of the state was growing at 5 per cent per annum while national growth rate was 3 per cent.**

*** The transformation put villagers closer to the urban life and economy and this became one of the reasons for increasing consumption expenditure of rural society.**

*** During the 1990s, an implementation of the new economic policy forced farmers to enter in to open market operations and compete with developed countries.**

*** There has been a sharp increase in cultivation expenditure during the post reforms period due to the decontrolled inputs market and heavy use of pesticides and fertilisers.**

*** Increase in the share of informal sector up to 61.31 per cent in total supply of credit in Punjab. 'Arthias' (commission agent) were observed to be the major source of credit for farmers in the state.**

*** In Punjab the money was borrowed both for the 'productive' (41%) and 'unproductive' (59%) purposes. The tendency of unproductive borrowing was highest among marginal farmers (71%) and for big farmers it was 48 per cent.**

*** It is found from the cropping pattern of Vidarbha region that Cotton is the predominant crop and it is followed by Soyabean and Tur (Arhar).**

*** Government of India removed the quantitative restrictions on imports and also reduced the import tariffs from 35 per cent to 5 per cent during a period of 1998-2001 and also slashed the subsidies that were given to agriculture sector of the country. On the other hand subsides given by the developed countries particularly the U.S.A. to their farmers continued and caused reduction in the Cotton prices by 50 per cent in the international market.**

*** Co-operative sector is the dominant source of credit to farmers of the state as compare to all India level. Vidarbha and Marathwada did not receive sufficient benefits of the movement. After the 1990s, the period of financial liberalization, the public sector banks became more profit oriented than earlier times.**

*** Private moneylenders became more powerful in the rural parts and captured the rural economy. Because either they are input dealers, traders or the sellers of the daily needs and commodities.**

*** In Vidarbha some school teachers are also involved in private money lending business and it is a new category of the money lenders.**

*** Indebtedness, economic downfall, family discords, crop failure, deterioration in social status, marriageable daughter/sister, occurrence of suicide in nearby villages, addictions (alcoholism, gambling), change in behaviour, disputes with neighbours or others, death of family member before the incidence, suicide history in family, chronological illness of family members are the major risk factors for the distress act of suicides by the farmers in Maharashtra.**

*** Though the agrarian crisis and indebtedness are the two important factors which force farmers to take an extreme step of suicide in the countrywide, the reasons behind it are different in different states/regions.**

*** During the period of 1992-2002 seed prices increased by 400 per cent and similar trend in the prices of fertilizers and pesticides was found. Which was highest in Andhra Pradesh as compare to other states in the country. Whereas the output prices did not increase in proportionate of input prices.**

*** The use of pesticides is highest in Andhra Pradesh as compare to other states in India. State alone consumes 45 per cent of total pest controlling pesticides in the country and most of the same is for the purpose of Cotton.**

*** Urban based economic and developmental policy of the state government hunted farming community and rural economy of the country.**

*** The rising cost of cultivation, imperfect market structure, negligence by the government are found the reasons for crisis and thereby farmers suicides in the state of Kerala.**

*** Agrarian crisis was observed to be of multidimensional but international price fluctuation was found as a dominating cause of distress.**

*** Farmers with the lowest level of assets were more affected than farmers with larger holdings and more assets. It means the reforms policies hunted both the small and marginal farmers of the state.**

*** Substantial dislocations of livelihoods pushed a community to despair and eventually suicides in Andhra Pradesh.**

*** The agrarian crisis is saturated in Telangana and Railseema districts of the state from where most of the suicide cases have been reported.**

*** An introduction of capital intensive techniques in agriculture and the opening of the seed industry to the Multinational Corporations (MNCs) affected Indian agriculture badly.**

*** It has been widely acknowledged that the act of farmers suicides is rooted in the endemic neglect of the farming sector in the state of Andhra Pradesh particularly during the post reforms period.**

*** The lack of irrigation facilities and institutional credit mechanism available to small and marginal farmers and their over dependence on private moneylenders has further aggravated the crisis.**

*** The loss making cultivation, high cost paid inputs, increasing consumption expenditure and also expenditure for maintaining social status and unavailability of institutional credit are the responsible factors for the distress act of suicides by farmers in the state of Maharashtra.**

*** The successive droughts and the irrigation backlog are causes of the distress in agriculture sector of Andhra Pradesh.**

*** The distress got compounded by the virtual withdrawal of public support of institutional credit and research and extension during the post reforms period.**

*** Majority of the farmers committing suicides belong to a small and marginal category of holding pattern. It means the small and marginal farmers have entered the arena of high risk commercial farming in the hope of salvaging themselves.**

*** The general suicide rate in Kerala is highest in India. It is almost three times more than national average.**

*** Heavy use of fertilizers and pesticides has been one of the reasons of decline in productivity of agriculture. Which also resulted into environmental degradation.**

*** The change in cropping pattern from food-grains to commercial crops and thereby increase in the cost of cultivation and marginal remuneration with the minimum support of an institutional credit mechanism was the root cause of agrarian distress in the state of Maharashtra.**

*** Cost of cultivation increased because of higher use of fertilizers, pesticides and for the irrigation facilities at individual farm level. Failure of input-output markets and the dominance of the middlemen in price determination caused the declining profitability from cultivation.**

***Incidence of suicide is high among the first generation farmers belonging to the backward (*dalit)* communities.**

*** The spate of farmers suicides was naturally associated with the performance of the sector, along with the other factors that were prominent including advent of WTO, GM varieties of crops, price collapse and spurious seeds.**

*** The situation became worse during the period of the 1990s which has been due to the changes in market situation, weather inflicted**

uncertainties at the end of the decade and systemic fall in the credit delivery system.

*** In Karanataka the problem of indebtedness is acute specifically in the rain fed regions of the state and also in the areas that have some potential for growth.**

*** The technological changes and crop diversification is found as the root cause of agrarian crisis and also the social and psychological factors have been instrumental in deteriorating the situation.**

*** Agrarian crisis has been most intense in states where the State governments have most actively pursued neo-liberal economic agendas of the post 1990s.**

*** Financial and trade libralisation affected the cultivation, credit, trade and rural livelihoods. The main cause of this distress act is dominantly related to public policy in general and that of post reforms in particular.**

*** There is no direct relationship between institutional credit, indebtedness and suicides in rural Punjab. But there is a positive relationship between non institutional credit and indebtedness of the farmers of the state.**

*** It is the failure of the institutional set up in the state of Punjab in supplying credit commensurate with demand that is mainly responsible for the crisis and its manifestation in the form of suicides.**

*** Farmers who have committed suicides have been the market oriented autonomous farmers belonging to different social groups or background.**

*** The public investment in agriculture over the last two decades has drastically come down and the budgetary allocation didn't cross the limit of two per cent of the total budget.**

*** In Karnataka initially the farm suicides were confined in the northern parts of the state; later it began to envelop other districts which included the irrigated areas also.**

*** The debt of the farmers of Karnataka who committed suicide was not uniform and it varied from Rs.5000 to Rs.50,000 and the reasons for the loan were also multiple.**

*** From 1987 to 1992, the credit availability to agriculture sector at national level by nationalized banks stagnated at 11.7 per cent. As a result, there is an increase in a share of non-institutional sources in agriculture credit disbursement and thereby the growing indebtedness of the farmers.**

*** Non- inclusion of irrigation has been the major factor for the tragedy of farm suicides in the rural part of the state of Andhra Pradesh.**

*** It was the politics and economics of negligence of rural economy of Andhra Pradesh for over a period of one decade that is one of the important causes of suicide by farmers.**

*** The backlog of irrigation, lack of electricity, spurious seeds, high cost of inputs, low credit availability from the institutional sources mainly the nationalized banks and thereby increasing dependence on informal credit sources at exorbitant rates of interest and market failures have been observed the causes of farm distress and suicide by farmers in the Vidharbha region of Maharashtra state.**

*** It is painful to observe that the foodgrain output grew only at 0.11 per cent per annum which was far below the growth of population for a long time.**

*** The non-food crops dominated the growth in the crop economy during 1949-65 and the growth in the production of food crops came mainly through the expansion of area and not through the productivity.**

*** The food-grains growth decelerated from 2.85 per cent in the 1980s to 1.16 per cent during the post reforms period. This was lower than the rate of growth of population of 1.9 per cent during the same period.**

*** While the annual yield growth for all crops taken together decelerated from 2.56 per cent during the eighties to 0.90 per cent during the later period, for Rice the yield growth rate decelerated from 3.47 per cent to 0.99 per cent and for Wheat from 3.10 per cent to 1.35 per cent.**

*** In case of Cotton, the yield growth rate has gone down from 4.10 per cent during the 1980s to -0.69 per cent during the 1990s i.e. for the reforms period.**

*** At the initial stage only 18.1 per cent of the total area under food-grains had irrigation coverage. This was increased later but very slowly. At present at all India level 46.8 per cent of the total area under food crops is under irrigation. Still 54.2 per cent of the area is out of the reach of institutional and individual irrigation.**

*** The average gap between the cost of cultivation and support prices for the year 2005-06 was about 38 to 50 per cent. However the gap between the recommended prices from state government and prices announced by CACP is around 50 to 55 per cent.**

*** For the year 2010-11 the support price for Cotton was Rs.3000/- per quintal and market price during the period was observed around Rs.4500/-.**

*** At all India level over the period from 1960-61 to 2003, the number of holdings doubled from 51 to 101 million, while the area operated declined from 133 to 108 million hectares.**

*** In states like Tamil Nadu, Andhra Pradesh, Punjab, West Bengal, Harayana, Maharashtra and Karnataka the proportion of landless households abnormally gone up after the period of 1986-87.**

