

AERC REPORT 165

Farmers' Suicides in Gujarat

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Agricultural Development & Rural Transformation Centre,
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Agro-Economic Research Centre
For the states of Gujarat and Rajasthan
(Ministry of Agriculture & Farmers Welfare, Govt. of India)

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Foreword

Gujarat has historically been known for business acumen of its people. Gujarat state has made rapid strides in its agriculture sector including the agribusiness sub sector during recent past. Agriculture in Gujarat has been transforming over time from traditional to high value added commercial crops which can be seen from a shift in its cropping pattern from food grains crops to high value cash crops such as oilseeds, fruits, vegetables and spices. The trend in shifting of cropping pattern paved ways for many ancillary industries in the areas of processing, packing, storage, transformation, etc. Agricultural growth in the state is favored by the prevailing eight agro-climatic zones, enterprenuring farming community, policy support from the government, wealth of livestock population, extended coast line and contribution by the agricultural scientist and dedicated NGOs.

The Gujarat government has aggressively pursued an innovative agriculture development programme by liberalizing markets, inviting private capital, reinventing agricultural extension, improving roads and other infrastructure. The mass-based water harvesting and farm power reforms in dry Saurashtra and Kachchh, and North Gujarat have helped energise Gujarat's agriculture. These semi-arid regions have outperformed the canal irrigated South and Central Gujarat. The shift in agriculture to 8 per cent growth rate during last decade was mainly responsible for the shift of the overall state economy to higher growth path with 10.6 per cent annual growth rate. For ensuring systematic and coordinated approach to all around development of its agriculture sector, the Government of Gujarat had prepared in the year 2000 a 10 year plan called 'Gujarat Agro-vision 2010'. A comprehensive New Agro-industrial Policy was also announced in 2000. In the new industrial policy, the state has indentifies agro-industries as the major thrust area. The policy aims to spur investment in agro-processing, agro-infrastructure and hi-tech agriculture by monetary incentives. Adequate returns on agricultural output are one of the driving forces for better agricultural growth.

Despite of high rate of growth during the last decade, National Crime Records Bureau has recorded total 45 cases of farmers suicides in the state of Gujarat during the year 2014. Out of total number of suicides recorded in 2014, as per land holding size category of farmers, two third were from medium size category, followed by small (17.78 per cent), large (8.89 per cent) and remaining from marginal farm category (6.67 per cent). The prominent causes recognized for farmers' suicides in Gujarat were other/not known (62.22 per cent),

followed by illness (15.55 per cent), marriage related problems (8.89 per cent), farming related problems (6.67 per cent), family related problems (4.44 per cent) and drug abuse/alcoholic addiction (2.22 per cent). In view of above, the present study was entrusted to us by the Ministry of Agriculture and Farmers Welfare, Government of India with an aim to analyze the incidence and spread of farmer suicides in Gujarat. The study is based on both primary and secondary level statistics. The primary data is collected from the selected 30 victim farm households in Gujarat. The results of the study provide useful insights to understand on socio-economic profile of victim households. The study came out with suitable policies to alleviate the incidence of farmers' suicides in future.

I am thankful to authors and their research team for putting in a lot of efforts to complete this excellent piece of work. I also thank the Directorate of Economics and Statistics, Ministry of Agriculture, Government of India for the unstinted cooperation and support. I hope this report will be useful for policy makers and researchers.

Agro-Economic Research Centre

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List of Abbreviations

APMC	Agricultural Produce Marketing Committee
Av.	Average
C.I.	Cropping Intensity
CoC	Cost of Cultivation
EPW	Economic and Political Weekly
FIR	First Information Report
GCA	Gross Cropped Area
GDP	Gross Domestic Product
GIA	Gross Irrigated Area
GOG	Government of Gujarat
GOI	Government of India
ha	hectare
HH/hh	Household
I.I.	Irrigation Intensity
KCC	Kisan Credit Cards
kg	kilograms
mha	Million hectares
MOA & FW	Ministry of Agriculture & Farmers Welfare
mt	Metric Tonnes
NCA	Net Cropped Area
NCRB	National Crime Record Bureau
NIA	Net Irrigated Area
NGO	Non Government Organisation
NSA	Net Sown Area
NSSO	National Sample Survey Organisation
OBC	Other Backward Classes

PDS	Targeted Public Distribution System
PMNRF	Prime Minister's National Relief Fund
RBI	Reserve Bank of India
UNCSD	United Nations Commission on Sustainable Development
Y	Yield

Executive Summary

The agricultural sector in India has been going through a painful phase. It is not merely a crisis of deceleration of growth of agricultural production and productivity, but also increasing distress experienced by a growing proportion of the farming community which has not been able to meet their basic consumption needs from their dependence on agricultural income. One of the tragic manifestations of the crisis is the large number of suicides committed by the farmers in some parts of India. The distress among the rural community, allegedly manifested in farmers' suicide, is commonly attributed to debt trap, crop failure and/or yield loss. In fact so alarming was the problem that it attracted nationwide attention and generated frantic debates in the union and state legislatures. These incidents raised serious questions of the state of the agrarian economy and the economic hardships faced by farmers.

The spate of farmers' suicides that surfaced in some part of India was naturally associated with the performance of the sector, along with the other factors that were predominant including advent of the World Trade Organisation, genetically modified crop varieties, price collapse and spurious seeds. Agricultural production in these parts always has significant fluctuations and the prices did not increase despite supply stress. That brought down the gross income flow. On the other side, the cash component in the cost of cultivation has been increasing. As a consequence the net income flow to the farmer households stagnated. The farmer would borrow to meet the increased cost of cultivation or for irrigation well and pump sets, but the shrinking net income will not allow for payment of debt. These incidents raised serious questions of the state of the agrarian economy and the economic hardships faced by farmers.

The Situation Assessment Surveys of the NSSO (2014) has reconfirmed the worsening situation of farm households which indicated that about 51.9 percent of the farm households in India are indebted, increased from 48.6 percent recorded in 2003 in 59th round. As per 2014 report, indebtedness was the highest in Andhra Pradesh (93 percent), followed by Telangana (89 percent), Tamil Nadu (82 percent), Karnataka (77 percent) and Rajasthan (62 percent). Interestingly, indebted farmers have taken higher credit from institutional sources (60 percent) as compared to the non-institutional sources (40 percent). It is also necessary to note here is that NSSO in its 59th round survey has revealed that given the choice, 40 percent farmers will quit farming because it is not profitable, risky and it lacks social status, because of poor remuneration from farming. Distress among the farmers in the country is genuine and the situation is quite depressing in Andhra Pradesh, Karnataka, Maharashtra, Rajasthan, Orissa and Assam. Though one cannot draw any 'one to one' correspondence between distress in the farm sector and the present spate of suicides in some of the states, the farm and farm related activities have the largest stake in explaining the unfortunate occurrences. Considering that 54.6 percent of the workforce in the country is

still dependent on agriculture for its livelihood, the wave of suicides has received considerable media attention and a matter of policy concern.

Concerned with farmers' suicides in some parts of the country, on 29th of September, 2006, Union Cabinet approved the Rehabilitation Package for 31 identified districts in the State of Andhra Pradesh, Karnataka, Kerala and Maharashtra. The implementation period of PM's package was fixed for 3 years and included both immediate and medium term measures. All these attempts have to some extent have helped to reduce farmers' suicides insignificantly overtime in several states. However, farmers' suicides still remain major challenge in India.

The agrarian crisis has occurred because of multiple reasons, though inadequate income from cultivation is considered to be the prime factor. On the one hand, the decline in public investment in agriculture has increased the transaction cost of the farmers, on the other hand, inadequate institutional credit supply, poor arrangements to supply various inputs required for crop cultivation as well as market for agricultural produce have reduced the cultivation income. It is widely believed now that the agrarian crisis is aggravated since the initiation of economic reforms in India, because the Indian agriculture has been witnessing a few unprecedented shocks and changes over the last one decade. The control on imports of many agricultural products has been gradually removed due to obligations of World Trade Organizations, which has made significant impact on the domestic prices of certain agricultural commodities. Studies carried out in those regions where farmers have committed suicides at a large scale have attributed that the inadequate supply of institutional credit is one of the major reasons for the present crisis.

Farm income is not only very low but the year-on-year fluctuation is also very high. Constant financial stress and pressure related to ongoing drought and flood conditions and the loss of independence add to the farmer's economic problems; as many of the issues such as disease, weather, government policy, etc. are not within the farmer's control. The debts, however, are personal and need to be repaid. While the prices of crops have been pushed down (often even below the cost of production), the prices of inputs such as seed, fertilizers and pesticides have gone up. With limited resources, farmers depend on borrowed money to purchase seeds and other inputs and to farm their land and a reduction in their income could promptly lead to farmers owing more than they own. Farmers feel a repeated sense of hopelessness due to the loss of crops, income, land and even the loss of a way of life. Another factor that increases suicides is the potential for social isolation due to reasons like the loss of communities as well as geographical remoteness. The lack of access to mental health services in rural areas and the stigma attached to treatment is also a contributing factor. Depression arising from exposure to agricultural chemicals/pesticides may increase the risk for mood disorders and ultimately suicide.

Need of the Study:

Farmer suicide has turned out to be a major socio-economic concern in India that has resulted in profound implications on the quality of life of farmers. As per NCRB (2015) a total of 5,650 farmers have committed suicides during 2014, accounting for 4.3 per cent of total suicides victims in the country, of which 5,178 were male farmers and 472 were female farmers. The highest numbers of farmers suicides cases were recorded in Maharashtra (2,568) Telangana (898), Madhya Pradesh (826), Chhattisgarh (443) and Karnataka (321). These five States together accounted for 89.5 per cent of the total farmer suicides reported in the country during 2014. The prominent causes recognized for farmers suicides were bankruptcy or indebtedness (20.6 per cent), family problems (20.1 per cent), failure of crops (16.8 per cent), illness (13.2 per cent) and drug abuse/alcoholic addiction (4.9 per cent). The main consequence of agrarian distress has been that marginal and small farmers who find it increasingly hard to sustain on farming, are either getting pushed out from agriculture or committing suicide. According to report, the land holding status of the farmers who committed suicide revealed that 44.5 per cent and 27.9 per cent of victims were small farmers and marginal farmers, respectively and that put together accounted for 72.4 per cent of total farmer suicides. Therefore, there was an urgent need to study the farmer's suicide. The objectives of the study were:

- i) To analyze the incidence and spread of farmer suicides in Gujarat state and to map the hot-spots of suicide;*
- ii) To study the socio-economic profile, cropping pattern and profitability of victim farm households.*
- iii) To study the causes leading to farmers' suicides.*
- iv) To recommend suitable policies to alleviate the incidence of farmers' suicides.*

The study is based on both primary and secondary data. The secondary data were collected from the different published sources. The primary data were confine exclusively to those victim farmers households who were cultivating either their own land or on lease basis - at the time of survey. The selection of sample of victim farmers' households in Gujarat state for primary data was as per the numbers of suicides given in 2014 publication of NCRB. During 2014, there were 45 numbers of suicides belonging to farming community and primary data were collected from the selected 30 victim farmer households in Gujarat.

Farmers' Suicide Scenario in Gujarat

Gujarat has historically been known for business acumen of its people. Gujarat state has made rapid strides in its agriculture sector including the agribusiness sub sector during the recent past. Agriculture in Gujarat has

been transforming over time from traditional to high value added commercial crops which can be seen from a shift in its cropping pattern from food grains crops to high value cash crops such as oilseeds, fruits, vegetables and spices. The trend in shifting of cropping pattern paved ways for many ancillary industries in the areas of processing, packing, storage, transformation, etc. Agricultural growth in the state is favored by the prevailing eight agro-climatic zones, enterprenuring farming community, policy support from the government, wealth of livestock population, extended coast line and contribution by the agricultural scientist and dedicated NGOs.

Despite of high rate of growth during the last decade, National Crime Records Bureau has recorded total 45 cases of suicide of farmers in the state of Gujarat during the year 2014. Out of total number of suicides, 68.89 per cent were male farmers and 31.11 were female farmers. As per land holding size category of farmers, 66.67 per cent were from medium size category, followed by small (17.78 per cent), large (8.89 per cent) and remaining from marginal category (6.67 per cent). The prominent causes recognized for farmers' suicides in Gujarat were other/not known (62.22 per cent), followed by illness (15.55 per cent), marriage related problems (8.89 per cent), farming related problems (6.67 per cent), family related problems (4.44 per cent) and drug abuse/alcoholic addiction (2.22 per cent).

Farmer Suicides in Gujarat have come under the scanner after comments by opposition party leaders in the recent past. They have attacked the Gujarat model of development by pointing at the high number of farmer suicides in Gujarat. The district-wise data shows that epidemic of farmers suicides during the year 2014 was recorded in Devbhoomi Dwarka district covering about 45 percent of total suicides in the state, followed by Panchmahal district (about 22 percent) and Porbandar (almost 12 per cent). These three districts together accounted for about 79 per cent of total number of suicides in the state. The remaining suicide cases were recorded in Amreli, Bhavnagar, Surat and Surendranagar districts. The numbers of suicides were not specific to any particular month and were spread across the year. No compensation scheme for farmers those who commit suicide. However, only victim family in Surendranagar district had received compensation of Rs. 1 lakh through Agricultural Produce Marketing Committee of Rajkot district where victim farmer had committed the suicide.

Findings from Field Survey data:

- About 90 percent of victims were male farmers while 10 per cent were female farmers. Around 83 percent victims were from other backward classes, around 13 percent were from open category while remaining were from scheduled caste category. Majority of the victim were from Hindu religion.
- The highest number of suicides (70%) were recorded in age group of 30-60 years while remaining were from age group up to 30 years.
- In case of 70 percent of households, victim was a main earner.

- *Almost 83 percent of victims were literate and around 80 percent were married with arrange marriage system within their relatives.*
- *Two third of total number of victims had consumed poison to commit suicide, while about one sixth of victim hanged themselves. Remaining victims adopted the other method of suicide such as jumping into river/well (6.67 per cent), self immolation /burning (6.67 per cent) and accident by slipping on railway track (3.33 per cent).*
- *The house and farm were the main places where victim had committed suicides (47 per cent each), while in one case each; it was reported in operational area of APMC in Rajkot and on railway track.*
- *The existing households size was 5.1 members and 70 per cent of households estimated to be dependent on agriculture as a main occupation. Around 70 per cent of households were as joint family while remaining where nuclear family.*
- *The highest number of farmers who had committed suicides were from medium size land holding group having land holding between 2-4 ha (33 per cent) followed by marginal and small size land holding group of farmers (about 27 per cent each). Marginal and small land holdings size group put together accounts for 53 per cent of total number of suicides and the lowest proportion of suicide was recorded in large land holding size group. Thus, as expected, marginal and small farm category group found to be vulnerable to this kind of situation.*
- *The selected households have relative large land holding of 5.9 acre, of which 44 per cent of land was irrigated having cropping intensity of 109 per cent and irrigation intensity of 119 per cent.*
- *About 60 percent of victim households have open well as main source of irrigation, followed by 24.11 percent of households have tube well/bore well, while remaining of 16.12 percent households used canal water for irrigation purpose. Thus, groundwater source was main source available with the sample household to irrigate the crops.*
- *The consumption expenditure of selected households was higher than the annual income (from all sources) in all three consecutive years (2013-14 to 2015-16). It means that income from the all sources was not adequate to meet the required expenditure of family that to particular income from main source was not adequate. In fact, the highest deficit of income (percentage of expenditure on income) was recorded during 2014-15.*
- *Groundnut and cotton were the major crops grown in kharif season, followed by jowar crop which was cultivated for fodder purpose by some of the households. The productivity level of groundnut realized by the victim household was very low (1.49 qt/acre) and thus income received from sale of groundnut was much lower that it's cost of cultivation/production. On an average Rs. 30113 per households loss has been reported in groundnut cultivation in 2015-16. Same the case*

of cotton crop cultivation in which selected households had to suffer with loss of Rs. 12426 per hh.

- The negative returns have been reported in case of production of groundnut and cotton crops during 2015-16. So the case may be earlier two years as cropping patterns was almost same during 2013-14 and 2014-15. Thus, may be due to low yield of major two crops, the income from the crop cultivation had dropped, which must have put stress on the victim and households to manage the expenditure with short of income.
- Selected victim households had taken significant amount of loan from informal sources such as relatives and friends, agriculture input shop, of which loan from relatives and friends earlier was used for both farming and non farming purpose, while loan taken from agro shop owner was used for only farming purpose. Besides, loan was also taken by selected victim households from trader and commission agents to fulfill non farming/domestic requirements.
- Besides having loan from informal sources, few selected households had taken loan from formal sources also such as cooperative society/bank and commercial banks. As compared to the amount borrowed from non-formal sources (between Rs. 1-3 lakh), it was around 0.5 lakh in case of formal sources. Thus, inability of payment of loan taken from the informal sources must have put pressure on victim and its family which must have forced the victim to commit suicide.

Causes and After Effect of Suicide

- About 93 per cent of the households/ respondents have mentioned that victim was mixing with everyone and his/her behavior was proper. No difference in behavior and approach of victim was notice by anyone around him/her. While remaining households had noticed some change in behavior of victim as he/she was not mixing/mingling with them. About 70 per cent of households reported that victim was taking food properly, while 30 percent households observed that victim was not eager to have food. On enquiry, it was observed that none of victim had tried to commit suicide earlier and thus there was no failure attempt recorded.
- None of the household had any dispute on property related issues. In case of marriage related issues such as dowry related issues, extra marital affairs, wife went with somebody and got married with that person, and wife expired by suicide five year ago, shocked by that, heavy burden of family), one case was reported under each above cause. The family problems/commitments (such as daughter's marriage, social functions, son's marriage, frequent quarrel among the family members, more and more responsibility on single person and his son suicide earlier; that is why he depressed) were also reported as main cause of suicide.

- *The highest numbers of suicides were recorded due to acute economic crises/sudden fall in social status which accounts for 37 per cent of total suicides followed by suicides due to illness (27 percent), depression (27 per cent), fall in social reputation (17 per cent), drug abuse/alcoholic addiction (13 per cent). The family problems, inter-personal disagreement/fight on some issue and marriage related issues have also contributed in pushing the victim towards such drastic step of ending the life.*
- *Majority of households have reported that the farming related problems such as high cost of production (repeated sowing; poor germination, high labour charges); crop failure (due to lack of access to irrigation water and pests diseases; failure of rainfall/drought; land submerge); high expectations of output and prices, high cost of bt cotton seed, inability to sell output, etc were major causes of suicides.*
- *During the last three years, due to low income, selected farmers household who had taken loan for crop production, purchase of farm equipments could not repay in time loan taken. Also some households had taken loan from non institutional sources. Thus, on non repayment of loan amount in time, victim households had faced pressure from these both agencies.*
- *The ranking of causes indicate that majority of households top ranked to cause of failure of crop/s followed by indebtedness (institutional & non-institutional) and illness.*
- *About 43 per cent of households faced the severe crisis as no earning member was with family which must have put family member/s under depression. In case of 33 percent households, agricultural activities had stopped while insecurity in the family was felt by 30 per cent households. In case of 27 per cent households, schooling of the children got stopped. Besides, other impacts were that the family member/s felt seriously ill, family had to postpone their son/daughter's marriage, and forced them to sell land and livestock.*
- *The respondents were asked to give suggestion to avert suicides in future. Few respondents had given suggestions such as government should help in drought years, complete prohibition on drunkenness in village, and medical facilities should be provided at village level.*

Policy Implications:

- *Government should provide the support to the farmers during drought years by adopting a multi-pronged approach to mitigate the effects of the drought.*
- *The NCRB 2014 data shows that prominent causes recognized for farmers' suicides in Gujarat were other/not known (62.22 per cent), Besides, three cases registered at Mehsana district police station were mistakenly reported. Thus, there is a need to have a proper responsible mechanism to create data base on farmers' suicide for proper policy formulation and its implementation.*

- *The primary data shows that the highest numbers of suicides were recorded due to acute economic crises/sudden fall in social status followed by suicides due to illness, depression, fall in social reputation, and drug abuse/alcoholic addiction. Thus, there is a need to stabilize the agriculture income through crop diversification and making available non-farm employment to rural population. There is also a need to execute the complete ban of availability of local liquor at village level.*
- *Majority of households have reported that the farming related problems such as high cost of production, crop failure, high expectations of output and prices, high cost of bt cotton seed, inability to sell output were major causes of suicides. Therefore, there is urgent need to reduce cost of production of crop by adopting cost-effective farming techniques and increase in income through value addition.*
- *The State should ensure the creation of an environment which supports effective financial intermediation and smooth flow of institutional credit for needy farmer. Also crop insurance coverage needs to improve.*
- *Civil society institutions including NGOs, religious organizations, farmer clubs, panchayats and political parties have to come forward to sensitize and educate the people on social evils like unethical behavior, ostentatious expenditure on social functions, dowry problem, alcoholism and declining work ethic among youth.*
- *Depression arising from exposure to agricultural chemicals/ pesticides increase the risk for mood disorders and ultimately suicide. Therefore easy access and availability of insecticides/pesticides or at least its toxicity should be reduced to non lethal levels.*
- *There is a need to educate the communality to identify depression and alcoholism and initiate treatment. The lack of access to mental health services in rural areas and the stigma attached to treatment is also a contributing factor. Therefore, medical facilities should be made available at village level.*
- *Some of the sample farmers reported that the causes of farmers' distress are the rising input costs, dwindling produce price realisation and the inability of farmers to abandon cultivation without alternative livelihood opportunity. Some of our sample farmers had to commit suicide because of higher cost of production (26.7% to 33.3%), non-receipt of remunerative prices of output (3.3% to 6.7%), lack of availability of low cost institutional credit (3.3% to 6.7%), unfulfilled hope of loan waiver (3.3%) and non-availability of agricultural insurance (6.7%). Therefore, post harvest infrastructural facilities need to be improved in rural areas. Also the Rural Non Farm Employment activities need to be increased.*

Introduction

1.1 Background

Agriculture is often described as the backbone of the Indian economy. On the eve of independence, the agricultural sector was the prominent sector of the Indian economy both in terms of its contribution (approximately 55 percent) to the gross domestic product (GDP) and in providing employment to the country's labour force (about 70 percent). Therefore, the fortunes of a large majority of people in India were basically linked with agricultural performance (Bhalla, 2007). In the course of last six decades of planned development, Indian agriculture has made great strides. The grit and toil of Indian farmers has greatly contributed in transforming Indian agriculture from a moribund state at the time of independence to a resilient production system of a food secure nation. Although agriculture share in gross domestic product has declined from over half at independence to less than one seventh currently, agriculture remains the predominant sector in terms of employment and livelihood with more than half of India's workforce (54.6 percent in 2011, GOI, 2016a) engaged in it as the principal occupation. Agricultural sector also contributed 12.16 percent of national exports in 2015-16 (GOI, 2016).

