

Farmer Suicides in West Bengal



**Study sponsored by Ministry of Agriculture and Farmers Welfare
Government of India, New Delhi**

**Agro-Economic Research Centre
(For the States of West Bengal, Sikkim and Andaman & Nicobar Islands)
Visva-Bharati, Santiniketan
West Bengal**

June-2017



Study Number - 183

Farmer Suicides in West Bengal



**Study sponsored by Ministry of Agriculture and Farmers Welfare
Government of India, New Delhi**

**Agro-Economic Research Centre
(For the States of West Bengal, Sikkim and Andaman & Nicobar Islands)
Visva-Bharati, Santiniketan
West Bengal**

June-2017

Citation:

AERC (2017). Farmer Suicides in West Bengal; Study No.- 184, Agro-Economic Research Centre (For the States of West Bengal, Sikkim and Andaman & Nicobar Islands), Visva-Bharati, Santiniketan, West Bengal, pp.-ix+59.

Project Team:**Team Leader**

Mr. Kali Sankar Chattopadhyay

Field Survey, Tabulation and Data Analysis

Mr. Kali Sankar Chattopadhyay

Mr. Debanshu Majumder

Mr. Ashok Sinha

Mr. Vivekananda Datta

Dr. Ranjan Kumar Biswas

Dr. Debajit Roy

Typing and Secretarial Services

Mr. Munshi Abdul Khaleque

Mr. Nityananda Maji.

Mr. D. Mondal

Mr. D. Das

Mr. P. Mitra

Mr. A. R. Patra

Drafting and Report Writing

Mr. Kali Sankar Chattopadhyay

Prof. Bidhan Chandra Roy

Coordinator

Agricultural Development and Rural Transformation Unit, Institute for Social and Economic Change (ISEC), Bangalore.

Preface

The present study entitled “Farmer Suicides in West Bengal” is an All India Coordinated Study and was undertaken at the instance of Directorate of Economics and Statistics, Ministry of Agriculture & Farmers Welfare, Government of India, New Delhi. The task of coordination has been entrusted with Agricultural Development and Rural Transformation Unit, Institute for Social and Economic Change, Bangalore.

Farmers’ suicide is a social menace and a very sensitive issue in India that require immediate attention and sympathy of the policymakers for coping over with the situation at the earliest. The present study is an attempt to develop an in-depth understanding of agrarian distress and farmers’ suicide in West Bengal and to make some policy suggestions to prevent such incidences in future. The study revealed that farmers’ suicide in West Bengal is not necessarily linked with backward regions or crop failures due to flood or drought rather it is more common with market failure in cash crops that required substantial borrowing to purchase farm supplies. Low and insufficient income from the farming enterprises; increasing cost of living and lack of non-farm employment opportunities are the root cause of farmers’ suicide though manifested by indebtedness and family related problems. Therefore, policies towards risk management in agriculture should not only address the climatic and financial risks but also risks associated with distress sale, sudden decline in price due to glut in the market, and income uncertainties. Development of rural infrastructure, particularly, irrigation, storage and cold chain system will help to mitigate risk to a large extent but this should go hand in hand with creating non-farm employment opportunities in the rural areas.

The National Crime Records Bureau (NCRB) is the main official agency in the country responsible for collecting and analyzing crime data, including suicides. However, since 2014, the NCRB changed the methodology as well as parameters for compiling farmers’ suicide related data. This change in parameters led to reporting zero farmers’ suicide by as many as 12 States and 6 Union Territories including West Bengal in spite of several news and media reports claiming farmer’s suicides in these states. We have also approached the concerned Director, Government of West Bengal for information regarding farmers’ suicides in the state but they too could not help us because of non-availability of data with them. Given such an obscure nature of data availability, as per instruction from the Ministry of Agriculture, Government of India and the coordinating centre, we conducted the study collecting information with our own sources following snowball sampling technique.

The task of completion of this study was assigned to Kali Sankar Chattopadhyay, as Team Leader, The study team consist of all the researchers in the Centre. Drafting and analysis of the report was done by the study team. During field survey he was ably assisted by Debanshu Majumder, Ashok Sinha, Vivekananda Datta, Ranjan Kumar Biswas and Debajit Roy. Debanshu Majumder, Debajit Roy and Ranjan Kumar Biswas assisted him during data entries and tabulation also. Typing of the report was done by Munshi Abdul Khaleque and Nityananda Maji. Secretarial

assistance was provided by D. Mondal, D. Das, P. Mitra and A.R. Patra. B. Singh and S. Hansda helped in the office maintenance.

We acknowledge the generosity of Prof. Swapan Kumar Dutta, Vice Chancellor (Officiating) Visva-Bharati, and Madam Ms. Sangeeta Verma, Economic and Statistical Adviser, Ministry of Agriculture & Farmers Welfare, Government of India, New Delhi for their guidance and necessary support in completion of the study. We are also thankful to Dr. A. V. Manjunath (ADRTU, ISEC Bangalore) for his effective coordination of the study.

We are particularly indebted to Shri P. C. Bodh, Adviser (AER Division), Ministry of Agriculture & Farmers Welfare, Government of India, New Delhi; Prof. Bidhan Chandra Roy, Professor of Agricultural Economics, and Prof. Amrit Sen, Professor of English, Visva-Bharati for their valuable suggestions and pain taking efforts in editing an earlier version of this report. A word of appreciation is also to Mr. Arunava Ganguly, Freelance Journalist, for his valued opinion and supplying information regarding farmers' suicide in the state and finally, we convey our sincere gratitude to the hundreds of villagers and bereaved family members of the victims for their ungrudging responses to our questions for the days together.

**Prof. Amit Kumar Hazra
Registrar (Acting)
&
Hony. Director
Agro-Economic Research Centre
Visva –Bharati,
Santiniketan**

Contents

Preface	:	i – ii
List of Tables	:	iv
List of Figures	:	v
Executive Summary	:	vi – viii
Chapter – I	Introduction	: 1 – 11
	1.1 Background	
	1.2 Review of literature	
	1.3 Main objectives and scope of the study	
	1.4 Data and methodology	
	1.5 Limitation of the study	
	1.6 Organization of the report	
Chapter – II	Farmer's Suicide Scenario in the State	: 12 – 16
	2.1 Spatio-temporal incidence of farmers' suicide	
	2.2 Socio-economic characteristic of farmers committed suicides	
	2.3 Summary of the chapter	
Chapter – III	Analysis of Primary Data	: 17 – 26
	3.1 Socio-economic profile of victims	
	3.2 Socio-economic profile of victims' family	
	3.3 Characteristics of operational holdings	
	3.4 Source of irrigation	
	3.5 Leasing of land	
	3.6 Source of income and items of expenditure	
	3.7 Cropping pattern and returns from cultivation	
	3.8 Details of credit availed	
	3.9 Summary of the chapter	
Chapter - IV	Causes and After Effect of Suicide	: 27 – 42
	4.1 Symptoms observed by the family members	
	4.2 Causes of suicide	
	4.2.1 Social causes of suicides	
	4.2.2 Farming related causes of suicides	
	4.2.3 Indebtedness related causes of suicides	
	4.2.4 Ranking of the causes	
	4.3 Impact of suicides on family members	
	4.4 Suggestion from families to avert suicides in future	
	4.5 Summary of the chapter	
Chapter - V	Conclusions and Policy Suggestions	: 43 – 47
	5.1 Conclusions	
	5.2 Policy recommendations	
	References	: 48 – 50
	Appendices	: 51 – 57
	Annexure – I	: 58
	Annexure – II	: 59

List of Tables

<i>Table No.</i>	<i>Title</i>	<i>: Page</i>
1.1	Number of suicides and indebtedness in major suicide prone states of India	: 2
1.2	Number of farmers' suicide in selected states of India	: 3
1.3	Age-group wise incidence of farmers' suicide in India during 2014	: 4
2.1	District wise details of farmers' suicide in West Bengal (2011 to 2016)	: 13
2.2	Year wise and district wise distribution of farmer committed suicides	: 15
3.1	Socio-economic profile of victims	: 18
3.2	Socio-economic profile of victims' family	: 19
3.3	Characteristics of operational holdings (Per HH)	: 20
3.4	Source-wise distribution of irrigated area	: 21
3.5	Rental value of leased-in and leased-out land	: 21
3.6	Net income and expenditure during 2015-16	: 22
3.7	Season-wise cropping pattern	: 25
3.8	Details on credit availed by the sample households	: 26
4.1	Symptoms observed by family members before suicide (% of HH)	: 28
4.2	Social causes of suicide	: 29
4.3	Farming related causes of suicides	: 31
4.4	Indebtedness related causes of suicides	: 32
4.5	Ranking of the social, farming and debt related causes of suicides	: 33
4.6	Impact of suicide on victims family	: 34
4.7	Suggestions to prevent the suicides in future	: 36
4.8	Brief description of the photographs	: 42

List of Figures

<i>Figure No.</i>	<i>Title</i>	<i>: Page</i>
Fig. 2.1.	Trends in farmers' suicide in West Bengal since 2011	13
Fig. 2.2	Season wise incidence of farmer suicides in the state	14
Fig. 2.3.	Distribution of victim farmers according to caste and religion	16
Fig. 3.1.	Cropping Pattern among the sample households	23
Fig. 4.1.	Some representative photographs of the sample households	38

EXECUTIVE SUMMERY

Background

Suicide of farmers is a social menace and a very sensitive and politically damaging issue in India that require immediate attention of the researchers and policymakers. Repeated incidence of farm suicides in some parts of the country, coupled with increasing media coverage, made it a social catastrophe and a drag on the quality of life of the farmers and their dependents. The present study is an attempt to look into the agrarian distress and farmers' suicides in the state of West Bengal and to prescribe policy measures to curb this social menace with the following specific objectives:

1. To analyze the incidence and spread of farmer suicides in selected states and to map the hot spots of suicide.
2. To study the socio-economic profile, cropping pattern and profitability of victim farm households.
3. To study the causes leading to farmers' suicides.
4. To recommend suitable policies to alleviate the incidence of farmers' suicides.

The study, confined to the state of West Bengal, is based on primary data collected from 30 farm household across three districts viz., Burdwan, Birbhum and North 24 Pargana. As there was no official records of farmers' suicide in West Bengal, snowball sampling technique was used to build up samples for this study. All the selected households were farmers, cultivating either their own land or on leased in land at the time of suicide. The reference period for data collection was 2015-16.

Major Findings:

The major findings of the study are summarized as below:

The main conclusions that can be drawn from the findings of this study are as follows:

- I. The incidence of farmers' suicide in West Bengal is lower than the national average and much lower as compared to several other states like Maharashtra, Telengana, Madhya Pradesh, Chhattisgarh, Karnataka, Andhra Pradesh, etc. But the claim of 'zero farm suicides' as reported in the official documents does not match with the ground realities.

- II. In contrast to popular perception, farmers' suicide in West Bengal is not linked with backward regions. Burdwan and Hoogly, two agriculturally developed districts, are the hot spot of farmers' suicide in West Bengal. This is mainly because the cropping pattern in these two districts is highly skewed towards potato and summer paddy. The level of crop diversification as well as livelihood diversification among the poor farmers is very low.
- III. Farmers' suicide in West Bengal is not also necessarily linked with crop failures due natural disaster rather it is more common with market failure in cash crops that required substantial borrowing to purchase farm supplies. Most of the victims took loans to cultivate their land. But they did not get any remunerative price for their product which left them indebted without any prospect of repaying these loans. Driven to desperation and social embarrassment, they took their own lives.
- IV. There are specific characteristics associated with farmers committed suicides, like those growing crops like potato or summer rice; those with very small size of land; those having no alternative sources of livelihood; those with long term illness; and those with borrowed a lot from non-institutional sources. The farmers with whom these three characteristics are most common had the highest suicide rates.
- V. The causes of farmers' suicide in West Bengal are many. It is a complex interplay of social, economic, agro-climatic, political and psychological factors. But economic distress is the root cause.
- VI. Income realized by the crop farmers in the study area is very low. Apart from very low income, increased cost of cultivation and rising cost of living particularly towards health care and meeting social obligations pushed the farmers to borrow.
- VII. Lack of alternative livelihood options (other than wage earning within agriculture) for the poor is a major constraint in the study area leading to economic distress of the farmers. Farmers with alternative source of livelihood are able to cope with the crisis better. Therefore, sustainable rural livelihood diversification is needed.
- VIII. A large number of farmers who committed suicide were indebted to money lenders at an exorbitant rate of interest and much of that indebtedness was due to low income vis-a-vis high cost of living. Too much reliance on non-institutional sources of credit is a possible threat for the farming community in West Bengal.

- IX. Another important matter of concern is wide spread drug addiction and alcoholism among the poor farmers. Though this is not only confined to the farmers alone, but poor and illiterate villagers are more prone to this, and in many times it escalates tension in the family.
- X. Farmers' suicide in the study area made a devastating loss to the family of the victims and posed a large number of challenges that includes psychological depression, loss of livelihood, and increased financial and social insecurity.

Policy recommendations

The present farm crisis in West Bengal, calls for a multi-pronged solution that addresses major challenges faced by the farmers. Past agricultural policies, driven exclusively by food self-sufficiency related goals, offered limited scope to farm income and rural livelihood related concerns which has become prime concern now while pursuing sustainable agricultural development. Since economic distress is the root cause of farmers' suicide in West Bengal, immediate efforts are needed in the following dimensions to augment the income of farmers suffering from natural as well as market failure.

- I. Policies towards risk management in agriculture should not only address the climatic risks but also risks associated with distress sale, sudden decline in price, farm credit, and income uncertainties. Development of rural infrastructure, particularly, irrigation, storage and cold chain system will help to mitigate risk to a large extent but this should go hand in hand with creating non-farm employment opportunities in the rural areas.
- II. Since economic distress is the root cause of farmers' suicides in West Bengal, mere emphasis on compensation for crop loss or waiving loans can help only in the short run to mitigate the impact of farmers' suicide. A comprehensive package for long-term development of agricultural infrastructure and well as promoting agri-business activities can solve the twin problem of rural unemployment and low farm income.
- III. Farmers should be encouraged for growing more diversified alternative remunerative cash crops rather sticking to the traditional ideas of cultivating only potato (during rabi season) or boro paddy (during summer). Small and marginal farmers need to be encouraged to grow other remunerative crops like off-season vegetables, pulses and oilseeds.

- IV. Sustainable rural livelihood diversification is a must. Government must take measures to increase non-farm employment opportunities in the rural areas. For this, both short term and long term interventions are needed to alleviate the farmers out of economic distress. Strengthening livelihood programmes such as the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) and promoting agri-business activities holds the key.
- V. In order to protect the potato farmers from distress sale, the government must think of introducing some innovative procurement mechanisms (on the lines of MSP) for potato for their mid-day meal schemes and ICDS schemes. Timely intervention by the government for procurement, storage and export of potato can reduce the distress sale to a great extent.
- VI. At the same time, as suggested by the National Commission on Farmers, higher MSP for all the major agricultural crops including paddy is very important. However, mere increase in MSP alone will not be sufficient unless there is commensurate improvement in the procurement infrastructure in the state which is very poor till date.
- VII. Government must also ensure that the benefits from various schemes, targeted towards agriculture and rural development, actually reach the farmers. Proper care and adequate measures are needed while planning and implementing farmers welfare programmes like support price, procurement, crop insurance, crop loan, health insurance, etc so that the poor farmers does not face any entry barrier to take benefit from such schemes.
- VIII. Public awareness programme regarding the ill effects of drug addiction and alcoholism is necessary. For this counseling services and establishment of rehabilitation centre can be of great help. At the same time revamping rural health facilities, which is severely inadequate in West Bengal, is also necessary to avert farmers' suicide to a great extent.
- IX. Finally, there is a need to improve the quality of farm suicide data. The claim of 'zero farm suicides' in West Bengal as reported in the official documents does not fits well with the ground realities. The NCRB compiles these information from police records but without verifying the claims made by the police stations. Therefore, some alternative checks must be there to counter under reporting of farm suicide cases by the states.