*** The area operated was declined from 133.48 million he. to 107.55 million he. between 1960 -61 and 2003-04. As well as the average size of holding reduced from 2.63 he. to 1.06 he. during the period of 1960 to 2003.**

*** The growth rate of GDP from agriculture decelerated from 3.08 per cent during 1980-81 to 1990-91 to 2.61 per cent in 1992-93 to 2002-03.**

*** The growth of agriculture GSDP shows declining trend from 3.05 to 2.19 per cent for the period of 1983-84 to 2003-04.**

*** In Maharashtra agriculture GSDP dwindled from 5.39 to 1.27 per cent whereas, GSDP decreased from 7.43 to 4.92 per cent.**

*** GSDP of West Bengal was increased from 4.73 to 7.03 per cent during the post reforms period which was quite higher than national average.**

*** From 1996-97 onwards total public and private investment in Indian agriculture has declined substantially and increased slightly for 1999-00. For the subsequent period of 1999-00 to 2004-05 the situation brings out overall fluctuating trend.**

*** The trend of capital formation in agriculture sector shows that it was declined from 7.8 to 7.1 per cent during the period of 2004-08, which is known as the period of agrarian crisis and farmers suicides.**

*** The interesting fact is that the share of public sector in Gross Capital Formation was declined from 6.7 to 6.1 per cent while the share of private sector in GCF increased from 8.1 per cent to 10.3 per cent.**

*** During the period of tenth plan the ratio of actual expenditure on agriculture to total plan expenditure declined to 10.63 per cent from the earlier 18.83 per cent i.e. ninth plan.**

*** During the plan period of 9th to 11th, the actual expenditure on agriculture and allied activities never crossed the limit of 5.3 per cent of the total plan outlay.**

*** The budget expenditure on agriculture and allied sectors increased by around 25 per cent averagely up to the year 2007-08, and again it was declined by 27.46 per cent in 2008-09.**

*** Institutional credit expanded rapidly during the post bank nationalization period from Rs.1,675 crore in 1975-76 to Rs.1,80,486 crore in 2005-06.**

***Number of banks both in public and private sector achieving the statutory target of 18 per cent lending for agriculture between March 2001 and March 2003 has not been more than six (Public Sector) and two (Private Sector) respectively.**

*** The states of Andhra Pradesh, Tamil Nadu, Punjab, Kerala, Karnataka and Maharashtra are more affected of the poor performance of public sector banks than rest of the states with percentage of farm indebtedness as; 82, 74.5, 65.4, 64.4, 61.6 and 52.8 per cent respectively.**

***Agriculture credit to total bank deposit ratio for a state like West Bengal has been lowest among others with just 3.3 per cent whereas for states like**

Bihar and Uttar Pradesh it decelerated from 9.2 to 5.4 and 10.1 to 6.3 per cent during the period of 1981 to 2000.

*** Deducting the all India household average annual income from cultivation (Rs.11628.00) from the annual household cultivation expenditure (Rs.8791.00) the average annual household net income remains Rs.2837 which is available for the family maintenance.**

*** Productivity of Punjab worker was Rs.35,000/- this is 7.5 times that of Bihar. In Maharashtra, productivity of non-agricultural worker was 11.71 times higher than agricultural worker.**

*** The share of institutional sources in cultivators' debt improved considerably after the nationalization of banks, from 32 per cent in 1972 to 66 per cent in 1991.**

*** After the introduction of new economic policy, commercial banks reduced credit flow to agriculture from 35.2 per cent to 26.3 per cent.**

*** The share of co-operatives in total agricultural lending was 30.2 per cent in 2002 with increase of 0.66 per cent over 1991.**

*** The share of co-operatives in farmers suicides affected states was very low i.e. Karnataka- 16.9, Andhra Pradesh- 10.4 and in Punjab – 17.6 per cent. Only Maharashtra among the suicide affected states has 48.5 per cent share of co-operatives in agricultural lending.**

*** The share of non-institutional lending was high in Andhra Pradesh with 68.5 per cent, higher than of national average of 42.4 per cent.**

*** In recent survey of the NSSO (2005) 41 per cent of farmers have shown willingness to leave the agriculture if they have other opportunity of employment available.**

*** The outstanding debt of the sub-marginal land holder (less than 0.40 hectares) is mostly financed by the non-institutional agencies.**

*** At the all India level the debt for productive purposes as a per cent of total debt declined from 72 per cent in 1981 to 63 per cent in 2002. Similarly the share of debt incurred for farm business declined from 64 per cent in 1981 to 53 per cent in 2002. The share of capital expenditure declined from 45.3 per cent to 34.3 per cent.**

*** At all India level the ten year period between 1997 and 2006 as many as 166304 farmers ended their lives through committing suicide.**

*** At all India level year 1998 shows a sharp increase in the number of farm suicides with 18 per cent jump from the previous year and the number remained more or less steady at around 16000 farm suicides per year over the next three years up to 2001.**

*** In India the average number of farm suicides per year in five year period of 2002-2006 stood at 17,513 which is substantially higher than the average of 15747 for the previous five year period.**

*** Considering the period of 1997-2006 as a whole, close to 85 per cent of all the farm suicides were by male farmers and every fifth male suicide in the country was a suicides by farmers.**

*** It was noted that the criterion generally adopted in government records for identifying the farmer is mainly the title to land and since the title is generally in the name of the male head of the household it is very likely that a female farmers who committed suicides were not recorded as a farmer suicide in these records.**

*** In Kerala the area under Pepper has been substantially increased by 102.56 per cent during the period of 1970-71 to 2005-06 and the spate of farmers suicides was also concentrated among the Pepper growers.**

*** The area under major cash crops is accounted for 60 per cent of the gross cropped area in the state of Kerala.**

*** More than 80 per cent of area and production of Coffee of Kerala is in Wayanand district, while Idukki district with a share of 11.31 per cent as a distant second. The 48 per cent of the total area under Pepper is also concentrated in these two districts of the state. Similarly, 67.55 per cent of the area under Tea cultivation falls in Idukki district. Also the farmers suicides in Kerala are concentrated in these two districts.**

*** Among the farm households, the incidence of indebtedness was higher in Kerala at 64.4 per cent as against the national average of 48.6 per cent.**

*** In Kerala in 2003, 82.3 per cent of the outstanding loans of farm households were obtained from formal agencies, which is considerably higher than the national average of 57.7 per cent.**

*** The dependence on moneylenders for borrowing has been lower in Kerala, which was only 7.4 per cent as against the national average of 25.7 per cent.**

*** In Kerala, only 21.4 per cent of the loan was taken for the cultivation practices as against the national average of 58.4 per cent.**

*** The suicide rate in Kerala both for the male and female has increased substantially after the year 1995.**

*** The suicide mortality rate both for male and female in Kerala is higher than national average. The suicide mortality rate for male is higher than female and has been increasing after the year 1996.**

*** The proportion of landless households (52.3per cent) in the state of Andhra Pradesh was higher than the national average of 40.9 per cent in 1999-2000.**

*** In Andhra Pradesh the share of agriculture and major crops in the GSDP had declined during the period of 2001-02. The agriculture production was declined by 32 per cent in 2002-03 which was highest since 1993-1994.**

*** The year wise percentage change has shows volatility in output prices. Decadal price changes for Paddy- 77.41%, Cotton- 91.66 % / 83.33% and Groundnut- 75%. The average increase of output prices was around 80%, but the input prices were increased by 400% between 1993 to 2002 in Andhra Pradesh.**

*** The share of agriculture and allied activity in state government expenditure of Andhra Pradesh under various plans has declined from 11.8 per cent to 2.15 per cent during 1980-2003. The overall decline is -81.74 per cent.**

*** In Andhra Pradesh during the year 1990-1991, 1993-94, 2001-2002 the plan expenditure on agriculture was declined by 62.47, 99.63 and 54.73 per cent respectively.**

*** In the state of Andhra Pradesh in 1998-2000 actual term loan was 113.65% and 126.45% of targeted amount. After that, it hardly crosses 50 per cent of targeted amount.**

*** The share of credit disbursed by co-operatives in Andhra Pradesh has come down from 44.3 to 34.7 per cent. However, the shares of Regional Rural Banks and Commercial Banks have increased by 1.7 and 8 per cent respectively for the year 1992-2001.**

*** The share of moneylenders (53.4 %) in total credit to rural households in Andhra Pradesh was two times higher than the national average of 25.7 per cent.**

*** Suicide Mortality Rate for male was higher than female in Andhra Pradesh at all India level. After 1989 SMR for male in Andhra Pradesh was higher than the national average.**

*** The ratio of farmers SMR to non-farmers SMR in Andhra Pradesh is found more than one for male during the mentioned period (1995-2001).**

*** The total number of landholdings in Punjab declined from 1375392 ha. in 1971 to 1027127 ha. in 1981 and again it has increased in 1991 and declined in 1995.**

*** The share of Commercial banks in total agricultural lending had increased during the above cited period (1970-2003).**

*** The institutional credit is the main source of the credit to the farmers. But, during the post reforms period the flow of institutional credit for Punjab farmers was limited only to the big farmers.**

*** In Punjab the share of non-institutional sources in agricultural lending increased substantially. The moneylenders charged higher rates of interest from 36 per cent to 120 per cent per annum therefore the principal amount becomes double within a short span of time. Around 52.1 percent of farmers are indebted through non-institutional sources.**

*** In Punjab Suicide Mortality Rate for male and female is lower than national average. But on the other hand SMR for farmers and the ratio of farmers to non-farmers is also high.**

*** The state was grown at an average of 7.9 per cent; it is 1.6 per cent higher than the national average during the period of 1993-94 to 2000-**

2001. Agrarian economy saw the negative growth rate of –14.5 per cent in 2001-02, 0.8 per cent in 2002-03 and -1.8 per cent in 2003-04, an average growth rate of -3.6 per cent in the state of Karnataka.