Agricultural growth plays an important role in achieving certain national goals, such as reducing rural poverty, providing food and nutritional security, supplying raw materials to major industries such as textiles, earning foreign exchange, etc. Agricultural sector not only plays an important role in improving the growth of rural economy but also the overall growth of the economy in India and therefore, prosperity of the rural economy in India is closely linked to agriculture and allied activities. Besides, increased agricultural production always makes dent on the prices of agricultural commodities, which benefit

millions of landless rural and urban consumers. It is proved beyond doubt that agricultural growth also significantly impacts on the reduction of rural poverty, through increased employment opportunities and wage rates in India¹. Research also suggests that growth in agricultural sector also impacts substantially on the growth of industrial sector (Rangarajan, 1982).

The performance of Indian agriculture has been characterized by large fluctuations during the last six decades. Experience so far indicates that a few bright spots are often followed close on the heels by a spate of distress (Deshpande and Arora, 2010). Despite the beneficial effects of several programmes and policy initiatives launched by the Central and the State governments on agricultural development over the last six decades, the economic conditions of the farmers in many areas have not improved much due to inadequate coverage of all regions and sections of farmers and lack of targeting. While the overall growth of the economy has been in the range of seven to nine percent since the introduction of economic reforms, except few years in recent past, the agricultural growth is almost stagnant or decelerating over last two decades or so. The annual compound growth rate of GDP during the period 1992-93 to 2005-06 was 6 per cent, the rate of growth of agricultural sector during corresponding period was 2.57 percent. When economy grew at 9 percent and 7 percent between 2004-05 to 2007-08 & 2008-09 to 2013-14 respectively, the annual average growth rate of agriculture sector was 5 percent and 3 per cent corresponding period. Volatility in economic activity is normal fact but it was much higher in the agriculture and allied sector. Between the period from 2005-06 to 2013-14, the coefficient of variation was only 0.27 in case of overall GDP growth but it was 0.69 for agricultural GDP (GOI, 2016a). The marked slowing down in the rate of agricultural

¹ see, Ahluwalia, 2000; Narayanamoorthy, 2001; Saleth, *et al.*, 2003; Shah and Singh, 2004; Narayanamoorthy and Deshpande, 2003; World Bank, 2006.

growth, declining prices of several crops, widening disparities between agricultural and non-agricultural sectors, farmers' suicides have attracted much comment and discussion in the media, among scholars and in public forums. Cumulatively they have contributed to generating a sense of a deepening agrarian crisis in the country.

One of the tragic manifestations of the crisis in agriculture is the large number of suicides committed by the farmers in some parts of India, occurred commonly both in developed and underdeveloped regions, though the intensity is found to be higher in the rainfed regions. Suicides were mainly concentrated in Karnataka, Andhra Pradesh and Maharashtra. A large number of suicides were reported in Karnataka in the first three years of the decade starting 2000-01, while Andhra Pradesh had maximum in 2004-05. In 2006, there was virtually a suicide epidemic in Maharashtra. These incidents raised serious questions of the state of the agrarian economy and the economic hardships faced by farmers (Thakur and Kalamkar, 2013). The *Situation Assessment Surveys of the National Sample Survey Organization*² (2014) has reconfirmed the worsening situation of farm households which indicated that about 51.9 percent of the farm households in India are indebted, increased from 48.6 percent recorded in 2003 in 59th round (NSSO, 2005). As per 2013 report, indebtedness was the highest in Andhra Pradesh (93 percent), followed by Telangana (89 percent), Tamil Nadu (82 percent), Karnataka (77 percent) and Rajasthan (62 percent). Interestingly, indebted farmers have taken higher credit from institutional sources (60 percent) as compared to the non-institutional sources (40 percent) (NSSO, 2014). It is also necessary

² The Situation Assessment Survey of Agricultural Households in NSS 70th Round January December, 2013 (NSSO, 2014) was conducted as a repeat survey of 59th round of Situation Assessment Survey, 2003 (NSSO, 2005).

NSSO (2005) defined farmers as a person who possessed some land and was engaged in agricultural activities on any part of that land during the 365 days preceding the date of survey. A farmer household was termed as one in which at least one family member was farmer.

to note here is that NSSO in its 59th round survey has revealed that given the choice, 40 percent farmers will quit farming because it is not profitable, risky and it lacks social status (NSSO, 2005), because of poor remuneration from farming (Narayanamoorthy, 2016).

The crisis has been exacerbated further by rapid environmental degradation, climate change situation, plateauing of the existing agricultural technology and declining per capita availability of food grains in the country. Though food availability and price stability, which are considered as a good measure of food security till 1970, were achieved through green revolution and Public Distribution System (PDS), the chronic food insecurity which is primary associated with poverty (363 million³ or 29.5 per cent of total population in 2011-12) still persisted in the country. Though physical access to food was achieved, economic access at micro-level lagged behind indicating food and nutritional insecurity. Thus, despite substantial progress made towards agricultural and rural development since independence, there are clear signs of approaching crises which need priority attention.

Dimensions and Magnitude of Agrarian Crisis in India:

For the last several years, particularly since the launching the economic reforms in the 1990s, Indian agriculture has been passing through a serious crisis⁴. It is not merely a crisis of deceleration of growth of agricultural production and productivity, but also increasing distress experienced by a growing proportion of the farming community which has not been able to meet their basic consumption

³ http://planningcommission.nic.in/reports/genrep/pov_rep0707.pdf, GOI (2014).

⁴ 'Agricultural Crisis' refers to performance of the agricultural sector in terms of changes in growth of productivity and production and the underlying factors. 'Agrarian Crisis' is a structural and institutional in nature, as could be seen in growing marginalization and failure of support systems, especially as a part of the reforms agenda because of the shift in institutional emphasis from state to market. 'Agrarian Crisis' and 'Agricultural Crisis' are not exclusive but interrelated and are nothing but two sides of the problems associated with agriculture in developing countries (Reddy and Mishra, 2010).

needs from their dependence on agricultural income (Reddy and Mishra, 2010). The distress among the rural community, allegedly manifested in farmers' suicide, is commonly attributed to debt trap, crop failure and/or yield loss. The agrarian crisis and distress⁵ of the rural population which is the outcome of accumulated eventualities and adversity, has emerged as a nationwide phenomenon and leading policy issue. Decelerating agricultural growth, stagnating yields, erosion of farm income, shrinking access and entitled to food are the manifestations of agrarian crisis (Barah, 2011). During the decade of the 1990s, the situation became aggravated, both due to policy failure and the successive droughts at the end of the 1990s and because of the prices did not pick up even in the event of low production. This was compounded by the economic reforms which took the agricultural sector for granted. The situation was quite alarming in Karnataka, Andhra Pradesh and Maharashtra (Reddy, *et al.*, 1998; Vasavi, 1999; Deshpande, 2002; Sainath, 2005a, 2005b, 2005c; Mishra, 2005). A large number of suicides were reported in Karnataka in the first three years of the decade starting 2000-01, while Andhra Pradesh had maximum in 2004-05. In 2006, there was virtually a suicide epidemic in

⁵ **Farm distress:** The definition of the Government of India while announcing the Farm Credit Package on June 18, 2004 was articulated as, "Farmers who have suffered production and income losses on account of successive droughts, floods or other calamities (in districts declared as calamity affected by the State Government concerned) will be treated as farmers in distress and provided debt relief, and their debts will be rescheduled/ restructured (Kalamkar, 2012)."

RBI (2006) Working Group had considered the following two operational definitions:

- a) "Distressed farmer is one, who has suffered repeated income/ psychological shocks due to failure of investment, weather, crop production or markets, and which has crippled his ability to meet his financial and other family obligations; and feels humiliated by the castigations of the lenders and, in the absence of coping mechanisms, contemplates/takes the extreme step of voluntarily ending his life."
- b) "Distressed farmer is the one who, in spite of his/her best rightful effort, is not able to earn income enough from his/her farm and non-farm activities to meet his/her genuine family needs. As a consequence, he/she borrows from institutional and/or private sources, but is not able to generate enough additional repaying capacity to retire these loans, thereby landing into intractable indebtedness. In the circumstances, he/she might take desperate step of even suicide."

Maharashtra. In fact so alarming was the problem that it attracted nationwide attention and generated frantic debates in the union and state legislatures. The spiraling of suicides in the past decade or so is clearly a symptom of agrarian distress and impoverished condition of farmers. The spate of farmers' suicides that surfaced in these states was naturally associated with the performance of the sector, along with the other factors that were predominant including advent of the World Trade Organisation (WTO), Genetically Modified (GM) varieties, price collapse and spurious seeds. Agricultural production in these states always has significant fluctuations (Rao *et al.*, 1988) and the prices did not increase despite supply stress. That brought down the gross income flow. On the other side, the cash component in the cost of cultivation has been increasing (Nadkarni, 1988; Reddy 1994; Deshpande and Pratchitha, 2006). As a consequence the net income flow to the farmer households stagnated. The farmer would borrow to meet the increased cost of cultivation or for irrigation well and pumpsets, but the shrinking net income will not allow for payment of debt. These incidents raised serious questions of the state of the agrarian economy and the economic hardships faced by farmers. Distress among the farmers in the country is genuine and the situation is quite depressing in Andhra Pradesh, Karnataka, Maharashtra, Rajasthan, Orissa and Assam (Reddy and Mishra, 2009). Though one cannot draw any 'one to one' correspondence between distress in the farm sector and the present spate of suicides in some of the states, the farm and farm related activities have the largest stake in explaining the unfortunate occurrences (Deshpande and Arora, 2010).

The agrarian crisis has occurred because of multiple reasons, though inadequate income from cultivation is considered to be the prime factor. On the one hand, the decline in public investment in agriculture has increased the transaction cost of the farmers, on the other hand, inadequate institutional credit supply, poor arrangements

to supply various inputs required for crop cultivation as well as market for agricultural produce have reduced the cultivation income. It is widely believed now that the agrarian crisis is aggravated since the initiation of economic reforms in India, because the Indian agriculture has been witnessing a few unprecedented shocks and changes over the last one decade. The control on imports of many agricultural products has been gradually removed due to obligations of World Trade Organizations, which has made significant impact on the domestic prices of certain agricultural commodities (see, Kalamkar and Narayanamoorthy, 2003). Studies carried out in those regions where farmers have committed suicides at a large scale have attributed that the inadequate supply of institutional credit is one of the major reasons for the present crisis.⁶ In nutsell, the RBI report (2006, Johl Committee) has succinctly summarized the gamut of causative factors of agrarian distress (Box 1.1).

Farm income is not only very low but the year-on-year fluctuation is also very high (Narayanamoorthy, 2016). Constant financial stress and pressure related to ongoing drought and flood conditions and the loss of independence add to the farmer's economic problems; as many of the issues such as disease, weather, government policy, etc. are not within the farmer's control. The debts, however, are personal and need to be repaid. While the prices of crops have been pushed down (often even below the cost of production), the prices of inputs such as seed, fertilizers and pesticides have gone up. With limited resources, farmers depend on borrowed money to purchase seeds and other inputs and to farm their land and a reduction in their income could promptly lead to farmers owing more than they own.

⁶ EPW (2006) has brought out a special issue on suicides by farmers covering regions like Andhra Pradesh, Kerala, Maharashtra and Punjab. Articles included in this volume have clearly highlighted the reasons for agrarian distress and farmers suicides in recent years. Though Karnataka has also experienced farmers' suicides at a large scale, this volume somehow does not include any articles from it.

Box 1.1: Risk factors-A Matrix of Issues

Issues	Supply side	Demand side
Credit	<ul style="list-style-type: none"> • Formal sources: Decline in the number of branches, decline in agricultural credit/direct finance to agriculture as a percentage of NBC, and there is a shift to value addition activities. • Increasing dependence on informal sources – relatively more among smaller farmers. 	<ul style="list-style-type: none"> • Formal sources -not timely. • Repayment difficult during crop loss and price shocks. • Instead of getting them out of credit, the system draws them into it. • Difficulties in meeting consumption requirements and other social obligations. • An increase in market induced consumerism.
Input	<ul style="list-style-type: none"> • No link between publicly funded research and its extension. This is particularly missing for crops/cultivation in dry land areas. • Technological change is substantial and there is an increasing reliance on the unregulated private suppliers. • Inadequate public investment in agriculture (spread of irrigation in arid regions is a casualty). 	<ul style="list-style-type: none"> • Supplier-induced-demand is on the rise. This is credit-intensive and an important reason for putting the farmer in a quagmire of indebtedness. • There is deskilling. With new technology come new methods of cultivation. Social capital of knowledge in cultivation is rendered redundant. A case in point is the introduction of Bt Cotton seeds. • Greater investments in assets like bore wells in Andhra Pradesh not only increases cost, but has also led to a tragedy when the investments failed.
Output/ Price/ Income	<ul style="list-style-type: none"> • Increased volatility due to global prices. • Price distortion through subsidies by developed countries. • Low tariff in India. • Minimum support price not functional. A case in point is the Monopoly Cotton Procurement Scheme (MCPS) of Maharashtra. • Forward market – it is a virtual world that will hardly benefit the farmer. In fact, price volatility is the basis through which hedger/speculator can operate. 	<ul style="list-style-type: none"> • Cultivation not profitable. • Income not sufficient for meeting higher education of wards, medical expenditure and other social obligations. • Yield risk because of weather, water and power availability, pests, and spurious quality of inputs among others.
Other Issues	<ul style="list-style-type: none"> • Interlinked credit, input and output markets. • Non-farm income opportunities limited. • Public health response to occupational health hazards of farming is wanting. • Easy availability of pesticides and other hazardous substances. 	<ul style="list-style-type: none"> • Political dominance of moneylender and/or input dealer and output buyer. • Higher family size: more daughters – greater dowry burden. • Lack of social support.

Source: RBI (2006).

Years of economic reforms have given farmers access to expensive and promising technological options; but these reforms have not led to crop insurance, land irrigation, or enough bank loans. These reforms have rendered Indian farmers open to global competition and in order to compete, they were forced to turn to high-cost seeds, fertilizers and pesticides; believing in easier returns. Modified seeds cost nearly twice as much as ordinary ones, necessitating larger loans. Unfortunately for farmers in India, foreign subsidies (such as the United States and the United Kingdom who receive over \$18 billion a year in subsidies) have driven down the price of crops (such as cotton) in the global market. In addition, there has been minimal financial support from the government for marginal and small farmers. Many of these farmers don't qualify for bank credit, forcing them to turn to moneylenders who charge up to 20 to 36 per cent interest on them. Consequently, farmers often sign away the title to their land as collateral.

Concerned with the agrarian crisis and farmers' suicides in suicide prone states of India, on 29th of September, 2006, Union Cabinet approved the Prime Minister Rehabilitation Package for 31 identified districts in the State of Andhra Pradesh, Karnataka, Kerala and Maharashtra. The implementation period of PM's package was fixed for 3 years and included both immediate and medium term measures (Kalamkar and Shroff, 2011). The amount sanctioned under this package was Rs. 16978.69 crore with the goal of mitigating the distress driven condition of farmers. The rehabilitation package aimed at establishing a sustainable and viable farming and livelihood support system through debt relief measures to farmers such as complete institutional credit coverage, crop centric approach to agriculture, assured irrigation facilities, effective watershed management, better extension and farming support services and subsidiary income opportunities through horticulture, livestock, dairying, fisheries and

other subsidiary activities. In order to alleviate the hardships faced by the debt driven families of farmers, ex-gratia assistance from Prime Minister's National Relief Fund (PMNRF) 50 lakh per district was also provided. Some other programs to increase of flow of agricultural credit includes Kisan Credit Cards (KCC), revival package for short term cooperative credit structure, concessional interest schemes, interest subvention schemes, interest subvention against negotiable warehouse receipt and so on. All these attempts have to some extent have helped to reduce farmers' suicides insignificantly overtime in several states. However, farmers' suicides still remain major challenge in India.

Need of the Study:

Farmer suicide has turned out to be a major socio-economic concern in India that has resulted in profound implications on the quality of life of farmers. The spiraling of suicides in the past decade or so is symptomatic of agrarian distress and impoverished condition of farmers. Farmers' suicides have also been receiving a lot of social and public policy attention⁷. According to the United Nations Commission on Sustainable Development (UNCSD⁸), one farmer committed suicide every 32 minutes between 1997 and 2005 in India. As per NCRB (2015) a total of 5,650 farmers have committed suicides during 2014, accounting for 4.3 per cent of total suicides victims in the country, of which 5,178 were male farmers and 472 were female farmers. The highest numbers of farmers suicides cases were recorded in Maharashtra (2,568) Telangana (898), Madhya Pradesh (826), Chhattisgarh (443) and Karnataka (321). These five States together

⁷ Some of the studies are Deshpande (2002), Mohanty and Shroff (2004), Deshpande and Prabhu (2005), Gill and Singh (2006), Mishra (2006, 2006a), Mohanakumar and Sharma (2006), Satish (2006), Singh (2006), Sridhar (2006), Mitra and Shroff (2007), Vaidyanathan (2007), Shroff (2008), Padhi (2009).

⁸ http://www.un.org/esa/sustdev/csd/csd16/PF/presentations/farmers_relief.pdf

accounted for 89.5 per cent of the total farmer suicides reported in the country during 2014 (Map 1.1, Fig 1.1 and Annexure 1).