1.1 Background

After independence, Indian society has had to travel through a passage of dozen of Economic Plans and all these plans have seemingly converged with the ideas of egalitarian distribution of income and wealth among all its stakeholders in the society. Agriculture being the main source of livelihood was always on top of priority list for the policy makers. It is no longer a rhetoric that India lives in the villages and almost 70 per cent of the rural workforce is engaged in agriculture which means agriculture is the principal source of livelihood for more than half of population in India. Although agriculture is the main source of livelihood in rural India, it failed to provide financial security to those involved in farming. However, the overwhelming share of workforce engaged in agricultural sector aptly justifies the importance of this very sector in India and at the same time the need for farmers' welfare in the country. Development of agriculture also plays a strategic role in the process of economic development of a country if there is a commensurate growth in farmers' income. A rise in per capita income of the farmers not only benefits the farmers alone but also leads to an increased demand for industrial goods and services. But in spite of more than fivefold increase in farm outputs during last 70 years, farming is not a viable livelihood for majority of the farmers in our country. A gradual decline in the relative share of agricultural sector in the national income may be an indicator of India's multi-faceted and wide spectrum economic development, but hopefully not neglecting the agricultural sector as well. Recognizing the need and importance of farmers' welfare in our country, the Government of India has recently changed the nomenclature of the 'Ministry of Agriculture' as Ministry of Agriculture and Farmers' Welfare¹. From this perceived change in nomenclature it could be easily surmised how the Government is concerned about the welfare of the farmers and is working for their development.

Suicide is the tenth leading cause of death in the World, and approximately 0.5% to 1.4% of people die by suicide, with a mortality rate of 11.6 per 100,000 persons per year. Suicide rates differ significantly between countries and over time. The

Note¹: Recently Government of India has also decided to double the income of the farmers in the country within the next five years and in this direction has adopted various measures. A concerted move among its all departments has started to function for making this proposal a success.

countries with the greatest absolute numbers of suicides are China and India, accounting for over half the total. What is more alarming is that, rates of suicide have increased by 60% from the 1960s to 2012 (Varnik, 2012).

Farmers' suicide accounts for 11.2% of all suicides in India and the rate of suicides among the farmers is 40% higher than the national average of all suicides (NCRB, 2014). Of late, it has turned out to be a national concern. Higher suicide rates among farmers than general population is a social menace and a very sensitive and politically damaging issue in India. Therefore, it requires immediate attention and sympathy of the policymakers for coping over with the situation at the earliest. According to the United Nation Commission on Sustainable Development (UNCSD), in India, one farmer committed suicide every 32 minutes and the total number of farmer suicides in the country has crossed the 3, 00,000 mark in 2014. Though farmers' suicide in India is a national issue, a close perusal of Table 1.1 reveals that this is more of a regional problem. Maharashtra, Telengana, Madhya Pradesh, Chhattisgarh and Karnataka, the five states, accounted for almost 90 per cent of total farmer suicides (5056 out of 5650) reported in the country in the year 2014 (NCRB, 2014). At the same time as many as 12 States and six Union Territories reported zero farmers' suicide in 2014. This includes three big states; West Bengal, Rajasthan and Bihar. In 2010, in contrast, not a single state claimed zero suicide.

Table -1.1 Number of suicides and indebtedness in major suicide prone states of India

State	Number of suicides in 2014	% of farmer suicides to all India total in 2014	% of indebted farm HH to total farm HH in 2012-2013
Maharashtra	2568	45.5	57.3
Telengana	898	15.9	89.1
Madhya Pradesh	826	14.6	45.7
Chhattisgarh	443	7.8	37.2
Karnataka	321	5.7	77.3
Total	5056	89.5	51.9

Source: Study proposal IESC, ADRTU (2015)

According to NCRB reports incidence of farmers' suicide in India reduced drastically since 2014. Table 1.2 shows that the incidence of farmers' suicide in India has substantially came down particularly in 2014 and the figure was zero for West Bengal. However, such an abrupt fall in farmers' suicide since 2014 has raised many questions in the minds of the researchers, activists and media personnel about the authenticity as well as parameters used in compiling farm suicide data by the NCRB. Researchers and social activists are in the opinion that

the 2014 data on farm suicide provided by NCRB are not comparable with earlier years of farm suicide data. This is so due to major changes in methodology of the NCRB. The “fall” in farmer suicides accompanies a stunning increase in suicides by ‘others’ and the changes in formats seem to further embolden and enable state government fudging of data (Sainath, 2015). Further, since suicide data in India is based on police records, are grossly underreported (Mishra, 2014). Even the NCRB report itself acknowledged that the actual figure of farmers' suicide might be higher than what is reported (NCRB, 2014). Many researchers are in the view that actual counts of farmers' suicide may be higher, but the police follow a strict definition of farmers while recording the case which artificially lowers the official count. Willful non-reporting by the police and excluding tenant farmers and farmers without land records on their own name adds to this problem. Moreover, earlier NCRB used to provide farm suicide data without specifying whether the farmers were cultivators or agricultural labourers. But from 2014, the NCRB began to publish farm suicide data separately for the cultivators and agricultural labourers (Kishore, 2017).

Table - 1.2 Number of farmers' suicide in selected states of India

Sl. No.	States	Years		
		(2001)	(2011)	(2014)
1.	Maharashtra	3536	3337	2568
2.	Andhra Pradesh	1509	2206	1058
3.	Karnataka	2505	2100	321
4.	Chhattisgarh	1452	1567	443
5.	Madhya Pradesh	1372	1326	826
6.	Kerala	1035	830	107
7.	West Bengal	1246	807	0
	Total	16425	14027	5056

Source: Kar (2015) & NCRB (Various sources)

Note: * including Telengana

There is also accusation of states manipulating the data on farmer suicides (Sainath, 2014). A closer analysis of the NCRB data shows that the reasons for 3,490 instances of suicides in West Bengal (which accounts to nearly 25 per cent of the suicides) could not be known. The State government has not admitted agrarian distress as the reason for even a single suicide in the State and that has been reflected in NCRB data, which shows that farmer suicides in the State are nil (Singh, 2015). According to this report West Bengal claimed zero farmers' suicide in 2012 by non-filing data under this category and dumped the suicides under the head ‘others’. Therefore, one should guard against changes in reporting parameters or non-reporting of profession-wise suicides in case of West Bengal (Mishra, 2014).

It is clear from the Table 1.3 that male members in farm family are most prone to suicide. Globally, death by suicide occurs about 1.8 times more often in males than females (Varnik, 2012). So far as age group distribution is concerned, it is mostly the middle aged farmers who committed suicides. Another important dimension of farmers' suicide in India is that, small and marginal farmers together account for 72.4 per cent of total number of farmers suicide (Economic Survey, 2014-2015). Therefore, so far as farm suicide is concerned, middle-aged, male small-and marginal farmers are the most vulnerable group.

Table -1.3 Age-group wise incidence of farmers' suicide in India during 2014

Sex/ Age	Below 18 years	18 years to below 30 years	30 years to below 60 years	60 years and above	Total
Male	35	1,131	3,480	532	5,178
Female	24	169	232	47	472
Total	59	1,300	3712	579	5,650
% Share	1.0%	23.0%	65.7%	10.2%	100%

Source: Economic Survey, GOI, 2014-15

In West Bengal the first incident of farmers' suicides came into headlines in 2005 when five villagers died due to starvation in a remote village (Amlasol) in West Midnapur district. It is worthwhile to mention that deaths due to starvation were not a new phenomenon, earlier 20 starvation deaths were also reported in this area but with little media attention. During that period the government often claimed the pride of implementing land reforms and achieving highest productivity in paddy in India. But data 'reveals that 1246 number of farmers have committed suicides during 2001. It is only due to the huge media coverage, the entire nation became acquainted with such miserable inhuman suffering and persistence of helplessness amongst the farming community in these areas.

Since 2011 it has become almost a daily occurrence. Several potato farmers have committed suicide particularly in Hooghly district, the 'tuber bowl' of the state. Potato farmers from Burdwan, Malda, Howrah, Bankura and Jalpaiguri district also took their lives under because of huge potato harvest that led to crash in price. The State government's decision to ban intra-state movement of potato further aggravated this problem though the government takes the stand that there has been no debt-related farmers' suicide in the state (Kar, 2015).

The plight of potato farmers in West Bengal was reported in most of the print and electronic media though there was differences in counting of deaths. All the leading news agencies including Zee New (Daily News & Analysis), The Hindu, First Post; India Today; and several other news agency repeatedly reported suicides

committed by potato farmers in West Bengal but government denied all such reports and political parties blamed each others. The local administration (The Joint BDO), however, said "it would have to be looked into whether loan was the cause of his death". The state government, however, has not admitted agrarian distress as the reason for even a single suicide in the state and that has been reflected in NCRB data. This is a matter of serious concern as the total suicide rate in West Bengal is higher than the national average. Ironically, the government of West Bengal has recently (2016) registered two deaths as farmers' suicide and the cause mentioned was depression due to problems arising out of currency crisis (demonetization).

1.2 Review of literature

Suicide among farmers is now an universal phenomenon and studies across the globe have identified farming as one of the most vulnerable livelihood in contrast to its popular image of peaceful and healthy way of life (Behera & Bhise, 2009). Farming today is a high stress profession and therefore farmers' suicide is a global phenomenon. Fraser et al.(2006), after a review of 52 scholarly publications, conclude that farming populations have the highest rates of suicide of any industry and there is growing evidence that those involved in farming are at higher risk of developing mental health problems.

Farmers' suicide rates differ significantly between countries and over time (Varnik, 2012). According to a recent study, farmers' suicide is a regional problem, not a country wide phenomenon in India (Basu et al, 2016). Barring few states like Maharashtra, Telengana, Madhya Pradesh, Chhattisgarh and Karnataka, the overall suicide rate is higher than the farmers suicide in most of the states. However, some other researchers are in the view that farm suicide data is grossly under reported in our country (Sainath, 2015). Too much public discourse on farmers' suicide has forced a debate on a different angle. Though there are haggling over the numbers, activists and the media are often raising questions about the nomenclature fixed by the NCRB for it thus directly or indirectly affecting the numbers of suicides of farmers, and contradict state governments' reports vis-a-vis that of the local media (Banik, 2015; Bera, 2015; Roshan, 2015). According to them, the NCRB data are collected from the local police station based on first information report (FIRs), and FIRs are often contested documents, not conclusive proof. Further, segregating agricultural labourers and tenant farmers from the definition of farmer is unwelcome strategy (Basu et al, 2016; Mishra, 2014; Sainath, 2014). Some researchers are in the opinion that for making the farm suicide data more

meaningful, suicides rates need to be normalized with appropriate population (Mishra, 2014).

In the available literature, various reasons have been offered to explain why farmers commit suicide. Factors responsible for farmers' suicide are many and it includes mental disorders, physical illness, drug misuse, psychological states, family problems, and social situations like discrimination and loss of reputations (Qin et al, 2003 and CDC, 2013). Activists and scholars have offered a number of reasons for farmer suicides in agrarian country like India, the most prominent being meteorological factors such as monsoon failure, unseasonal rains and hailstorm that can destroy crops, lack of irrigation and the lowering / poisoning of ground water, as well as economic factors like indebtedness, loss of livelihood, market failure, high costs of seeds, and high rates of interest charged by private money lenders (Schurman, 2013). Detrimental government policies may trigger suicidal tendencies.

A study conducted in 2014, found that there are three specific characteristics associated with high risk farmers: those that grow cash crops such as coffee and cotton; those with 'marginal' farms of less than one hectare; and those with debts with non-institutional sources. The study also found that the Indian states in which these three characteristics are most common had the highest suicide rates and also accounted for "almost 75% of the variability in state-level suicides (Kennedy and King, 2014).

Another study conducted in rural Vidarbha (Dongre and Deshmukh, 2012) identified a large number of causes that includes indebtedness, alcoholism, distress sale, stress and family responsibilities, poor irrigation, increased cost of cultivation, use of chemical fertilizer and crop failure. In a different study in the same region (Behere and Bhise, 2009) indebtedness (87%) and deterioration in the economic status (74%) were found to be major risk factors for suicide. So it can be concluded that, causes of farmers' suicides are very context specific. Indebtedness has been highlighted as the prime cause of farmers' suicide in many studies (Mishra, 2006; Ravi, 2015). Analysis the farmers' suicide data in Maharashtra indicates higher incidence of suicide among large farmers with higher amount of borrowings. Nearly 86 per cent of all farmers' suicide in Maharashtra is by the farmers with more than two acres of land (Ravi, 2015).

Poor agricultural income and absence of adequacy of non-farm avenues of income is the root of the malaise and the root could be discerned into two dimensions in agriculture (Despande, 2002). An agrarian crisis which threatens the livelihood of those dependent on agriculture, particularly the small and marginal farmers and

landless agricultural labourers; and an agricultural developmental crisis that manifest through a deceleration of productivity and declining profitability which can be attributed to the neglect in the designing of programmes and in the allocation of resources towards agriculture (Government of India, 2007 & Mishra, 2008). Mishra (2008) tried to reach out to Indian agricultural problem and crisis according to the chronology of the events and activities since mid nineties. The declining trend in value of output for agriculture coupled with fall in growth rate of production made a tremendous effect on a large section of the population dependent on agriculture itself. The declining size of land holdings and an increasing preponderance of marginal holding (63 per cent as per 2000-2001, Agricultural Census) set the farmers at bay as the source of income from non-farm sources become increasingly limited. A shortfall in resource allocation in agricultural sector has led to sluggish growth in public investment like irrigation and other related infrastructure. Non-availability of credit from formal sectors make the farmer depend on illegal money lenders sacrificing a greater chunk of their much toiled return from agricultural activities, leading to a 'debt trap'. The farmers are exposed to the uncertainties of the product as well as the factor markets as they fail to cope with the pace of changing technology and market conditions.

Till late nineties, issues related to declining farm income and farmers' suicide have not received much attention in the policy circle. The researchers and policy makers began to take a serious note only when farmers' suicide became a widespread phenomenon (Sainath, 2010). Government of India constituted an expert committee in 2007 under the Chairmanship of Prof. R. Radha Krishna to examine the nature and causes of widespread farm suicide in the country. The committee raised serious concerns to the issues like livelihood threat to those dependent on agriculture, particularly the small and marginal farmers and landless agricultural labourers; and agricultural developmental crisis that manifests through a deceleration of productivity as well as profitability in farming (Ravi, 2015).

Deshpande (2002) raised the concern about commercialization of agriculture and its impact of farmers' suicide. According to him commercialization of agriculture and diversification towards cash crops invited higher risk in agriculture and thus increased the farmer's distress in the state of Karnataka. Commercialization led to over-exploitation of land leading to 'inevitable externality of the added risk and soil degradation.' Nevertheless, requirement of cash for the package of inputs owing to commercialization increased significantly. The study also mentioned that non-availability of quality inputs and poor extension services added fuel to the uncertainty of production and pulling down expected return from farming. Loss of production leads to lowering farmers' income and fixing them in financial

distress. All these put pressure on farmers' economic base and recurrent pressure often trap them in debt.

Mohanty and Shroff (2004), based on their micro level analysis in three districts in Maharashtra, argued that though crop failure due to adverse weather, market imperfection and indebtedness cause hardship to the farmers, social factors are also responsible for farmer's suicides. Rao and Gopalappa (2004) emphasized on conserving water resources through participatory measures; and ensuring safety nets to protect poor farmers from climatic as well as market risks.