*** In Karnataka the ratio of agricultural credit to total bank credit was 24.5 per cent during the period 1986-90 and declined to 16.9 per cent by 1996-2000.**

*** For Karnataka the share of agriculture and allied activities in the total priority sector credit has come down from 43 per cent to about 26 per cent.**

*** The total priority sector advances increased by 104.58 per cent during 2001-2005 in Karnataka.**

*** The credit flow for agriculture and allied activities increased by 109 per cent while for other priority sector it is increased by 352.44 per cent for the period 2001-2005 in Karnataka.**

*** The share of crop loan to total priority sector credit of Karnataka has come down from 51 per cent in 2000-01 to 41 per cent in 2004-05.**

*** Around 68.9 per cent of farmers are in debt through institutional sources in Karnataka. Also the farm indebtedness is directly linked with the productive purposes, 78 per cent of farmers are in debt due to increase in farm expenses in Karnataka, while at national level it is 65.1 per cent.**

*** In Karnataka the trend of farmers suicides was continuously high till 2000, where 2630 farmers ended their lives through committing suicides but after that it started to decline in the next year, and settled on 2340 in 2002.**

*** At the initial stage the rate of farmers suicides was quite high which shows around 12 per cent of the total incidences of suicides in Karnataka. Later it reduced to 7.82 per cent in 2006.**

*** According to the National Crime Record Bureau (NCRB) record in Karnataka 1963, 1883, 1720 farmers have committed suicides in the year 2004, 2005 and 2006 respectively.**

*** The contribution of agriculture and allied sector to the net state domestic product at current prices came down from 40 per cent in 1960-61 to 13 per cent in 2004-05. Where as per the 2001 census 55 per cent of the total work force were either cultivator or agricultural labourers in the state of Maharashtra.**

*** The growth rate of the Gross State Domestic Product of Maharashtra (GSDP) at 4.8 per cent was lower than that of India's Gross Domestic Product (GDP) (5.8 per cent per annum) for the period of 1993-94 to 2003-04.**

*** In Maharashtra the eight major crop groups in terms of gross area under cultivation are Cereals with nearly half of it under Jowar, Pulses (3/10 under Tur), Fiber (mostly Cotton), Oil Seeds (nearly half of it under Soyabean), Sugar cane, Fruits and Vegetables, Condiments, Spices, Drugs and Narcotics etc.**

***The total per hectare cost of cultivation of Cotton in Maharashtra which was Rs. 716.32 in 1981-82 went up to Rs. 6,341.18 in 1995-96 in real terms. Similarly the cost of cultivation of Jower rose to Rs. 2,118.87 in 1995-96 from Rs. 716.32 in 1981-82.**

*** For Maharashtra the productivity of Cotton for the year 2007 was 253 kg. per hectare which was below the national average of 279 kg. per**

hectare and the productivity of sugarcane was 29 metric ton which was also below the national average of 43 metric ton.

*** Averagely 60.23 per cent of the gross cropped area is under the food-grains. It proves the fundamental principal of Indian agriculture of 'livelihood agriculture'.**

*** In Maharashtra, Konkan region has the highest rainfall of 2801mm which is followed by Vidarbha with 970mm during the month of June to September. Whereas, central Maharashtra and Marathwada the rainfall is 743mm and 706mm respectively.**

*** In Maharashtra in the year 2004 actual rainfall was only 70 per cent of the normal rainfall. The year 2004 was the drought year for the state as a whole but the severity of the same was high in Vidarbha region of the state.**

*** Around 73 per cent of is Sugarcane produced in the Drought Prone Area Programme (DPAP) of Maharashtra which is about the most water intensive crop.**

*** The net and gross irrigated area is near about constant and never crossed the limit of 20 per cent of gross cropped area in the state of Maharashtra.**

*** Maharashtra has around 30 lakh Cotton growers and it accounts for 15 to 20 per cent of the total Cotton output in India.**

*** Only 3 per cent of the area under Cotton is irrigated while 97 per cent of area of Maharashtra depends on uncertain monsoon.**

*** While all India yield of Cotton was 191 kg. per he. in 2000-01, where as the yield in Maharashtra during the same period was 100 kg per hectare.**

*** In Maharashtra there has been an increase in the area under Cotton from 27.66 lakh hectare in 2003-04 to 29.80 lakh hectare in 2004-05, which was propelled by a higher open market prices for Cotton in 2003-04.**

*** In Maharashtra the yield of Cotton grew by 55.49 per cent in 2004-05 further it was declined to 8.75 per cent in the year 2005-06.**

*** In Maharashtra only 16.2 per cent of farmers borrow the money from non-institutional sources. It is on record but in fact around 85 per cent of the farmers are in the trap of the non-institutional credit mechanism.**

*** The outstanding debt of the sub marginal land holder (less than 0.40 hectare) households was financed mostly by non-institutional agencies in Maharasshtra.**

*** Indebtedness for productive purposes was substantially high in the state of Maharashtra (80.2 per cent) as against 19.8 per cent for unproductive purposes.**

*** The backlog of Vidarbha region is highest with 39.12 per cent followed by rest of the Maharashtra 37.32 per cent and Marathwada of 23.56 per cent. In the total financial backlog the share of Vidarbha was highest with Rs.124654.5 lakhs (39.12 per cent).**

*** The report of Indicator and Backlog Committee in Maharashtra arrived at the conclusion that the financial backlog of the Vidarbha region has increased substantially from 39.12 to 47.60 per cent. In which the situation of the irrigation was worse, the irrigation backlog increased from 38.05 to 55.04 per cent.**

*** The financial backlog of the rest of the Maharashtra declined from 37.02 to 24.12 per cent and for Marathwada it increased from 23.56 to 28.77 per cent.**

*** At the earlier stage, the number of incidences of suicides was less, but among them Vidarbha region has been at the top. Afterwards the spate of farmers suicide spread all over the state of Maharashtra also covering irrigated regions and cash crop growing farmers of the state.**

*** The most noticeable aspect is that the districts consisting tribal population i.e. Dhule, Nandurbar, Chandrapur, Gadchiroli, Gondia, Bhandara have reported less number of incidences of farmers suicides. Which proves that the poor have less inclination to commit suicide.**

*** The proportion of the victims' families who were eligible for the state compensation of Rs.1 lakh was higher in Western Maharashtra as compare to Vidarbha and Marathwada regions of the state.**

*** In Maharashtra the annual compound growth rate of an exceedingly high figure of 9.8 per cent for farm suicides, here a rate at which the number would double every 7-8 years.**

*** Considering the period 1997-2006 as a whole, every fifth farm suicide committed in the country occurred in the state of Maharashtra.**

*** In 2001 Maharashtra constituted about 9.4 per cent of all India population but accounted for 13.5 per cent of the total suicide deaths in the country. Suicides accounted for 2 per cent of the total deaths in the state whereas at all India level suicides, accounted for 1.3 per cent of the total deaths.**

*** In 2001 the age adjusted suicide mortality rate for Maharashtra was 20.6 for males and 12.6 for female whereas for India it was 14.0 for males and 9.5 for females.**

*** In Maharashtra, the age adjusted SMR for males increased from 17.4 in 1995 to 20.3 in 2004 and that for females decreased from 13.6 in 1995 to 10.8 in 2004.**

*** The total number of farmers suicides in Maharashtra increased from 1083 in 1995 to 4147 in 2004. The increase was largely because of a 288 per cent increase in male farmers suicides from 978 to 3799.**

*** During this period, male farmers suicides as a proportion to total male suicides in Maharashtra increased from 14 per cent to 38 per cent. The SMR for farmers increased by nearly four times from 15 in 1995 to 57 in 2004, but for females the trend fluctuated to reach a peak of 12 in 2001 and thereafter it has been declining.**

*** The SMR for farmers of Maharashtra across divisions of the state during 2001-04 indicates relatively higher suicide deaths than the state average for males in Amravati and Nagpur divisions and for females in Amravati, Aurangabad and Nasik divisions.**

*** Nagpur has the higher SMR for farmers, which is lower only than in Amravati, but the ratio of farmers to age adjusted SMR is much lower.**

8.2 Salient Findings from Primary Data

***The composition of the surveyed households is; Maratha- 32.5%, Kunbi (Maratha)- 20.5%, Nav Baudha- 6.5%, Other Backward Class-14%, STs- 1%, SCs- 1%, Muslim- 2.5%, VJNT- 22%.**

*** About 53 per cent of farmers affected by agrarian crisis and suicide belong to the Maratha (Maratha+Kunbi Maratha) community which is predominantly a farming community in the state of Maharashtra.**

*** In the Family set up of affected households 52.5 per cent of families are joint families and 47.5 per cent belonged to the nuclear family set up.**

Hence there is no correlation of high degree between the suicidal act and type of the family.