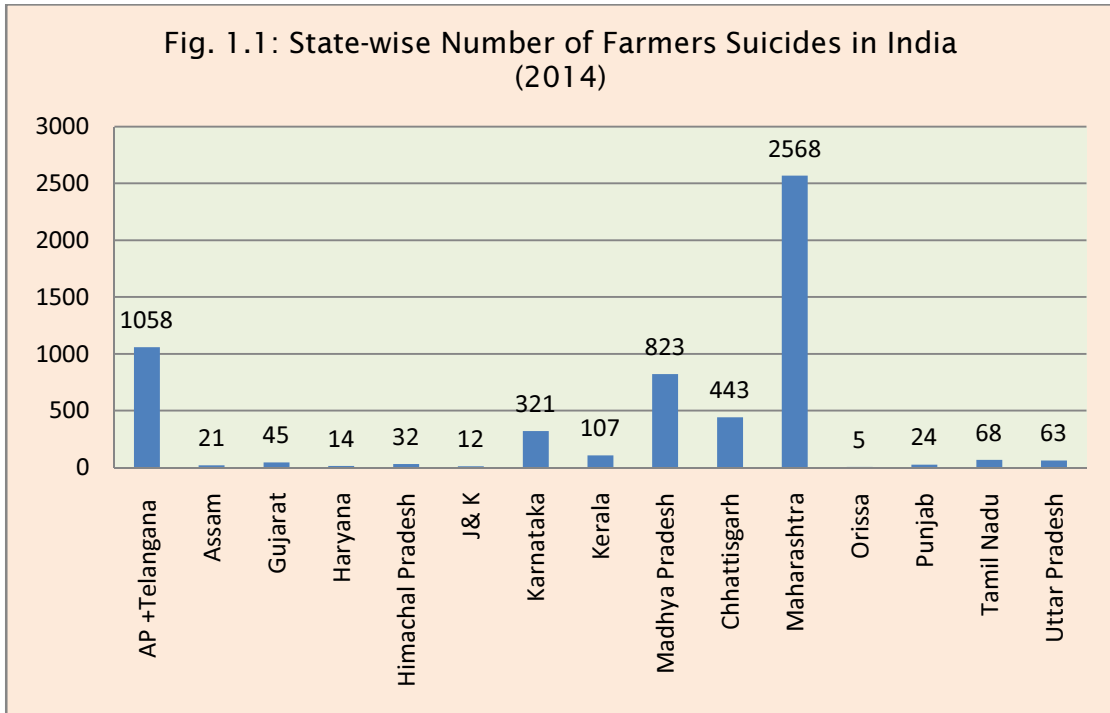
Map 1.1: State-wise farmers Suicides during 2014



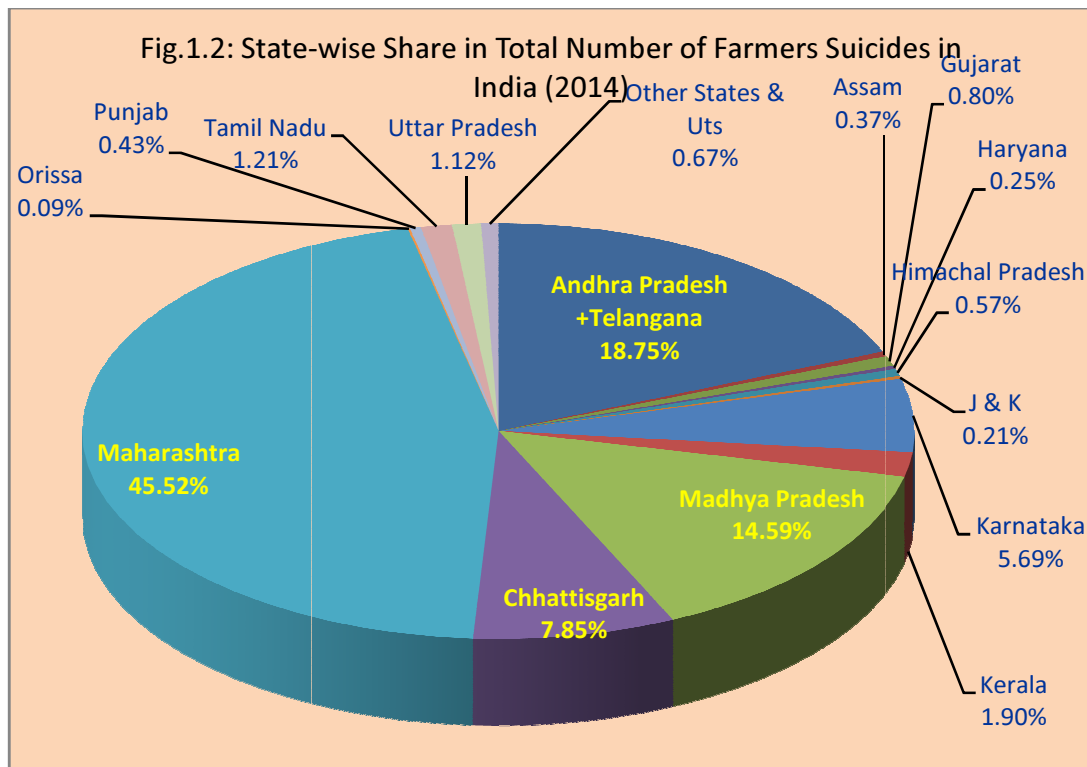
The prominent causes recognized for farmers⁹ suicides were bankruptcy or indebtedness (20.6 per cent), family problems (20.1 per cent), failure of crops (16.8 per cent), illness (13.2 per cent) and drug abuse/alcoholic addiction (4.9 per cent) (Fig. 1.1). Farmers feel a repeated sense of hopelessness due to the loss of crops, income, land and even the loss of a way of life. Another factor that increases suicides is the potential for social isolation due to reasons like the loss of communities as well as geographical remoteness. The lack of access to

⁹ Farmers include those who own and work on field (viz. cultivators) as well as those who employ/hire workers for field work/farming activities. It excludes agricultural labourers (NCRB, 2015).

mental health services in rural areas and the stigma attached to treatment is also a contributing factor. Depression arising from exposure to agricultural chemicals/pesticides may increase the risk for mood disorders and ultimately suicide.

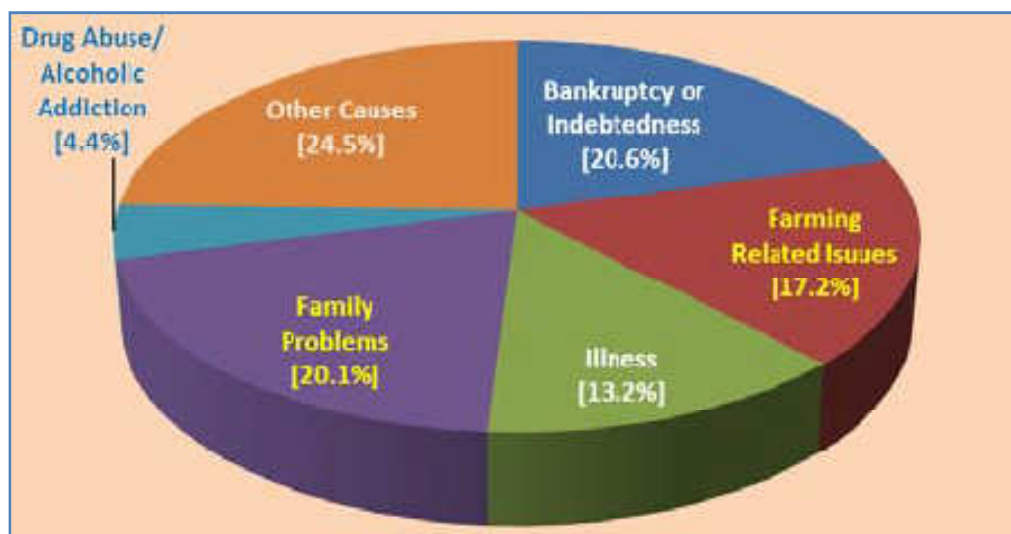


Source: NCRB (2015).



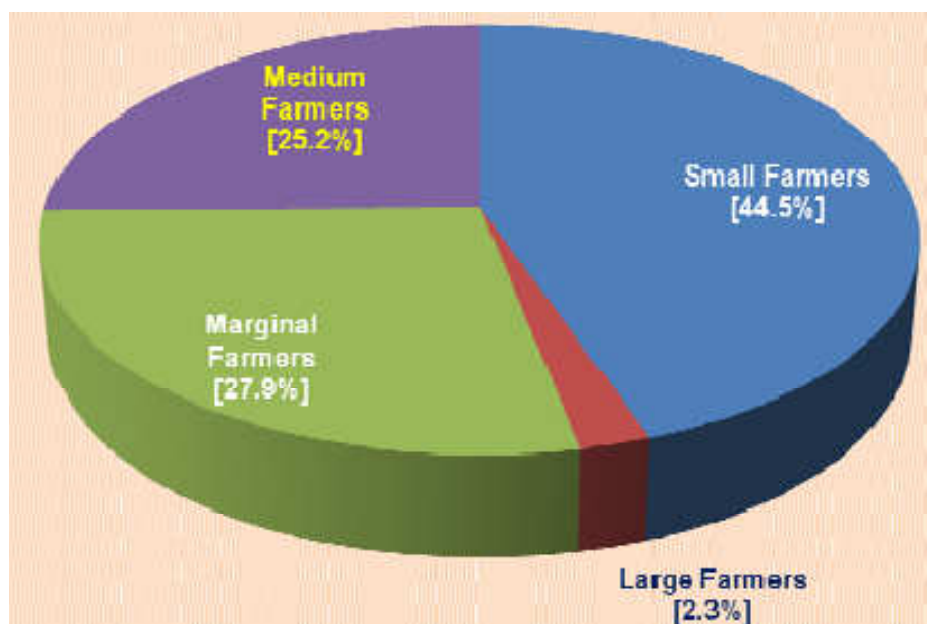
Source: NCRB (2015).

Fig. 1.3: Percentage Share of Major Causes of Farmers' Suicides during 2014



Source: NCRB (2015).

Fig. 1.4: Percentage Share of Farmers' Suicides by Land Holding Status during 2014



Source: NCRB (2015).

The main consequence of agrarian distress has been that the marginal and small farmers who find it increasingly hard to sustain on farming, are either getting pushed out from agriculture or committing suicide. According to the report, the land holding status of the farmers who committed suicide revealed that 44.5 per cent and 27.9 per cent of

victims were small farmers and marginal farmers, respectively and that put together accounted for 72.4 per cent of total farmer suicides. The report further reveals that 53.1 per cent and 14.5 per cent of small farmers who committed suicides were reported in Maharashtra and Telangana respectively during 2014. Among marginal farmers, 39.7 per cent and 25.5 per cent of farmers' suicides were reported in Maharashtra and Madhya Pradesh respectively

1.2 Review of Literature:

1.2.1 Theoretical Literature Review

Most studies on suicides fail to look at the phenomena from an interdisciplinary perspective (Manjunatha and Ramappa, 2015). Research on suicide is performed by various scientific disciplines, in particular by psychologists (e.g. Radhakrishnan and Andrade 2012), public health researchers (e.g. Mayer 2011), and sociologists (e.g. Durkheim 1951). Common to all is the prevailing usage of statistics and quantitative data in identifying certain patterns in suicide (Carey 1993; Kral, et al. 2012; Tatz, 2005). Hence, research on suicides in psychology is mostly concentrated on the individual, his or her emotions as well as biological or genetic causes. From a public health perspective risk factors of suicide, access to lethal means and strategies for suicide prevention are particularly crucial (Wray et al, 2011). Sociological research, on the other hand, is more concerned with social or ecological aspects surrounding suicide. According to these disciplines, suicide involves intention, personal agency as well as knowledge about the fatal outcome. Such a definition rests on Durkheim's (1951) description of suicide (as cited in Höfle, 2015¹⁰).

The sociological paradigm of suicides developed by Durkheim (1952) has served as a model for understanding suicides. According to

¹⁰ http://crossasia-repository.ub.uni-heidelberg.de/3909/1/MasterThesis_FarmersSuicides_AHoeffle.pdf

him, suicide is an individual phenomenon the causes of which are essentially social in nature. The causes of suicide are external to the individual rather than within him. Durkheim (1897) has also highlighted that suicide rates are dependent upon the degree to which individuals were integrated into society and the degree to which society regulates individual behaviour. He mentioned that in the modern society there are two major types of suicides, viz. increasing detachment from others resulting to egoistical suicide (e.g. unmarried and childless are less integrated and hence susceptible to a higher suicide rate) and dissatisfaction in relation to expectations resulting in anomic suicide (e.g. in times of price crash of crops, there is more probability of suicides if the farmers' price expectations are not met) (Lester, 1994 cited in Deshpande and Arora, 2010). Taking into account Durkheim's types, Mohanty (2001, 2013) noted that farmer suicides are resulted from a combination of ecological, economic and social crisis and also due to modern agricultural practice, which has become an independent, household or family enterprise, without requiring any link and interaction among the cultivators themselves.

However, as Staples (2012) points out, an anthropology of suicide must go beyond what Durkheim proposed. Durkheim was limited to the extent that he developed his theory in a Western context, and regarded cultures as being homogenous. Moreover, Staples (2012) suggests the following three steps when studying suicide anthropologically. These are the identification of (i) culturally shared norms about suicide, (ii) motivations for suicide which might reflect broader social values, and (iii) wider cultural beliefs on, for instance, life after death. This also involves the investigation of social contexts and conditions which shape suicide archetypes and meanings.

Another way of analysing the causes of suicides requires understanding the culmination of four factors namely, Events, Stressors, Actors and Triggers. This categorization stems from the

mental set up of victims (Deshpande, 2002). The events such as crop loss, bore-well failure, price crash, family problems, property disputes and daughter's marriage act as stress creators, when two or more events cluster together. Usually illness of the individual or any family members, heavy borrowing, continued disputes in the family or land related problems act as stressors'. These become lethal in combination with the events, but further ignition comes through the actors and triggers incidence. Given this complex nature of the phenomena, it is certainly difficult to pinpoint one particular reason for the suicide (Deshpande, 2002).

Gupta (2005: 752) while shedding a light on the plight of the Indian farmer aptly observes that "Indian agriculture has always lurched from crisis to crisis. If the monsoons are good then there are floods, if they are bad there are droughts, if the production of mangoes is excellent then there is a glut and prices fall, if the onion crops fail then that too brings tears. The artisanal nature of agriculture has always kept farmers on tenterhooks, not knowing quite how to manage their economy, except to play it by (y) ear". The study on farmers' suicides is a problem of the type that is theoretical and interpretative in nature. Although there is an availability of empirical data, due to a lack of sufficient understanding of the trends and complex patterns, there exists a deficiency in establishing interrelationships (Kaviraj, 1984).

Sridhar (2006) opined that the act of suicide, or the phenomenon of suicides on a widespread basis, is usually provoked by a churn in socio-economic conditions. Individuals and communities are under pressure to cope with the changes in the conditions of their lives, when society is in a state of flux. Once it is accepted that the growing number of suicides within a community is provoked by sudden or dramatic changes in the terms on which their lives are lived, it is necessary to explore what these changes are and how they have impacted the lives of the community, in this case, the peasantry.

Vasavi (2012) states that bewilderment, loss of meaning and uncertainty among farmers due to the unrelenting failures of policies and responses are doubtful to change unless there is a paradigm shift in the general outlook that starts with trusting agriculturists' knowledge and working towards those elements that enhance their capacities for collective action.

In summary, while all current reports ascertain that widespread and soaring indebtedness among farmers is considered by most of the families to be the key reason for the suffering experienced by the victims leading to their suicide, the social bases of such indebtedness and its implications have not yet been recognized.

1.2.2 Empirical Literature Review

Mohanty and Shroff (2004) studied farmers suicides in Maharashtra and noted that though crop losses, indebtedness and market imperfections cause economic hardship to farmers; social factors are also at work which leads in some cases to their suicides. Mishra (2006) also studied the suicides in Maharashtra and identified interrelated and co-existing socio economic stressors as indebtedness, deterioration of economic status, conflict with other members in the family, crop failure, decline in social position, burden of daughter's /sisters' marriage, suicide in a nearby village, addictions, change in behavior of deceased, dispute with neighbors/others, health problem, a recent death in the family, history of suicide in family or other family members being ill.

Narayanamoorthy and Kalamkar (2005) analysed the determinants of the indebtedness of the farmers households suggests that wherever the availability credit per hectare of net sown area is higher, the extent of indebtedness is also higher. The study shows that (a) the incidence as well as extent of indebtedness has considerably increased among the farmers' households over the last

one decade across the states and (b) both the incidence as well as the extent of indebtedness is found to be relatively higher among those states that are relatively developed in terms of agriculture.

According to Meeta and Rajivlochan (2006) some of the common problems found among the victims of suicide were (a) hopelessness in being unable to resolve the dilemmas of personal life and an inability to find funds for various activities or repay loans; (b) the absence of any person, group, or institution to whom to turn to in order to seek reliable advice - whether for agricultural operations or for seeking funds or for handling private and personal issues; (c) little knowledge about institutional mechanisms like the Minimum Support Price (MSP) that would affect marketing, technical knowledge and no reliable sources from where such knowledge and advice could be accessed; and (d) chronic alcoholism and drug abuse among the rural population.

Jeromi (2007) studied the farmers indebtedness and suicides in Kerala and noted that following trade liberalization and also due to a host of other factors like deficient rainfall, excessive concentration on export-oriented perennial crops, decline in production and productivity, fall in prices, etc, the agricultural sector of state has been facing a crisis during the last one decade, which led to a rise in farmers' indebtedness and suicides. While farm distress continued, there was a significant rise in loans issued by the formal financial institutions in the recent period, especially short-term loans, thus, raising the indebtedness of farmers further. Agricultural crisis was one of the major reasons for suicides, but not the sole reason. Most farmers who committed suicide had landholdings below one acre and average loan liability was Rs 72,000. Besides this, many farmers had private borrowings from friends and relatives. Their inability to repay these loans (liquidity) is considered as the proximate reason (trigger point) for committing suicide.

Mitra and Shorff (2007) studied farmers suicides in Maharashtra and concludes that the loss in the competitiveness of the Indian cotton farmer after the opening up of India's agricultural economy in the mid-1990s was a major reason for the increasing incidence of farmers' suicides. In a closed economy framework, farmers were faced mainly with yield risk and any crop loss could at least be somewhat compensated by an increase in domestic prices. In an open economy, however, crop failure may be accompanied by a fall in the ruling price in case of an increase in world supply. Thus, the farmer faces not only yield risk but also price risk. Overall, three factors contributed to the plight of farmers – low yield exposed to the lower international prices after liberalisation, a lack of dynamism in cotton yield per hectare in a dynamic world and a huge increase in costs of cultivation. One recent factor leading to an increase in the cost of cultivation is the use of costly Bt cotton seeds by farmers.

Kumar Mohana and Sharma (2006) analysed farmer suicides in Kerala and noted that agrarian crisis and farmers' distress in Kerala over the past one decade are closely linked to the neoliberal policy regime implemented in the country in the recent past. The association between the two is more in the regions of the state which are heavily dependent on export-oriented crops, such as coffee and pepper. The worst affected are the small farmers, as they are more vulnerable to crop losses and a price fall. They find it extremely difficult to pay back the loans they have incurred to grow crops and survive. Unless the plight of farmers is addressed in terms of changing the macro-policies regulating taxes, prices and imports, the condition of the farmers cannot be improved on a sustainable basis, either by increasing the availability of institutional credit or providing some alleviatory sops to the victims of suicide families.

According to Behere and Behere (2008), suicide should not be viewed as only mental health problem, which is a common notion

among people. The various factors which play are: chronic indebtedness and inability to pay interest accumulated over the years; economic decline leads to complications and family disputes, depression, and alcoholism, etc.; compensation following suicide (death) helps family to repay debt; grain drain; and the rising costs of agricultural inputs and falling prices of agricultural produce. They also opined that the causes are multifactorial, cumulative, repetitive and progressive, leading an individual to a state of helplessness, worthlessness and hopelessness, obviously influenced by his social strengths and weaknesses along with his mental health status.

Kanthi (2014) reported that the contributory factors for farmers suicides in Andhra Pradesh as farmers indebtedness, crop loss and failure and risk factor, input (seed, fertilisers, pesticides, irrigation, credit) related problems, inadequate institutional finance, failure of agricultural extension system lack of storage and marketing facilities, lack of remunerative prices and absence of agricultural insurance.

Talule (2013) analyses the complexities of changing agrarian relations on account of the impact of development policies and tries to document the reasons for suicides by using household level data collected from two hundred suicide affected farm families between 1995 and 2008. Author argues that suicides by farmers in the state is not an outcome of poverty but the punctured socio-economic pride which made practicing cultivation difficult and thus pulled them into a debt trap. He suggests that problem of suicides in farming needs to be addressed in a holistic way, through development of rural base industries along with policies for allied activities like animal husbandry. Also extension facilities and rural non farm sector need to be focused in order to bring farmer in the mainstream and to divert their main dependence on agriculture.

Kedar and Kannan (2013) examined the core factors responsible for the farmers' indebtedness in the major suicides prone states in

India. Authors point out that the causes of farmers' suicides are different in different regions and higher incidence is noticed in the region which is cultivating export-oriented crops. However, the indebtedness is a main factor behind farmers' suicides in Punjab and Andhra Pradesh mainly due to higher borrowing from money lenders and increasing irrigated area under tube wells.

Kavare (2013) argue that the causes of farmers' suicides are both economic and suggest a set of remedies such as immediate (adequate) compensation given on a priority basis to families of victims; comprehensive insurance safety net ; revamping of extension services in lines with e-choupals; dissemination of information such as agricultural prices and methods of low-cost organic farming; fundamental policy changes to factor in the functioning production cost in the Minimum Support Price mechanism; integrate surface and groundwater irrigation schemes and integrate the line departments in order that the schemes are implemented efficiently; policy changes to focus on farmers rather than seed and fertilizer corporations; and set up of a commission with statutory powers that takes decisions on issues such as genetic modification technology and its impact on Indian agriculture, pricing policy and cropping pattern.

Tripathy (2008) examines the history of Indian agriculture and its underlying policies since the 1960s. He found that a payment crisis in the 1990s, which resulted in a declining growth of India's economy, led to farmers' suicides. More precisely, he attributes the rising suicides among farmers to an increasing indebtedness due to the fact that India started importing agricultural products such as cotton, edible oils and spices. In addition to indebtedness, Tripathy (2008) also cites increasing costs for cultivation, dependencies on private money lenders and a lack of water as reasons for farmers' suicides in the states of Maharashtra and Andhra Pradesh.