Referring the effectiveness of poverty alleviation policy measures, Vyas (2004) pointed out deprivation of rural poor from basic education and health services a cause for indebtedness. Jeromi (2007) argued that it is not the level of borrowings from formal financial institutions which was leading to suicides, but the borrowings from non-institutional sources money lenders, friends and relatives, etc. At the event of inability to repay such loans within stipulated time, huge tension builds with the borrowed farmers and his family, that even resorted to sale of land or in extreme cases suicides. In contrast, Tewari (2017) reported that in 80 percent cases of farmers' suicide, victims availed loan from banks, not from money lenders. According to him money lenders were more flexible than banks in rescheduling the loans. Basu et al (2016) opined that it is not just the source of borrowing rather bankruptcy and farming related questions top the issue on which most farmers killed themselves.

Several researchers are in the opinion that introduction of New Economic Policy is the major responsible factor for bringing agrarian crisis to the farmers (Mishra, 2006; Sridhar, 2006; Jeromi, 2007; Nancharai and Jugadesh, 2015). Globalization and market orientation of agricultural policies imposed a stress on the peasantry leading to suicide. Mitra and Shroff (2007) also linked agrarian distress to neo-liberal policy regime in the country. According to them globalization and economic liberalization led to loss of competitive of Indian cotton farming which is a major reason for farmers' suicide in Maharashtra. To many researchers, farmer's suicides have reached a higher level among the growers of cash crops like cotton, chillies, groundnut, rubber etc. Besides all these cash crops, cultivation of Bt cotton of late has drawn world-wide attention for inflicting huge losses. Though Narayanmoorthy and Kalamkar(2006) argued that the returns from Bt cotton crop is considerably higher than non –Bt cotton crop, they too suggested that seed company should invest some portion of their profit for extension services for sustaining the cultivation of this particular technology.

1.3 Main objectives and scope of the study

Farm suicides had become a politically damaging issue in India. The phenomenal increase in the suicides committed by the farmers, with the passage of time, is becoming a social catastrophe and a drag on the quality of life of the farmers and their dependents. Being a social menace and a very sensitive issue in India, therefore, it requires immediate attention and sympathy of the policymakers for coping over with the situation at the earliest. Realizing the gravity of the problem, during last decade, the Government appointed quite a few committees to inquire the real causes of farm suicide and to suggest ways to solve the problem. In 2006, government announced a relief package of Rs.110 billion for the farming sector that includes an ex gratia grant of Rs.100,000 to the victim's family. The package also provided debt relief to farmers and a rehabilitation package for the victims with the goal of mitigating the distress driven condition of farmers. Various state governments in India too have launched their own initiatives to help prevent farmer suicides. But such response and relief packages have generally been ineffective because they focused on credit and loan rather improving the livelihood and employment opportunities. At the same time, the very existence of social loss in terms of lives and dignity ostensibly has raised the issues of its effective implementation. Further, in spite of several media reports, the Government of West Bengal has not admitted agrarian distress as the reason for even a single suicide during 2014 & 2015. However, the aggregate suicide rate in West Bengal is quite high and higher than the national average. Rate of suicides per lakh population in West Bengal was 15.5 per cent, while the national average was 10.6 per cent in 2014. This raises question on the authenticity of official data on farmers' suicide in West Bengal. Under such circumstances, the present study is an attempt to develop an in-depth understanding of agrarian distress and farmers' suicide in the state of West Bengal and to make some policy suggestions to prevent such incidences in future. The specific objectives of the study are:

1. To analyze the incidence and spread of farmer suicides in selected states and to map the hot spots of suicide.
2. To study the socio-economic profile, cropping pattern and profitability of victim farm households.
3. To study the causes leading to farmers' suicides.
4. To recommend suitable policies to alleviate the incidence of farmers' suicides.

1.4 Data and methodology

The present study, confined to the state of West Bengal, is a part of an all India coordinated study being coordinated by ISEC, ADRTC Bangalore under the aegis of Ministry of Agriculture and Farmers Welfare, Government of India to have a glimpse on agrarian distress and farmers' suicides throughout the country and to prescribe policy measures to curb this social crisis. The present study is essentially based on primary data being collected by the Centre's Research team. The primary data is confined to those farmers who are cultivating either their own land or on leased in land at the time of field survey.

As there was no official records of farmers' suicide in West Bengal, snowball sampling technique was used to build up samples for our study. We started with some media reports about farmers' suicide in West Bengal and un-official correspondences with journalists as well as farmers organizations in the study area. Then following snowball sampling technique, a total of 30 victim's families were interviewed with the aid of a structured and pre-tested questionnaire covering two sections. The first section was designed to collect information about the family size, education level of the victim households, social group, cropping pattern, size of land holdings, sources of irrigation, cost and return from crop cultivation, etc. In the second section, information was collected regarding causes of farmers' suicides, extent of indebtedness, impact of suicide on family members, coping strategies, and suggestions to avert such incidences in future.

The survey was conducted in three districts of West Bengal viz. Burdwan, Birbhum, and North 24 Parganas. The spatial distribution of 30 victim households were as follows: 6 households from the district of Birbhum, 8 households from North 24 Parganas, and 16 households from the district of Burdwan.

The primary data were collected in the year 2015-16 and from the family members/relatives/neighbours of the victim. Simple statistical tools like mean, percentages, growth rates and very common farm efficiency measures like cropping pattern, cropping intensity, benefit-cost ratio, cost of cultivation, rankings, etc were used to fulfill the various objectives of the study.

1.5 Limitation of the study

The National Crime Records Bureau (NCRB) reported zero farmers' suicide in West Bengal. As there was no other official records of farmers' suicide in West Bengal, we relied on several un-official sources including media reports and un-official correspondences with journalists as well as farmers organizations in the

study area. However, due care was taken to check the authenticity of those reports and information. And only after verifying the information we approached the sample households for field survey. It is worthy to mention here that earlier we had also approached the Director, Government of West Bengal for information regarding farmers' suicides in the state but they too could not help us because of non-availability of data with them. Therefore as advised by the coordinating centre, we identified the suicide cases based on our own sources. There were ambiguities for few sample victims committed suicides regarding their status as farmers with land records on their own name. In some cases they were cultivating on leased in lands and in few cases the records were in the name of their ancestors but all the sample victims were cultivators. Because of non-availability of official data on farmers' suicide, we followed snowball sampling technique and drawn sample households from three districts only instead of representative sample from the entire state. Finally, the information provided by the respondents is based on the face to face interview with the bereaved family members and in some cases the responses were received from the close relatives or neighbours of the deceased victim.

1.6 Organization of the report

The present report is organised into five chapters. Chapter- I, which is the current chapter provides the background of the study, a brief review of literature, objectives and scope of the study, a detailed description of data and methodology along with limitations of the study. The second chapter essentially deals with the farmers' suicide scenario in the state of West Bengal. Analysis of primary data is presented in Chapter-III. Socio-economic profile of the sample households have been elaborately discussed in this chapter. Chapter-IV dealt with the causes and after effect of suicide in the study area, and finally conclusions and policy suggestions are covered in Chapter-V.

Introduction

As per the National Crime Records Bureau (NCRB) reports, which is the main official source of crime data in the country, there was not a single incidence of farmers' suicides in West Bengal in 2014 and 2015. However, there were several news and media reports claiming farmer's suicides in the state during the said period. Information received from the field survey conducted by the team of researchers under this study also supports incidence of farmers' suicide in the state. But when compared with other states, the magnitude of farmers' suicide in West Bengal is much less.

2.1 Spatio-temporal incidence of farmers' suicide

District wise distribution of farmers' suicides in the state of West Bengal gives an interesting picture. Table 2.1 reveals that the district Bardhaman (erstwhile Burdwan) alone contributes almost 64 percent of the total cases. The district is often called as 'Rice Bowl' of West Bengal and in terms of production and productivity of major agricultural crops (paddy, potato, vegetables, etc), this district is regarded as one of the leading districts in the state. Hoogly is another district, with second highest incidence of farmers' suicide, which is also agriculturally very developed in the state. In terms of agricultural development, the district of Hooghly is a close competitor to Bardhaman and is famous for potato cultivation with a fertile alluvium soil. Higher incidence of suicides in these agriculturally developed districts, points to farmers' plight and the state of affairs in agriculture and rural livelihoods in the state.

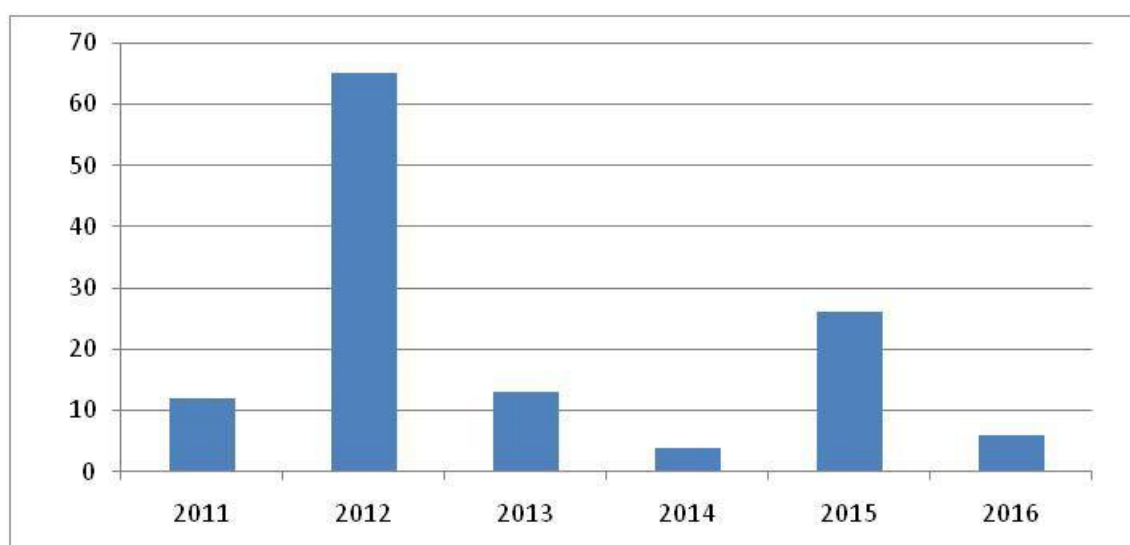
The number of farmers' suicides per lakh hectare of net sown area or gross cropped area, as well as per lakh farming families is highest in Bardhaman district followed by Hoogly. In contrast, the incidence of farmers' suicide is much lower than the State's average in backward districts like South 24 Parganas, Uttar Dinajpur, Jalpaigudi, Murshidabad, Purulia, and Bankura. Thus, it can be aptly said farmers have taken their lives mostly in agriculturally rich districts cultivating summer rice and potato, not in backward or mono cropped districts like Purulia, West Midnapur, Birbhum or Bankura. It is reported that most of the farmers committing suicide in these two districts are potato growers along with boro rice (summer rice) farmers, both of which requires substantial investment to purchase modern farm inputs.

Table - 2.1 District-wise details of farmers' suicide in the state (2011 to 2016)

Sl. No.	Name of district	No. of farmers' suicide	% to State total	No. of farmers' suicide per lakh hectare of NSA*	No. of farmers' suicide per lakh hectare of GCA*	No. of farmers' suicide per lakh farming families ⁺
1	Bankura	4	3.2	1.2	0.8	1.3
2	Bardhaman	80	63.5	17.6	10.0	23.4
3	Birbhum	6	4.8	1.8	1.1	2.6
4	Hooghly	10	7.9	4.7	1.9	3.9
5	Howrah	1	0.8	1.2	0.6	1.2
6	Jalpaigudi	3	2.4	0.9	0.5	1.4
7	Malda	5	4.0	2.2	1.1	2.0
8	Murshidabad	4	3.2	1.0	0.4	1.0
9	Nadia	1	0.8	0.3	0.1	0.3
10	24 Pargana (N)	4	3.2	1.7	0.9	1.4
11	24 Pargana (S)	1	0.8	0.3	0.2	0.3
12	Paschim Midnapur	6	4.8	1.2	0.6	1.0
13	Uttar Dnajpur	1	0.8	0.4	0.2	0.4
	West Bengal	126	100	2.4	1.3	2.5

Source: Author's own source **Note:** *NSA (Net sown area) & GCA (Gross cropped area) are average of 2011 to 2016, ⁺ Data for farming families relates to Census 2011

Figure 2.1 shows the trends in farmers' suicide in West Bengal since 2011. A total of 126 numbers of farmers have taken their lives between 2011 and 2016, although the data for the year 2016 is neither exhaustive nor complete. It is clear from the figure that there is a high ups and down in the incidence of suicides in the state with highest suicides in 2012.

Fig. 2.1 Trends in farmers' suicide in West Bengal since 2011

Data Source: Author's own source

Table 2.2 shows the year and district wise distribution farmers' committed suicides in the state of West Bengal. The data in the table reveals an interesting picture. It is seen that highest incidence of farmers' suicides have taken place in the year 2012 though the official publications did not report even a single farmers' suicide for that year. The district Birbhum records the most number of deaths in the current year i.e. 33.33 percent though numbers reported is only six suicides since 2011. The district North 24 Paraganas has lowest incidence of farmers' suicides. After Birbhum and West Midnapur the District of Malda has higher incidence followed by Bankura and Mursidabad. While drafting this report, a leading Bengali Daily (Ananda Bazar Patrika, dated 17/01/2017) reported another suicide by a potato farmer in Jalpaiguri district. The deceased farmer committed suicide after consuming poison, fearing huge loss of his crop due to pest infestation.

The season wise pattern of farmers' suicide in West Bengal is represented by Fig. 2.2. It is evident from the Fig.-2.2 that highest incidences of farmers' suicide was during Rabi, i.e., during the period of potato harvest. Almost 56 percent of total suicide cases took place during this time indicating thereby that the suicides may have happened due to low returns from rabi crops i.e., potato. This is followed by Summer season when farmers grew summer paddy another risk crop that required substantial investment in purchasing farm inputs.