*** On an average, family consisting four persons are found in case of 88.5 per cent of the affected households which is termed as an ideal size of family.**

*** Among the total surveyed families 63.74 per cent of the family members have completed their primary and secondary education whereas 15.39 per cent are illiterate.**

*** 9.93 per cent of the family members have completed the higher secondary education and 3.06 per cent have the graduation and technical education diploma.**

*** Field level data revealed that 33.58 per cent of the family members of surveyed households are engaged in actual cultivation practices whereas 55.91 per cent are as farmers plus agricultural labourers.**

*** 2.67 per cent are doing business, 1.33 per cent are in Government services, 1.71 per cent work in private services and 4.77 per cent are working as farm labourers.**

*** It is found that there is a lack of off farm employment opportunities in the study regions.**

*** All the studied households have their own houses. Among them 55 per cent have the houses of two rooms and 28.5 per cent of households have houses with three rooms.**

*** The roof of most of the houses is found made of leaves/bamboo and soil/mud in 23.5 and 20.5 per cent households respectively. 44 per cent of households have the roof of teen sheets and only 9 per cent have cement concreted houses.**

*** All the houses are constructed by earlier generation not even single house has been built in last 20 years. Some of them recently renovated their houses which is an insignificant number.**

*** Of the total surveyed families 78 per cent of households have the electricity supply with 12 to 14 hours of daily load shading.**

*** Only 11.5 per cent of households have toilets of their own.**

*** Drinking water in the surveyed regions is available through wells- 15.5%, Hand pumps- 35.5%, Public Stand Posts- 38.5% and Public Wells- 10.5 per cent.**

*** In Vidarbha not a single farm family lives on the farm because of unavailability of water and electricity throughout the year.**

*** For the Vidarbha region after the month of January, it is hard of getting drinking water without the tanker.**

*** The pattern of consumables is; Gas- 15.5%, Electric fan- 65%, Radio/Tape- 27.5%, T.V.- 58.5%, Bicycle- 45% and Two Wheeler- 9%. However 26.7 per cent of surveyed households have no consumables and other amenities.**

*** It is observed in the field investigation that 36 per cent of households have bullock cart, plough- 39.5%, Seed Drill- 40%, and Electric Pumps- 22.5 per cent.**

*** Only 36.5 per cent of households have spray pumps which they need for the frequent spraying of Cotton. Others are dependent on hired spray pumps and operator.**

*** The most striking fact is that about 39.5 per cent of total suicide affected households do not have any of agricultural implements.**

*** The higher dependency on hired labour and implements affects the production badly because the time factor always plays a significant role in agricultural operations.**

*** Surveyed farmers cited that the present financial position cannot allow them to purchase farm implements.**

*** Though the bullocks are important in agriculture only 38 per cent of surveyed households have their own bullocks. Among the total surveyed families 43.5 per cent have cows, and only 6 per cent have buffalo. Mostly the milking animals are found in the irrigated area of Western Maharashtra.**

*** It is observed that farmers sell their animals for the purpose of consumption, agricultural expenses, repayment of debt and health problems.**

*** Majority of the households surveyed belong to the category of small and marginal land holders which accounts for 61.50 per cent.**

*** 30.5 per cent of the deceased farm families have size of holding which is only a little more than five acres but finding a category of large holding is equally difficult.**

*** There have been three households affected of suicides falling under the category of landless.**

*** Only 25.87 per cent of the surveyd farmers have the irrigation facilities and those belong to Ahmednagar and Aurangabad districts of the state. 80 per cent of the surveyed farm households are dependent on uncertain monsoon for the cultivation purpose.**

*** Availability of irrigation facilities as par the land holding category; 25.52% of marginal, small- 39.21, semi medium- 31.37%, medium- 3.92% and 1.96 per cent of big farmers have the irrigation facility.**

*** Insufficient availability of electricity makes it difficult to irrigate their crops on time.**

*** In all size classes of landholding Marathas have the higher land holding as compare to other caste which followed by Kunbis (Marathas).**

*** In other social groups SCs, STs, VJNT, OBCs and Muslims have their own land holdings. Among these social groups VJNT and OBCs (mali) are involved in the agricultural practices.**

*** The main reason for land leasing out is the very small and uneconomic size of the land holding.**

*** The leasing of land either is on the basis of shared cost of cultivation and income or it is based on the cash payment to the land owner ranging between Rs.3000 to Rs.8000 per acre depending on the quality of land.**

*** Around 13 per cent of surveyed farmers have sold their lands in which 69.23 per cent belong to the marginal category and 19.23 per cent are small farmers.**

*** 12.12 % of the farmers sold their land for the agricultural expenses, 45.45 per cent for debt repayment and 42.42 per cent have sold their land for the purpose of the marriage of a daughter or a sister.**

*** In all there are forty three (43) crop combinations in the suicide hit regions of the state of Maharashtra.**

*** The agro climatic conditions of Vidarbha and Marathwada regions of the state are suitable for 27 different types of Pulses and Cereals but farmers cultivate very few of them and concentrate more on Cotton.**

*** The highest dominance of Cotton is of 65.48 per cent followed by 57.29 per cent of farmers growing Soya bean.**

*** The crops combination that consists Cotton+Arhar+Soya bean is 19.28 per followed by 9.67 per of Cotton+Arhar+Jowar.**

*** All the surveyed households use hybrid seeds for the cultivation.**

*** For the applications of various inputs, input dealer is the main source of information (61.12%) followed by friends and relatives with 35.54 per cent.**

*** Only 0.99 per cent of surveyed households get the information from the agriculture development officer.**

*** More than 73.59 per cent of farm households cannot procure farm implements and other inputs on cash purchasing mode.**

*** When farmers obtained inputs on credit then the dealers charge for 24 to 48 per cent of rates of interest per annum.**

*** In some cases (37.24%) interest is not charged by traders. Whereas in few cases (2.06%) the extra price on credit purchase of implements is directly charged.**

*** Only one deceased household openly reported about the mortgage which accounts 0.68 per cent of the total surveyed households.**

*** It is observed that farmers are not using the doses of fertilizers as per the scientific requirement.**

*** 49.61 per cent of the total pesticides are used for Cotton which disproves the commitments of the Monsanto-Mahyco, the company supplying BT Cotton seed in the state of Maharashtra.**

*** Around 30.29 per cent of the Cotton growing farmers have to spray for three times and 27.13 per cent for four times to get control over pest attack on Cotton.**

*** However in case of Soya bean cultivating farmers 27.10 and 35.51 per cent spray twice and thrice respectively.**

*** Cotton is the most favoured crop in Vidarbha, registered a per acre productivity of 3.79 quintals, which is higher than the national average of 2.30 quintals per acre.**

*** The crop wise productivity of Soya bean- 3.84, Jowar-4.70, Bajara- 4.95, Arhar- 4.30, Mung- 2.50, Safflower- 3, Udad- 2.83, Wheat- 7.06, Sugarcane- 28.415(ton), Gram- 4.14, Groundnut- 15.50, Onion-87.50 quintal per acre.**

*** The productivity of other crops shows little deviation from the national average and that is mainly because of the territorial fluctuations in weather conditions and the changes in availability of the inputs.**

*** The marketable surplus of cash crops such as Cotton, Soya bean, Groundnuts, Onion and Sugarcane is found of the order of 100 per cent.**

*** But in food-grains crops it has been observed to be less than expected. The marketable surplus for Jowar and Bajara is limited to 9.37 and 27.5 per cent of the growers which implies that majority of farmers (90.62 and 72.2 per cent of Jowar and Bajara growers) the agriculture is mainly the occupation of livelihood and it is not for the profit earning commercial enterprise.**

*** More than 50 per cent of the families have this type of agriculture.**

*** The marketability of Cotton and Soya bean is of higher order i.e. 100 and 97 per cent respectively and we also find the higher incidences of farmers suicides in this category of cultivators.**

*** Cotton crop incurred a heavy loss of Rs.1360 per acre and most of the farmers committed suicides were Cotton grower (62 per cent).**

*** The crops like Arhar and Soya bean which follow the Cotton in Vidarbha region yield per acre net returns up to Rs.655 and Rs.1057 respectively. However, the Bajara and Jower cultivators found incurring a per acre loss of Rs.1286 and Rs.1450 respectively whereas Wheat yields Rs.168 per acre higher than cost of cultivation.**

*** The crops like Sugarcane, Groundnut, Onion and Gram which are cultivated in the irrigated region of Western Maharashtra bring better returns for the farmers.**

*** It is observed that, about 75.68 per cent of farmers from the surveyed regions resort to traders to sell their produce.**

*** The most striking fact is that, not even a single Cotton producer sell his produce at the Federation outlets. Because selling of Cotton at government procurement outlets take too much of time and leads to incurring of losses. Also the government machinery takes more time in making of payment.**

*** Since 2006 most of the government procurement centres are closed in Vidarbha region of the state.**

*** Averagely two third of farmers prefer to sell their produce through unorganised mode of marketing that consists traders and local weekly village market.**

*** Only 24.30 per cent of farmers from the studied regions bring their product at Agricultural Produce Marketing Committee.**

*** It is found that 73.60 per cent (145) of farmers are unaware of the existing Minimum Support Price mechanism.**

*** The spurious seeds caused losses to 24.36 per cent of the farmers of which 81.25 per cent of them belong to the category of Cotton and surprisingly most of them are of BT Cotton growers.**

*** Around 73.5 per cent (147) farmers of the study regions experienced frequent crop losses.**

*** It is clear from the study that 53.44 per cent of the crop failure has to be accrued to an inadequate and untimely rainfall.**

*** 31.03 per cent of the farmers have faced losses on account of the spurious seeds and most of them are commercial crops cultivators like Cotton, Soyabean and Onion.**

*** 16.32 per cent of farmers lost their crop due to uncontrolled pest attack which is an outcome of the mono cropping practice in Vidarbha and Marathwada regions of the state.**

*** Some of the farmers (1.36 %) incurred losses due to the lack of electricity.**

*** In Vidarbha region the wage rate during peak season for male and female is around Rs.125/- and Rs.75/- respectively. Whereas during the post harvest period (February to May) the wage rate for male and female ranges between Rs.30/- and Rs.20/- respectively.**

*** The functioning of the employment generation schemes in Vidarbha region has been very unsatisfactory.**

*** Around 80 per cent of the poor households from Vidarbha demand that they need work but only 7.5 per cent of households get employment under MGNAREGA and EGS. Both the schemes neither created employment**

nor did the irrigation infrastructure in Vidarbha as has happened in Western Maharashtra at the initial stage of the EGS.