Swaminathan (2010) investigates farmers' suicides in respect of malnutrition and interventions by the government. He argues that farmers' distress results from several factors comprising institutional parameters such as a lack of credit or insurance as well as social aspects such as gender discrimination or the dependency on moneylenders. As a third component he mentions government policies which lead to a collapse of the rural economy. Furthermore, Swaminathan states that measures designed for farmers by the government have not considered the cause of farmers' distress and he demands an insurance system which incorporates health, crop and livestock security as well as a nutrition security system.

With respect to studies on risk management strategies for reducing farmers' suicides, Mishra (2007) refers to several insurance schemes and strategies by the farmers themselves. He states that a crop insurance (National Agricultural Insurance Scheme) and a National Calamity Contingency Fund have already been established. Furthermore, a weather insurance considering rainfall as well as temperature and a Farm Income Insurance Scheme for rice and wheat have been implemented on a pilot basis. Yet, Mishra (2007) clarifies that mostly farmers are unaware of being insured. Moreover, he demands a risk management which addresses credit, prices, income, weather as well as yield risks. Mishra (2007) found alternative strategies by farmers such as non-farm income, crop diversification and inter-cropping. Another way of risk management is offered by means of relief packages which have been provided to 31 districts in four states. These packages addressed, amongst other aspects, debt relief, additional institutional credit as well as subsidiary income opportunities (Mukherjee 2009). However, Mukherjee (2009) found out that these packages are not comprehensive enough as they only address immediate issues. In addition to that, more suicides might be triggered by desperate farmers in order to obtain compensation money

and repay debt. As a result, Mukherjee (2009) asks for additional and extended services including counseling of farmers as well as an acknowledgement of multiple causes of farmers' suicides. Kennedy and King (2012), furthermore, claim that interventions should be targeted at stabilizing cash crop prices and relieving indebted farmers. Implications resulting from farmers' suicides are found to particularly affect the relatives of the deceased. Mukherjee (2009) emphasizes that widows are faced with need of compensating loss of income, otherwise children may get expelled from education or even lose both parents.

Risk management and prevention strategies have been assessed by Narayanamoorthy (2006) and revealed that the relief packages provided to districts in Vidarbha, Maharashtra, were not comprehensive enough since the underlying reasons for the farmers' distress are ignored. For instance, immediate relief was not offered, but instead only partial investments were made in the insufficient infrastructure such as irrigation development programs. Moreover, farmers should be offered additional credit, which is according to Narayanamoorthy (2006) unhelpful since the necessary infrastructure is missing. As a consequence, he demands that the government should announce remunerative prices for crops, establish an emergency center which ensures the supply of required inputs, and check the quality and prices of inputs. Further interventions by the government should include contract farming, which protects farmers from price fluctuations, as well as the remission of loans for marginal farmers. Long-term measures should especially improve rural infrastructures, and if a sufficient infrastructure is established, the supply of institutional credit need to be ensured (Narayanamoorthy 2006). Kalamkar and Shroff (2010) also examined the ground reality as to whether the benefit of the PM's rehabilitation package has reached the intended beneficiaries and its impact in Vidarbha region of Maharashtra. Authors conclude that farmers in the suicide prone districts of Vidarbha were aware of

the PM's package and farmers had availed of relief measures such as interest waiver and rescheduling of loans and also subsidy under various schemes, which enabled them to be eligible for fresh loans and also augment their incomes through subsidiary activities. However, despite the broad based comprehensive nature of the PM's package with several schemes and issues being addressed (AIBP, Watershed Development and Micro Irrigation), agriculture in Vidarbha continues to be a gamble of the monsoons.

Mohanty (2014) in a study conducted in Amravati and Yavatmal district of Maharashtra argued that crop loss and egoistic factors led to suicidal tendency among small farmers. On the contrary, the suicides of large and medium farmers who belong to higher castes were attributed mainly to the anomic forces generated by failure in business, trade and politics. The socio-cultural factors such as old age, illness, family tension, etc, further added their urge to take their own lives. They concluded that the suicides of farmers are neither properly anomic nor egoistic rather they are ego-anomic in nature. Singh and Singh (2014) based on the research in Punjab studied that the level of education, non-farm income, farm size and non-institutional credit were the main factors which affect the level of farmers' indebtedness. They also found that the farmers face a large number of problems in availing institutional credit which drives them to fall into the debt trap of the crafty and exploitative non-institutional sources of credit.

Hebous and Klonner (2014) found that transitory spikes in poverty caused by a lack of rainfall increase suicides among male and decrease suicides among female members of farm households. However, the paper concludes that the combined causal effect of a poverty shock on suicides in farm households is positive. Also, a shift from subsistence crops to cash crops, especially cotton, was found to be associated with a decrease in male suicides.

Anneshi and Gowda (2015) concluded that both small and large farmers borrowed relatively higher proportion from the non-institutional sources compare to institutional sources and accessibility to institutional borrowing is relatively more for large farmers. Similarly, both small and large farmers owed more outstanding debt to non-institutional sources, as compared to institutional sources in SC/ST category. Macharia (2015) investigated that majority of small and marginal peasants depend on non-institutional credit facilities (i.e. moneylenders, micro financiers and traders). The farmers' suicides take place among the scheduled castes and tribe families who cultivate commercial crops. Low yields, extremely reduced profits and mounting debts make their agricultural life extremely difficult.

Causes of farmers' suicides are analyzed by almost all studies. Consensus is evident regarding the fact that the reasons for farmers' suicides are multifaceted. Despite of various attempt at government level, farmers' suicides still remain major challenge in India. Therefore, there is urgent need to study the farmers' suicide.

1.3 Main Objectives and Scope of the Study

- i) To analyse the incidence and spread of farmers' suicides in Gujarat state and to map the hot-spots of suicide;
- ii) To study the socio-economic profile, cropping pattern and profitability of victim farm households.
- iii) To study the causes leading to farmers' suicides.
- iv) To recommend suitable policies to alleviate the incidence of farmers' suicides.

The study has been carried out in the state of Gujarat, which is one of the fast growing states of India. Though state accounts for hardly 0.8 per cent of total farmers' suicides recorded in India during 2014, it is important to investigate the causes of suicides in the state. The results of the study will provide useful insights to understand on

socio-economic profile of victim households, causes of farmers' suicides in general and specifically due to indebtedness from institutional and non-institutional sources, suggestions to prevent farmers' suicides and coping strategies after suicide incident will help the policy makers in framing policies and programmes to prevent farmers' suicides.

1.4. Data and Methodology

The study is based on both primary and secondary data. The secondary data were collected from the different published sources such as government publications, reports, research papers and related websites, viz. *Accidental Deaths and Suicides in India - 2014* (Annual publication by National Crime Records Bureau), and *Agricultural Statistics at a Glance*, (published by the Directorate of Economics and Statistics, Ministry of Agriculture, GOI), etc.

The primary data were confine exclusively to those victim farmers' households who were cultivating either their own land or on lease basis - at the time of survey. Thereby, the suicide cases of agricultural labourers were outside the purview of study. Annual publication by National Crime Records Bureau (NCRB) is the only authentic data source for compiling state-wise number of farmers' suicides in the country. As such, the data cannot be segregated as farmers and agricultural labourers for the previous years, the latest available publication is for the year 2014 under the title "Accidental deaths and suicides in India-2014" presents separately the number of suicides of agricultural labourers and farmers. Therefore, the selection of sample of victim farmers' households in Gujarat state for primary data was as per the numbers given in 2014 NCRB's publication. According to this publication, during 2014, there were 45 number of suicides belonging to farming community. The details of sampling framework are given in the Table 1.1.

Table 1.1: Sample Size of Primary Data in Gujarat

Sr. No.	Names of selected district	Name of selected Taluka/Block	Name of Village	No. of Victims' families interviewed	% to total Suicide in district
1	Amreli	Amreli, Dhari	Chital, Shivad	2	100
2	Bhavnagar	Bhavnagar, Talaja	Madhia, Mithi Viridi	2	100
3	Devbhumi Dwarka	Dwarka, Jam Khambhaliya, Kalyanpur, Bhanvad	Padli, Gorinja, Thakkar Sherdi, Viramgadh, Bhadthar, Kuwadia, Bhatel, Ran, Chur, Ashyavadar, Bhanvad, Verad, Shiva, Mota, Kalawad	14	73.68
4	Jamnagar	Jamnagar, Jam Jodhpur, Lalpur	Naghuna, Moti Gop, Modpur	3	100
5	Panchmahal	Kalol, Godhra	Sureli, Nandarba, Chaleli, Paruna, Rampur Jodka	5	55.56
6	Porbandar	Porbandar, Kutiyana	Miyani, Kadegi	2	40
7	Surat	Surat	Jahagirpura	1	100
8	Surendranagar	Chotila	Dhorai	1	100
	Total (8)	17	30	30	71.43*

Note: * Percentage to State total.

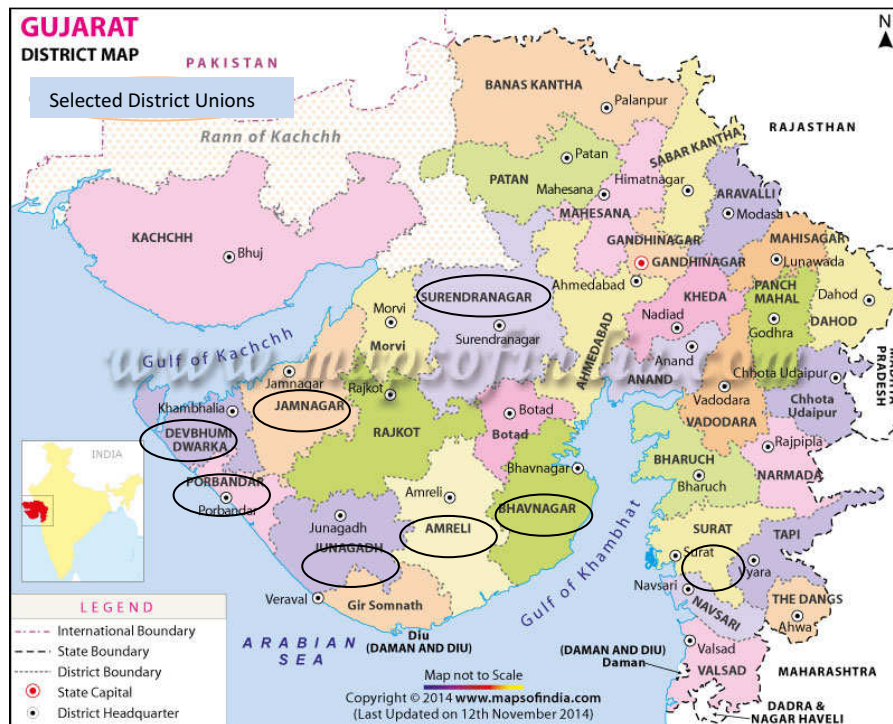
The detailed information is elicited from victim households with the aid of a structured and pre-tested questionnaire covering two sections. The first section covers information about the family size, education level of the victim household, social group, cropping pattern, size of the land holdings, sources of irrigation, cost and returns from crop cultivation and so on. In the second section, information regarding causes of farmers' suicides with special focus on the institutional and non-institutional credit, extent of indebtedness, coping strategies after the suicide incident and suggestions for preventing farmers' suicides were collected. Besides tabular analysis, annual compound growth rates were estimated to indicate an increase or decrease in various parameters.

1.5 Limitations of the Study

The primary data were collected from the respondent of victim household, thus exact reason/cause of suicide was estimated based on

the responses, which cannot be certified as right one. In most of cases, the final cause of suicide was not mentioned in police record. Though a person who poses some land is defined as a 'farmer', but causes for suicides may be social, personal/family, financial and farming, thus it is very difficult to reach to the conclusion.

Map 1.2: Location Map of Study Districts in Gujarat, India



1.6 Structure of the report

The present study report is divided into five chapters including this introductory chapter. The details on farmers' suicide scenario in Gujarat have been presented in Chapter II. The Chapter III presents the socio-economic profile of victims' family, characteristics of operational holdings, sources of irrigation, leasing of land, source of income and items of expenditure, cropping pattern & returns from cultivation and credit availed. The Chapter IV discusses the causes and after effect of suicide. The last chapter presents the summary of findings of the study and some policy implications.

The next chapter presents farmers' suicide scenario in Gujarat.

Farmers' Suicide Scenario in Gujarat

2.1 Introduction

Gujarat has historically been known for business acumen of its people. Gujarat state has made rapid strides in its agriculture sector including the agribusiness sub sector during THE recent past. Agriculture in Gujarat has been transforming over time from traditional to high value added commercial crops which can be seen from a shift in its cropping pattern from food grains crops to high value cash crops such as oilseeds, fruits, vegetables and spices (Swain, et.al., 2012; Parihar et al, 2014). The trend in shifting of cropping pattern paved ways for many ancillary industries in the areas of processing, packing, storage, transformation, etc. Agricultural growth in the state is favored by the prevailing eight agro-climatic zones, enterprenuring farming community, policy support from the government, wealth of livestock population, extended coast line and contribution by the agricultural scientist and dedicated NGOs.

The Gujarat government has aggressively pursued an innovative agriculture development programme by liberalizing markets, inviting private capital, reinventing agricultural extension, improving roads and other infrastructure. The mass-based water harvesting and farm power reforms in dry Saurashtra and Kachchh, and North Gujarat have helped energize Gujarat's agriculture. These semi-arid regions have outperformed the canal irrigated South and Central Gujarat. The shift in agriculture to 8 per cent growth rate during last decade was mainly responsible for the shift of the overall state economy to higher growth path with 10.6 per cent annual growth rate. For ensuring systematic and coordinated approach to all around development of its agriculture sector, the Government of Gujarat had prepared in the year 2000 a 10 year plan called 'Gujarat Agro-vision 2010'. A comprehensive New Agro-industrial Policy was also announced in 2000. In the new industrial policy, the state

has indentifies agro-industries as the major thrust area. The policy aims to spur investment in agro-processing, agro-infrastructure and hi-tech agriculture by monetary incentives. Adequate returns on agricultural output are one of the driving forces for better agricultural growth (Swain, et.al., 2012; Parihar et al, 2014).

Despite of high rate of growth during the last decade, National Crime Records Bureau has recorded total 45 cases of suicide of farmers in the state of Gujarat during the year 2014. Out of total number of suicides, 68.89 per cent were male farmers and 31.11 were female farmers. As per land holding size category of farmers, 66.67 per cent were from medium size category, followed by small (17.78 per cent), large (8.89 per cent) and remaining from marginal category (6.67 per cent). The prominent causes recognized for farmers' suicides in Gujarat were other/not known (62.22 per cent), followed by illness (15.55 per cent), marriage related problems (8.89 per cent), farming related problems (6.67 per cent), family related problems (4.44 per cent) and drug abuse/alcoholic addiction (2.22 per cent). In view of above, the present study was entrusted to us by the Ministry of Agriculture and Farmers Welfare, Government of India with an aim to analyze the incidence and spread of farmer suicides in Gujarat. The study is based on both primary and secondary level statistics. The primary data is collected from the selected 30 victim farm households in Gujarat. The results of the study will provide useful insights to understand on socio-economic profile of victim households.

2.2 Intensity of Farmers' Suicides in the State

Farmer Suicides in Gujarat have come under the scanner after comments by opposition party leaders in the recent past. They have attacked the Gujarat model of Development by pointing at the high number of farmer suicides in Gujarat. The district-wise details of farmers' suicide in the state of Gujarat are presented in Table 2.1. It can be seen from the table that epidemic of farmers suicides during the year 2014

was recorded in Devbhoomi Dwarka district covering about 45 percent of total suicides in the state, followed by Panchmahal district (about 22 percent) and Porbandar (almost 12 per cent). These three districts together accounted for about 79 per cent of total number of suicides in the state. The remaining suicide cases were recorded in Amreli, Bhavnagar, Surat and Surendranagar districts. Though three suicide cases were recorded in Mehsana district as per NCRB report, but the Mehsana District Police Office informed us in writing that it was by mistake.

Table 2.1: District-wise details of farmers' Suicide in the state

(January, 2014 to December, 2014)

Sr. No.	Name of the district	No. of farmers' suicide 2014	% to state total	No. of Farmers' Suicide per lakh hectare of Net Sown Area = (No. of Farmers' Suicides/ NSA in lakh ha)	No. of Farmers' Suicide per lakh hectare of Gross Cropped Area = (No. of Farmers' Suicides x / GCA in lakh ha)	No. of Farmers' Suicide per lakh farming families = (No. of Farmers' Suicides) / No. of farming families in lakh)
1	Amreli	2	4.76	0.36	0.32	0.85
2	Bhavnagar	2	4.76	0.37	0.29	0.84
3	Devbhumi Dwarka	19	45.24	8.06*	6.58**	20.30
4	Jamnagar	3	7.14	0.79*	0.64**	1.86
5	Panchmahal	9	21.43	3.21	2.85	4.31
6	Porbandar	5	11.90	3.65	2.96	8.04
7	Surat	1	2.38	0.35	0.33	0.71
8	Surendranagar	1	2.38	0.14	0.12	0.44
	Total	42	100.00	0.42	0.34	0.86
9	Mehsana#	03				
	Grand Total	45				

Notes: * Estimated Net Sown Area; ** Estimated Gross Cropped Area; # As per NCRB, total 45 Farmer's Suicide was recorded. However, as per the report of Mehsana District Police Office; 3 were recorded mistakenly (see, Annexure III).

Source: GOG- State Crime Record Bureau, The Additional Director General of Police, Gandhinagar.

The month-wise distribution of suicides in the state during 2014 (Table 2.2) indicate that during the month of March and May highest number of farmers had committed suicides (i.e. 14.3 per cent each, may be due to poor harvest during the last agriculture years), followed by July and September month (11.9 per cent each), October (7.14 per cent) and December (9.52 per cent). Thus, the numbers of suicides were not specific to any particular month and were spread across the months.

Table 2.2: Month-wise farmers' suicide in Gujarat

(January,2014 to December,2014)

Sr. No.	Months	No. of Farmers' Suicides	Percent to total No. of farmers' suicides
1	January,2014	4	9.52
2	February,2014	2	4.76
3	March,2014	6	14.29
4	April,2014	4	9.52
5	May,2014	6	14.29
6	June,2014	1	2.38
7	July,2014	5	11.90
8	August,2014	1	2.38
9	September,2014	5	11.90
10	October,2014	3	7.14
11	November,2014	1	2.38
12	December,2014	4	9.52
	Total	42	100.00

Source: GOG- State Crime Record Bureau, The Additional Director General of Police, Gandhinagar.

2.3 Procedure adopted and Criteria for Compensation

In order to support the victims family members and with a view to alleviate the sufferings of victims' stressed families, State Governments have been declared compensation. For example, Government of Maharashtra¹¹ state pays Rs 1.0 lakh compensation without placing any conditions or conducting an inquiry in a farmer suicide case. Though the state government has given a compensation of Rs 1 lakh to the nearest

¹¹ <http://timesofindia.indiatimes.com/city/mumbai/Rs-1-lakh-compensation-sans-inquiry-in-farmer-suicide-cases-announces-Maharashtra-government/articleshow/51400695.cms>

kin of farmers in case of an accidental death, there is no such compensation¹² in case farmers in the state commit suicide. Thus, there is no procedure and any criteria towards compensation to victim family in the state.

2.4 Compensation Paid and Actions by State Government to Avert in the Future

As mentioned earlier, there is no compensation scheme for farmers' suicide cases in the state of Gujarat, no victim family under study had received compensation from state government. While only victim family in Surendranagar district had received compensation of Rs. 10000/- through Agricultural Produce Marketing Committee of Rajkot district where victim farmer had committed the suicide.

Table 2.3: Details of compensation paid

(January, 2014 to December, 2014)

Sr. No	Name of District	No. of families compensated	Percent of families received compensation (%) [*]	Total amount of compensation paid in Rs.	Compensation paid per family [#]
1	Amreli	-	-	-	-
2	Bhavnagar	-	-	-	-
3	Devbhumi Dwarka	-	-	-	-
4	Jamnagar	-	-	-	-
5	Panchmahal	-	-	-	-
6	Porbandar	-	-	-	-
7	Surat	-	-	-	-
8	Surendranagar	1	100.00	100000	100000
	Total	1	2.38	100000	100000

Note:^{*}- No. of families compensated in the district/ total no. of farmers' suicide in the district)^{*} 100; [#]= total compensation paid / no. of families compensated.

Source: Field Survey data.