Fig.-2.2 Season wise incidence of farmers' suicides in the state

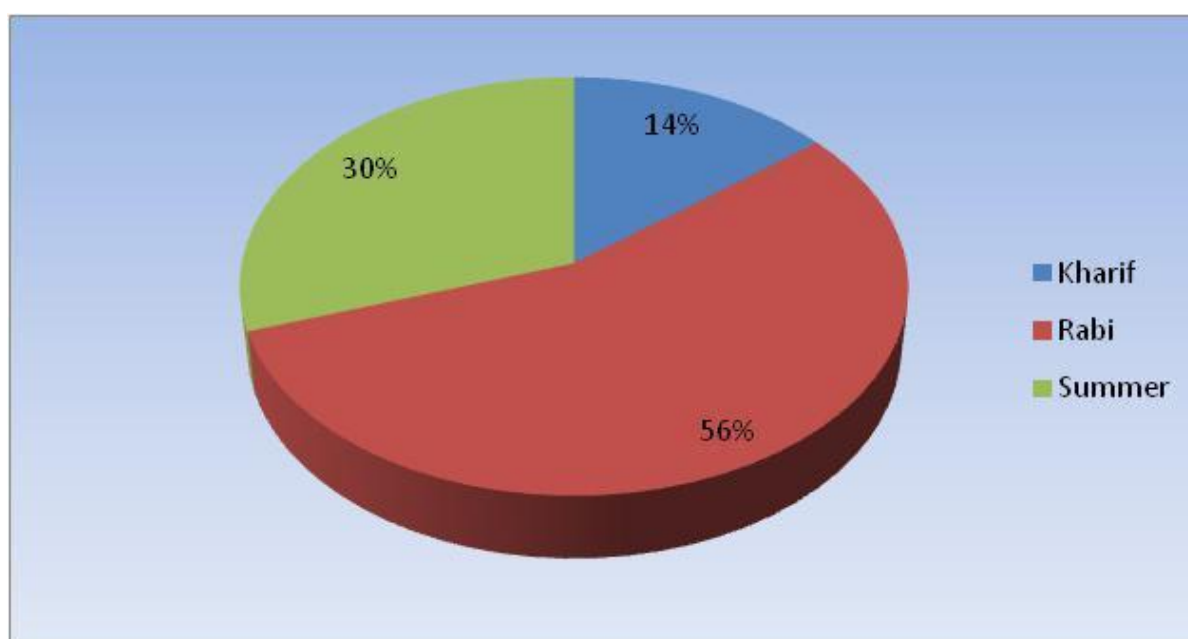


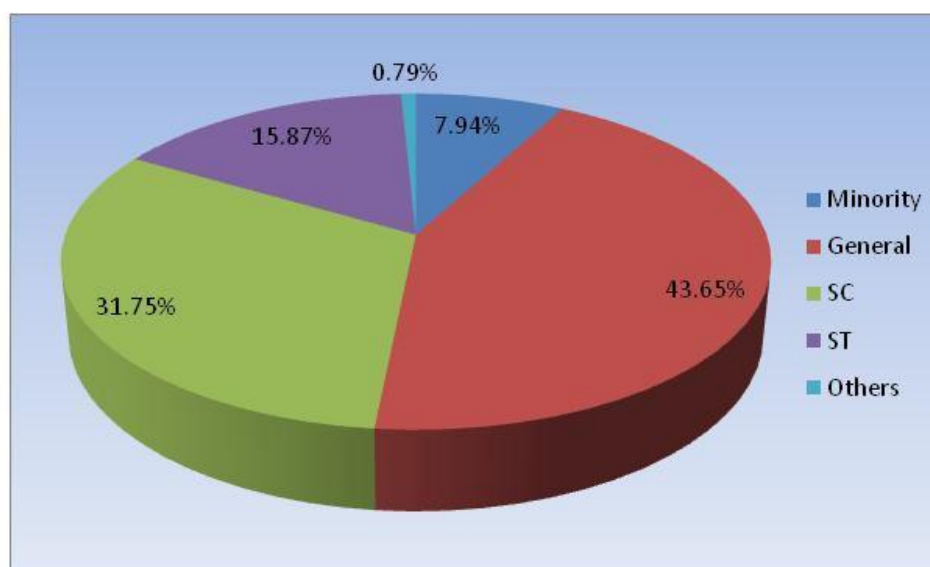
Table - 2.2 Year-wise and district wise distribution of farmers committed suicides

Districts	Farmers committed suicide													
	2011		2012		2013		2014		2015		2016		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Bankura	1	8.3	1	1.5	0	0.0	0	0.0	2	7.7	0	0.0	4	3.2
Bardhaman	10	83.3	46	70.8	10	76.9	3	75.0	9	34.6	2	33.3	80	63.5
Birbhum	0	0.0	2	3.1	0	0.0	0	0.0	2	7.7	2	33.3	6	4.8
Hooghly	0	0.0	5	7.7	1	7.7	0	0.0	4	15.4	0	0.0	10	7.9
Howrah	0	0.0	1	1.5	0	0.0	0	0.0	0	0.0	0	0.0	1	0.8
Jalpaigudi	1	8.3	0	0.0	0	0.0	1	25.0	1	3.8	0	0.0	3	2.4
Malda	0	0.0	3	4.6	0	0.0	0	0.0	2	7.7	0	0.0	5	4.0
Murshidabad	0	0.0	3	4.6	1	7.7	0	0.0	0	0.0	0	0.0	4	3.2
Nadia	0	0.0	0	0.0	1	7.7	0	0.0	0	0.0	0	0.0	1	0.8
24 Pargana (N)	0	0.0	2	3.1	0	0.0	0	0.0	0	0.0	2	33.3	4	3.2
24 Pargana (S)	0	0.0	1	1.5	0	0.0	0	0.0	0	0.0	0	0.0	1	0.8
Paschim Midnapur	0	0.0	0	0.0	0	0.0	0	0.0	6	23.1	0	0.0	6	4.8
Uttar Dinajpur	0	0.0	1	1.5	0	0.0	0	0.0	0	0.0	0	0.0	1	0.8
Total	12	100.0	65	100.0	13	100.0	4	100.0	26	100.0	6	100.0	126	100.0

2.2 Socio-economic characteristics of farmers committed suicide

Though it is not justifiable to segregate human lives in terms of religion and caste, yet for the sake of academic discourse and statistical analysis, caste religion wise distribution of deceased farmers are presented in Fig. 2.3. A perusal of the figure reveals that incidence of farm suicide is there across the castes and religions. Out of 126 victims, nearly 8 percent (10 in numbers) belongs to the minority groups and 44 percent belonged to the general caste category. The respective percentage figure for scheduled caste and scheduled tribe are 32 and 16, respectively.

Fig. 2.3 Distribution of victim farmers according to caste and religion



2.3 Summary of the chapter

Though the state of West Bengal has no authenticated data for farmers' suicides even in NCRB sources, a detailed analysis of statistics related to farm suicides in the state reveals the following:

- There are incidences of farmers' suicide in the state but the rate of farmers' suicide is very low as compared to other states.
- Most of the farm suicides took place in agriculturally developed districts of Burdwan and Hoogly.
- Majority of the victims in West Bengal are either potato farmers or summer rice growers.

An attempt is made in this chapter to analyze the primary data collected from the sample households in the study area. It is worth to mention here that, due to non-availability of official records on farmers' suicide in the state during the period under consideration, investigators had to depend on a number of un-official sources to reach to the victim families. To meet the objectives of the study, an elaborative and well structured questionnaire was prepared to collect information on various aspects of victim's families, particularly on socio-economic profile of the victims and their families; cropping patterns and irrigation sources; and details about income, expenditures and borrowings by the victims.

3.1 Socio-economic profile of the victim

Socio-economic profile of the sample farmers committed suicide is presented in Table 3.1. It is evident from the table that out of 30 victims selected in this study, as high as 28 were male farmers. As far as the social status is concerned, half of the victims (15 out of 30) belonged to scheduled caste and scheduled tribe categories. The respective share for the general category and other backward categories are 23.3 and 26.7 percentage, respectively. All the victims barring one belonged to Hindu religions, in spite of the fact that there is considerable number of Muslim farmers in the study area. Eighteen farmers, i.e. 60 per cent of the total sample, were within the age group between 31 yrs to 60 years whereas 36.7 percent victims belonged to the age group of less than 30. Only one farmer among the 30 victims was over 60 years of age.

Majority of the victims were found (86.7 percent) and performed arranged marriage (83.3 percent) outside the relatives (86.7 percent). Out of 30 farmers, 23 have committed suicide within the residence or residential area or periphery. Only 16.7 per cent of them have committed suicide outside residential complex or periphery and mostly in the farm houses. From the respondents of the victims' families, 46.7 per cent are their wives or sons or daughters and in 53.3 per cent of cases we have received information from the victim's brothers or sisters or neighbours.

The majority of the farmers committed suicides by either consuming poison (53.3 percent) or hanging (40 percent). Only one victim (female) finished her life by self immolation. As far as educational standard is concerned almost 23 per cent of the victim farmers were illiterate. Only one of them achieved degree/diploma. Almost 40 percent of the farmers learnt up to primary or middle level while one third of victims received education up to matriculation level.

Table - 3.1 Socio-economic profile of victims

Particulars		
Total number of victim households surveyed: (Numbers)		30 (100.0)
Type of respondents (% to total sample)	1.Wives/Sons/Daughters	14 (46.7)
	2.Brothers/Sisters/ others	16 (53.3)
Gender (% to total sample)	1.Male	28 (93.3)
	2.Female	2 (6.7)
Social status (% to total sample)	1.SC	13 (43.3)
	2.ST	2 (6.7)
	3.OBC	8 (26.7)
	4.General	7 (23.3)
Religion (% to total sample)	1.Hindu	29 (96.7)
	2.Muslim	1 (3.3)
	3.Christian	0 (0.0)
	4.Others	0 (0.0)
Age group (% to total sample)	1.Upto 30 years	11 (36.7)
	2.Between 31 to 60 years	18 (60.0)
	3.Above 60 years	1 (3.3)
Years of schooling (% to total sample)	1.Illiterate	7 (23.3)
	2.Primary (4 years)	9 (30.0)
	3.Middle (7 years)	3 (10.0)
	4.Matriculation/secondary (10 years)	10 (33.3)
	5.Higher secondary (12 years)	0 (0.0)
	6.Degree/Diploma (15 years)	1 (3.3)
	7.Above Degree (Above 15 years)	0 (0.0)
Marital status (% to total sample)	1.Married	26 (86.7)
	2.Un Married	4 (13.3)
Type of marriage (% to total sample)	1.Arranged	25 (83.3)
	2.Love	1 (3.3)
	3.Not Applicable	4 (13.3)
Married to whom (% to total sample)	1.Within relatives	0 (0.0)
	2.Outside relatives	26 (86.7)
	3. Not Applicable	4 (13.3)
Heirs of the victim (Avg. No. to total sample)	1.Sons	29 (96.7)
	2.Daughters	1 (3.3)
Victims who had parents and had brothers and sisters (% to total sample)	1.Only Mother	2 (6.7)
	2.Only Father	1 (3.3)
	3.Both mother and father	9 (30.0)
	4.Brothers, sisters, & others	18 (60.0)
Method of suicide (% to total Sample)	1.Poison consumption	16 (53.3)
	2.Hanging	12 (40.0)
	3.Jumping into river / well	0 (0.0)
	4. Current shock	0 (0.0)
	5. Self immolation	2 (6.7)
	6. Railway Track	0 (0.0)
	7. Others	0 (0.0)
Place of suicide (% to total sample)	1.House	23 (76.7)
	2.Farm	5 (16.7)
	3. Lodge / Hotel	0 (0.0)
	4. Others	2 (6.6)

Source: Primary Survey. *Figures in parenthesis indicate percentages

3.2 Socio-economic profile of victim's family

Table 3.2 provides a comprehensive picture about the socio-economic profile of the victim households. It is clear from the table that farming was the main source of occupation for all the victims, refuting thereby the claim of zero farmers' suicide in the state. More than half of the victim's families have had a joint family structure 56.7 percent), and 43.3 per cent had nuclear family. In contrast to northern or western India, all the sample families are located within the villages.

Table - 3.2 Socio-economic profile of victims' family

Particulars			
Existing household size: (Average numbers)		3.83	
Households depending on farming as a main occupation (% to total sample)		30 (100.0)	
Family type (% to total sample)		1.Joint	17 (56.7)
		2.Nuclear	13 (43.3)
Location of the households (% to total sample)		1.Within the village	30 (100.0)
		2.In their own farm	0 (0.0)
Age group of family members (% to total sample)		1.Adult Males (>15 yrs)	44 (38.3)
		2.Adult Females (>15 yrs)	52 (45.2)
		3.Children (<15 yrs)	19 (16.5)
Years of schooling of family members (% to total sample)		1.Illiterate	35 (30.4)
		2.Primary (4 years)	24 (20.8)
		3.Middle (7 years)	15 (13.0)
		4.Matriculation/secondary (10 years)	26 (22.6)
		5.Higher secondary (12 years)	9 (7.8)
		6.Degree/Diploma (15 years)	6 (5.2)
		7.Above Degree (Above 15 years)	0 (0.0)
Farm Size	% of area to holdings of sample	1. Landless	0.0 (0.0)
		2.Marginal (0.1 to 2.5 ac)	9.95 (26.9)
		3.Small (2.51 to 5 ac)	21.65 (58.6)
		4.Medium (5.1 to 10 ac)	5.33 (14.4)
		5.Large (10.1 and above)	0.0 (0.0)
	% of holdings to total sample	1. Landless	11 (36.7)
		1.Marginal (0.1 to 2.5 ac)	12 (40.0)
		2.Small (2.51 to 5 ac)	6 (20.0)
		3.Medium (5.1 to 10 ac)	1 (3.3)
		4.Large (10.1 and above)	0 (0.0)
	Average operational holding size (acres Per HH)		1.23

Source: Primary Survey *Figures in parenthesis indicate percentages

Family composition of the victim's family in term of age group is interesting. Adult females have higher percentage (45.2) than the adult males (38.2). The literacy pattern of family members is not much different from that of victims. Within the victim's family members almost 30 per cent are illiterate and 21 percent have education upto

primary level only. A meager 5 per cent of them have degree/ diploma and another 30 per cent completed either secondary or higher secondary level.

It is observed from the table that majority of the sample households belongs to landless (36.7) or small and marginal category (60 percent). It is also observed that almost 59 per cent of land holdings belongs to small farmer where as percentage of area under marginal and medium farms are 26.9 and 14.4, respectively. There was not a single farm with area more than 10 acres. Meanwhile it is worth mentioning that average size of operational holding is only 1.23 acres.

3.3 Characteristics of operational holdings

Characteristics of operational holdings of the sample households are presented in Table 3.3. The table shows that the average net operated area (NOA) among the sample household was only 1.23 acres which is not at all an economic holding to provide livelihood support to a family. The average gross cropped area too is just 1.61 acres indicating thereby a cropping intensity of just 130.71 percent. Such a low level of cropping intensity was not expected in an area with 87 per cent irrigation facilities. This point to the fact that farming is not at all a profitable enterprise and failed to encourage the farmers to adopt intensive farming practices.

Table - 3.3 Characteristics of operational holdings (acre/HH)

Sl. No.	Land details	Irrigated	Un-irrigated	Total
1	Total owned land	1.29	0.15	1.45
2	Un-cultivated land	0.00	0.00	0.00
3	Cultivated land (Own)	1.29	0.15	1.45
4	Leased-in land	0.40	0.00	0.40
5	Leased-out land	0.62	0.00	0.62
6	Net Operated Area(1-2+4-5)*	1.08	0.15	1.23
7	Gross Cropped Area	1.45	0.15	1.61
8	Gross Irrigated Area	1.45	-	1.45
9	Net Irrigated Area	1.08	-	1.08
10	Cropping Intensity (%)	135.14	100.00	130.71
11	Irrigation Intensity (%)	135.14	-	135.14

Source: Primary Survey Note: * NOA has been calculated irrespective of seasonal lease-in / lease-out

3.4 Sources of irrigation

In the preceding tabular analysis, we have seen that almost 87 per cent of the net operated area is irrigated. Prima facie, that can reveal a rosy picture about the development of irrigation network in the study area. But if we examine the sources of irrigation in the sample farms, it can be seen that tube-well is the only source of

irrigation for almost 95 per cent of the area irrigated. Tube well irrigation (in this case shallow tube well/ sub-mersible well) is quite costly as compared to canal irrigation or other sources of irrigation which is practically non-existent in the study area. Too much dependence on tube-well irrigation not only impacts the profitability of farming enterprises but also damaging for the sustainability of this resource.

Table - 3.4 Source-wise distribution of irrigated area

Sl.No.	Sources of irrigation	Total area in acres (Per HH)	Percent to total sample area
1	Open well	0.00	0.00
2	Tube well	1.02	94.86
3	Tank	0.02	2.05
4	Canal	0.03	3.09
5	Others	0.00	0.00
	Total Irrigated Area	1.08	100.00

Source: Primary Survey

3.5 Leasing of land

Leasing in or leasing out is not very common among the sample households. Occurrence of seasonal leasing in or leasing out land in the study area mostly take place in irrigated land and that too for cultivation of summer paddy. During summer paddy (Boro) the landless farmers and the small and marginal farmers lease in land from their neighbours. Cultivation of summer paddy require more labour and the leasee farmers provide family labour. The rental value for land leasing is around Rs. 2000/- per acres (Table 3.5).