*** 33.50 per cent of the suicide affected farmers have been borrowing from private moneylenders.**

*** 52 and 36 per cent of the state farm households borrow from co-operatives and commercial banks.**

*** In the study regions the average amount borrowed from the moneylenders has been Rs.41,432/- whereas the same has been of the order of Rs.25,570/- from co-operatives and Rs.38,413/- from the nationalised commercial banks.**

*** For the rates of interest charged the average comes out as 14 per cent by co-operatives, 13 per cent by commercial banks, urban co-operatives- 18 per cent and 78 per cent by moneylenders (Maximum of 120 and minimum of 36 per cent per annum).**

*** 3 per cent of studied households did not obtain any type of loan and the information of 16 households regarding the same could not be made available by us.**

*** 83.18 per cent of the farm households from where suicides have been reported found borrowing and strictly using the loan amount for agriculture related productive purposes such as agriculture implements, seeds and fertilizers, irrigation and live stock.**

*** Only 16.18 per cent of the farmers were found borrowing for non agricultural purposes which consisted health, education, marriage and housing. Where two families did not reveal the reasons of loan.**

*** Only 27.27 per cent of the marginal farmers could obtain 12.75 per cent of the total loan amount from the co-operative institutions.**

*** Whereas 39.66 per cent of small, 40.65 per cent of the semi medium, 36.84 per cent of medium and 100 per cent of the large land holders have an access to co-operative borrowings.**

*** The benefits of the crop loan are observed more in favour of large holders with 28.20 per cent of marginal farmers having access to crop loan, 53.70 per cent semi medium, 57.64 per cent from medium and 50 per cent of the large holders have the crop loans available from co-operatives.**

*** In case of caste wise borrowing of loan 62.76 per cent of farmers have been borrowing from institutional sources whereas 36.22 per cent from the village moneylender.**

*** 81.43 per cent of the farmers of all caste categories borrow for productive purposes whereas only 18.57 per cent of the farmers obtained loan for non-agricultural purposes.**

*** There is no correlation of significant degree between the caste and purpose of borrowing.**

*** More than 50 per cent of the farmers who ended their lives through suicide were below the age of 45 years, 34 per cent belonged to middle age group i.e. 46 to 60 years and only 14.5 per cent of the deceased farmers were from the senior age group.**

*** Around 18 per cent of farmers of surveyed households have been found illiterate and the proportion of the primary and secondary education is limited to 29 and 43 per cent respectively. Only 6 per cent of them have completed their higher secondary education.**

*** 74.50 per cent of the surveyed farmers have committed suicides by consuming pesticides whereas 20.50 per cent through hanging themselves.**

In one case the victims had suffered a heart attack due to the pressure by moneylender of repaying loan amount.

*** The major risk factors which lead to the suicidal behaviour of the farmers are as;**

Deterioration of Social Status (39.5%), Economic Crisis (75.5%), Marriageable daughter/sister (41%), Indebtedness (89%), family discord (husband/wife) (8%), other family discord (18%), disputes with villagers (1.5%), disputes before the incidence (3.5%), suicide case in nearby village (81%), suicide in family (3%), serious illness (8%), behavioural changes (59.5%), addiction (48%), social isolation (93%) and crop failures (73.5 %).

*** There are about six factors responsible for taking of lives of 19.5 per cent of the farmers followed by seven risk factors in case of 18 per cent, eight in case of 14.5 per cent, nine in 10.5 per cent and ten risk factors in 4.5 per cent.**

*** In all 82 per cent of farmers suicide affected households had been eligible for the state government compensation of Rs. 1 lakh. And rest of the 18 per cent of the farm families could not become eligible for the same.**

*** 38 per cent of the studied households expect subsidy on digging of wells. Not even a single farmer of the surveyed three regions has received any kind of subsidy on digging of wells.**

*** 3 per cent of farmers expect modern irrigation techniques i.e. drip and sprinkler whereas 18.5 per cent of the households mentioned the need of the actual cost based fair prices for their produce, 17 per cent of the households expect government job for one of the family members, 11 per**

cent of households expect direct economic compensation and 5.5 per cent are confused who mentioned neutrality.

8.3 Conclusion

In India the marginalising of agriculture sector ever since the 1980s in the national planning and declined state investment in rural infrastructure and extension had caused an increase in the cost of cultivation at individual farm level which resulted in the manifestation of agriculture crisis that deepened further during the period of economic reforms with a resultant impact in the form of farmers suicides in the country. Hence reporting and continuous increase of the suicidal mortality rate amongst the farming community has become a serious issue of the post reforms period of the world economy in general and that of the India in particular. The foregoing analysis reveals that the suicides of farmers in the state of Maharashtra has neither been an incidence out of poverty amongst farming community nor is the inefficiency of the farmers or an unproductive use of credit money that has pushed them into the death trap but it is on account of a punctured pride, caused by the accumulated economic tensions as they continuously faced through unexpected losses for a long time plus negligence of agriculture in national and state policy kind of a thing ever since the 1986 at the national level that led to the suicides of many. It is not the productive inefficiency either of the land or farmers but the increased costs of inputs as the demand for them shot up rapidly which led to an increase in the cost of production and thereby the cost outstripped revenue and accumulation of debt burden in case of 89 per cent of the farm households in the state of Maharashtra compelled them to end life through suicide. Post green revolution extensive use of

nitrogen fertilizers and the chemicals for Integrated Pest Management had its economic implications on the farm economy of commercial cropping such as the Cotton growing belts of the state. The study also brought to light the fact that the cropping pattern of the suicide hit belts of the state is a mono cropping of nature dominated by commercial crops like Cotton the crop demanding all expensive inputs and the availability of certain inputs like irrigation in time where there are many obstacles brought production and income uncertainties. The repetition of crop rotation like the Cotton heavily consuming farm manures also caused negative returns to scale from agriculture. The agro climatic conditions of Vidarbha and Marathwada regions of the state are suitable for twenty seven different types of cereals and pulses whereas due to the inadequate cropping education and extension the majority of farmers had undertaken the mono cropping pattern for which the cost has gone up due to the declining returns to scale on the one hand and yielding of lower revenue as the market price of Cotton declined from Rs.2700 per quintal in2005 to Rs. 1900 in the year 2007 on the other.

The underdeveloped market conditions further contributed to the farm vagaries of the state which exposes around 75 per cent of cultivators to the exploitation by private traders and local moneylenders. 73.60 per cent of the farmers from the suicide hit regions of the state didn't even know about the mechanism of Minimum Support Price whereas 24.36 per cent of farmers suffered crop failures on account of input market imperfections as they got the spurious seeds and 81.25 per cent of them were of Cotton growers.

Use of credit, time, adequacy and price for the same had caused long term impacts on the lives of farmers and the farming economy. The rural institutional credit sector of the regions neither could eliminate nor has been able to control the lending rates and the dominance on lending by private moneylenders. 33.50 per cent of the farmers are still borrowing from the private moneylenders at a lending rate ranging from 36 to 120 per cent per annum can double the borrowed money in a period of few months.

The foregoing analysis brings out the fact that the suicides by farmers in the state is not an outcome of poverty of farmers but the punctured socio-economic pride which made practicing agriculture difficult pushed them in to a debt trap and thereby suicidal behaviour. Hence the shift in cropping pattern towards contemporary high value crops like pulses, oilseeds and vegetables is inevitable. Also, the shift on the policy front for creation of quality rural infrastructure is required. Role of agricultural universities and *Krishi Vigyan Kendras* (KVKs) of central government can revitalise agrarian conditions to some extent. Creation of quality rural infrastructure and provision of credit can improve the resource use efficiency. Nationalised commercial banks advances to agriculture could not cross the limit of 11.5 per cent leaving aside the statutory expectation of 18 per cent needs to give a serious thought. The outcome of government economic package proves that it is for the time being and cannot solve the problem in the long run unless it facilitates strengthening the base of rural economy apart from elimination of corruption in implementation of the same and also the corruption and agency practices in institutional credit mechanism. Public policies towards creating non farm sector employment

in rural areas can take off pressure from unremunerative agriculture. The eleventh plan which has expected 8.5 per cent of annual growth rate with 10 per cent for the last two years plus 4 per cent of the growth of agriculture with an inclusion of all has already been proved to be difficult to achieve as the agriculture has registered a negative rate of growth during the third quarter of 2009-10; hence, unless the plan incorporates the rural and farming classes with policy intervention on the one front and special targeting of agriculture on the other it will not be possible like the earlier plan targets to achieve. Planned shift in cropping pattern according to the agro climatic conditions can improve productivity of land and labour which will reduce the cost of cultivation and improve the situation emerging out of declining returns to scale from agriculture. Development of rural and agro based industries along with policy for allied activities like animal husbandry and promoting policies of extension facilities and the rural non farm sector can help to include farmers in the mainstream activity shall divert dependence from agriculture and promote the aimed objective of inclusive growth in years to come.