¹² <http://indianexpress.com/article/cities/sudden-rise-in-farmer-suicides-due-to-debt-crop-failure-gujarat-govt-figures/>

2.5 Summary of the Chapter

Despite of high rate of growth during the last decade, total 45 cases of farmers suicides were recorded in the state of Gujarat during the year 2014. The epidemic of farmers suicides during the year 2014 was recorded in district Devbhoomi Dwarka covering about 45 percent of total suicides in the state, followed by Panchamahar district (about 22 percent) and Porbandar (almost 12 per cent). These three districts together accounted for about 79 per cent of total number of suicides in the state. The remaining suicide cases were recorded in Amreli, Bhavnagar, Surat and Surendranagar districts. Though three suicide cases were recorded in Mehsana district as per NCRB report, but the Mehsana District Police Office informed us in writing that it was by mistake. The month-wise distribution of suicides in the state during 2014 indicates that the numbers of suicides were spread across the months. Though the state government has given compensation to the nearest kin of farmers in case of an accidental death, there is no such compensation in case farmers in the state commit suicide. Only victim family in Surendranagar district had received compensation of Rs. 1 lakh through Agricultural Produce Marketing Committee of Rajkot district where victim farmer had committed the suicide.

Next chapter presents the results from the field level data.

Findings from Field Survey Data

3.1 Introduction

In order to understand the possible reasons for the suicide, the information were collected from victim's households on various parameters such as socio-economic profile of victims and family, operational holdings, sources of irrigation, leasing of land, source of income and items of expenditure, cropping pattern & returns from cultivation and credit availed which is discussed in this chapter.

3.2 Socio-Economic Profile of the Victim

The details of socio-economic profile of victim are presented in Table 3.1. As suicide is a sensitive social issue and thus the investigation was made with very guarded and careful manner, and without hurting the sentiments of the family. Interview was conducted at residence of respondent so as to review overall situation of the family by researcher. Out of the total surveyed victim households, in 70 per cent cases brothers/sisters have provided the information, while in remaining cases victim's close members such as wife, son/daughter have responded. The dominance male category can be seen from the fact that 90 per cent of victims were male farmers while 10 per cent were female farmers. The social category distribution of victims indicate that around 83 per cent victims were from other backward classes, around 13 per cent were from open category while remaining 3.33 per cent were from scheduled caste category. There was no suicide case from schedule tribe category. Majority of the victim except one case who belongs to Muslim religion, all others were from Hindu religion. The age wise category of suicides indicate the dominance in middle age group, i.e. the highest number of suicides (70 per cent) has recorded in age group of 30-60 years while remaining were from age group up to 30 years (30 per cent).

Table 3.1 Socio-Economic Profile of Victim

Sr No.	Particulars	No./%	
1	Total number of victim households surveyed (Numbers)	30	
2	Type of Respondents (% to total sample)	1.Wives / Sons / Daughters	30
		2.Brothers / Sisters / others	70
3	Gender (% to total sample)	1.Male	90
		2.Female	10
4	Social status (% to total sample)	1.SC	3.33
		2.ST	0.00
		3.OBC	83.33
		4.General	13.33
5	Religion (% to total sample)	1.Hindu	97
		2.Muslim	3
		3.Christian	0
		4.Others	0
6	Age group (% to total sample)	1.Upto 30 years	30
		2.Between 31 to 60 years	70
		3.Above 60 years	0
7	Years of schooling (% to total sample)	1.Illiterate	16.67
		2.Primary (4 years)	16.67
		3.Middle (7 years)	26.67
		4.Matriculation/secondary (10 years)	30.00
		5.Higher secondary (12 years)	6.67
		6.Degree/Diploma (15 years)	3.33
		7.Above Degree (Above 15 years)	0.00
8	Marital status (% to total sample)	1.Married	80
		2.Un Married	20
9	Type of marriage (% to total sample)	3.Arranged	100
		4.Love	0
10	Married to whom (% to total sample)	5.Within relatives	100
		6.Outside relatives	0
11	Heirs of the victim (Average No. to total sample)	1.Sons	1.03
		2.Daughters	0.43
12	Victims who had parents and had brothers and sisters (% to total sample)	1.Only Mother	10
		2.Only Father	20
		3.Both mother and father	30
		4.Brothes and sisters	40
13	Method of suicide (% to total Sample)	1.Poison consumption	66.67
		2.Hanging	16.67
		3.Jumping into river / well	6.67
		4. Current shock	0.00
		5. Self immolation	6.67
		6. Railway Track	3.33
		7. Others	0.00
14	Place of suicide (% to total sample)	1.House	46.67
		2.Farm	46.67
		3. Lodge / Hotel	0.00
		4. Railway Track	3.33
		5. APMC	3.33
15	Victim was main earner	Yes	70.0

Source Field survey data.

In case of 70 percent of household, victim was a main earner. Almost 83 percent of victims were literate and around 80 percent were married with arrange marriage system within their relatives. Thus, victims may be possibly aware about the family as well as life partner before marriage. On an average, almost every victim has one son, while one daughter among two victim family. Almost all victims' household family have either elderly support (father or mother or both) or presence of brother and or sister. Two third of total number of victims had consumed poison to commit suicide, while about one sixth of victim hanged themselves. Remaining victims adopted the other method of suicide such as jumping into river/well (6.67 per cent), self immolation /burning (6.67 per cent) and accident by slipping on railway track (3.33 per cent). The house and farm were the main places where victim had committed suicides (47 per cent each), while in one case each, it was reported in operational area of APMC in Rajkot and on railway track.

3.3 Socio-Economic Profile of Victims' Family

The socio-economic profile details of victim's family are presented in Table 3.2. Size of family is determined by number of factors apart from resource base of the family and the educational status of the head of the household. It is argued that poor families tend to have more number of children in order to increase their total earning capacity. It can be seen from the table that existing households size was 5.1 members and 70 per cent of households estimated to be dependent on agriculture as a main occupation. As seen earlier that victim's family has support of relatives, around 70 per cent of households were as joint family while remaining where nuclear family. The location of 70 percent of victim family households was within the village, while in case of 30 percent, they were housed on their own farm. The composition of victim family comprised of around 40 per cent each of male and female members and remaining were the children. The average education details indicate that about 40 per cent of total family members were illiterate, which may include old

age members. The highest number of farmers who had committed suicides were from medium size land holding group having land holding between 2-4 ha (33 per cent) followed by marginal and small size land holding group of farmers (about 27 per cent each). Marginal and small land holdings size group put together accounts for 53 per cent of total number of suicides and the lowest proportion of suicide was recorded in large land holding size group. Thus, as expected, marginal and small farm category group found to be vulnerable to this kind of situation.

Table 3.2 Socio-Economic Profile of Victims' family

Sr No	Particulars			
1	Existing household size (Average numbers)		5.1	
2	Households depending on farming as a main occupation (% to total sample)		70	
3	Family type (% to total sample)	1.Joint	70	
		2.Nuclear	30	
4	Location of the households (% to total sample)	1.Within the village	70	
		2.In their own farm	30	
5	Age group of family members (% to total sample)	1.Adult Males (>15 yrs)	40.26	
		2.Adult Females (>15 yrs)	39.61	
		3.Children (<15 yrs)	20.13	
6	Years of schooling of family members (% to total sample)	1.Illiterate	40.14	
		2.Primary (4 years)	11.27	
		3.Middle (7 years)	11.97	
		4.Matriculation/secondary (10 years)	23.24	
		5.Higher secondary (12 years)	7.75	
		6.Degree/Diploma (15 years)	4.23	
		7.Above Degree (Above 15 years)	1.41	
7	Farm Size	% of area to holdings of sample	1.Marginal (0.1 to 2.5 ac)	7.01
			2.Small (2.51 to 5 ac)	15.72
			3.Medium (5.1 to 10 ac)	43.22
			4.Large (10.1 and above)	34.04
			5.Total	100.00
		% of holdings to total sample	1.Marginal (0.1 to 2.5 ac)	26.67
			2.Small (2.51 to 5 ac)	26.67
			3.Medium (5.1 to 10 ac)	33.33
			4.Large (10.1 and above)	13.33
			5.Total	100.00
8	Average operational holding size (acres Per HH)		5.89	

Source: Field survey data.

As it has been observed at national and state level, the distribution of land holding as per land size indicate that more than 53 per cent of marginal and small land holder accounts for hardly 23 per cent of land, while 13.33 percent of large land holder accounts for 34 per cent of land holdings. The average land holding size of selected victim households was 2.38 ha (5.89 acre), which is higher as compared to state average land handling size of 2.23 ha and national average land holding size of 1.13 ha.

3.4 Characteristics of Operational Holdings

As it was seen earlier that selected households have relative large land holding of 5.9 acre, of which 44 per cent of land was irrigated having cropping intensity of 109 per cent and irrigation intensity of 119 per cent (Table 3.3). The trend of land leased-in was observed in both irrigated and un-irrigated areas, while land leased-out was only noticed in case of un-irrigated land. As expected the cropping intensity was higher in irrigated land as compared to un-irrigated land.

Table 3.3 Characteristics of Operational Holdings per HH

Sr. No.	Land details	Irrigated	Un-irrigated	Total
1	Total Owned land (Acre)	2.53	3.15	5.68
2	Un-cultivated land (Acre)	0.06	0.40	0.46
3	Cultivated (Own) (Acre)	2.47	2.75	5.22
4	Leased-in land (Acre)	0.13	0.80	0.93
5	Leased-out land (Acre)	0.00	0.26	0.26
6	Net Operated Area(1-2+4-5)	2.60	3.29	5.89
7	Gross Cropped Area (Acre)	3.09	3.34	6.43
8	Gross Irrigated Area (Acre)	3.09	-	3.09
9	Net Irrigated Area (Acre)	2.60	-	2.60
10	Cropping Intensity (%)	118.96	101.42	109.16
11	Irrigation Intensity (%)	118.96	-	118.96
12	Net Irrigated Area per Net Sown Area	100.00	-	44.11

Source: Field survey data.

3.5 Sources of Irrigation

As irrigation plays important role in stabilizing the income, it would be important to see the sources of irrigation available with the farmers. The information on sources of irrigation available with the victim household is presented in Table 3.4. It can be seen from the table that about 60 percent of victim households have open well as main source of irrigation, followed by 24.11 percent of households have tubewell/borewell, while remaining of 16.12 percent households used canal water for irrigation purpose. Thus, groundwater source was main source available with the sample household to irrigate the crops. The availability of surface irrigation in the form of tank and canal is very minimal in the selected area.

Table 3.4 Source-wise Distribution of Irrigated Area

Sr. No.	Land details	Total Area in acres per HH	Percent to total sample area
A.	<i>Irrigated area</i>		
	Irrigated	2.60	44.11
	Un-irrigated	3.29	55.89
	Total Area	5.89	100.00
B	<i>Sources of irrigation</i>		
	Open well	1.55	59.76
	Tube well	0.63	24.11
	Tank	-	-
	Canal	0.42	16.12
	Others	-	-
C	<i>Net Irrigated Area (total)</i>	77.96	100.00

Source: Field survey data.

3.6 Leasing of land

The details on rental value of land leased-in and leased-out are presented in Table 3.5. It was very strange to note here is that the rate either for land leased-in or leased-out were found to be same in both the categories, i.e. land having irrigation facility and un-irrigated land, which

ranges between Rs. 7500/- to 8750/- per acre per year. The land leased-in and leased-out tendency was observed in land holders having un-irrigated land.

Table 3.5 Rental Value of Leased-in and Leased-out Land

Sr No	Particulars		Irrigated	Un-irrigated
A	Leased - in	Average Area in acres (per HH)	4 (1)	8 (3)
		Rental value paid per acre in Rs. (Average)	7500	7500
B	Leased-out	Average Area in acres per HH	0	2.6 (3)
		Rental value received per acre in Rs. (Average)	0	8750

Note: Figures in parenthesis are total number of household.

Source: Field survey data.

3.7 Source of Income and Items of Expenditure

In order to have idea about problem of any financial crisis which may have forced the victim to commit suicide, we have tried to analyze the net income and expenditure of victim households not only during the last agriculture years 2015-16, but also for earlier two years, i.e. 2013-14 and 2014-15 and same is presented in Tables 3.3a to 3.3c. It is very clear from these tables that the consumption expenditure was higher than the annual income (from all sources) in all three consecutive years (2013-14 to 2015-16). It means that income from the all sources was not adequate to meet the required expenditure of family that to particular income from main source was not adequate. In fact, the highest deficit of income (percentage of expenditure on income) was recorded during 2014-15. Though some of members of few households are in service and most of households has dairy as a subsidiary business as well as supported with self business and have earlier as agricultural wage income, all these sources of income could not offset the negative effect of low income-high expenditure condition for consecutive three years and thus, it may have put victim under depression and must have forced him to commit suicide.

Table 3.6a: Details of Net Income and Expenditure of Selected hh (2015-16)

Sr. No	Source	Amt in Rs. Per HH	% To total	% increase/decrease#
A	Income			
1	Agriculture	22490.00	47	90.00
2	Agriculture wage income	10083.33	21	33.33
3	Dairy and animal husbandry	7626.67	16	23.33
4	Poultry	0.00	0	0.00
5	Fishery	0.00	0	0.00
6	Service (salary and pension)	6433.33	13	6.67
7	Self business	1100.00	2	6.67
	Total income (A)	47733.33	100	
B	Consumption Expenditure			
1	Food	50420.00	40	90.00
2	Non-food	20936.67	17	83.33
3	Health	12856.67	10	53.33
4	Education	14333.33	11	40.00
5	Any Other	28010.00	22	36.67
	Total expenditure (B)	126556.67	100	
C	Surplus / Deficit (+ / -) A- B	-78823.33		
D	Percent of expenditure to income	265		

Note: #-% of HH to total sample who mentioned that the income has reduced / expenditure increased over the last 5 years (% to each respective sources).

Source: Field survey data.

Table 3.6 b: Details of Net Income and Expenditure of Selected hh (2014-15)

Sr. No.	Source	Amt in Rs. Per HH	% To total
A	Income		
1	Agriculture	25853.33	57
2	Agriculture wage income	7550.00	17
3	Dairy and animal husbandry	5683.33	13
4	Poultry	0.00	0
5	Fishery	0.00	0
6	Service (salary and pension)	3833.33	8
7	Self business	2266.67	5
	Total income (A)	45186.67	100
B	Consumption Expenditure		
1	Food	44256.67	33
2	Non-food	19391.67	14
3	Health	40135.00	29
4	Education	13040.00	10
5	Any Other	19306.67	14
	Total expenditure (B)	136130	100
C	Surplus / Deficit (+ / -) A- B	-90943.33	
D	Percent of expenditure to income	301	

Source: Field survey data.

Table 3.6c: Details of Net Income and Expenditure of Selected hh (2013-14)

Sr. No	Source	Amt in Rs. Per HH	% To total
A	Income		
1	Agriculture	34710.00	64
2	Agriculture wage income	6593.33	12
3	Dairy and animal husbandry	6883.33	13
4	Poultry	0.00	0
5	Fishery	0.00	0
6	Service (salary and pension)	3166.67	6
7	Self business	2800.00	5
	Total income (A)	54153.33	100
B	Consumption Expenditure		
1	Food	40493.33	44
2	Non-food	18110.00	20
3	Health	9653.33	10
4	Education	11822.00	13
5	Any Other	12158.00	13
	Total expenditure (B)	92236.67	100
C	Surplus / Deficit (+ / -) A- B	-38083.33	
D	Percent of expenditure to income	170	

Note: Responses in multiple in nature

Source: Field survey data

3.8 Cropping Pattern & Returns from Cultivation

In view of above mentioned short of income to expenditure level among selected victim households, it is important to have an idea about the cropping pattern adopted/ followed by victim households to understand the nature of crops grown by these households, which would have reflection on income level. It can be seen from the Table 3.7 that groundnut and cotton were the major crops grown in kharif season, followed by jowar crop which was cultivated for fodder purpose by some of the households. The other crops grown during kharif seasons were paddy, jowar, maize, bajra, tur, sesame and vegetables. The productivity level of groundnut realized by the victim household was very low (1.49 qt/acre) and thus income received from sale of groundnut was much lower than its cost of cultivation/production. On an average Rs. 30113 per households loss has been reported in groundnut cultivation in 2015-16. Same the case of cotton crop cultivation in which selected households had to suffer with loss of Rs. 12426/- per hh.

During rabi season, vegetables crops were grown while during summer season, paddy and vegetables crops were cultivated. The negative returns have been reported in case of production of groundnut and cotton crops during 2015-16. So the case may be earlier two years as cropping patterns was almost same during 2013-14 and 2014-15. Thus, may be due to low yield of major two crops, the income from the crop cultivation had dropped, which must have put stress on the victim and households to manage the expenditure with short of income.

Table 3.7a: Season-wise Cropping Pattern 2015-16

Sr No	Name of the crop	No. of HH Who have cultivated	Total cultivated area (acres)	% of cultivated area to total cropped area	Total production in Qtls	Yield in qtls per acre
1	2	3	4	5	6	7
	Kharif					
A	Cereals					
1	Paddy	3	14.07	7.28	245.4	17.44
2	Jowar	1	6.00	3.10	50	8.33
3	Maize	4	3.74	1.94	21.2	5.66
4	Bajara	2	3.20	1.66	16	5.00
B	Pulses					
1	Tur	3	2.75	1.42	5	1.82
C	Oilseed					
1	Ground Nut	15	70.60	36.52	105.4	1.49
2	Sesame	1	4.80	2.48	3	0.63
D	Fiber Crop					
1	Cotton	10	32.00	16.55	38.6	1.21
E	Fodder					
1	Jowar Fodder	7	36.40	18.83	358	9.84
F	Vegetable	1	0.80	0.41	60	75.00
	Rabi					
G	Vegetable					
1	Brinjal	1	1.6	0.83	100	62.50
2	Chilly	1	2	1.03	0	0.00
	Summer					
H	Cereals					
1	Paddy	1	12.57	6.50	200	15.90
I	Vegetable					
1	Bottle gourd	1	1.6	0.83	50	31.25
2	Bitter gourd	1	0.8	0.41	20	25.00

Source: Field survey data

Table 3.7a continues.....

Sr No	Name of the crop	Av. price received (Rs/qttl)	Gross returns/ acre (Rs.)	Total cultivation cost (Rs.)	Cost of cultivation (Rs./acre)	Net returns (Rs/acre)	Net returns Rs. /hh
1	2	8	9	10	11	12	13
	Kharif						
A	Cereals						
1	Paddy	1465	25548	262000	18619	6930	32504
2	Jowar	1590	13250	10000	1667	11583	69500
3	Maize	1300	7364	23000	6146	1218	1140
4	Bajara	1300	6500	8000	2500	4000	6400
B	Pulses						
1	Tur	4000	7283	16000	5826	1457	1333.33
C	Oilseed						
1	Ground Nut	3638	5430	835091	11828	-6398	-30113
2	Sesame	4500	2813	5000	1042	1771	8500
D	Fiber Crop						
1	Cotton	3550	4282	261297	8166	-3883	-12427
E	Fodder						
1	Jowar Fodder	625	6147	144875	3980	2167	11268
F	Vegetable						
	Rabi						
G	Vegetable						
1	Brinjal	400	25000	6500	4063	20938	33500
2	Chilly	0	0	6500	3250	-3250	-6500
	Summer						
H	Cereals						
1	Paddy	1475	23460	210000	16700	6760	85000
I	Vegetable						
1	Bottle gourd	1000	31250	16000	10000	21250	34000
2	Bitter gourd	1800	45000	15000	18750	26250	21000

Source: Field survey data

Table 3.7b: Season-wise Cropping Pattern 2014-15

Sr. No	Name of the crop	No. of HH Who have cultivated	Total cultivated area (acres)	% of cultivated area to total cropped area	Total production in Qtls	Yield in qtls per acre
A	Kharif					
1	Paddy	3	14.67	8.79	240	16.36
2	Jowar	1	6	3.60	50	8.33
3	Maize	3	4.34	2.60	8.8	2.03
4	Bajara	1	2	1.20	10	5.00
5	Tur	2	1.65	0.99	0.4	0.24
6	Ground Nut	16	65.2	39.08	175.6	2.69
7	Sesame	1	2	1.20	2.6	1.30
8	Cotton	11	43.8	26.25	85.3	1.95
9	Jowar Fodder	6	11.6	6.95	145	12.50
B	Rabi					
1	Onion	1	1.2	0.72	0	0.00
C	Summer					
1	Paddy	1	12.57	7.54	240	19.09
2	Bajara	1	0.60	0.36	3.6	6.00
3	Jowar Fodder	1	1.20	0.72	120	100.00

Source: Field survey data

Table 3.7c: Season-wise Cropping Pattern 2013-14

Sr. No	Name of the crop	No. of HH Who have cultivated	Total cultivated area (acres)	% of cultivated area to total cropped area	Total production in Qtls	Yield in qtls per acre
A	Kharif					
1	Paddy	3	14.67	9.49	205.4	14.00
2	Jowar	1	6	3.88	50	8.33
3	Maize	2	3.14	2.03	15.2	4.84
4	Bajara	2	3.2	2.07	16	5.00
5	Tur	2	1.5	0.97	0.9	0.60
6	Ground Nut	15	67.6	43.75	258.2	3.82
7	Sesame	2	4.8	3.11	6.8	1.42
8	Castor Seed	1	2	1.29	10	5.00
9	Cotton	10	36	23.30	218	6.06
10	Jowar Fodder	6	14.4	9.32	226	15.69
11	Fodder other	1	2.99	1.94	0	0.00
12	Vegetable	1	0.8	0.52	10	12.50
13	Amaranth	1	0.6	0.39	0.8	1.33
14	Gaur	2	1.2	0.78	4.6	3.83
B	Rabi					
1	Cumin	1	4	2.59	0	0.00
2	Onion	1	1.2	0.78	0	0.00
C	Summer					
1	Paddy	1	12.57	8.14	220	17.50
2	Bajara	1	0.60	0.39	4	6.67
3	Jowar Fodder	1	1.20	0.78	20	16.67

Source: Field survey data

3.9 Credit Availed

As seen in literature review, one of the serious and unrelenting problems faced by the Indian farmers households has been indebtedness. Despite substantial improvement in agricultural output as well as distribution of credit through institutional sources since the introduction of the new agricultural technology, indebtedness among the farmers' households is found to be widespread even today. In view of the less income than the expenditure realized by the selected households as observed earlier, it is expedited that the victim households must have taken the loan, either from the formal or informal sources to bridge the gap between the income and expenditure as well as to invest in the crop production during the last three years period.