Table - 3.5 Rental value of leased-in and leased-out land

Sl. No.	Particulars		Irrigated	Un-irrigated
A	Leased - in	Area in acres per HH	0.40	-
		Rental value paid per acre in Rs.	1733	-
B	Leased-out	Area in acres per HH	0.62	-
		Rental value received per acre in Rs.	2133	-

Source: Primary Survey

3.6 Source of income and items of expenditure

Agriculture is the main source of livelihood in the study area. Details of the income and expenditures of the sample households are presented in Table 3.6. The table reveals that crop farming and allied activities like agricultural wage earning is the main source of livelihood among the sample households too. These two sources, together, accounts for

two-third of the farm household incomes in the study area. Petty business and other livelihood options like wage earning (casual) too contributes a significant portion in their income but surprisingly income from sources like dairying, animal rearing, backyard poultry keeping, fisheries, or even from salary is negligible. Another important feature in the study area is that the poor farmers are forced to diversify their livelihood options mostly towards wage earning as a way of supplementing income from agriculture. Agriculture alone failed to provide income required to meet the family obligations. The table also reveals that majority of the sample households (70 to 100 per cent) are in the opinion that income from farming enterprises have reduces substantially while consumption expenditures increased over the last five years.

Table - 3.6 Net income and expenditure during 2015-16

Sl. No.	Source	Amount in Rs./HH	% to total	% of HH to total sample who mentioned that the income has reduced or expenditure increased
A. INCOME				
1	Agriculture	21462	41.76	70.00
2	Agriculture wage income	12833	24.97	33.33
3	Dairy and animal husbandry	659	1.28	3.33
4	Poultry	33	0.06	0.00
5	Service (salary and pension)	1667	3.24	0.00
7	Self business	6667	12.97	10.00
8	Miscellaneous	8070	15.70	3.33
	Total income (A)	51391	100.00	-
B. CONSUMPTION EXPENDITURE				
1	Food	34257	63.61	96.67
2	Non-food	19600	36.39	100.00
	Total expenditure (B)	53857	100.00	-
C	Surplus / Deficit (+ / -) A- B	- 2466		
D	% of expenditure to income	104.80		

Source: Primary Survey

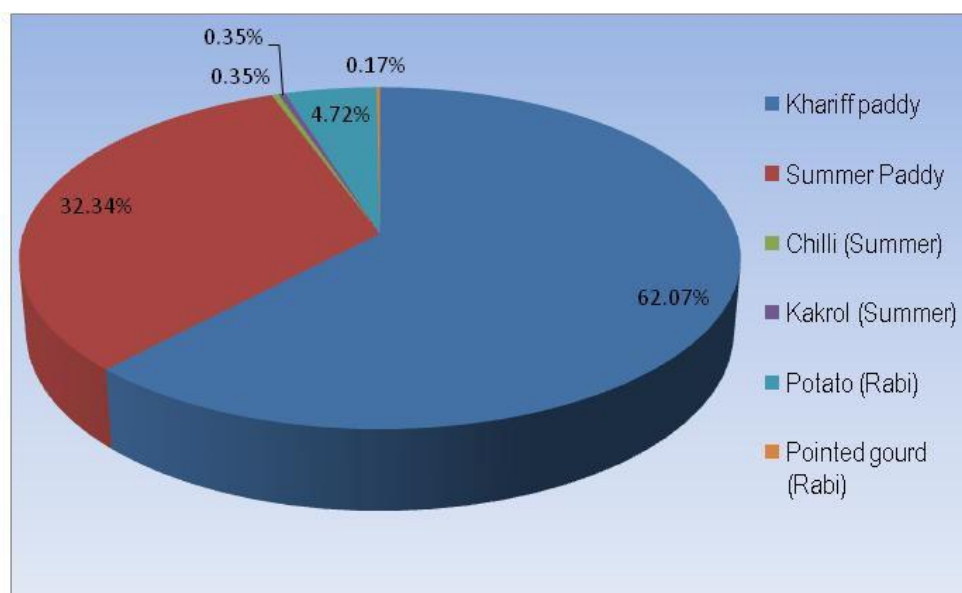
A close perusal of table 3.6 also reveals that the average annual incomes for the victim families were too low (Rs. 51391/ year/household) and lower than even the consumption expenditure. The income of the sample households are so low that even expenditure towards food alone take away two-third of their income. Non-food expenses are mostly towards health care and on social obligations like marriage of daughters. So it is clear that economic distress is the root cause of farm suicide in this area though manifested by many other causes. Apart from very low income, increased cost of cultivation and rising cost of living particularly towards health care and meeting

social obligations, pushed the farmers to borrow. Social obligations to spend more is increasing while inability to fulfill the obligation adds to their mental stress. Nearly 90% of the sample households required to spend more than they earned pushing them to debt. Unable to cope with rising gap between income and expenditure, many poor farmers choose to end their lives.

3.7 Cropping pattern and returns from cultivation.

A season wise cropping patterns among the sample household is given in Table 3.7. The table provides a very dismal picture. A perusal of the table indicates that not only the average cultivated area is very low but also the cropping pattern during kharif season in the study area is mostly stagnant with mono-cropping of kharif rice only. During rabi and summer, some amount of crop diversification is there towards potato, summer paddy, and vegetables but those too are insignificant. The cropping pattern in the study area, as evident from the Fig. 3.1, is mostly dominated by paddy alone during kharif season; potato during rabi season; and boro rice during summer season. Another important feature is that, earlier in the study area, potato was cultivated mainly for self consumption. But at present potato is cultivated mainly for the market as a cash crop. But the price received by the farmers for potato, and even for vegetables and paddy too, was very low due to sudden fall in harvest price that led to distress sale in the midst of absence of procurement mechanism in the state. Further, most of the victim farmers suffered huge loss in summer paddy cultivation due to hailstorm coupled with low price for their produce.

Fig.-3.1 Cropping pattern among the sample households



All these resulted into very low net income per household. The real income from traditional crop cultivation has declined in spite of the fact that the prices of agricultural crops have increased modestly. But at the same time the costs and risks involved in agricultural production has also increased because of rise in input prices as well as stagnant yield and price instability at post-harvest period. In this situation the only way to survive for the rural households is either to adopt additional sources of livelihoods or changing cropping pattern.

Economic distress among the farmers, due to low income from farming enterprises is very common and it is difficult for rural households to rely on agriculture alone for survival. Mere crop cultivation is not capable of supplying basic needs for subsistence.

3.8 Details of credit availed

During discussion of a sensitive issue like farmers' suicides, availability of credit both from institutional and non-institutional sources, as well as farmers' indebtedness in terms of amount and number (frequency) play a very crucial role. As discussed in earlier, farmers are forced to borrow not only to meet the cost of cultivation but also to meet the cost of living and other social obligations like marriage of daughters, etc. It is revealed from the Table 3.8 that farmers in this study area took loan from both institutional and non-institutional sources. Institutional sources comprise of co-operative societies/banks and commercial banks including regional rural bank (RRB). Out of 30 sample households, as high as 19 forced to take loan 10 for farming purposes and 9 for non-farming purposes.

The non-institutional sources of credit are primarily village money-lenders, land-lords, traders, commission agent, and relatives. Meanwhile, it is worth mentioning that the sample farmers usually did not depend on single source of credit, as in many case they had to depend on multiple sources of credit, institutional and non-institutional. Table 3.8 shows that the victim farmers took more loans from the non-institutional sources (money lenders) than from institutional sources like commercial bank or RRBs, or co-operatives and forced to pay an exorbitant rate of interest from 27 per cent per annum to as high as 81 per cent per annum. Only four households, out of 30 could avail loan from institutional sources.

Table - 3.7 Season-wise cropping pattern

S l. N o.	Name of the crop	No. of HH	Cultivated area (acre/HH)	% of cultivated area to TCA	Production (Qtls/HH)	Yield (Qtl/Acre)	Average price received (Rs./Qtl)	Gross returns (Rs./acre)	Total cost of cultivation (All HH)	Cost of cultivation (Rs./acre)	Net returns (Rs./acre)	Net returns (Rs./HH)
Kharif												
A	Kharif Paddy	13 (43.33)	2.30	100.00	30.68	13.31	1169	15537	269950	9028	6508	15041
	Total	-	2.30	100.00	-	-	-	-	-	-	-	-
Rabi												
A	Potato	9 (30.00)	0.25	96.61	8.53	33.67	797	26821	43350	19013	7808	1978
B	Pointed gourd	1 (3.33)	0.08	2.29	10.15	126.87	800	101500	3800	47500	54000	4320
	Total	-	0.33	100.00	-	-	-	-	-	-	-	-
Summer												
A	Summer Paddy	14 (46.67)	1.11	97.97	14.36	12.88	1024	13180	172550	11054	2126	2371
B	Chilli	1 (3.33)	0.17	1.06	4.00	23.53	1875	44118	1875	11029	33088	7500
C	Kankrol	1 (3.33)	0.17	1.06	10.50	61.76	1485	91721	6000	35294	56426	9593
	Total	-	1.45	100.00	-	-	-	-	-	-	-	-
Annual												
	Grand Total	30 (100.00)	1.61	100.00	-	-	-	-	-	-	-	6795

Source: Primary Survey

Note: Figures in parenthesis are percentage in that variable

Table - 3.8 Details on credit availed by the sample households

Sl. No	Source of credit	No. of borrowing HH	Purpose of borrowing				Outstanding amount (Rs./HH)	Average interest rate (%)	% of borrowing HH paid the installments as per schedule
			Farming purposes		Non-farming purposes				
			No. of HH	Amount borrowed (Rs./HH)	No. of HH	Amount borrowed (Rs./HH)			
Institutional									
A	Co-op. Society/bank	2 (6.67)	2 (100.00)	13000	0 (0.00)	0	0	9.00	1 (50.00)
B	Commercial bank including RRBs	2 (6.67)	1 (50.00)	180000	1 (50.00)	560000	0	10.00	1 (50.00)
Non-institutional									
A	Landlord	3 (10.00)	1 (33.33)	40000	2 (66.67)	8500	50000	26.67	1 (33.33)
B	Money lenders	12 (40.00)	7 (58.33)	31571	5 (41.67)	77000	23750	80.83	9 (75.00)
C	Traders and commission agents	2 (6.67)	2 (100.00)	40000	0 (0.00)	0	35000	80.00	1 (50.00)
D	Relatives and friends	3 (10.00)	1 (33.33)	25000	2 (66.67)	25000	21667	40.00	2 (66.67)
Grand Total*		19 (63.33)	10 (52.63)	40857	9 (47.39)	101200	22895	57.00	12 (63.16)

Source: Primary Survey Note: * Grand total may not be equal direct addition, as one can avail multiple sources of credit.

3.9 Summary of the chapter

The socio-economic profile of the victims and their families reveals the followings:

- There are specific characteristics associated with farmers committed suicides, like those who are socially and economically backward; those who are marginal farmers; those with limited livelihood options; those growing crops like potato or summer rice; and those with borrowed a lot from non-institutional sources. The farmers with whom these characteristics are most common are the most vulnerable.
- Lack of alternative livelihood options (other than wage earning within agriculture) for the poor is a major constraint in the study area leading to economic distress of the farmers.
- Income realized by the crop farmers in the study area is very low. Apart from very low income, increased cost of cultivation and rising cost of living particularly towards health care and meeting social obligations pushed the farmers to borrow.
- Lack of availability of institutional credit forced the farmers to borrow from money lenders and other non-institutional sources at a very high rate of interest

Suicide is a social menace and the reasons behind farmers' suicide cannot be discussed in isolation. In most of the cases there are several inter-related reasons behind suicides and therefore analysis of socio-economic and socio-psychological factors are equally important along with analysis of farming related agro-climatic and policy related causes. This chapter deals with exploring, as perceived by the family member of the victims, various reasons behind farmers' suicides in the state of West Bengal and what the farmers expect from the policy makers to do to avert such events in future.

There are several causes for the farmers themselves taking their own lives. In the available literature, various reasons have been offered to explain why farmers commit suicide. As per the data available from National Crime Records Bureau, at national level, the prominent causes recognized for farmers' suicides are 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), respectively (NCRB, 2015). Though there is debate about the main cause for suicide but normally there are multiple causes for a suicide. It is generally a complex interplay of social, economic, psychological, political, and environmental factors.

An attempt has been made in this study to identify various social and psychological factors including familial coherence, mingling of the victim with family members/relatives/friends, along with economic and farming related factors. The respondents were asked about their perception regarding the possible causes of suicide, symptoms observed with the victims before committing suicides, and impact of suicide on their socio-economic functioning. They were also asked to suggest few possible measures or interventions needed to avert such happenings in future.

4.1 Symptoms observed by the family members

It is believed that someone who is thinking about committing suicide, usually give some hints or clues to those who are around them, particularly to the family members or friends. A critical observation of such symptoms and taking immediate steps therein, may prevent suicides to a great extent. The general perception is that before committing suicide, a person is alienated from his family members or often create a cause unto himself for making it justifiably clear to his/her present set of mind that he /she is of no use to his/her family or the community he/she belongs to. Distancing himself/herself from the social or financial affairs at least for a significant time period is not a spontaneous or spurt of the moment decision. That clearly signifies the victim's mental

agony for the time period though in some cases a sudden and violent emotional outburst may cause for suicide and that relates to the wild or obscure part of human functional behavior.

Symptoms observed by family members, with the deceased, before suicide is presented in Table-4.1. It signifies that 70 per cent of the respondents reported that the victim had a familial bondage with his family members and 53.3 per cent of the respondents have reported that the victim maintained social relationship with his/her community so far. Interestingly over 50 per cent of the victims did not mingle with his/her neighbours and 40 per cent reported the irregular consumption of food by the victim. Changes in sleeping pattern and their mingling with the neighbours/friends turned out to be the most important symptom displayed by the victims before committing suicides. Significantly, around 73 per cent of the respondents reported that the victims did not sleep adequately during nights, prior to committing suicide. It shows that inspite of normal behavior with the family members or neighbours victims committed suicides were under unbearable tension and a state of helplessness.

Table - 4.1 Symptoms observed by family members before suicide (% of HH)

Sl. No	Symptoms enquired	% Answered yes to total
1	Was victim mingling with his/her own family member?	70.0
2	Was victim mingling with his/her own community?	53.3
3	Was victim mingling with his/her neighbouring households /friends?	46.7
4	Was victim consuming food regularly?	60.0
5	Was victim sleeping adequately during nights?	26.7

Source: Primary Survey

4.2 Causes of suicide

Besides economic factors, a number of social factors and farming related factors are responsible for the suicide of the farmers. All the perceived causes of suicides are reported in the following sub-sections.

4.2.1 Social causes of suicides

Information regarding the social causes was taken simultaneously from the victim households as well as from the neighbouring households. This exercise was made to verify the authenticity of information provided by the sources by deliberate cross-checking. Though there are some differences, information as received from two separate groups were more or less same. The difference was mainly in their perception

about the magnitude of the factor and perception may differ since they are based on experiences. The social causes of suicide includes poverty related issues, property related disputes, marriage related issues including dowry related issues and extra marital relation, family problems, drug abuse and alcoholic addiction, fall in social reputation, etc and is presented in Table 4.2.

Table - 4.2 Social causes of suicide

Sl. No	Causes	% of HH to total sample who answered Yes	
		As per respondent	As per neighbors /relatives/friends
1	Poverty		
a	APL	20.0	0.0
b	BPL	66.7	36.7
c	AAY	26.7	23.3
2	Property dispute		
a	Partition of land	0.0	3.3
b	Partition of house	0.0	0.0
c	Partition of income	3.3	0.0
d	Partition of jewelleryes	0.0	0.0
3	Marriage related issues		
a	Dowry related issues	0.0	0.0
b	Extra marital affairs	10.0	13.3
c	Divorce	0.0	0.0
d	Love failure	10.0	3.3
e	Others (Family Trouble)	3.3	3.3
4	Family problems/Commitments		
a	Social functions,	20.0	0.0
b	Daughter's marriage	13.3	0.0
c	Son's marriage	0.0	0.0
d	Frequent quarrel among the family members	50.0	10.0
e	Others (Frequent purchase of lottery tickets)	0.0	3.3
5	Illness	40.0	13.3
6	Drug abuse/Alcoholic addiction	20.0	20.0
7	Gambling/betting /chit fund	0.0	3.3
8	Fall in social reputation	50.0	3.3

Source: Primary Survey

Table 4.2 indicates that according to the respondents, poverty, critical illness, drug abuse/alcoholism, fall in social reputation and disputes in the family driven the victims to commit suicides. A close perusal of the table indicates poverty as the root cause of suicide as two-third of respondents under BPL category cited poverty as the main reason. And in many cases frequent quarrels among the family members were due to

economic distress and resulted tension. Critical illness of the victims or his/her family members is another reason driven them to take this drastic step. Drug addiction is another serious but very common problem among the poor farmers in West Bengal. Extra-marital affairs and loss of social reputation are other important social cause of suicides among the victim farmers in the study area.