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6.8 Socio-economic survey of Akola district, 2008-09
6.9 Socio-economic survey of Buldana district, 2008-09

Annexure

I) Questionnaire

1) Name of the Farmer:-

2) Basic Information about Family

Caste	Type of family	Number of Family Members			
		Male	Female	Boys	Girls

Name of Family Member	Relationship with head (Code-01)	Sex	Age	Marital Status (code-2)	Education (code-3)	Occupation (code-4)	
						Major	Subsidiary

Code-01:- Self- 1, husband/wife-2, child-3, parent-4, other-5

Code-02:- Unmarried-01, Maried-02, Widow/Widower-03, Divorced-04

Code-03:- Illiterate-01, Primary-02, Secondary-03, Higher Secondary-04, Technical-05, Graduation-06, Post Graduation-07, Non-formal-08, other (specify)-09

Code-04:- Farming-01, Farm Labourer-02, other Labour-03, Household Industry-04, Business-05, Government Services-06

3) Housing Information

Ownership (code-1)	Number of Rooms	Electricity	Material used for walls (code-2)	Type of Roof (code-3)	Toilet facility	Sources of Drinking Water (code-4)

Code-1:- owned-01, Rented-02, Other-03

Code-2:- Mud-01, Cement -02, Stone-03, Bricks-04, Wood-05, Other-06

Code-3:- Leaves/bamboo-01, Mud-02, Concrete cement-03, Tin-04, Tiles-05, Other-06

Code-4:- Well-01, Hand pump-02, public stand post-03, Public Well-04Tank-05, Canal-06, Other-07

4) Consumables

Type	Yes/No
Smokeless Chullah	
Gas	
Electric fan	
Radio	
TV	
Bicycle	
Two wheeler	
Car	
Other	

5) Agricultural Implements

Type	Yes/No
Bullock Cart	
Plough	
Seed drill	
Crushing machine	
Spraying pump	
Electric	

6) Selling of these Implements

Type	Year of sell	Reasons of sell (code-01)

Code-01:- Daily Expenses-01, Current Agricultural Expemditure-02, Debt Repayment-03, Health-04, Marriage-05, Education-06, Other-07

7) Livestock

Type	Yes/No	Numbers	Sell?	Price	Reason for sell (code-1)

Bullocks					
Cow					
Buffalo					
Sheep					
Poultry birds					
Other					

Code-1:- Daily Expenses-01, Current Agricultural Expemditure-02, Debt Repayment-03, Health-04, Marriage-05, Education-06, Other-07

8) Assets (Land)

Type	Area (acre)	Leased in	Leased out	Reason for leased out (code-1)
Irrigated				
Dry land				

Type	Sell	Area (acre)	Price	Reason for sale (code-2	Purchased (acre)	Price
Irrigated						
Dry land						

Code-01:- Engaged in Other Activities-01, Longer Distance from home-02, Physical disability-03, Economic Weakness-04, Other-05

Code-02:- Daily Expenses-01, Current Agricultural Expemditure-02, Debt Repayment-03, Health-04, Marriage-05, Education-06, Other-07

9) Cropping System

Crop	Type of inputs	Quality (code-1)	Who suggested (code-2)	Source of purchase (code-3)	Mode of Payment (code-4)	Interest rate (%)	Per acre use
	Seed						
	Fertilizers						
	Pesticides						
	Organic manure						
	Vermi						

	Compost						
	Agricultural implements						

Code-01:- Hybrid-01, Indigenous-02

Code-02:- Extension officer-01, Friend-02, Dealer-03, Other-04

Code-03:- Self-01, Government Stores-02, Dealer-03, Other-04

Code-04:- Cash-01, Credit-02

10) Last Year Cropping Pattern

Crop	**Area (acre)**	**Season (code-1)**	**Type of Land (code-2)**	**Sources of irrigation (code-3)**	**Methods of irrigation (code-4)**	**Type of seed (code-5)**	**Productivity (quintal)**

Code-01:- kharif- 01, Rabbi-02, Summer-03

Code-02:- irrigated-01, Dry land-02

Code-03:- Wells-01, Tubewells-02, Canal-03, River-04, Tank-05, Farm tank-06, Other-7

Code-04:- Pipeline-01, Drip-02, Sprinkler-03, Traditional-04, Other-05

Code-05:- Hybrid-01, Indigenous-02

11) Agricultural Marketing

Crop	**Marketable surplus**	**Price (qtl.)**	**Place of sell (code-1)**	**Place of market**	**Distance of market**	**Transportation (code-2)**	**Type of road**	**Transport cost**

Code-01:- Government Center-01, APMC-02, Traders-03, Open Market-04

Code-02:- Bullock cart-01, Tractor-02, Truck-03, Rikshaw-04, other-05

12) Information about Minimum Support Price- Yes/No

13) Reasons for sell of below the MSP

14) Spurious seeds (Crop and Number of times)

15) Problem face of spurious seeds

1) could not grow, 2) spurious quality of produce, 3) Could not get expected returns, 4) No production

16) Crop Failure

Crop	Year	Expected production (qtl.)	Actual production (qtl.)	Reasons for crop failure

17) Agricultural Wage Rate

Type	Season	No. of working days	Wage Rate (Rs.)			Wages in terms of goods (Kg.)		
Own field								
Other labourer in own farm								
On other farm								

18) Employment under Different Government Scheme

Scheme	Season	No. of working days	Wage Rate (Rs.)			Wages in terms of goods (Kg.)		

19) Information about Loan

Year	Loan Amount (Rs.)	Source of Loan (code-1)	Rates of Interest (%)	Mortgage (code-2)	Reasons (code-3)	Repayment (code-4)	Total repayment (Rs.)	Overdue (Rs.)

Code-1:- Co-operative-01, Nationalized Bank-02, SHG-03, Moneylnder-04, teaders-05, Zamindar-06, Relatives-07, other-08

Code-02:- nothing-01, Land-02, Livestock-03, Crop-04, House-04, Other than Agricultural Assets-05, Other Consumables-06, Labour-08, Other-9

Code-3:- Daily Expenses-01, Education-02, Health-03, Marriage-04, Land Purchasing-05, Livestock-06, Current Agricultural Expenditure-07, Debt Repayment-08, House-09, Seed-10, Fertilizers-11, Modern Implements-12, Irrigation-13, Pesticides-14, Agricultural Implements-15, Other-16

Code-04:- Regular-01, Irregular-02

20) Loan in Terms of Goods

Year	Source (code-1)	Foodgrains (Kg.)	Reason (code-2)	Rate for Repayment

Code-01:- Moneylender-01, Zamindar-02, Traders-03, Relatives/Friend-04

Code-02:- Consumption-01, Seed-02, Fertilizers-03, Pesticides-04

21) Information about Complete Repayment

Year	Loan Amount	Year of Repayment	Repayment Amount

22) Investment in Agriculture/Consumables

Type	Year	Total Investment (Rs.)	Loan Amount(Rs.)	Source (code-1)	Interest (%)	Subsidy (Rs.)
Well						
Electric Pump						
Pipeline						
Drip/sprinkler						
Household industry						
Housing						
Land Purchasing						

Code-1:- Co-operative-01, Nationalized Bank-02, SHG-03, Moneylnder-04, teaders-05, Zamindar-06, Relatives-07, other-08

23) Public Investment in Village:- Yes/No

Type	Year
Dam	
Pond	
Canal	
Electrification	
Roads	

24) Benefits Received from Public Investment in Details:-

25) Personal Information of Deceased Farmer

Name:-

Age:-

Education:-

Marital Status:-

Date of Suicide:-

Experience in agriculture:-

Post Mortem:-

Mode of Suicide:-

26) Reasons for Committing Suicide

Yes-01, No-02

Sr. No.	Reasons	Yes/No
1	Deterioration of Social Status	
2	Economic Crisis	
3	Marriageable Daughter/Sister	
4	Indebtedness	
5	Relationship Between Husband/Wife	
6	Relationship with other family members	
7	Social Disputes	
8	Disputes before suicide	
9	Suicide in nearby village	

10	**Suicide in family**	
11	**Serious Illness**	
12	**Behavioural changes**	
13	**Addiction**	
14	**Social and political participation**	
15	**Crop failure**	

27) Government Compensation

Source	**Yes/No**	**Details of Compensation**	**Reasons for ineligibility**
Social			
Government			

28) Life after the sad end of family head

29) Expectations from Government

II) List of the surveyed households for the primary data collection.

AHMEDNAGAR				
1)	**Kalangade Bhausaheb Damu** **At- Nimgaon Khairi** **Tal. Shrirampur**		**10)**	**Gholap Ramdas Baburao** **At- Kotul** **Tal- Akole**
2)	**Todmal Vasant Babura** **At- Daithane Gunjal** **Tal- Parner**		**11)**	**Gore Gorakshanath Haribhau** **At- Malewadi** **Tal- Shrirampur**
3)	**Avhad Babasaheb Kashinath** **At- Jambhali** **Tal- Pathardi**		**12)**	**Garje Sadashiv Jagannath** **At- Vadule** **Tal- Newasa**
4)	**Suryavanshi Vishnu** **At- Kolhar Khu.**		**13)**	**Badakh Bajirao Vitthal** **At- Mahankal Vadgaon**