It can be seen from the Tables 3.8a to 3.8c that selected victim households had taken significant amount of loan from informal sources

such as relatives and friends, agriculture input shop, of which loan from relatives and friends earlier was used for both farming and non farming purpose, while loan taken from agro shop owner was used for only farming purpose. Besides, loan was also taken by selected victim households from trader and commission agents to fulfill non farming/domestic requirements.

Table 3.8a: Details on Credit of Sample HHs 2015-16

Source of credit	Institutional		Non-institutional					Grand Total
	Co-op. Society/bank	Commercial bank incl. RRBs	Landlord	Money-lender	Traders & commission agents	Relatives and friends	Agro Shop	
No. of borrowing HH as a % to total sample	13	53	-	-	3	17	3	63
Farming purposes (Short Term Loan)			-	-				
No. of HH as a % to borrowing HHs	100	81	-	-		20	100	
Amount borrowed per HH of borrowing HHs	63996	76385	-	-		130000	20000	72683
Outstanding amount Rs/hh of borrowing HH	50250	3077	-	-		130000	20000	20579
Average interest rate	6.25	5.15	-	-		-	-	
% of borrowing HH who paid the installments as per schedule	50	92	-	-		0	0	74
Farming purposes (Long Term Loan)								
No. of HH as a % to borrowing HHs	-	19	-	-	-	20	-	-
Amount borrowed per HH of borrowing HHs	-	108321	-	-	-	250000	-	143741
Outstanding amount Rs/hh of borrowing HH	-	59416	-	-	-	250000	-	107062
Average interest rate	-	12.91	-	-	-	2	-	-
% of borrowing HH who paid the installments as per schedule	-	33	-	-	-	0	-	-
Non-farming purposes								
No. of HH as a % to borrowing HHs	-	-	-	-	100	60	-	-
Amount borrowed per HH of borrowing HHs	-	-	-	-	25000	166667	-	131250
Outstanding amount Rs/hh of borrowing HH	-	-	-	-	25000	166667	-	131250
Average interest rate	-	-	-	-	-	-	-	-
% of borrowing HH who paid the installments as per schedule	-	-	-	-	0	0	-	-

Source: Field survey data

Table 3.8b: Details on Credit of Sample HHs 2014-15

Source of credit	Institutional		Non-institutional					Grand Total
	Co-op. Society/bank	Commercial bank incl. RRBs	Landlord	Money-lender	Traders & commission agents	Relatives and friends	Agro Shop	
No. of borrowing HH as a % to total sample	17	63			3	20	3	70
Farming purposes (Short Term Loan)								
No. of HH as a % to borrowing HHs	100	79			17	100		17
Amount borrowed per HH of borrowing HHs	55668	68733			180000	20000	68606	180000
Outstanding amount Rs/hh of borrowing HH	14197	11667			180000	20000	20272	180000
Average interest rate	6.4	5.2			-	-		-
% of borrowing HH who paid the installments as per schedule	80	80			0	0		0
Farming purposes (Long Term Loan)								
No. of HH as a % to borrowing HHs	-	16	-	-	-	17	-	-
Amount borrowed per HH of borrowing HHs	-	95167	-	-	-	250000	-	133875
Outstanding amount Rs/hh of borrowing HH	-	100988	-	-	-	0	-	75741
Average interest rate	-	12.91	-	-	-	2	-	-
% of borrowing HH who paid the installments as per schedule	-	-	-	-	-	100	-	-
Non-farming purposes								
No. of HH as a % to borrowing HHs	-	5	-	-	100	67	-	-
Amount borrowed per HH of borrowing HHs	-	200000	-	-	25000	85500	-	94500
Outstanding amount Rs/hh of borrowing HH	-	200000	-	-	25000	52500	-	72500
Average interest rate	-	12	-	-	2	-	-	-
% of borrowing HH who paid the installments as per schedule	-	-	-	-	0	50	-	-

Source: Field survey data

Besides having loan from informal sources, few selected households had taken loan from formal sources also such as cooperative society/bank and commercial banks. As compared to the amount borrowed from non-formal sources (between Rs. 1-3 lakh), it was around 0.5 lakh in case of formal sources. Thus, inability of payment of loan

taken from the informal sources must have put pressure on victim and its family which must have forced the victim to commit suicide.

Table 3.8c: Details on Credit of Sample HHs 2013-14

Source of credit	Institutional		Non-institutional					Grand Total
	Co-op. Society/bank	Commercial bank incl. RRBs	Landlord	Money-lender	Traders & commission agents	Relatives and friends	Agro Shop	
No. of borrowing HH as a % to total sample	17	60	-	3	3	17	3	77
Farming purposes (Short Term Loan)			-	-	-	-	-	-
No. of HH as a % to borrowing HHs	100	83	-	-	-	20	100	-
Amount borrowed per HH of borrowing HHs	53400	63200	-	-	-	180000	20000	64318
Outstanding amount Rs/hh of borrowing HH	13268	1000	-	-	-	180000	20000	11970
Average interest rate	6.4	5.2	-	-	-	-	-	-
% of borrowing HH who paid the installments as per schedule	80	93	-	-	-	0	0	-
Farming purposes (Long Term Loan)	-	17	-	-	-	-	-	-
No. of HH as a % to borrowing HHs	-	83333	-	-	-	20	-	-
Amount borrowed per HH of borrowing HHs	-	88500	-	-	-	40000	-	63500
Outstanding amount Rs/hh of borrowing HH	-	12.91	-	-	-	40000	-	76375
Average interest rate	-	0	-	-	-	12	-	-
% of borrowing HH who paid the installments as per schedule	-	-	-	-	-	0	-	-
Non-farming purposes	-	-	-	-	-	-	-	-
No. of HH as a % to borrowing HHs	-	-	-	100	100	60	-	-
Amount borrowed per HH of borrowing HHs	-	-	-	200000	25000	136667	-	127000
Outstanding amount Rs/hh of borrowing HH	-	-	-	200000	25000	130000	-	123000
Average interest rate	-	-	-	-	-	-	-	-
% of borrowing HH who paid the installments as per schedule	-	-	-	0	0	33	-	-

Source: Field survey data

3.10 Summary of Chapter

The field data indicate that among the victims, majority of them were male from the other backward class caste category belongs to Hindu religion. The highest number of suicides (70 per cent) has been recorded

in age group of 30-60 years. In case of 70 percent of household, victim was a main earner. Around 80 percent were married with arrange marriage system within their relatives. Two third of total number of victims had consumed poison to commit suicide, while about one sixth of victim hanged themselves. Remaining victims adopted the other method of suicide such as jumping into river/well (6.67 per cent), self immolation /burning (6.67 per cent) and accident by slipping on railway track (3.33 per cent). The house and farm were the main places where victim had committed suicides (47 per cent each), while in one case each, it was reported in operational area of APMC in Rajkot and on railway track. The existing households size was 5.1 members and 70 per cent of households estimated to be dependent on agriculture as a main occupation. Around 70 per cent of households were as joint family while remaining where nuclear family.

The highest number of suicides were recorded in medium size land holding group of farmers (33 per cent) followed by marginal and small size land holding group (about 27 per cent each). Marginal and small size land holdings group put together accounts for 53 per cent of total number of suicides. Thus, marginal and small farm category group found to be vulnerable to this kind of situation. Groundwater source was main source available with the sample household to irrigate the crops.

The consumption expenditure of selected households was higher than the annual income (from all sources) in all three consecutive years (2013-14 to 2015-16). It means that income from the all sources was not adequate to meet the required expenditure of family that to particular income from main source was not adequate. Selected victim households had taken significant amount of loan from informal sources such as relatives and friends, agriculture input shop. Thus, inability of payment of loan taken from the informal sources must have put pressure on victim and its family which must have forced the victim to commit suicide.

Causes and After Effect of Suicide - Based on Primary Survey

4.1 Introduction

After having discussed about the basic characteristics of selected victim households, it is important to know about the causes and effect of suicide on family. This chapter present the aspects related to suicide such as symptoms observed by family members before suicide, social causes of suicide, farming related causes of suicides, indebted related causes of suicides and impact on household after committing suicide. Also the suggestions to prevent the suicides in future received from the respondent of victim households are presented.

4.2 Symptoms Observed and Causes of Suicide

Suicide is the act of intentionally causing one's own **death**. Thus, any one from family, friend circle, society can notice the potential warning signs for suicide such as excessive sadness or moodiness, hopelessness, food/sleep problems, sudden calmness, withdrawal/leaving alone, changes in personality and/or appearance: dangerous or self-harmful behavior, recent trauma or life crisis; making preparations: threatening suicide, etc. Thus, members of victim households and neighbors and friends must have noticed some symptoms about behaviors of victim before he/she commit the suicide. In fact in case of 70 percent of selected sample household, victim was a main earner. It was observed from our field survey that 93 per cent of the households/ respondents have mentioned that victim was mixing with everyone and his/her behavior was proper. No difference in behavior and approach of victim was notice by anyone around him/her. While remaining households had noticed some change in behavior of victim as he/she was not mixing/mingling with them. About

70 per cent of households reported that victim was taking food properly, while 30 percent households observed that victim was not eager to have food. On enquiry, it was observed that none of victim had tried to commit suicide earlier and thus there was no failure attempt recorded.

Table 4.1: Symptoms observed by Family Members before Suicide

Sr. No	Symptoms enquired	% of HH
1	Was victim mingling with his/her own family member?	93.33
2	Was victim mingling with his/her own community?	93.33
3	Was victim mingling with his/her neighboring households/friends?	93.33
4	Was victim consuming food regularly?	70.00
5	Was victim sleeping adequately during nights?	60.00

Note: % of HH who answered 'Yes' to total sample.

Source: Field survey data.

It is important to know about the broad social causes of suicide of from our sample households as well as neighbors/friends/relatives of victim and responses are presented in Table 4.2. The respondents have quoted multiple interconnected reasons for suicides. Evidence supports a positive association between suicide and poverty as well as unemployment at the individual level. The field survey data indicate that around 67 per cent of households were above poverty line. None of the household had any dispute on property related issues. In case of marriage related issues such as *dowry related issues, extra marital affairs, wife went with somebody and got married with that person, and wife expired by suicide five year ago, shocked by that, heavy burden of family*), one case was reported under each above cause. The family problems/commitments (such as daughter's marriage, social functions, son's marriage, frequent quarrel among the family members, more and more responsibility on single person and his son suicide earlier; that is why he depressed) were also reported as main cause of suicide.

Table 4.2: Social Causes of Suicide

Sr. No	Causes	Percent of HH to total sample who answered 'Yes'	
		As per respondent	As per Neighbors /relatives/ friends
1	Poverty		
	a) APL	66.67	70.00
	b) BPL	30.00	26.77
	c) AAY	3.33	3.33
2	Property dispute		
	a) Partition of land	0.00	0.00
	b) Partition of house	0.00	0.00
	c) Partition of income	0.00	0.00
	d) Partition of jewelleries	0.00	0.00
	e) Others (specify).....	0.00	0.00
3	Marriage related issues		
	a) Dowry related issues	3.33	3.33
	b) Extra marital affairs	3.33	3.33
	c) Divorce	0.00	0.00
	d) Love failure	0.00	0.00
	e) Wife went with somebody and got married with that person	3.33	3.33
	f) Wife expired by suicide five year ago, shocked by that, heavy burden of family	3.33	3.33
4	Family problems/Commitments		
	a) Social functions,	6.67	6.67
	b) Daughter's marriage	10.00	10.00
	c) Son's marriage	6.67	6.67
	d) Frequent quarrel among the family members	6.67	6.67
	e) more and more responsibility on single person	3.33	3.33
	f) his son suicide earlier; that is why he depressed	3.33	3.33
	g) family member won't respect	0.00	3.33
5	Illness	26.67	23.33
6	Drug abuse/Alcoholic addiction	13.33	13.33
7	Gambling/betting /chit fund	0.00	0.00
8	Fall in social reputation	16.67	20.00
9	Inter -personal disagreement/fight on some issue	3.33	3.33
10	Acute economic crises/Sudden fall in social status	36.67	33.33
11	Depression	26.67	26.67

Note: Multiple responses.

Source: Field survey data.

The highest numbers of suicides were recorded due to acute economic crises/sudden fall in social status which accounts for 37 per cent of total suicides followed by suicides due to illness (27 percent), depression (27 per cent), fall in social reputation (17 per cent), drug abuse/alcoholic addiction (13 per cent). The family problems, inter-personal disagreement/fight on some issue and marriage related issues have also contributed in pushing the victim towards such drastic step of ending the life.

Table 4.3: Farming related Causes of Suicides

Sr No	Causes	Percent of HH to total sample who answered Yes		
		2013-14	2014-15	2015-16
1	Failure of crop/s			
	a) Pests & diseases	13.33	20.00	16.67
	b) lack of access to irrigation water	30.00	40.00	30.00
	c) land submerge	6.67	6.67	6.67
	d) land not productive	3.33	3.33	3.33
	e) production are low	3.33	3.33	3.33
2	Due to natural calamities			
	a) Cyclone effect	0.00	0.00	0.00
	b) Failure of rainfall/drought	33.33	46.67	23.33
	c) Accidental fire	0.00	0.00	0.00
	d) others specify	0.00	0.00	0.00
3	Inability to sell output	6.67	10.00	10.00
4	Well failures	0.00	0.00	0.00
5	Quarrel between the victim & others	0.00	0.00	0.00
6	Expectations of			
	a) Higher output	10.00	10.00	3.33
	b) Higher prices	6.67	6.67	3.33
	c) Loan waiving	0.00	3.33	0.00
	d) Institutional credit	3.33	6.67	0.00
	e) Non-institutional credit	0.00	3.33	0.00
7	Lack of extension services	3.33	0.00	0.00
8	Delayed payment/ payment in installments for the sold output	0.00	0.00	0.00
9	Insurance for the cultivated crop	6.67	6.67	6.67
10	High cost of Bt cotton seed	13.33	16.67	13.33
11	High cost of production (repeated sowing; poor germination; high labour charges)	30.00	33.33	26.67
12	During spying, pesticide breathing	0.00	3.33	0.00

Source: Field survey data.

As our focus is on farmers' suicide, it is therefore important to see whether any farming related cause was prominent in suicide cases. Majority of households have reported that the farming related problems such as high cost of production (repeated sowing; poor germination, high labour charges); crop failure (due to lack of access to irrigation water and pests diseases; failure of rainfall/drought; land submerge); high expectations of output and prices, high cost of bt cotton seed, inability to sell output, etc were major causes of suicides.

The indebtedness of the peasantry had been a serious issue since long and recent. NSSO (2014) results again highlighted the issue. During the last three years, due to low income, selected farmers household who had taken loan for crop production, purchase of farm equipments could not reply in time loan taken. Also some households had taken loan from non institutional sources as seen in Chapter III. Thus, on non repayment of loan amount in time, victim households had faced pressure from these both agencies.

Table 4.4: Indebted related Causes of Suicides

Sr No	Causes	Percent of HH to total sample who answered Yes		
		2013-14	2014-15	2015-16
1	Indebtedness - Institutional & Non-Institutional			
	a) Due to crop loan	13.33	16.67	10.00
	b) Due to farm equipment loan	13.33	10.00	10.00
	c) Due to non-agricultural loan	3.33	6.67	3.33
	d) Due to non-institutional loan	13.33	16.67	3.33
2	Due to pressure from institutional sources	3.33	10.00	3.33
3	Due to pressure from non-institutional sources (mainly money lenders)	6.67	13.33	3.33

Source: Field survey data.

Table 4.5: Ranking of the Social, Farming & Indebted Causes of Suicides

Sl. No	Causes	Ranking as per answer					
		1	2	3	4	5	6
A	Social causes						
1	Poverty	2	3	1	1		
2	Property dispute						
3	Marriage related issues	1	1	1		1	
4	Family problems/Commitments	5			1		
5	Illness	6	2				
6	Drug abuse/Alcoholic addiction	3	1				
7	Gambling/betting /chit fund						
8	Fall in social reputation	2	1	1		1	
9	Inter -personal disagreement/fight on some issue	1					
10	Acute economic crises/Sudden fall in social status	6	3	2			
11	Depression	2		1			1
B	Farming related causes						
1	Failure of crop/s	12	2				
2	Due to natural calamities	2	6	1			
3	Inability to sell output			1			
4	Well failures						
5	Quarrel between the victim & others						
6	Expectations of:	1	1	3			
7	Lack of extension services			1			
8	Delayed payment/ payment in installments for the sold output						
9	Insurance for the cultivated crop				2		
10	High Cost of Bt cotton			1		2	
11	High Cost of production				4	1	1
12	Pesticide breathing during spray	1					
C	Indebtedness related causes						
1	Indebtedness - Institutional & Non-Institutional	9					
2	Due to pressure from institutional sources	2	1				
3	Due to pressure from non-institutional sources (mainly money lenders)	5					

Source: Field survey data.

The respondents were asked to rank the causes of suicide under three broad categories of social, farming and indebtedness and responses are presented in Table 4.5. The ranking of causes indicate that majority of

households top ranked to cause of failure of crop/s followed by indebtedness (institutional & non-institutional), illness and acute economic crises/Sudden fall in social status.

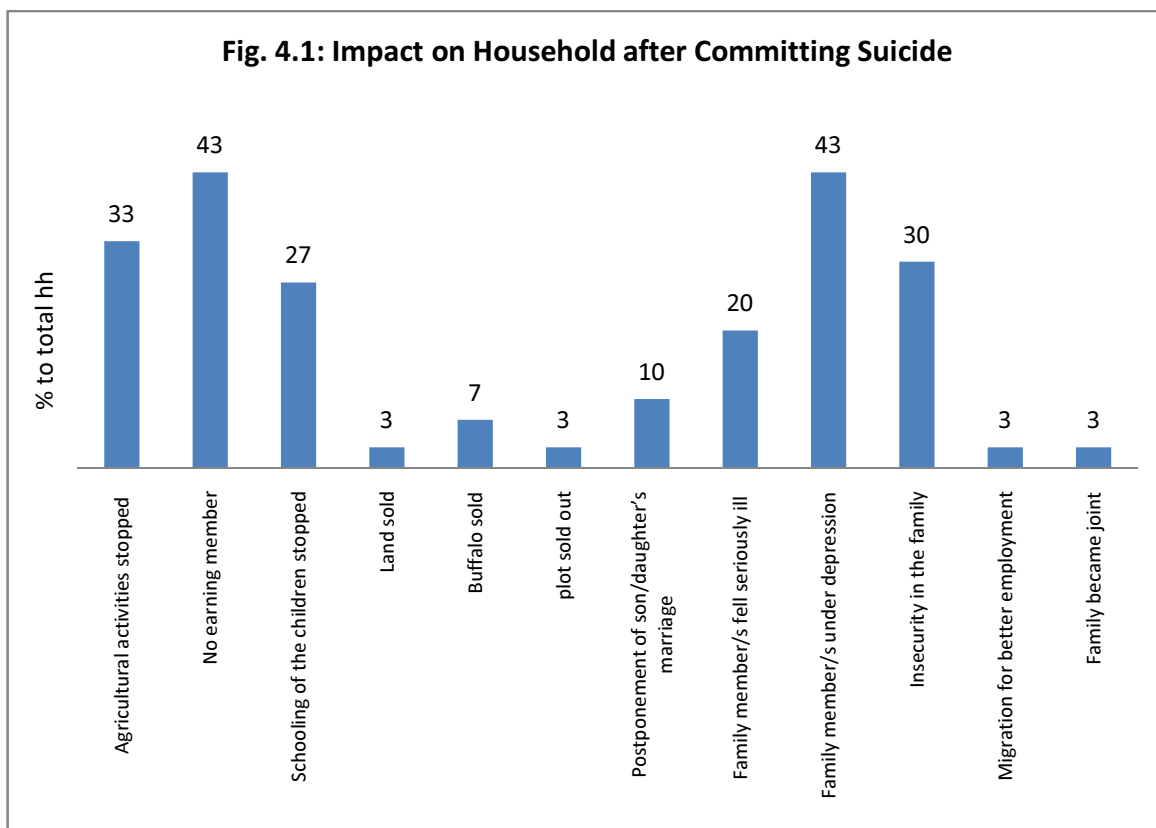
4.3 Impact of Suicide on Family Members

Suicide is a social phenomenon; it creates severe personal, social and economic consequences within family. After the lost of a family member who was the main bread earner of family for 70 per cent of households, the respective family must have faced some constraints. The impact of suicide on family members is presented in Table 4.6. It can be seen from the table that 43 per cent of households faced the severe crisis as no earning member was with family which must have put family member/s under depression. In case of 33 percent households, agricultural activities had stopped while insecurity in the family was felt by 30 per cent households. In case of 27 per cent households, schooling of the children got stopped. Besides, other impacts were that the family member/s felt seriously ill, family had to postpone their son/daughter's marriage, and forced them to sell land and livestock.