4.2.2 Farming related causes of suicides

Very often, official records, does not mention farming as the cause of farmers' suicide in India. According to Dr. Arvind Panagoria, farm-related reasons get cited only approximately 25 percent of the time as reasons for suicide (Panagoria, 2008). Like social and family related causes, farming related causes are given in Table-4.3. The important causes are categorized as failure of crops under segments of infestation of pest and diseases, lack of irrigational facilities including natural calamities. In 'others' segments, farmers (respondents) views/opinions regarding desire of higher output, higher price, waiving of credit and crop insurance were considered as important. The reference periods for taking information were 2014-2015 and 2015-2016 respectively.

It is evident from the table that expectation of higher prices, higher outputs, loan waiving by the government, and higher institutional credit was very high among the victims. It is also evident from the Table 4.3 that in 2015-16 almost 97 per cent of the respondents expected waiving of loans. Such expectations were very natural on the part of victim or the respondents but the same can not be considered as the main driving force towards committing suicide by the farmers. Sixty per cent of the respondents in both of these reference periods viewed non-fulfillment of anticipation of higher output and better price of their produce among the causes of suicide. Inability to sell output was considered as another important cause (higher in the reference period 2014-15 than 2015-16). It is seen that 46.7 per cent of the respondents, within the reference period 2014-15, reported crop failure due to pest and diseases factor as the major cause of suicide. Forty three percent of them stated lack of irrigation facilities might have added fuel to their misery. Seventy three per cent of the respondent households in both the year lack of extension services provided by the government sources as a cause of farm suicide. Flood and hailstorm was another natural disaster in 2014-15, which added to the misery of the farmers. Quarrel between the victim and others were found to be a major cause for 10 to 37 per cent of suicides. Farmers' perception regarding lack of extension services and poor delivery of government support schemes, as a cause of farm suicide is very high. For them, the benefit from the government package goes to middle level or large scale farmers only. Poor and needy farmers hardly receives any benefit

because of their entry barrier in terms of knowledge about such schemes and their position in the village power structure.

Table - 4.3 Farming related causes of suicides

Sl. No	Causes	% HH to total sample who answered Yes	
		2014-15	2015-16
1	Failure of crops		
a.	Pests & diseases	46.7	6.7
b.	Lack of access to irrigation water	43.3	6.7
c.	Others	3.3	13.3
2	Due to natural calamities		
a.	Failure of rainfall/drought	10.0	0.0
b.	Accidental fire	3.3	0.0
c.	Others (Flood & hailstorm)	36.6	0.0
3	Inability to sell output	46.7	13.3
4	Well failures	13.3	6.7
5	Quarrel between the victim & others	36.7	10.0
6	Expectations of:		
a.	Higher output	60.0	60.0
b.	Higher prices	60.0	60.0
c.	Loan waiving	46.7	96.7
d.	Institutional credit	33.3	10.0
e.	Non-institutional credit	46.7	46.7
7	Lack of extension services & delivery mechanisms	73.3	73.3
8	Delayed payment/ payment in installments for the sold output	43.3	0.0

Source: Primary Survey

4.2.3. Indebtedness related causes of suicides

As already discussed earlier, indebtedness is the most important reason for the suicide of the farmers. Causes of indebtedness are not state or region specific. Most of the researchers hold the views that pressure of indebtedness both from institutional and non-institutional sources has been responsible for distress and suicide. As viewed from Table-4.4, almost 60 per cent of the respondent households reported that pressure from non-institutional sources (mainly moneylenders) might have led to suicides. Borrowings from the non-institutional sources in both of the year were very common. Around 67 per cent of the respondents reported that non-institutional sources were the important source of meeting their exigencies for agricultural and non-agricultural needs. These sources issued verbal/written notice to the defaulters for the repayment of loans and on

account of this, victims had come under financial stress and tension. In spite of that the poor farmers rely on money lenders for borrowing. Arranging a loan from the bank is a lengthy procedure and banks avoid giving loans to small farmers who have poor capacity to repay the loan. Hence, these poor small farmers go to private money lenders who verbally negotiate the business.

Table - 4.4 Indebtedness related causes of suicides

Sl.No	Causes	Percent of HH to total sample who answered Yes	
		2014-15	2015-16
1	Indebtedness – Institutional & Non-Institutional		
a.	Due to crop loan	50.0	50.0
b.	Due to farm equipment loan	16.7	0.0
c.	Due to non-agricultural loan	43.3	56.7
d.	Due to non-institutional loan	66.7	66.7
2	Due to pressure from institutional sources	10.0	10.0
3	Due to pressure from non-institutional sources (mainly money lenders)	60.0	56.7

Source: Primary Survey

Most of the farmers committed suicides are summer paddy and potato farmers. Both potato and summer rice requires high investment and also involves higher risk. The victim farmers took loans to cultivate their land from private money lenders at an exorbitant rate of interest. But they did not get any remunerative price for the product which left them indebted without any prospect of repaying these loans. Driven to desperation and social embarrassment, they took their own lives.

4.2.4 Ranking of the causes

The ranking of social, farming and indebtedness related causes of suicide are presented in the table. These rankings are based on responses received at time of survey but for the average of year 2014-15 and 2015-16.. All the causes of suicides were classified in to three groups; namely social, farming and indebtedness related causes and presented in Table 4.5. Besides economic factors (including indebtedness and poverty related issues), socio-psychological factors with farming related causes were ranked by the family members themselves according to the priority of the causes of suicides. Although, these attributes are not uniform in all of the causes, but from this ranking a discernible segregation among all causes may focus on the issues we are trying to reach out.

It is seen from the Table-4.5 that almost 87 per cent of the respondents reported poverty as the root causes of committing suicide by the farmer himself. Poor access to extension services and benefits from government schemes is reported to be a major cause by 73.3 per cent respondents. Fifty three per cent of the respondents viewed indebtedness and pressure from the non-institutional sources (mainly money lenders) as the main cause of these unfortunate incidents. Among other causes, family problems, crop failure, expectation of higher prices coupled with inability to sell the farm outputs, fall in social reputation, critical illness, drug abuse/alcoholic addiction, natural calamities, etc. are the other important causes.

Table - 4.5 Ranking of the social, farming and indebtedness related causes of suicides

Type of Causes	Sl. No	Specific Causes	Ranking
Social causes	1	Poverty	I (86.7)
	2	Property dispute	VIII (3.3)
	3	Marriage related issues	VI (20.0)
	4	Family problems & social obligations	II (56.7)
	5	Illness	IV (33.3)
	6	Drug abuse/Alcoholic addiction	V (23.3)
	7	Gambling/betting /chit fund	VII (6.7)
	8	Fall in social reputation	III (43.3)
Farming related causes	1	Failure of crop/s	II (50.0)
	2	Due to natural calamities	III (36.7)
	3	Inability to sell output	V (30.0)
	4	Well failures	VIII (10.3)
	5	Quarrel between the victim & others	VII (16.7)
	6	Expectations of higher price	IV (33.3)
	7	Poor access to extension services & government schemes	I (73.3)
	8	Delayed payment/ payment in installments for output sold	VI (21.0)
Indebtedness related causes	1	Indebtedness – Institutional & Non-Institutional	II (46.7)
	2	Due to pressure from institutional sources	III (10.0)
	3	Due to pressure from non-institutional sources (mainly money lenders)	I (53.3)

Source: Primary Survey Note: Figures in parentheses indicate proportion of respondents answered in affirmative as one of the causes.

In a nutshell, there is very little livelihood option in the study area other than farming and wage earning. The sample households were pursuing farming and wage earning out of compulsion. Further, income realized by the crop farmers in the study area was very low, with which they could not even meet their basic requirements for survival. Apart from very low income, increased cost of cultivation and rising cost of living particularly

towards health care and meeting social obligations, pushed the farmers to borrow. At the same time social obligations to spend more is increasing while inability to fulfill the obligation adds to their mental stress. Due to bumper crop, there has been a sharp decline in the harvest price of potato and paddy. Several farmers even could not get the price half of its cost of production. All these were responsible for farmers' suicide in the study area.

4.3 Impact of suicides on family members

An understanding about the impact of farm suicide on the victim's family is important as the social, economic and psychological consequence of a suicide is enormous. It's not just that a precious life has ended; it is also a tragedy of epic proportions for the people left behind. Suicide of the farmers makes a serious blow on the living conditions and socio-economic setup of the surviving members of the victim's family. Generally a family has multi-dimensional activities and aspirations for its survival and a sudden demise of its main earning member brings a tremendous impact on its terminal and perpetual status of the wellbeing (if it exists at all) of the family. Generally, the victim's family members adopt several measures to cope with the situation and to mitigate the negative impacts over a period of time. However, this is particularly difficult in poor and nuclear families. In a nuclear family its impact is immeasurable. Survivors often blame themselves for their seeming shortcomings, or words that were exchanged with the deceased as a family members or relatives. Since suicide occurs within families, the focus on the aftermath of suicide is an important step to determine exactly how to help survivors.

Table - 4.6 Impact of suicide on victims family

Sl.No	After effect	Percent of HH to total sample who answered Yes
1	Agricultural activities stopped	63.3
2	Left no earning member	56.7
3	Schooling of the children stopped	13.3
4	Land sold	3.3
5	House sold	3.3
6	Other assets sold (Ornaments & Livestock)	10.0
7	Postponement of son/daughter's marriage	3.3
8	Family member/s fell seriously ill	30.0
9	Family member/s under depression	80.0
10	Insecurity in the family	76.7
11	Others	20.0

Source: Primary Survey

A perusal of Table-4.6 reveals that after the sudden and sad demise of the farmers, 80 per cent of the victim's family member are placed under severe financial and psychological depression. Seventy seven per cent of them suffered a jolt in terms of security and in 57 per cent of the cases the families lie in severe economically distressed condition, as non existence of the sole earning member (not in all cases) of the family creates a void on the financial and social base. So far as tangible impacts are concerned, in as high as 63 per cent cases, the family members were forced to stop agricultural activities and in 13 per cent cases stopped sending their children to school. Many family members (30 per cent) fell seriously ill and forced to sale their productive assets for their survival. In some cases, even they required postpone the marriage of their daughter.

Some of the representative photographs of sample farmers are given in Fig.-4.1 (along with a description of figures in Table 4.8) to highlight the incidence as well as impact of suicides on the victims family. The worst affected and most vulnerable are the poor and marginal farmers who lost their only earning member. Not only they are worst hit, but also their capacity to recover from the shock is very low. Such an extreme situation traps the poor in a situation to sell off productive assets that become difficult to retrieve and thereby reinforcing the poverty almost permanently.

4.4 Suggestions from families to avert suicide in future.

Information about sufferers' perception about the causes of suicides and possible ways to avert such happenings in future are important for 'planning and designing effective policy interventions by the policy makers. Remedial measures suggested by the close relations of the victim's family are presented in Table-4.7. The responses, as evident from the table, are quite encouraging. Though indebtedness and expectation about waiving farm loan was the most cited reason for farmers' suicide, creation of employment opportunities and farm income related issues topped the list of suggestions given by the respondents to avert farm suicides in future. Almost every respondent are in agreement that if family income can be ensured, most of the suicides will not be there. And for this, they suggested creation of increased employment opportunities under the existing National Rural Employment Guarantee Scheme (73.3 percent) as well as through livelihood diversification in non-farm sector (56.7 per cent). In 66.7 per cent of cases, the respondents suggested measures to reduce distress sale through increasing Minimum Support Price scheme and through development of improved procurement system. Waiving of farm loan during difficult years was also suggested by nearly half of the respondents. Many respondents (43.3 per cent) also believe that the

problem of farmers' suicide cannot be solved only through technological or economic developments. What is also needed is social and spiritual interventions so that farmers realise that suicide is not the way out. Panchayats should take a leading role in providing such counselling to the depressed or suffered persons. Respondents were also stressed the need for social campaign to increase awareness regarding ill effect of drug addiction/alcoholism (33.3 per cent), and ensuring adequate medical facilities affordable to the rural poor (33.3 percent). Other important suggestions given by the respondents are: increased provision for institutional credit with easy access for poor farmers, development of basic health facilities in the villages, effective measures to transfer the benefits of government schemes to the poor; and easy claim settlement procedure for crop failure under Pradhan Mantri Fasal Bima Yojana. The respondents also suggested the need for developing rural infrastructures particularly minor irrigation facilities, cold storages and starting custom hiring centres for farm machineries in the study area. Custom hiring facilities will enable the small and marginal farmers to reap the benefits of farm mechanization which otherwise they are unable to afford. This will also reduce the cost of cultivation to a great extent.

Table - 4.7: Suggestions to prevent the suicides in future

Sl. No	Suggestion	% of HH to total sample who suggested
1	Increased employment opportunity under NREGS	73.3
2	Price protection for farm output (Higher MSP and timely procurements by the government)	66.7
3	Creation of non-farm employment opportunity	56.7
4	Waiving crop loan to reduce economic distress	46.7
5	Social counseling at Panchayat	43.3
6	Social awareness about the ill effect of drug addiction/alcoholism	36.7
7	Provision for crop loan from banks	33.3
8	Adequate medical facilities for poor farmers	33.3
9	Inclusive access to the extension services and government schemes for farming	26.7
10	Easy claim settlement for crop insurance/crop failure	23.3
11	Development of irrigation facilities & cold storages	20.0
12	Custom hiring services for farm machineries	16.7

Source: Primary Survey

4.5 Summary of chapter

Perception of family members of the deceased, about various causes of suicide, impact of such suicide on the family, and their suggestions to avert such events in future are summarized as follows:

- The causes of farmers' suicide are many. It is a complex interplay of social, economic, agro-climatic, political and psychological factors.
- Changes in sleeping pattern and their mingling with the neighbours/friends turned out to be the most important symptom displayed by the victims before committing suicides.
- Farmers perceived economic distress, indebtedness, drug addiction, poor prices for farm produce, rising cost of cultivation, pressure from private money lenders, increasing social obligations and cost of living, and crop failure as the specific reasons for farmers' suicides.
- Farmers' suicide in the study area made a devastating loss to the family of the victims and posed a large number of challenges that includes psychological depression, loss of livelihood, and increased financial and social insecurity.
- The worst affected and most vulnerable are the poor and marginal farmers who lost their only earning member. Not only they are worst hit, but also their capacity to recover from the shock is very low. Such an extreme situation traps the poor in a situation to sell off productive assets that become difficult to retrieve and thereby reinforcing the poverty almost permanently.
- Creation of employment opportunities and farm income related issues topped the list of suggestions given by the respondents to avert farm suicides in future.
- Suggestion was also given to increase the scope and coverage of institutional credit and crop insurance to small farmers.
- Few farmers are losing faith in the government delivery mechanisms and support measures due to its failure to design and implement pro-poor policies as benefits of government schemes are not reaching the actual poor.