	Tal- Rahata			**Tal- Shrirampur**
5)	**Markad Ramu Dhondiba** **At- Rupanerwadi** **Tal- Pathardi**		**14)**	**Pathak Sandhya Dattatray** **At- Fatyabad** **Tal- Shrirampur**
6)	**Doiphode Haribhau Ashru** **At- Sultanpur Khu.** **Tal- Shevgaon**		**15)**	**Dalavi Bhausaheb Govind** **At- Newasa Bu.** **Tal- Newasa**
7)	**Shinde Ankush Thakaji** **At- Pimpri Jalshet** **Tal- Parner**		**16)**	**Sangale Rausaheb Nivrutti** **At- Kharde** **Tal- Pathardi**
8)	**Malunjkar Chandrabhan Govind** **At- Savantwadi** **Tal- Akole**		**17)**	**Khedkar Dnyandev Namdev** **At- Dule Chandgaon** **Tal- Pathardi**
9)	**Jadhav Babasaheb Bhaskar** **At- Gujarwadi** **Tal- Shrirampur.**		**18)**	**Darkunde Kailash Gangadhar** **At- Devgaon** **Tal- Newasa.**
19)	**Jagtap Shankar Ramchandra** **At- Mahalakshi Hivre** **Tal- Newasa**		**26)**	**Bhaldan Namdev Karbhari** **At- Undirgaon** **Tal- Shrirampur**
20)	**Savai Prakash Anandrao** **At- Bhamthan** **Tal- Shrirampur**		**27)**	**Bangal Dagdu Dhondiba** **At- Mehenduri** **Tal- Akole**
21)	**Wakchaure Digambar Janardhan** **At- Punatgaon** **Tal- Newasa**		**28)**	**Sonavane Ramchandra Dashrath** **At- Mohoj Devae** **Tal – Pathardi.**
22)	**Lokhande Popat Ramchandra** **At- Ranjangaon Devi**		**29)**	**Bade Janardhan Eknath** **At- Yeli**

	Tal- Newasa			**Tal- Pathardi**
23)	**Ban Shivaji Visvanath** **AT- Susare** **Tal- Pathardi**		**30)**	**Jangle Sonyabapu Vishwanath** **At- Panegaon** **Tal- Newasa.**
24)	**Sase Dattu Sankar** **AT- Unchkhadak Tal- Pathardi**		**31)**	**Pande Bapu Lakshiman** **At- Kumbhephal.** **Tal- Akole**
25)	**Patange Chandrakant Ganpat** **At- Vadala** **Tal- Newasa.**		**32)**	**Avhad Parshuram Rakhmaji** **At Rajegaon Vasti,** **Tal- Newasa.**
34)	**Deshmukh Ram Aapasaheb** **Aurangapur, tal. Sangamner**		**33)**	**Patkar Nivrutti Nathu** **At- Dhorjalgaon** **Tal- Shevgaon**
BEED				
35)	**Aher Ashok Shankarrao** **At – Bori Pinpalgaon** **Tal- Gevrai**		**36)**	**Rathod Baliram Uttam** **At- Ramu Naik Tanda (Kekat Pangri)** **Tal- Gevrai**
37)	**Maske Ganesh Kisanrao** **At- Rampuri** **Tal- Gevrai**		**38)**	**Gire Ishwar Kakasaheb** **AT- Mudhapuri** **Tal- Gevrai**
39)	**Gire Ashok Tukaram** **AT- Mudhapuri** **Tal- Gevrai**		**40)**	**Pathan Navab Badshah** **At- Mahad Takali** **Tal- Gevrai**
41)	**Kharat Krushna Kalyan** **At- Dhondarai** **Tal- Gevrai**		**42)**	**Lonkar Ram Rabhaji** **AT- Nipani Javalka** **Tal- Gevrai**
43)	**Mondhe Ankush Vitthal**		**44)**	**Deshmukh Babasaheb Kisan**

	At- Sushi **Tal- Gevrai**			**At- Umapur** **Tal- Gevrai**
45)	**Kavade Sitaram Santaram** **At- Belgoan** **Tal- Gevrai**		**46)**	**Vairal Sukhadev Sopan** **At- Manubai Javla** **Tal- Gevrai**
VARDHA				
47)	**Gudhe Palasram Tulsiram** **At- Lonsangvi** **Tal- Vardha**		**48)**	**Gopale Mahadev Mangal** **At- Shirpur** **Tal- Arvi**
49)	**Pusadekar Manik Shivram** **At- Narayanpur** **Tal- Samudrapur**		**50)**	**Patekar Kavadu Anandrao** **AT- Kurzadi** **Tal- Vardha.**

AURANGABAD				
51)	**Thote Ashok** **At- Rajapur** **Tal- Paithan**		**52)**	**Pawar Raju Babasaheb** **At- Tuljapur** **Tal- Paithan**
53)	**Tawar Manoj Sukhadev** **At- Kadethan** **Tal- Paithan**		**54)**	**Tekale Yesuji Bajaba** **At- Kekat Jalgaon** **Tal- Paithan**
55)	**Bhagwat Sambhaji Asman** **At- Dhokephal** **Tal- Paithan**		**56)**	**Agaj Ramesh Janardhan** **At- Gidhada** **Tal- Paithan**
57)	**Fade Chandrakant Tukaram** **At- Paithan** **Tal- Paithan**		**58)**	**Sayyad Husein** **At- Koli Bodakha** **Tal- Paithan**
59)	**Pival Laximan Namdev** **At- Adul** **Tal- Paithan**		**60)**	**Kokane Nanasaheb Trimbak** **At- Harshi**

				Tal- Paithan
61)	**Mahajan Mansing Bimrot** **At- Bramhain Gaon** **Tal- Paithan**		**62)**	**Sheikh Rasul Gafur** **At- Thergaon** **Tal- Paithan.**
YAVATMAL				
63)	**Rathod Vishnu Kavadu** **At- Asola** **Tal- Yavatmal**		**64)**	**Khapar Ramesh Sudam** **Yelabarai** **Tal- Yavatmal**
65)	**Jadhav Vinod Nattu** **At- Chandrapur** **Tal- Yavatmal**		**66)**	**Chauhan Suryabhan Harising** **At- Yavali** **Tal- Yavatmal.**
67)	**Bondre Vinayak Ramrao** **At- Daheli** **Tal- Yavatmal**		**68)**	**Jadhav Sadanand Motiram** **At- Mangrul** **Tal- Yavatmal**
69)	**Adhe Subhadra Nanu** **At- Chandrapur** **Tal- Yavatmal**		**70)**	**Ukanda Babu Rathod** **At- Vaki** **Tal- Yavatmal**
71)	**Ghuge Pundlik Dadarao** **At- Dorli** **Tal- Yavatmal**		**72)**	**Mane Ambadas Shravan** **At- Bham Raja** **Tal- Yavatmal**
73)	**Rathod Devidas Savai** **At- Pandhurna** **Tal- Yavatmal.**			
WASHIM				
74)	**Vazulkar Ramrao Laximan** **At- Shelgaon Dabhade** **Tal- Malegaon**		**75)**	**Kute Ramdas Narayan** **At- Shirpur** **Tal- Malegaon**
76)	**Ghuge Vishvanath Nageji**		**77)**	**Raut Santosh Sopan**

	At- Bramhainwada **Tal- Malegaon**			**At- Dubalvel** **Tal- Malegaon**
78)	**Dhangar Gulab Sampat** **At- Kalambeshwar** **Tal- Malegaon**		**79)**	**Thombe Prakash Gangaram** **At- Jambhala Jaha** **Tal- Vashim**
80)	**Endole Baban Uttam** **At- Karli** **Tal- Vashim**		**81)**	**Kute Vaman Shivram** **At- Pangri Kute** **Tal- Malegaon**
82)	**Chauhan Raju Ratan** **At- Medashi** **Tal- Malegaon**		**83)**	**Rajaram Vitthal Gangavane** **At- Depul** **Tal- Vashim.**
84)	**Vankhede Vijay Dashratha** **At- Shelgaon Bagade** **Tal- Malegaon**		**85)**	**Nagare Digambar Tukaram** **At- Babhulgaon** **Tal- Vashim**
86)	**Pachpille Gajanan Ramdas** **At- Sonala** **Tal Malegaon**		**87)**	**Kapse Arjuna Kisan** **At- Umara Kapse** **Tal- Vashim**
88)	**Pawar Mahadev Sakharam** **At- Mungla** **Tal- Malegaon**		**89)**	**Aru Uddhav Rajaaram** **At- Shelu Khu.** **Tal.- Vashim.**
90)	**Khandare Bhaurao Pandurang** **At- Akamba** **Tal – Vashim**		**91)**	**Ramkisan Baliram Ingale** **At- Umra Shamshoddin** **Tal- Vashim**
92)	**Gavhane Fakira Bhujanga** **At- Kalambeshwar** **Tal- Vashim**		**93)**	**Hajare Murlidhar Uttamrao** **At- Goksangavi** **Tal- Malegaon**

AMRAVATI				
94)	**Dive Vasudev Ramchandra** **At- Yavali** **Tal- Amravati**		**95)**	**Shinde Sonabai Motiram** **At- Pusada** **Tal- Amravati**
96)	**Kshirsagar Sudhakar Punjaji** **At – Nandgaon Peth** **Tal- Amravati**		**97)**	**Chaudhari Vinod Raman** **At- Chinchkhed** **Tal- Amravati**
98)	**Athavale Dnyaneshwar Marotrao** **At- Davargaon** **Tal- Amravati**		**99)**	**Choudhari Purushottam Sadashiv** **At- Yavali** **Tal- Amravati**
100)	**Vakode Mohan Sudhakar** **At- Revasa** **Tal- Amravati.**		**101)**	**Sakusle Ramdas Ramchandra** **At- Mahuli** **Tal- Amravati**
102)	**Dange Ramdas Laximan** **At- New Akola** **Tal- Amravati**		**103)**	**Ingale Jagdish Pralhad** **At- Jalka Shahapur** **Tal- Amravati**
104)	**Deshmukh Manikrao Baliram** **At- Nandgaon Peth** **Tal- Amravati**		**105)**	**Gophane Bhimrao Natthuji** **At- Pusada** **Tal- Ahmednagar.**
106)	**Bhagat Dnyaneshwar Ambadas** **At- Pusada** **Tal- Amravati**		**107)**	**Banasure Suresh Kashinath** **At- Nandgaon Peth** **Tal- Amravati**
108)	**Virulkar Nivas Madhukar** **At- Pusada** **Tal- Amravati**		**109)**	**Shirsat Sidharth Gunvant** **At- Mamdapur** **Tal- Morshi**
110)	**Tayade Babulal Shamrao**		**111)**	**Mate Janrao Lahanuji**