Table 4.6: Impact on Household after Committing Suicide

Sr. No	After effect	Percent of HH to total sample who answered Yes
1	Agricultural activities stopped	33.33
2	No earning member	43.33
3	Schooling of the children stopped	26.67
4	Land sold	3.33
5	House sold	0.00
6	Buffalo sold	6.67
7	plot sold out	3.33
8	Postponement of son/daughter's marriage	10.00
9	Family member/s fell seriously ill	20.00
10	Family member/s under depression	43.33
11	Insecurity in the family	30.00
12	Migration for better employment	3.33
13	Family became joint	3.33

Source: Field survey data.



4.4 Suggestions from families to avert suicides in Future

Suggestions are one of the important aspects of any research study in social sciences. It refers to the opinion of family members about what action should be taken for avoiding recurrence of suicides, which can help to some extent for finding out ground realities of suicides and help to suggest different measures to solve farmers' distress. The respondents were asked to give suggestion to avert suicides in future. Few respondents had given suggestions such as government should help in drought years, complete prohibition on drunkenness in village, and medical facilities should be provided at village level. It is important here to note that consumption of alcohol is completely ban in the State of Government, but responses indicate that still some local wine is easily available to the people.

Table 4.7: Suggestions to Prevent the Suicides in Future

Sl. No	Suggestion	Percent of HH to total sample who suggested
1	Government should help in drought year	6.67
2	Prohibition on drunkenness should be in village,	6.67
3	Medical facilities should be provided by government	3.33
4	Create awareness about saving for future and need of hard work	3.33
5	Social responsibility /Extra marital affairs should be stop	3.33

Source: Field survey data.

4.5 Summary of chapter

The data indicate that majority of the households did not notice any strange behavior and approach of victim. About 70 per cent of households reported that victim was taking food properly. In fact none of victim had tried to commit suicide earlier and thus there was no failure attempt recorded. Around 67 per cent of households were above poverty line. None of the household had any dispute on property related issues. In case of marriage related issues such, one case was reported under each four sub-cause. The family problems/commitments (such as daughter's marriage, social functions, son's marriage, frequent quarrel among the family members, more and more responsibility on single person and his son suicide earlier; that is why he depressed) were also reported as main cause of suicide.

The highest numbers of suicides were recorded due to acute economic crises/sudden fall in social status which accounts for 37 per cent of total suicides followed by suicides due to illness (27 per cent), depression (27 per cent), fall in social reputation (17 per cent), drug abuse/alcoholic addiction (13 per cent). The family problems, inter-personal disagreement/fight on some issue and marriage related issues

have also contributed in pushing the victim towards such drastic step of ending the life.

Majority of households have reported that the farming related problems such as high cost of production (repeated sowing; poor germination, high labour charges); crop failure (due to lack of access to irrigation water and pests diseases; failure of rainfall/drought; land submerge); high expectations of output and prices, high cost of bt cotton seed, inability to sell output, etc were major causes of suicides. During the last three years, due to low income, selected farmers household who had taken loan for crop production, purchase of farm equipments could not repay in time loan taken. Also some households had taken loan from non institutional sources. Thus, on non repayment of loan amount in time, victim households had faced pressure from these both agencies. The ranking of causes indicate that majority of households top ranked to cause of failure of crop/s followed by indebtedness (institutional & non-institutional) and illness.

About 43 per cent of households faced the severe crisis as no earning member was with family which must have put family member/s under depression. In case of 33 percent households, agricultural activities had stopped while insecurity in the family was felt by 30 per cent households. In case of 27 per cent households, schooling of the children got stopped. Besides, other impacts were that the family member/s felt seriously ill, family had to postpone their son/daughter's marriage, and forced them to sell land and livestock. Few respondents had given suggestions such as government should help in drought years, complete prohibition on drunkenness in village, and medical facilities should be provided at village level.

Summary and Policy Suggestions

5.1 Background

The agricultural sector in India has been going through a painful phase. It is not merely a crisis of deceleration of growth of agricultural production and productivity, but also increasing distress experienced by a growing proportion of the farming community which has not been able to meet their basic consumption needs from their dependence on agricultural income. One of the tragic manifestations of the crisis is the large number of suicides committed by the farmers in some parts of India. The distress among the rural community, allegedly manifested in farmers' suicide, is commonly attributed to debt trap, crop failure and/or yield loss. In fact so alarming was the problem that it attracted nationwide attention and generated frantic debates in the union and state legislatures. These incidents raised serious questions of the state of the agrarian economy and the economic hardships faced by farmers.

The spate of farmers' suicides that surfaced in some part of India was naturally associated with the performance of the sector, along with the other factors that were predominant including advent of the World Trade Organisation, genetically modified crop varieties, price collapse and spurious seeds. Agricultural production in these states always has significant fluctuations and the prices did not increase despite supply stress. That brought down the gross income flow. On the other side, the cash component in the cost of cultivation has been increasing. As a consequence the net income flow to the farmer households stagnated. The farmer would borrow to meet the increased cost of cultivation or for irrigation well and pump sets, but the shrinking net income will not allow for payment of debt. These incidents raised serious questions of the state of the agrarian economy and the economic hardships faced by farmers.

The *Situation Assessment Surveys of the National Sample Survey Organization* (2014) has reconfirmed the worsening situation of farm households which indicated that about 51.9 percent of the farm households in India are indebted, increased from 48.6 percent recorded in 2003 in 59th round. As per 2013 report, indebtedness was the highest in Andhra Pradesh (93 percent), followed by Telangana (89 percent), Tamil Nadu (82 percent), Karnataka (77 percent) and Rajasthan (62 percent). Interestingly, indebted farmers have taken higher credit from institutional sources (60 percent) as compared to the non-institutional sources (40 percent). It is also necessary to note here is that NSSO in its 59th round survey has revealed that given the choice, 40 percent farmers will quit farming because it is not profitable, risky and it lacks social status, because of poor remuneration from farming. Distress among the farmers in the country is genuine and the situation is quite depressing in Andhra Pradesh, Karnataka, Maharashtra, Rajasthan, Orissa and Assam. Though one cannot draw any 'one to one' correspondence between distress in the farm sector and the present spate of suicides in some of the states, the farm and farm related activities have the largest stake in explaining the unfortunate occurrences. Considering that 54.6 percent of the workforce in the country is still dependent on agriculture for its livelihood, the wave of suicides has received considerable media attention and a matter of policy concern.

Concerned with farmers' suicides in some parts of the country, on 29th of September, 2006, Union Cabinet approved the Rehabilitation Package for 31 identified districts in the State of Andhra Pradesh, Karnataka, Kerala and Maharashtra. The implementation period of PM's package was fixed for 3 years and included both immediate and medium term measures. The amount sanctioned under this package was Rs. 16978.69 crore. All these attempts have to some extent have helped to reduce farmers' suicides insignificantly overtime in several states. However, farmers' suicides still remain major challenge in India.

The agrarian crisis has occurred because of multiple reasons, though inadequate income from cultivation is considered to be the prime factor. On the one hand, the decline in public investment in agriculture has increased the transaction cost of the farmers, on the other hand, inadequate institutional credit supply, poor arrangements to supply various inputs required for crop cultivation as well as market for agricultural produce have reduced the cultivation income. It is widely believed now that the agrarian crisis is aggravated since the initiation of economic reforms in India, because the Indian agriculture has been witnessing a few unprecedented shocks and changes over the last one decade. The control on imports of many agricultural products has been gradually removed due to obligations of World Trade Organizations, which has made significant impact on the domestic prices of certain agricultural commodities. Studies carried out in those regions where farmers have committed suicides at a large scale have attributed that the inadequate supply of institutional credit is one of the major reasons for the present crisis.

Farm income is not only very low but the year-on-year fluctuation is also very high. Constant financial stress and pressure related to ongoing drought and flood conditions and the loss of independence add to the farmer's economic problems; as many of the issues such as disease, weather, government policy, etc. are not within the farmer's control. The debts, however, are personal and need to be repaid. While the prices of crops have been pushed down (often even below the cost of production), the prices of inputs such as seed, fertilizers and pesticides have gone up. With limited resources, farmers depend on borrowed money to purchase seeds and other inputs and to farm their land and a reduction in their income could promptly lead to farmers owing more than they own. Farmers feel a repeated sense of hopelessness due to the loss of crops, income, land and even the loss of a way of life. Another factor that increases suicides is the potential for social isolation due to reasons like

the loss of communities as well as geographical remoteness. The lack of access to mental health services in rural areas and the stigma attached to treatment is also a contributing factor. Depression arising from exposure to agricultural chemicals/pesticides may increase the risk for mood disorders and ultimately suicide.

Farmer suicide has turned out to be a major socio-economic concern in India that has resulted in profound implications on the quality of life of farmers. As per NCRB (2015) a total of 5,650 farmers have committed suicides during 2014, accounting for 4.3 per cent of total suicides victims in the country, of which 5,178 were male farmers and 472 were female farmers. The highest numbers of farmers suicides cases were recorded in Maharashtra (2,568) Telangana (898), Madhya Pradesh (826), Chhattisgarh (443) and Karnataka (321). These five States together accounted for 89.5 per cent of the total farmer suicides reported in the country during 2014. The prominent causes recognized for farmers suicides were bankruptcy or indebtedness (20.6 per cent), family problems (20.1 per cent), failure of crops (16.8 per cent), illness (13.2 per cent) and drug abuse/alcoholic addiction (4.9 per cent).

The main consequence of agrarian distress has been that the marginal and small farmers who find it increasingly hard to sustain on farming, are either getting pushed out from agriculture or committing suicide. According to the report, the land holding status of the farmers who committed suicide revealed that 44.5 per cent and 27.9 per cent of victims were small farmers and marginal farmers, respectively and that put together accounted for 72.4 per cent of total farmer suicides. The report further reveals that 53.1 per cent and 14.5 per cent of small farmers who committed suicides were reported in Maharashtra and Telangana respectively during 2014. Among marginal farmers, 39.7 per cent and 25.5 per cent of farmers' suicides were reported in Maharashtra and Madhya Pradesh respectively

Causes of farmers' suicides are analyzed by almost all studies. Consensus is evident regarding the fact that the reasons for farmers' suicides are multifaceted. Despite of various attempt at government level, farmers' suicides still remain major challenge in India. Therefore, there is urgent need to study the farmers' suicide. The study is based on both primary and secondary data. The secondary data were collected from the different published sources. The primary data were confine exclusively to those victim farmers households who were cultivating either their own land or on lease basis - at the time of survey. The selection of sample of victim farmers' households in Gujarat state for primary data was as per the numbers of suicides given in 2014 publication of NCRB. During 2014, there were 45 numbers of suicides belonging to farming community and primary data were collected from the selected 30 victim farmer households in Gujarat.

5.2 Farmers' Suicide Scenario in Gujarat

Gujarat has historically been known for business acumen of its people. Gujarat state has made rapid strides in its agriculture sector including the agribusiness sub sector during THE recent past. Agriculture in Gujarat has been transforming over time from traditional to high value added commercial crops which can be seen from a shift in its cropping pattern from food grains crops to high value cash crops such as oilseeds, fruits, vegetables and spices. The trend in shifting of cropping pattern paved ways for many ancillary industries in the areas of processing, packing, storage, transformation, etc. Agricultural growth in the state is favored by the prevailing eight agro-climatic zones, enterprenuring farming community, policy support from the government, wealth of livestock population, extended coast line and contribution by the agricultural scientist and dedicated NGOs.

The Gujarat government has aggressively pursued an innovative agriculture development programme by liberalizing markets, inviting private capital, reinventing agricultural extension, improving roads and

other infrastructure. The mass-based water harvesting and farm power reforms in dry Saurashtra and Kachchh, and North Gujarat have helped energize Gujarat's agriculture. These semi-arid regions have outperformed the canal irrigated South and Central Gujarat. The shift in agriculture to 8 per cent growth rate during last decade was mainly responsible for the shift of the overall state economy to higher growth path with 10.6 per cent annual growth rate. For ensuring systematic and coordinated approach to all around development of its agriculture sector, the Government of Gujarat had prepared in the year 2000 a 10 year plan called 'Gujarat Agro-vision 2010'. A comprehensive New Agro-industrial Policy was also announced in 2000. In the new industrial policy, the state has indentified agro-industries as the major thrust area. The policy aims to spur investment in agro-processing, agro-infrastructure and hi-tech agriculture by monetary incentives. Adequate returns on agricultural output are one of the driving forces for better agricultural growth.

Despite of high rate of growth during the last decade, National Crime Records Bureau has recorded total 45 cases of suicide of farmers in the state of Gujarat during the year 2014. Out of total number of suicides, 68.89 per cent were male farmers and 31.11 were female farmers. As per land holding size category of farmers, 66.67 per cent were from medium size category, followed by small (17.78 per cent), large (8.89 per cent) and remaining from marginal category (6.67 per cent). The prominent causes recognized for farmers' suicides in Gujarat were other/not known (62.22 per cent), followed by illness (15.55 per cent), marriage related problems (8.89 per cent), farming related problems (6.67 per cent), family related problems (4.44 per cent) and drug abuse/alcoholic addiction (2.22 per cent).

Farmer Suicides in Gujarat have come under the scanner after comments by opposition party leaders in the recent past. They have attacked the Gujarat model of development by pointing at the high number of farmer suicides in Gujarat. The district-wise data shows that

epidemic of farmers suicides during the year 2014 was recorded in Devbhoomi Dwarka district covering about 45 percent of total suicides in the state, followed by Panchamahar district (about 22 percent) and Porbandar (almost 12 per cent). These three districts together accounted for about 79 per cent of total number of suicides in the state. The remaining suicide cases were recorded in Amreli, Bhavnagar, Surat and Surendranagar districts. The numbers of suicides were not specific to any particular month and were spread across the year. There is no such compensation in case farmers in the state commit suicide. However, only victim family in Surendranagar district had received compensation of Rs. 10000/- through Agricultural Produce Marketing Committee of Rajkot district where victim farmer had committed the suicide.

5.3 Findings from Field Survey data:

- Out of the total surveyed victim households, in 70 per cent cases brothers/sisters have provided the information, while in remaining cases victim's close members such as wife, son/daughter have responded. The dominance male category can be seen from the fact that 90 percent of victims were male farmers while 10 per cent were female farmers.
- The social category distribution of victims indicate that around 83 percent victims were from other backward classes, around 13 percent were from open category while remaining 3.33 per cent were from scheduled caste category. There was no suicide case from schedule tribe category. Majority of the victim except one case who belongs to Muslim religion, all others were from Hindu religion.
- The age wise category of suicides indicate the dominance in middle age group, i.e. the highest number of suicides (70 per cent) has recorded in age group of 30-60 years while remaining were from age group up to 30 years (30 per cent).
- In case of 70 percent of household, victim was a main earner. Almost 83 percent of victims were literate and around 80 percent were

married with arrange marriage system within their relatives. Thus, victims may be possibly aware about the family as well as life partner before marriage. On an average, almost every victim has one son, while one daughter among two victim family. Almost all victims' household family have either elderly support (father or mother or both) or presence of brother and or sister.

- Two third of total number of victims had consumed poison to commit suicide, while about one sixth of victim hanged themselves. Remaining victims adopted the other method of suicide such as jumping into river/well (6.67 per cent), self immolation /burning (6.67 per cent) and accident by slipping on railway track (3.33 per cent). The house and farm were the main places where victim had committed suicides (47 per cent each), while in one case each, it was reported in operational area of APMC in Rajkot and on railway track.
- The existing households size was 5.1 members and 70 per cent of households estimated to be dependent on agriculture as a main occupation. Around 70 per cent of households were as joint family while remaining where nuclear family. The location of 70 percent of victim family households was within the village, while in case of 30 percent, they were housed on their own farm. The composition of victim family comprised of around 40 per cent each of male and female members and remaining were the children. The average education details indicate that about 40 per cent of total family members were illiterate, which may include old age members.
- The highest number of farmers who had committed suicides were from medium size land holding group having land holding between 2-4 ha (33 per cent) followed by marginal and small size land holding group of farmers (about 27 per cent each). Marginal and small land holdings size group put together accounts for 53 per cent of total number of suicides and the lowest proportion of suicide was recorded in large land holding size group. Thus, as expected,

marginal and small farm category group found to be vulnerable to this kind of situation.

- The selected households has relative large land holding of 5.9 acre, of which 44 per cent of land was irrigated having cropping intensity of 109 per cent and irrigation intensity of 119 per cent.
- About 60 percent of victim households have open well as main source of irrigation, followed by 24.11 percent of households have tube well/bore well, while remaining of 16.12 percent households used canal water for irrigation. Thus, groundwater source was main source available with the sample household to irrigate the crops.
- It was very strange to note here is that the rate either for land leased-in or leased-out were found to be same in both the categories, i.e. land having irrigation facility and un-irrigated land, which ranges between Rs. 7500/- to 8750/- per acre per year. The land leased-in and leased-out tendency was observed in land holders having un-irrigated land.
- The consumption expenditure of selected households was higher than the annual income (from all sources) in all three consecutive years (2013-14 to 2015-16). It means that income from the all sources was not adequate to meet the required expenditure of family that to particular income from main source was not adequate. In fact, the highest deficit of income (percentage of expenditure on income) was recorded during 2014-15. Though some of members of few households are in service and most of households has dairy as a subsidiary business as well as supported with self business and have earlier as agricultural wage income, all these sources of income could not offset the negative effect of low income-high expenditure condition for consecutive three years and thus, it may have put victim under depression and must have forced him to commit suicide.
- Groundnut and cotton were the major crops grown in kharif season, followed by jowar crop which was cultivated for fodder purpose by

some of the households. The other crops grown during kharif seasons were paddy, jowar, maize, bajra, tur, sesame and vegetables. The productivity level of groundnut realized by the victim household was very low (1.49 qt/acre) and thus income received from sale of groundnut was much lower than its cost of cultivation/production. On an average Rs. 30113 per household loss has been reported in groundnut cultivation in 2015-16. Same the case of cotton crop cultivation in which selected households had to suffer with loss.

- During rabi season, vegetables crops were grown, while paddy and vegetables crops were cultivated during summer season. The negative returns have been reported in case of cultivation of groundnut and cotton crops during 2015-16. So the case may be earlier two years as cropping pattern was almost same. Thus, may be due to low yield of major two crops, the income from the crop cultivation had dropped, which must have put stress on the victim and households to manage the expenditure with short of income.
- Selected victim households had taken significant amount of loan from informal sources such as relatives and friends, agriculture input shop, of which loan from relatives and friends earlier was used for both farming and non farming purpose, while loan taken from agro shop owner was used for only farming purpose. Besides, loan was also taken by selected victim households from trader and commission agents to fulfill non farming/domestic requirements.
- Besides having loan from informal sources, few selected households had taken loan from formal sources also such as cooperative society/bank and commercial banks. As compared to the amount borrowed from non-formal sources (Rs. 1-3 lakh), it was around 0.5 lakh in case of formal sources. Thus, inability of payment of loan taken from the informal sources must have put pressure on victim and its family which must have forced the victim to commit suicide.

5.4 Causes and After Effect of Suicide

- About 93 per cent of the households/ respondents have mentioned that victim was mixing with everyone and his/her behavior was proper. No difference in behavior and approach of victim was noticed by anyone around him/her. While remaining households had noticed some change in behavior of victim as he/she was not mixing/mingling with them. About 70 per cent of households reported that victim was taking food properly, while 30 percent households observed that victim was not eager to have food. On enquiry, it was observed that none of victim had tried to commit suicide earlier and thus there was no failure attempt recorded.
- Around 67 per cent of households were above poverty line. None of the household had any dispute on property related issues. In case of marriage related issues such as *dowry related issues, extra marital affairs, wife went with somebody and got married with that person, and wife expired by suicide five year ago, shocked by that, heavy burden of family*), one case was reported under each above cause. The family problems/commitments (such as daughter's marriage, social functions, son's marriage, frequent quarrel among the family members, more and more responsibility on single person and his son suicide earlier; that is why he depressed) were also reported as main cause of suicide.
- The highest numbers of suicides were recorded due to acute economic crises/sudden fall in social status which accounts for 37 per cent of total suicides followed by suicides due to illness (27%), depression (27%), fall in social reputation (17%), drug abuse/alcoholic addiction (13%). The family problems, inter-personal disagreement/fight on some issue and marriage related issues have also contributed in pushing the victim towards such drastic step of ending the life.