Fig. 4.1 Some representative photographs of the sample households



Picture -1 Aggrieved family members of a victim



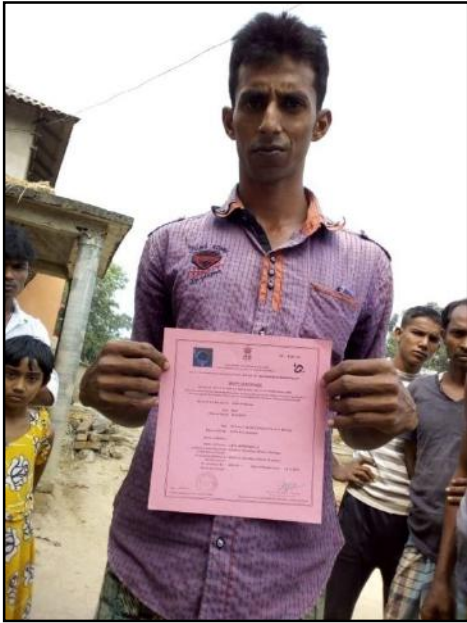
Picture -2 Son & wife of another victim



Picture –3 Loan agreement of the deceased



Picture -4 Wife of a deceased farmer



Picture –5 Brother of the deceased



Picture –6 Helpless father of another victim



Picture –7 Neighbours narrating the incidence



Picture –8 Elder brother and sister in law of a victim



Picture –9 Helpless daughter of the victim



Picture –10 Family members of a victim



Picture –11 Elder brother of another deceased



Picture –12 Helpless parents of the victim who could not repay the loan



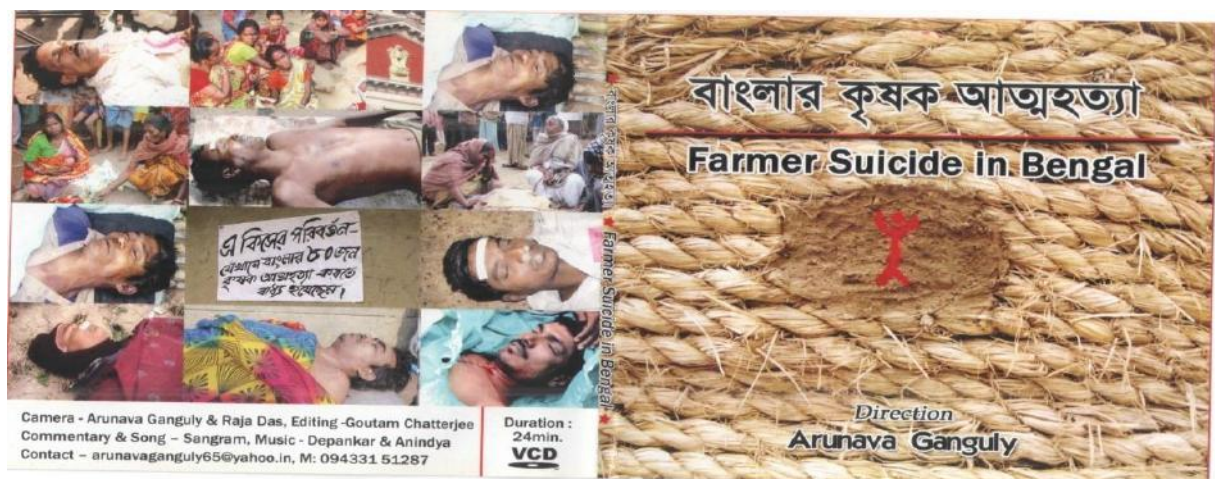
Picture –13 Mother of the deceased potato farmer



Picture –14 Wife and elder son of the victim



Picture –15 Ruined family members of the deceased



Picture –16 A documentary on Farmers' Suicide in West Bengal

Table 4.8 Brief description of the photographs

Picture no.	Name of the Respondent/s	Relation with the Victim	Name of the Deceased	Address	Date of Occurrence	Method of Suicide	Cause of Death
1.	Sandhya Sarkar and Biswajit Sarkar	Aunt, Cousin (brother)	Mrinal Srakar S/o Mihir Sarkar	Vill – Santra, P.O – Basapara G.P – Thupsara, P.S – Nanoor Dist. – Birbhum	24/03/2015	Consuming Poison	Failed to repay huge loan taken from Govt. and Private Sources
2.	Maharani Mal	Wife & Son	Areendra Mal	Vill – Neema Pakhuria, P.O – Do G.P – Sahapur, P.S – Mayureswar Dist. – Birbhum	Dec, 2012	Hanging	Crop loss, failed to repay Loan taken from Private Sources
3 & 14.	Tulshi Karmakar and Buddhadev Karmakar	Wife & Elder Son	Jaganath Karmakar	Vill – Baliara, P.O – Do G.P – Daskalgram-II, P.S – Nanoor Dist. – Birbhum	10/04/2015	Consuming Poison	Loan taken from Private Sources (Picture-3 shows mortgage loan Agreement as farmer)
4.	Suchona Pal	Wife	Dalim Pal	Vill – Natungam, P.O – Do G.P – Bamunara, P.S – Bhatar Dist. – Burdwan	08/05/2012	Consuming Poison	Loan taken from Private Sources
5.	Babar Molla	Brother	Safar Molla	Vill – Kaltikuri, P.O – Do G.P – Nityanandapur, P.S – Bhatar Dist. – Burdwan	18/11/2011	Consuming Poison	Crop loss, Loan & Family dispute Got red notice for failing installments.
6.	Krishna Chandra Pal	Father	Barun Pal	Vill – Belenda, P.O – Do G.P – Bhatar, Dist. – Burdwan	20/12/2011	Consuming Poison	Crop loss, Loan & Family dispute
7 & 15.	Mukti Das, Jagi Das, and neighbour	Father-in-law & Neighbours	Rumi Das W/o Gadadhar Das	Vill – Kulai, P.O – Do P.S – Katugram-I, Dist. – Burdwan	April, 2016	Consuming Poison	Family dispute, Private Loan & Husband's illness
8.	Haradhan Das & his wife	Elder Brother & Sister-in law	Dinu Das	Vill – Bhatkul, P.O – Do G.P – Belgona, P.S – Bhatar Dist. – Burdwan	29/03/2012	Consuming Poison	Crop failure, Unable to repay loan
9.	Shrabani Mete	Daughter	Brindaban Mete	Vill – Jhillu, P.O & G.P – Do P.S – Mangalkote, Dist. – Burdwan	April, 2010	Hanging	Poverty, family dispute
10.	Mithun Majhi & family members	Brother	Narugopal Majhi	Vill – Majigram, P.O & GP – Do P.S – Mangalkote, Dist. – Burdwan	24/04/2012	Hanging	Crop failure, loan & father's illness
11.	Ratan Konai	Elder Brother	Satan Konai	Vill – Narayanghati, P.O – Do G.P – Kundola, P.S – Mayresswar Dist. – Birbhum	Sept., 2012	Consuming Poison	Loan taken from Co-operative bank and got red notice for failing installments.
12.	Rakhakar Maji and Ranu Maji	Father and Mother	Subho Maji	Vill – Majigram, P.O & G.P – Do P.S – Mangalkote, Dist. – Burdwan	19/05/2012	Consuming Poison	Crop loss, father's illness, family dispute and loan from private sources
13.	Sadhana Mondal	Mother	Sanjoy Mondal	Vill – Paligram, P.O – Do G.P – Do, P.S – Mangalkote Dist. – Burdwan	12/03/2015	Consuming Poison	Sudden fall in potato price, loan taken from private sources.
16	Arunava Ganguly	Freelance journalist	Provided details of 80 farm suicide in West Bengal	arunavaganguly65@yahoo.in M: 09433151287	2012-2016	Several	The documentary is used as an important source to identify the victims and draw samples.

Conclusions and Policy Suggestions

Suicide of farmers in India is a sensitive issue and needs much attention and sympathy of the policymakers. Rising incidence of farm suicides is becoming a social catastrophe and a drag on the quality of life of the farmers and their dependents. The present study is an attempt to look into the agrarian distress and farmers' suicides in the state of West Bengal and to prescribe policy measures to curb this social menace. The study is confined to only three districts of West Bengal viz., Burdwan, Birbhum, and North 24 Pargana.

Though the incidence of farm suicide is very low in West Bengal, but the claim of zero suicide in the state is far from reality. Farmers in West Bengal are facing a large number of challenges that includes dwindling farm income, increasing cost of farm inputs (seed, pesticide, and labour); defunct marketing system (inadequate procurement and distress sale); poor rural infrastructure (irrigation, storage, healthcare), and irrelevant compensation schemes. Most of the sample farmers (more than 80%) in the study area received little support from government schemes like insurance, procurements, support prices and subsidies (like PMFBY, MSP, KCC, etc).

There are specific characteristics associated with farmers committed suicides, like those growing crops like potato or summer rice; those with very small size of land; those having no alternative sources of livelihood; those with long term illness; and those with borrowed a lot from non-institutional sources. The farmers with whom these three characteristics are most common had the highest suicide rates.

Low and insufficient income from the farming enterprises; increasing cost of living and lack of non-farm employment opportunities are the root cause of farmers' suicide though manifested by indebtedness and family related problems. Therefore, along with short term relief measures like compensation and waiving agricultural loans, a long term policy direction is needed to promote agri-business and sustainable rural livelihood diversification. And for this increased public investment in rural infrastructure is a must (Roy, 2006). The gradual withdrawal of government from agricultural research, education, extension services and neglect of cooperative institutions has led to a collapse of the enabling institutional structure for poor farmers.

Climate change and years of neglect have put enormous stress on the natural resources like land and water. Therefore, agricultural research and development must focus on developing new technologies which are less resource-intensive and environment-friendly in the long run. A cropping pattern highly skewed towards potato (in rabi season) and paddy (during kharif & summer) in the study area is a

risky phenomenon. Due to bumper crop, there has been a sharp decline in the harvest price of both potato and paddy in the state. Several farmers even could not get the price half of its cost of production.

As far as the issue of farm suicide is concerned, the first and foremost aim should be to have a long-term strategy to reduce the farm distress instead of giving doles and reliefs which are a diversion from development as it does not add to the creation of livelihood opportunities. For example, drought proofing should be accorded priority over drought relief because skewed policies have led to the decay of traditional water harvesting structures in the state. However, poor maintenance and neglect has resulted in those ponds being ineffective

5.1 Conclusions

The main conclusions that can be drawn from the findings of this study are as follows:

- The incidence of farmers' suicide in West Bengal is much lower as compared to several other states like Maharashtra, Telengana, Madhya Pradesh, Chhattisgarh, Karnataka, Andhra Pradesh, etc. But the claim of 'zero farm suicides' as reported in the official documents does not fit well with the ground realities. The reliability of the NCRB data has been questioned because they are based on reports made to the police rather than independent enquiries.
- The maximum number of farmers' suicides is there in Burdwan and Hoogly districts of West Bengal, both considered as agriculturally developed districts. This is mainly because farmers in these districts are growing cash crops like potato and summer paddy. The level of crop diversification and livelihood diversification among the poor farmers is very low.
- Most of the farmers committed suicides are summer paddy and potato farmers who took loans to cultivate their land. But they did not get any remunerative price for their product which left them indebted without any prospect of repaying these loans. Driven to desperation and social embarrassment, they took their own lives.
- Male farmers from socially and economically backward classes are most prone to commit suicide. Because of their poor resource base and dwindling income from farming, without alternative livelihood options, they are the most vulnerable section among the farming communities.

- Farming is not at all a profitable enterprise for most of farmers in the study area due to very small size of farms and rising costs of farm inputs. The prices of major agricultural inputs have increased by 10.7% to 55.5% during 2005-06 to 2011-12 but there was no commensurate increase in the harvest price rather a bumper harvest led to crash in harvest prices. Therefore insufficient income from farming coupled with greater risks from market forces failed to encourage the farmers to adopt intensive farming practices.
- Agriculture in West Bengal is gradually transforming into agri-business. Therefore, because of the changing nature of agricultural production, what is required is to insulate the farmers not only from the climatic risk and vulnerability but also from risks in the price and output market.
- Economic distress is the root cause of farmers' suicide in West Bengal and the rural poor need employment and income for their survival. A large number of farmers who committed suicide were indebted and much of that indebtedness was due to low income vis-a-vis high cost of living.
- Lack of alternative livelihood options (other than wage earning within agriculture) for the poor is a major constraint in the study area leading to economic distress of the farmers.
- Too much reliance on non-institutional sources of credit is a possible threat for the farming community in West Bengal. In the absence of institutionalized finance, the farmers normally resort to borrowing from private money lenders. Significantly, the loans taken from the private moneylenders are difficult to repay due to high interest rates.
- Another important matter of concern is wide spread drug addiction and alcoholism among the poor farmers. Though this is not only confined to the farmers alone, but poor and illiterate villagers are more prone to this, and in many times it escalates tension in the family.
- Farmers' suicide in the study area made a devastating loss to the family of the victims and posed a large number of challenges that includes psychological depression, loss of livelihood, and increased financial and social insecurity.
- Immediate efforts are needed to augment the income of farmers suffering from natural as well as market failure. Researchers have already made it a point that the ambition of doubling the farmer's income in the next six years

may be difficult to achieve but is not impossible (Chand, 2017; Narayanamoorthy, 2017).

5.2 Policy recommendations

The policy recommendation that flows from the above discussion calls for an integrated approach with multi-pronged emphasis on the larger crisis. Past agricultural policies, driven exclusively by food self-sufficiency related goals, offered limited scope to farm income and rural livelihood related concerns which has become prime concern now while pursuing sustainable agricultural development. Therefore, the present farm crisis in West Bengal, calls for a multi-pronged solution that addresses major challenges faced by the farmers. No single programme can help to reduce economic distress of farmers on a continuous basis.

- Policies towards risk management in agriculture should not only address the climatic risks but also risks associated with distress sale, sudden decline in price, farm credit, and income uncertainties. Development of rural infrastructure, particularly, irrigation, storage and cold chain system will help to mitigate risk to a large extent but this should go hand in hand with creating non-farm employment opportunities in the rural areas.
- Since economic distress is the root cause of farmers' suicides in West Bengal, mere emphasis on short term mitigation measures like compensation for crop loss or waiving loans will not help. What is needed is a comprehensive package for long-term development of agricultural infrastructure and well as creating non-farm employment opportunities in the rural areas. Therefore a more pro-active role in promoting agri-business activities and creating rural infrastructure, particularly cold-storage and minor irrigation is necessary to address farmer suicide in West Bengal.
- Farmers should be encouraged for growing more diversified alternative remunerative cash crops rather sticking to the traditional ideas of cultivating only potato (during rabi season) or boro paddy (during summer). Small and marginal farmers need to be encouraged to grow other remunerative crops like off-season vegetables, pulses and oilseeds.
- Sustainable rural livelihood diversification is a must. Government must take measures to increase non-farm employment opportunities in the rural areas. For this, both short term and long term interventions are needed to alleviate the farmers out of economic distress. Strengthening livelihood programmes

such as the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) and promoting agri-business activities holds the key.

- In order to protect the potato farmers from distress sale, the government must think of introducing some innovative procurement mechanisms (on the lines of MSP) for potato for their mid-day meal schemes and ICDS schemes. Timely intervention by the government for procurement, storage and export of potato can reduce the distress sale to a great extent.
- At the same time, as suggested by the National Commission on Farmers, higher MSP for all the major agricultural crops including paddy is very important. However, mere increase in MSP alone will not be sufficient unless there is commensurate improvement in the procurement infrastructure in the state which is very poor till date.
- Government must also ensure that the benefits from various schemes, targeted towards agriculture and rural development, actually reach the farmers. Proper care and adequate measures are needed while planning and implementing farmers welfare programmes like support price, procurement, crop insurance, crop loan, health insurance, etc so that the poor farmers does not face any entry barrier to take benefit from such schemes.
- Public awareness programme regarding the ill effects of drug addiction and alcoholism is necessary. For this counseling services and establishment of rehabilitation centre can be of great help. At the same time revamping rural health facilities, which is severely inadequate in West Bengal, is also necessary to avert farmers' suicide to a great extent.
- Finally, there is a need to improve the quality of farm suicide data. The claim of 'zero farm suicides' in West Bengal as reported in the official documents does not fits well with the ground realities. The NCRB compiles these information from police records but without verifying the claims made by the police stations. Therefore, some alternative checks must be there to counter under reporting of farm suicide cases by the states.