	At – Salora **Tal – Amravati**			**At- Kekatpur** **Tal- Amravati**
112)	**Dnyaneshwar Nathuji Vasnik** **At- Kapustalani** **Tal- Amravati**		**113)**	**Bhiku Sona Pawar** **At- Pohara** **Tal- Amravati**
114)	**Pandurang Paikaji Varhade** **At- Kamunja** **Tal- Amravati**		**115)**	**Raju Shriramji Deshmukh** **At- Devara** **Tal- Amravati**
116)	**Tipare Ambadas Shyamji** **At- Pusada** **Tal- Amravati**		**117)**	**Tarekar Hariram Baliram** **At- Shivni** **Tal- Bhatukli**
118)	**Ingale Bajirao Mulaji** **At- Gaurkheda** **Tal- Bhatkuli**		**119)**	**Rajgure Haridas Ramkrushn** **At- Khartalegaon** **Tal- Bhatukli**
120)	**Rangari Gotuji Januji** **At- Nimkhed** **Tal- Bhatkuli**		**121)**	**Lakade Vitthal Ambadas** **AT- Nimba** **Tal- Bhatukli**
122)	**Burdhte Ramchanda Jagan** **At- Vageda Shukleshwar** **Tal- Bhatukli**		**123)**	**Dhote Surendra Dnyaneshwar** **At- Makrampur** **Tal – Bhatukli**

BULDHANA				
124)	**Sapkal Ganesh Bhujanrao** **At- Karankhed** **Tal- Chikhli**		**125)**	**Solanki Devram Vikram** **At- Kolara** **Tal- Chikhli**
126)	**Ingale Bhaskar Pandurang** **At- Kavadgaon**		**127)**	**Zarekar Ganesh Shriram** **At- Esoli**

	Tal- Khamgaon			**Atl- Chikhli**
128)	**Waghmare Sanjay Laximan** **At- Somthana** **Tal- Chikhli**		**129)**	**Bangale Badrinath anganath** **At- Sitgaon Jahangir** **Tal- Deulgaon Raja**
130)	**Mhalsane Haribhau Ganpat** **At- Karatwadi** **Tal – Chikhli**		**131)**	**Gaikwad Namdev Rajaram** **At- Andhai** **Tal- Chikhli**
132)	**Haral Jagannat Kisan** **At- Kavhla** **Tal- Chikhli**		**133)**	**Waghe Udhav Dnyanba** **At- Esoli** **Tal- Chikhi**
134)	**Varpe Suresh Motiram** **At- Shelgaon Ahol** **Tal- Chikhli**		**135)**	**Devsing Jadhav** **At- Hatni** **Tal- Chikhli**
136)	**Garde Santosh Vithoba** **At- Andhai** **Tal- Chikhli**		**137)**	**Dagdale Sheshrao Vaman** **At- Shelsur** **Tal- Chikhli**
138)	**Kapse Sahebrao Gopal** **At- Shelsur** **Tal- Chikhl**		**139)**	**Nikam Mahadev Dnyandev** **At- Kelvad** **Tal- Chikhli**
140)	**Ambhore Gajanan Bhimrao** **At- Mangrul Vyavhare** **Tal- Chikhli**		**141)**	**Shingne Shivaji Uttam** **At- Deulgaon Mahi** **Tal- Deulgaon Raja**
142)	**Kale Pundlik Pralhad** **At Mera Khu.**		**143)**	**Raut Dattatray Shankar** **At- Karkhel**

	Tal- Chikhli			**Tal- Chikhli**
144)	**Deshmukh Sarjerao Kundlik** **At- Raheri Bul.** **Tal- Shindhkhed Raja**		**145)**	**Digambar Janrao Ingale** **At- Dhotra Bhangoji** **Tal- Chikhli**
146)	**Mavale Atmaram Ananda** **At- Varkhed** **Tal- Chikhli**		**147)**	**Jaybhae Dagduba Lahanu** **At- Khirkhed Purna** **Tal- shindhkhed Raja**
148)	**Gitte Jayram Kondiba** **At- Esorni** **Tal- Chikhli**			
AKOLA				
149)	**Pralhad Pundlik Vairale** **At- Sukali** **Tal Barshitakli**		**150)**	**Kaldate Ashok Sadashiv** **At- Shindkheda** **Tal- Barshitakli**
151)	**Bhoyer Ashok Kisanrao** **At- Pimpalgaon Chambhare** **Tal- Barshitakli**		**152)**	**Pagrtu Prabhakar Mahadev** **At- Aliyabad** **Tal- Akola**
153)	**Kakad Sudhakar Narayan** **At – Punoti Khu.** **Tal- Barshitakli**		**154)**	**Dahake Mahadev Kisanrao** **At- Dahigaon** **Tal- Akola**
155)	**Tambade Pramila Mahadev** **At- Chandur** **Tal- Akola**		**156)**	**Sugalibai Haridas Rathod** **At- Jamvasu** **Tal- Barshitakli**
157)	**Shalikram Bhonaji**		**158)**	**Ingale Ambadas Govinda**

	Wagmare **At- Bhoipura** **Tal- Barshitakli**			**At- Borgaon Manju** **Tal- Akola.**
159)	**Sheikh Bashir Abdulla** **At- Sanglud** **Tal- Akola**		**160)**	**More Ramesh Narayan** **At Borgaon Manju** **Tal- Akola**
161)	**Badhe Narayan Madhukar** **At- Palso** **Tal- Akola**		**162)**	**Tikar Motiram Baban** **At- Palkhed** **Tal- Barshitakli**
163)	**Rathod Rajendra Sagu** **At- Rajankhed** **Tal- Barshitakli**		**164)**	**Ganesh Balu Murumkar** **At- Chachondi** **Tal- Akola**
165)	**Khandavaye Santaram Sahahoji** **At- Gorvha** **Tal- Barshitakli**		**166)**	**Dhanraj Manju Rathod** **At- Sakharvira** **Tal- Barshitakli.**
167)	**Jyotiram Pratap Rathod.** **At- Jamvasu** **Tal- Barshitakli**		**168)**	**Prabhakar Shyamrao Risodkar** **AT- Barshitakli** **Tal- Barshitakli.**
169)	**Wayaskar Santosh Duryodhan** **At- Rajanda** **Tal- Barshitakli**		**170)**	**Mahalle Ramdas Kisan** **At- Chandur** **Tal-**
171)	**Bhatkar Mangesh Haribhau** **At- Sanglud** **Tal- Akola**		**172)**	**Rathod Harishchandra Lumba** **At- Jamvasu** **Tal- Barshitakli**

173)	**Bitni Tanhaji Hiramat** **At- Vizora** **Tal – Barshitakli**		**174)**	**Hage Shrikrushn Baburao** **At- Sukali** **Tal- Barshitakli**
175)	**Akot Manohar Namdev** **At- Barshitakli** **Tal- Barshitakli**		**176)**	**Ingale Mahadev Fakira** **AT- Kanheri Sarap** **Tal- Akola**
177)	**Rathod Kamlabai Mangu** **At- Umardari** **Tal- Barshitakli**		**178)**	**Mahalle Janrao Chandrabhan** **At- Shelu Khu.** **Tal- Barshitakli**
179)	**Gase Ashok Govind** **At- Dahihanda** **Tal- Akola**		**180)**	**Vankhede Motiram Laximan** **At- Revda** **Tal- Barshitakli**
181)	**Bansod Sadashiv Pandurang** **At- Mirzapur** **Tal- Barshitakli**		**182)**	**Marodkar Tulsiram Pandurang** **At- Lohgad** **Tal- Barshitakli**
183)	**Rathod Rajaram Bachchu** **At- Kajaleshwar** **Tal- Barshi Takli.**		**184)**	**Andhale Shankar Manik** **At- Dhaba** **Tal.- Barshitakli.**
185)	**Babulkar Arjun Ramrao** **At- Palso** **Tal- Akola**		**186)**	**Karpe Gajanan Govind** **At / Tal- Barshitakli.**
187)	**Thakre Ganesh Bhimrao** **At- Dahihandi** **Tal- Akola**		**188)**	**Umbrkar Shankar Uttam** **At- Jamvasu** **Tal- Barshitakli.**
189)	**Gavande Sudhir Manik**		**190)**	**Vairale Subhash Shalikram**

	At- Borgaon Manju **Tal- Akola**			**At / Tal- Barshitakli.**
191)	**Varkhede Baldev Atmaram** **At- Sukali** **Tal- Barshitakli.**		**192)**	**Duralkar Gopal Rajaram** **At- Morgaon Bhakre** **Tal- Akola.**
193)	**Vahute Janrao Banduji** **At- Bhendi Sutrak** **Tal- Barshitakli.**		**194)**	**Lande Tulshiram Haribhau** **At- sukali** **Tal- Barshitakli.**
195)	**Dongre Ashok Shalikram** **At- Mahagaon** **Tal- Barshitakli.**		**196)**	**Badhe Vasant Vishwanath** **At- Bondarkhed** **Tal- Barshitakli.**
197)	**Banarkar Jagdev Sukhadev** **At- Palkhed** **Tal- Barshitakli**		**198)**	**Ejaz Ullakha Shafic** **At / Tal- Barshitakli.**
199)	**Shirsat Devram Jamuji** **At- Chincholi Rudrayani** **Tal- Barshitakli.**		**200)**	**Daberao Rajesh Narayan** **At- Paslo** **Tal- Akola.**