- Majority of households have reported that the farming related problems such as high cost of production (repeated sowing; poor germination, high labour charges); crop failure (due to lack of access to irrigation water and pests diseases; failure of rainfall/drought; land submerge); high expectations of output and prices, high cost of bt cotton seed, inability to sell output, etc were major causes of suicides.
- During the last three years, due to low income, selected farmers household who had taken loan for crop production, purchase of farm equipments could not repay in time loan taken. Also some households had taken loan from non institutional sources. Thus, on non repayment of loan amount in time, victim households had faced pressure from these both agencies.
- The ranking of causes indicate that majority of households top ranked to cause of failure of crop/s followed by indebtedness (institutional & non-institutional) and illness.
- About 43 per cent of households faced the severe crisis as no earning member was with family which must have put family member/s under depression. In case of 33 percent households, agricultural activities had stopped while insecurity in the family was felt by 30 per cent households. In case of 27 per cent households, schooling of the children got stopped. Besides, other impacts were that the family member/s felt seriously ill, family had to postpone their son/daughter's marriage, and forced them to sell land and livestock.
- The respondents were asked to give suggestion to avert suicides in future. Few respondents had given suggestions such as government should help in drought years, complete prohibition on drunkenness in village, and medical facilities should be provided at village level.

5.5 Policy Implications:

The study brought out few policy implications.

- Government should provide the support to the farmers during drought years by adopting a multi-pronged approach to mitigate the effects of the drought.
- The NCRB 2014 data shows that prominent causes recognized for farmers' suicides in Gujarat were other/not known (62.22 per cent), Besides, three cases registered at Mehsana district police station were mistakenly reported. Thus, there is a need to have a proper responsible mechanism to create data base on farmers' suicide for proper policy formulation and its implementation.
- The primary data shows that the highest numbers of suicides were recorded due to acute economic crises/sudden fall in social status followed by suicides due to illness, depression, fall in social reputation, and drug abuse/alcoholic addiction. Thus, there is a need to stabilize the agriculture income through crop diversification and making available non-farm employment to rural population. There is also a need to execute the complete ban of availability of local liquor at village level.
- Majority of households have reported that the farming related problems such as high cost of production, crop failure, high expectations of output and prices, high cost of *bt* cotton seed, inability to sell output were major causes of suicides. Therefore, there is urgent need to reduce cost of production of crop by adopting cost-effective farming techniques and increase in income through value addition.
- The State should ensure the creation of an environment which supports effective financial intermediation and smooth flow of institutional credit for needy farmer.

- Civil society institutions including NGOs, religious organizations, farmer clubs, panchayats and political parties have to come forward to sensitize and educate the people on social evils like unethical behavior, ostentatious expenditure on social functions, dowry problem, alcoholism and declining work ethic among youth.
- Depression arising from exposure to agricultural chemicals/pesticides increases the risk for mood disorders and ultimately suicide. Therefore easy access and availability of insecticides/pesticides or at least its toxicity should be reduced to non lethal levels.
- There is a need to educate the communality to identify depression and alcoholism and initiate treatment. The lack of access to mental health services in rural areas and the stigma attached to treatment is also a contributing factor. Therefore, medical facilities should be made available at village level.
- There are multiple risks in agriculture – income, yield, price, input, technology and credit among others. Some of the sample farmers reported that the major causes of farmers' distress are the rising input costs, dwindling produce price realisation and the inability of farmers to abandon cultivation without alternative livelihood opportunity. Some of our sample farmers had to commit suicide because of higher cost of production (26.7% to 33.3%), non-receipt of remunerative prices of output (3.3% to 6.7%), lack of availability of low cost institutional credit (3.3% to 6.7%), unfulfilled hope of loan waiver (3.3%) and non-availability of agricultural insurance (6.7%). Thus, it is suggested that the post harvest infrastructural facilities need to be improved in rural areas so that farmers don't sell their crop output in distress prices.
- The availability of low cost institutional credit and crop insurance coverage need to be improved, particularly for small and marginal farmers.

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A1: State-wise Number of Farmers Suicides in India (2014)

Sr. No.	States	Farmers Suicide 2014		GCA 2012-13		Suicide /Lakh ha of GCA
		Numbers	% to total	Lakh ha	% to total	
1	Andhra Pradesh + Telangana	1058	18.75	136.5	7.02	7.75
2	Assam	21	0.37	41.97	2.16	0.50
3	Bihar	0	0.00	77.78	4.00	0.00
4	Jharkhand		0.00	16.57	0.85	0.00
5	Gujarat	45	0.80	126	6.48	0.36
6	Haryana	14	0.25	63.76	3.28	0.22
7	Himachal Pradesh	32	0.57	9.47	0.49	3.38
8	Jammu & Kashmir	12	0.21	11.62	0.60	1.03
9	Karnataka	321	5.69	117.48	6.04	2.73
10	Kerala	107	1.90	25.92	1.33	4.13
11	Madhya Pradesh	823	14.59	231.3	11.90	3.56
12	Chhattisgarh	443	7.85	56.91	2.93	7.78
13	Maharashtra	2568	45.52	218.74	11.25	11.74
14	Orissa	5	0.09	50.69	2.61	0.10
15	Punjab	24	0.43	78.7	4.05	0.30
16	Rajasthan	0	0.00	239.54	12.32	0.00
17	Tamil Nadu	68	1.21	51.4	2.64	1.32
18	Uttar Pradesh	63	1.12	258.21	13.28	0.24
19	Uttarkhand	0	0.00	11.24	0.58	0.00
20	West Bengal	0	0.00	96.78	4.98	0.00
	Other States	30	0.53	22.14	1.14	1.36
	UTs	8	0.14	1.27	0.07	6.30
	India	5642	100.00	1943.99	100.00	2.90

Sources: NCRB (2015) and GOI (2016).

Details of Cases of Farmers' Suicide in Gujarat 2014

A2-1: List of Farmers Suicide in Gujarat 2014

Sr No	Name Of Victim	Age	Gender	Village	Taluka	District
1	Navinbhai Thakorbbhai Patel	47	M	A/47, Sundervan Row House	Dadi Road	Surat
2	Arvindbhai Bhupatbhai Nagani	22	M	Dhharaiie	Chotila	Surendranagar
3	Bababha Ramsang Jadeja	57	M	Nadhuna	Jamnagar	Jamnagar
4	Nathabhai Khimabhai Karena	60	M	Moti Gop	Jam Jodhpur	Jamnagar
5	Govabhai Kanubhai Gagiya	30	M	Modpar	Lalpur	Jamnagar
6	Radhaben Jivabhai Waghela	42	F	Dukada (Khana)	Porbandar	Porbandar
7	Vijabhai Pujabhai Keshwala	65	M	Ratdi	Porbandar	Porbandar
8	Arbhambhai Kesavbhai Keshwala	40	M	Visawada	Porbandar	Porbandar
9	Menadbhai Balubhai Waghela	32	M	Miyani	Porbandar	Porbandar
10	Popat Lila Kadchha	36	M	Kadegi	Kutiyana	Porbandar
11	Kisanbhai Kavabhai Chudasma	20	M	Madhiya		Bhavnagar
12	Maganbhai Pragjibhai Dihora	50	M	Mithi Viridi		Bhavnagar
13	Tejalba Nirmalsinh Jadeja	31	F	Verad Darbar Pado	Bhanvad	Devbhumi Dwarka
14	Shantaben Dhanabhai Gojiya		F	Okhanda	Bhanvad	Devbhumi Dwarka
15	Govind Ramshi Kanara		M	Mota Kalawad	Bhanvad	Devbhumi Dwarka
16	Hasanbhai Akabarbbhai Kadiwar	52	M	Jumma Masjit Khadbai Sheri	Bhanvad	Devbhumi Dwarka
17	Ukabha Dosabhai Sisotiya		M	Shiva Wadi	Bhanvad	Devbhumi Dwarka
18	Kumbhabhai Meragbhai Karmur	45	M	Haripar	Khambaliya	Devbhumi Dwarka
19	Devsibhai Sumatbhai Vadher	28	M	Virmadar	Khambaliya	Devbhumi Dwarka

20	Nathula Pathula Jadeja	53	M	Bhatel	Khambaliya	Devbhumi Dwarka
21	Dhaniben Hitesh Chawada	25	F	Kuwadiya	Khambaliya	Devbhumi Dwarka
22	Kanabha Vejabhai Chawada	35	M	Bhadthar (Wadi Vistar)	Khambaliya	Devbhumi Dwarka
23	Gangaben Arjanbhai Chopada	65	F	Thakkar Sherdi	Khambaliya	Devbhumi Dwarka
24	Hiriben Maldebhai Goraniya Mer	37	F	Nagdiya	Kalyanpur	Devbhumi Dwarka
25	Dakshaba Rajendrasinh Jadeja	20	F	Khakharda	Kalyanpur	Devbhumi Dwarka
26	Jesabhai Gigabhai Khodedara	35	M	Khashiyavadar	Kalyanpur	Devbhumi Dwarka
27	Chandrikaben Satabhai Parmar	20	F	Bhatiya	Kalyanpur	Devbhumi Dwarka
28	Palabhai Nathabhai Karmur	60	M	Chur Gam	Kalyanpur	Devbhumi Dwarka
29	Dhanabhai Gokalbhai Dabhi	59	M	Ran Gam	Kalyanpur	Devbhumi Dwarka
30	Kayabha Pujabha Sumani	40	M	Gorija Wadi	Devbhumi Dwarka	Devbhumi Dwarka
31	Lakhmanbha Patramalbha Kara	32	M	Padali	Devbhumi Dwarka	Devbhumi Dwarka
32	Babubhai Devrajbhai Gohil	55	M	Chital	Amreli	Amreli
33	Amkubhai Vilkubhai Vala	28	M	Shivad	Dhari	Amreli
34	Savitaben Aalamsing Chauhan	60	F	Rinchhiya	Kalol	Panchmahal Godhara
35	Jyotiben Laxamansingh Chauhan	19	F	Bedhiya Barakuwa	Kalol	Panchmahal Godhara
36	Kiranbhai Chhaganvhai Parmar	34	M	Nandarba Ghota Faliyu	Kalol	Panchmahal Godhara
37	Laxmansinh Pratapsinh Chauhan	45	M	Chalali	Kalol	Panchmahal Godhara
38	Mitalben Bhalsinh Patel	17	F	Sureli Jhiliya	Kalol	Panchmahal Godhara
39	Rajeshbhai Narpatbhai Parmar	22	M	Pauna	Kalol	Panchmahal Godhara
40	Dilipkumar Rangitsinh Chauhan	20	M	Sureli	Kalol	Panchmahal Godhara
41	Jesinghbhai Kalubhai Chauhan	40	M	Bedhiya Samdiyani Muwadi	Kalol	Panchmahal Godhara
42	Kanubhai Prabhatbhai Parmar	25	M	Rampur Jodka	Godhra	Panchmahal Godhara

Farmers' Suicides in Gujarat

A2-2: Type and Reasons for Farmers' Suicide in Gujarat 2014 (as per FIR)

Sr No.	Name Of Victim	Date of Suicide	Type of Suicide	Reason	Police Sta.
1	Navinbhai Thakorabhai Patel	28-02-2014	Not mentioned	Crop Failure Paddy, Sugarcane, & Vegetable	Jahagirpura
2	Arvindbhai Bhupatbhai Nagani	17-12-2014	Self-Immolation	Lower Price Of Cotton	
3	Bababha Ramsang Jadeja	14-01-2014	Poison	The Grief Of Death Of His Son	Punch B Jamnagar
4	Nathabhai Khimabhai Karena	14-03-2014	Hanging		Jam Jodhpur
5	Govabhai Kanubhai Gagiya	16-03-2014	Poison	Crop Failure (Kharif)	Meghpar
6	Radhaben Jivabhai Waghela	20-03-2014	Hanging		Miyani Marine
7	Vijabhai Pujabhai Keshwala	07/10/2014	Hanging	Alcohol Addiction	Miyani Marine
8	Arbhabhai Kesavbhai Keshwala	19-07-2014	Jumping In Well	Divorce	Miyani Marine
9	Menadbhai Balubhai Waghela	18-09-2014	Hanging	Mental Illness/ Disease	Miyani Marine
10	Popat Lila Kadchha	14-06-2014	Poison	Crop Failure	Kutiya
11	Kisanbhai Kavabhai Chudasma	20-01-2014	Hanging	Acute Economic Crises	Velavadar
12	Maganbhai Pragjibhai Dihora	25-02-2014	Poison	Lower Price Of Onion	Alang Khedi
13	Tejalba Nirmalsinh Jadeja	30-01-2014	Self-Immolation		Bhanvad
14	Shantaben Dhanabhai Gojiya	14-04-14	Poison		Bhanvad
15	Govind Ramshi Kanara	19-04-2014	Poison	Rapist	Bhanvad
16	Hasanbhai Akabarabhai Kadiwar	22-05-2014	Poison	Mental Illness/ Disease	Bhanvad
17	Ukabha Dosabhai Sisotiya	17-05-2014	Poison	Acute Economic Crises	Bhanvad
18	Kumbhabhai Meragbhai Karmur	26-03-2014	Jumping In Well	Stomach Pain/Disease	Khambaliya
19	Devsibhai Sumatbhai Vadher	26-05-2014	Poison	Aids	Khambaliya
20	Nathula Pathula Jadeja	22-09-2014	Poison		Khambaliya
21	Dhaniben Hitesh Chawada	10/02/2014	Jumping In Well		Khambaliya
22	Kanabha Vejabhai Chawada	19-10-2014	Poison		Khambaliya

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23	Gangaben Arjanbhai Chopada	21-12-2014	Poison		Khambaliya
24	Hiriben Maldebhai Goraniya Mer	01/12/2014	Poison		Kalyanpur
25	Dakshaba Rajendrasinh Jadeja	31-03-2014	Hanging		Kalyanpur
26	Jesabhai Gigabhai Khodedara	05/06/2014	Poison		Kalyanpur
27	Chandrikaben Satabhai Parmar	16-07-2014	Railway Track		Kalyanpur
28	Palabhai Nathabhai Karmur	17-09-2014	Poison		Kalyanpur
29	Dhanabhai Gokalbhai Dabhi	22-10-2014	Poison	Cancer/ Disease	Kalyanpur
30	Kayabha Pujabha Sumani	24-07-2014	Railway Track	The Grief Of Death Of His Wife	Devbhumi Dwarka
31	Lakhmanbha Patramalbha Kara	12/10/2014	Hanging	Family Problem	Mithapur
32	Babubhai Devrajbhai Gohil	27-12-2014	Jumping In Well	An Accident Only	Amreli
33	Amkubhai Vil kubhai Vala	24-07-2014	Poison	Crop Failure	Dhari
34	Savitaben Aalamsing Chauhan	26-03-2014	Poison	Mental Illness/ Disease	Vejalpur
35	Jyotiben Laxmansingh Chauhan	04/08/2014	Jumping In Well	Marries Problem	Vejalpur
36	Kiranbhai Chhaganvhai Parmar	14-04-2014	Hanging		Vejalpur
37	Laxmansinh Pratapsinh Chauhan	25-05-2014	Poison		Vejalpur
38	Mitalben Bhalsinh Patel	25-05-2014	Poison	Family Problem	Vejalpur
39	Rajeshbhai Narpatbhai Parmar	19-08-2014	Poison		Vejalpur
40	Dilipkumar Rangitsinh Chauhan	09/12/2014	Poison	Family Problem	Vejalpur
41	Jesinghbhai Kalubhai Chauhan	17-09-2014	Hanging		Vejalpur
42	Kanubhai Prabhatbhai Parmar	25-11-2014	Poison		Vejalpur

Source: As per FIR report.

Annexure III

Letter received from the Superintendent of Police, Rajmahel Road, Police Head Quarters, Mehsana- 348001, Gujarat: About wrongly reporting of cases

Translated Version of letter written in Gujarati

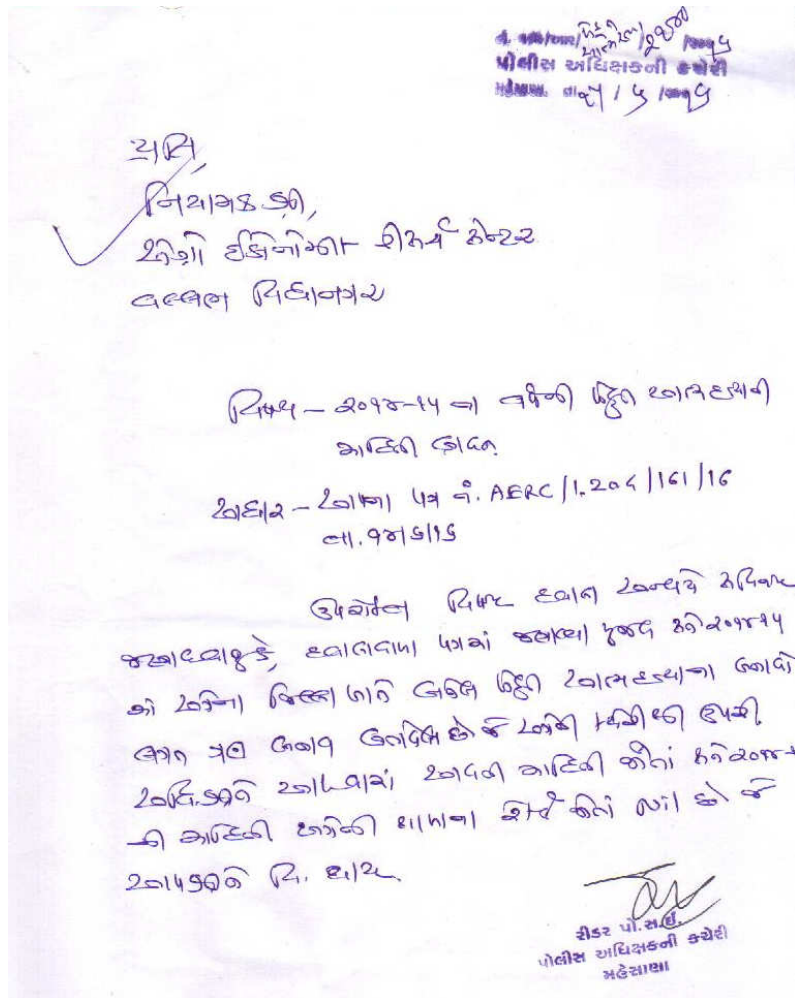
To
The Director
Agro Economic Research Centre
Vallabh Vidyanagar

Sub: Information about Farmers' Suicide in year 2014

Ref: Vide letter no: AERC/.20.4?161/16 dated 14/6/2016

With reference to above subject, farmers' suicide case reported to NCRB in year 2014 of district Maheshana was three by concern officer. Information about farmer's suicide of district Maheshana provided to NCRB has some mistake. In year 2014, the number of farmers' suicide in Maheshana district is nil.

-Sd-
Reader PSI
S P Office, Maheshana



Annexure IV

Coordinator's Comments on the Draft Report

The comments received on draft report from the Agricultural Development and Rural Transformation Centre, Institute for Social and Economic Change, Bengaluru, Karnataka.

1. **Title of the draft report examined:** Farmers' Suicides in Gujarat
2. **Date of receipt of the Draft report:** 31 January, 2017
3. **Date of dispatch of the comments:** 03 February, 2017
4. **Chapter-wise comments.**

Chapter 1:

- We appreciate your interest in carrying out the study in 8 districts and depicting them in map. Background given is quite comprehensive and well written.

Chapter 4:

- Kindly provide per cent figures in two decimals in all tables.
- Adhere to the table-4.5 format sent by us, as it helps in consolidation of state reports.

Chapter 5:

- Information given in Chapter-5 is repetition of first chapter. For instance, the objectives of study which is discussed in Chapter-I and is again discussed in Chapter-5. Kindly avoid the repetitions.
- We appreciate for providing victims'HH details in Annexure-II.

5. General comments.

- The report has adhered to the outline provided except one table as mentioned in chapter-wise comments.

6. Overall view on acceptability of report

- The report is well-structured with more discussion on the results using also the existing literature. The draft report can be accepted for consolidation and further submission to the ministry after revising in accordance with the comments / suggestions. The soft copy of the revised final report can be sent to us at the earliest along with the data.

Action taken by the authors based on the comments received from the Coordinator of the study.

- All the comments made by the Coordinator of the study have been addressed at the appropriate places in the final report.

S. S. Kalamkar