References

- Al Jazeera (2015). India's shocking farmer suicide epidemic, *www.aljazeera.com*, 18th May 2015.
- Banik, Nilanjan (2015). Seeds of farmer suicides, *The Financial Express*, May, 2015.
- Basu, D.; Das, D. and Misra, K. (2016). Farmer Suicides in India: Trends across major states, 1995-2011, *Economic and Political Weekly*, 51(21): 61-65.
- Behera, P. B. and Bhise, M. C. (2009). Farmers' suicide: Across culture, *Indian Journal of Psychiatry*, 51(4): 242-243.
- Bera, Sayantan (2015). Did the number of farmer suicides really halve last year?, *Livemint*, *www.livemint.com*, July 23, 2015.
- Centers for Disease Control and Prevention, (CDC) (2013). Suicide among adults aged 35-64 years--United States, 1999-2010, *Morbidity and mortality weekly report*, 62(17): 321-5.
- Chand, R. (2017). Doubling Farmers' Income, Presidential Address delivered at the 76th Annual Conference of Indian Society of Agricultural Economics, *Indian Journal of Agricultural Economics*, 72(1):1-23
- Chowdhury, S. (2012). Farmers' Suicides in West Bengal: A Preliminary Analysis, *Newsclick*, *http://newsclick.in*, 07 Mar 2012
- Deshpande, R.S. (2002). Suicide by Farmers in Karnataka: Agrarian Distress and Possible Alleviatory Steps, *Economic and Political Weekly*, 37(26): 2601-2610.
- Dongre and Deshmukh (2012). Farmers' suicides in the Vidarbha region of Maharashtra, India: a qualitative exploration of their causes, *Journal of Injury and Violence Research*, 4(1): 2-6
- Fraser, C. E.; Smith, K. B. and Judd, F. (2006) Farming and mental health problems and mental illness, *International Journal of Social Psychiatry*, 51(4):340-349
- Government of India (2015). *Economic Survey: 2014-15*, Ministry of Finance, Government of India.
- Kar, Pradip (2015). Potato Farmers' Suicides in West Bengal: A Preliminary Analysis, *www.sanhati.com/artical/13368*, April 22, 2015.
- Kennedy and King (2014). The political economy of farmers' suicides in India: indebted cash-crop farmers with marginal landholdings explain state-level variation in suicide rates, *Globalization and Health* 10(16):16.
- Kishore, Roshan (2017). Farmer suicides in India: Myth versus Realities, *Livemint*, *www.livemint.com*, May 17, 2017.
- Loiwal, Monogya (2012). Farmers'suicide on rise in Bengal; parties blame each other, *www.indiatoday.intoday.in.*, January 4, 2012.

- Mishra, S. (2008). Risks, Farmers' suicides and Agrarian Crisis India: Is There a Way Out?, *Indian Journal of Agricultural Economics*, 63 (21):38-54.
- Mishra, S. (2014). Farmers Suicides in India, 1995 -2012 : Measurement and interpretation, *Asia Research Centre, Working Paper* 62, pp.-25
- Mohanty, B. B. and Sharaff, S. (2004). Farmers' suicides in Maharashtra, *Economic and Political Weekly*, 39(52): 5599-5606.
- Nancharaiyah, G. and Jagadesh, G. (2015). Farmers' Suicides in Andhra Pradesh: An exploratory study, *Agricultural Situation in India*, LXXII (9): 29-43.
- Narayanmoorthy, A. (2017). Farm Income in India: Myths and Realities, *Indian Journal of Agricultural Economics*, 72(1):49-75.
- Narayanmoorthy, A. and Kalamkar, S. S. (2006). Is Bt Cotton Cultivation Economically Viable for Indian Farmers?-An Imperial Analysis, *Economic and Political Weekly*, 41(26): 2716-2724.
- NCRB (2014). *ADSI Report Annual – 2014*, National Crime Record Bureau, Ministry of Home Affairs, New Delhi, pp 242.
- NCRB (2015). *Accidental Death and Suicide in India: 2015 Statistics*, National Crime Record Bureau, Ministry of Home Affairs, New Delhi, pp. ii+468.
- Panagariya, A. (2008). India: The Emerging Giant, *Oxford University Press*, p. 153. ISBN 978-0195315035.
- Qin P, Agerbo E, Mortensen PB (2003). Suicide risk in relation to socioeconomic, demographic, psychiatric, and familial factors: a national register-based study of all suicides in Denmark, 1981–1997, *American Journal of Psychiatry*.160(4): 765–72.
- Rao, V.M., and Gopalappa, D.V. (2004). Agricultural Growth and Farmer Distress: Tentative Perspectives from Karnataka, *Economic and Political Weekly*, 39(52): 5591-5598.
- Ravi, S.(2015). India's suicide problem, *The Indian Express*, July 21 2015.
- Roy, B. C. and Pal, S. (2006). Investment, Agricultural Productivity and Rural Poverty in India: A State-Level Analysis, In: N. A. Mujumdar and Uma Kapila (Eds) *Indian Agriculture in the New Millennium: Changing Perceptions and Development Policy, Volume I*, Academic Foundation, New Delhi, pp. 398. (ISBN 81-7188-513-6)
- Rukmini, S. (2015). India's new farm suicides data : myths and problem, *The Hindu*, July 24 2015.
- Schurman, R. (2013), Shadow space: suicides and the predicament of rural India, *Journal of Peasant Studies*, 40(3), 597–601
- Sainath, P. (2010). Farm Suicides- A 12 Year Saga, *The Hindu*, January 25, 2010.
- Sainath, P. (2014). How states fudge the data on declining farmer suicides, www.rediff.com, August 01, 2014. URL: www.rediff.com/news/column/p-sainath

Sainath, P. (2015). The slaughter of suicide data, *Agrarian Crisis*, August 05, 2015, <https://psainath.org>

Singh, S. S. (2015). Bengal records highest rate of rise in suicides, *The Hindu*, July 23, 2015.

Surinder Sud (2009). The Changing Profile of Indian Agriculture, *Business Standard Books*, ISBN 978-8190573559, pp. 107–109

Tiwary, D. (2016). Farmer suicides up 40 per cent in a year, Karnataka shows sharpest spike, *The Indian Express*, August 19, 2016.

Tiwary, D.(2017). In 80% farmer suicides due to debt, loan from banks, not money lenders, *The Indian Express*, January 7, 2017.

Vaidyanathan, A. (2006). Farmers' Suicides and the Agrarian Crisis, *Economic and Political Weekly*, 41(36): 4009-4016

Värnik, P (2012). Suicide in the world, *International Journal of Environmental Research and Public Health*, 9(3):760–71.

Website Visited

www.firstpost.com – Potato farmer kills in West Bengal: 4th suicide in a fortnight

<http://en.wikipedia.org/wiki> - Farmer commits suicide in West Bengal; toll reaches to 12

www.firstpost.com – West Bengal farmer commits suicide as potato price drop

www.dnaindia.com –Farmer Commits Suicide in West Bengal: toll reaches to 12

www.firstpost.com – Bengal: Farmer's body found hanging in Burdwan; family, TMC call it suicide over demonetization

www.firstpost.com One more potato farmer suicide in West Bengal: toll mounts to 7

Appendices

Appendix - 1: Trends in Suicides by Sex in India, 1995-2012

Year	Farmers' Suicide				All Suicides			Farmer' Suicides as % of all Suicides, Persons
	Male	Female	Total	% of male in total	Male	Female	Total	
1995	8295	2425	10720	77.4	52357	36821	89178	12.0
1996	10897	2832	13729	79.4	51206	37035	88241	15.6
1997	11229	2393	13622	82.4	56281	39548	95829	14.2
1998	12986	3029	16015	81.1	61686	43027	104713	15.3
1999	13278	2804	16082	82.6	65488	45099	110587	14.5
2000	13501	3102	16603	81.3	66032	42561	108593	15.3
2001	13829	2586	16415	84.2	66314	42192	108506	15.1
2002	15308	2663	17971	85.2	69332	41085	110417	16.3
2003	14680	2463	17143	85.6	70068	40511	110579	15.5
2004	15929	2312	18241	87.3	72651	41046	113697	16.0
2005	14973	2158	17131	87.4	72916	40998	113914	15.0
2006	14664	2396	17060	86.0	75702	42410	118112	14.4
2007	14509	2123	16632	87.2	79295	43342	122637	13.6
2008	14145	2051	16196	87.3	80544	44473	125017	13.0
2009	14951	2417	17368	86.1	81471	45680	127151	13.7
2010	13592	2372	15964	85.1	87180	47419	134599	11.9
2011	12071	1956	14027	86.1	87839	47746	135585	10.3
2012	11951	1803	13754	86.9	88453	46992	135445	10.2
All years	240788	43885	284673	84.6	1284815	767985	2052800	13.9

Source: National Crime Records Bureau (NCRB) (Various Years).

Note: There is no farmers' suicides data for Tamil Nadu in 1995 and West Bengal in 2012 because profession-wise data was not provided. There is no suicides data for Jharkhand in 2003, as the published data are a repeat of 2002.

Appendix - II: Suicides Rates among Farmers and Non-Farmers (by Sex) in India, 1995 – 2012

(per lakh people)

Year	Male			Female		
	Farmers	Non-Farmers	Persons	Farmers	Non-Farmers	Persons
1995	9.7	12.6	12.5	5.9	9.6	9.5
1996	12.2	11.9	11.9	6.6	9.6	9.3
1997	12.7	12.9	12.9	5.6	10.2	9.7
1998	14.8	13.6	13.8	7.2	10.7	10.4
1999	15.3	14.2	14.4	6.7	11.1	10.6
2000	15.7	13.9	14.2	7.4	10.1	9.8
2001	16.2	13.5	14.0	6.2	9.9	9.5
2002	18.0	13.6	14.3	6.5	9.4	9.1
2003	17.8	14.0	14.6	6.3	9.3	9.0
2004	18.8	13.6	14.5	5.8	9.0	8.8
2005	17.7	13.6	14.3	5.5	8.9	8.6
2006	17.4	14.1	14.6	6.2	8.9	8.7
2007	17.3	14.6	15.0	5.5	9.0	8.7
2008	16.9	14.7	15.0	5.4	9.1	8.8
2009	17.9	14.4	14.9	6.5	9.1	8.9
2010	16.4	15.6	15.7	6.5	9.2	9.1
2011	14.6	15.7	15.6	5.4	9.2	9.0
2012	15.3	16.9	15.4	5.2	9.7	8.6

Source: Author's calculation based on relevant data from NCRB and Census of India.

Note: Suicide rates (suicide deaths per 100,000 people) are age-adjusted for 5 and above years. Suicide rates for farmers and non-farmers exclude Tamil Nadu in 1995 and West Bengal in 2012, as profession-wise suicide incidences for these states was not provided. **All suicide rates in 2003** exclude Jharkhand as suicide incidences provided were a repeat of 2002. Non-farmers include housewife (females only), government service, private service, public sector undertaking, student, unemployed, self-employed in business activity, self-employed in professional activity, self-employed in farming or agriculture, self-employed (others), retired person, and others.

Appendix - III: Triennium Ending Average Suicide Rates among Farmers and Non-farmers across the States of India, 1995-2012

(per lakh people)

State	Male Farmers						Male Non-Farmers					
	1995-97	1998-2000	2001-03	2004-06	2007-09	2010-12	1995-97	1998-2000	2001-03	2004-06	2007-09	2010-12
AP	18.5	27.2	28.7	42.8	38.1	46.3	12.1	15.6	18.7	21.5	24.3	23.5
AR	2.9	2.5	10.4	8.9	8.6	8.9	10.9	13.4	13.7	12.5	15.8	17.0
AS	4.9	4.1	6.8	10.3	8.9	10.7	18.5	19.5	15.9	16.8	16.1	15.6
BI†	0.9	0.9	0.7	1.3	2.2	2.3	1.4	1.7	0.7	1.3	2.2	2.1
BI	‡	‡	0.9	0.5	1.3	1.3	‡	‡	0.9	0.7	1.2	1.1
CT	‡	‡	42.1	49.2	56.9	10.8	‡	‡	22.7	25.0	25.1	45.0
GO	46.8	29.1	58.8	32.2	16.1	30.1	34.7	28.8	30.5	30.1	27.4	30.4
GU	10.7	13.1	12.4	11.4	9.9	11.0	9.7	11.5	10.8	11.5	13.9	14.6
HA	5.8	10.2	8.9	8.2	10.2	16.4	13.3	15.5	16.0	15.6	17.4	18.6
HP	2.6	3.7	3.0	3.3	7.1	4.7	7.8	8.7	9.2	10.6	13.0	12.3
JK	0.1	1.1	1.1	1.2	1.7	1.6	0.8	1.3	1.8	2.8	3.2	2.7
JN	‡	‡	1.0	3.5	4.6	4.8	‡	‡	1.1	3.1	5.4	5.5
KA	31.9	38.3	44.8	33.4	35.7	37.4	27.2	30.6	29.9	30.0	29.4	28.4
KE	124.9	179.6	219.4	170.1	162.4	153.0	36.8	41.0	41.8	41.3	38.8	38.5
MP†	14.2	20.7	22.6	26.0	27.5	14.5	10.7	14.4	14.3	13.1	15.8	23.2
MP	‡	‡	15.7	17.6	16.7	15.9	‡	‡	11.6	9.2	12.7	15.9
MR	20.7	32.3	46.7	54.7	46.6	41.8	16.3	16.6	16.2	14.9	15.2	17.2
MU	0.1	0.1	1.0	0.5	0.3	0.0	2.0	2.2	2.7	2.8	2.3	2.1
MY	2.6	1.3	1.8	2.3	4.8	4.8	7.3	5.3	5.8	5.5	5.2	8.0
MZ	1.4	0.8	0.8	0.8	8.5	7.0	11.1	16.9	16.4	16.9	8.5	25.1
NA	2.4	0.1	0.0	0.1	0.3	1.3	4.9	2.2	3.0	3.2	3.6	2.5
OD	6.8	7.5	8.4	7.4	5.5	4.0	11.5	13.4	16.1	15.5	16.8	16.7
PN	6.2	5.0	2.0	3.9	4.6	4.7	3.7	6.0	3.9	4.4	5.0	5.7
RA	4.8	8.3	6.9	6.7	9.3	3.6	9.4	8.8	8.7	10.9	12.2	12.1
SI	12.1	18.3	19.7	44.9	39.7	19.0	21.7	27.5	24.3	19.9	51.3	56.3
TN	14.5	21.9	30.3	28.9	19.1	16.3	19.5	23.7	23.5	24.6	28.7	32.9
TR	33.8	33.3	10.2	7.6	13.2	12.2	22.2	34.0	35.5	29.9	29.2	30.7
UP†	2.3	3.5	2.7	2.4	3.2	3.4	3.5	3.3	2.7	2.3	2.3	2.4
UP	‡	‡	2.7	2.3	3.2	3.4	‡	‡	2.6	2.2	2.3	2.3
UT	‡	‡	4.3	3.1	3.0	3.0	‡	‡	5.8	4.2	3.4	4.6
WB	23.3	20.3	21.5	18.9	18.1	16.2	20.9	20.6	19.0	21.6	20.7	19.6
AN	45.1	80.5	24.9	38.1	145.1	21.1	52.9	46.9	46.7	49.2	43.9	52.8
CN	31.5	0.0	38.6	18.0	0.0	0.0	6.2	10.0	11.2	11.6	10.5	10.2
DA	62.4	78.7	115.8	58.4	80.1	52.8	21.0	16.6	12.0	15.5	15.6	19.1
DD	13.3	15.2	34.2	37.3	0.0	0.0	10.6	11.9	15.7	13.7	9.8	14.9
DE	46.7	85.0	66.9	27.0	52.5	48.6	10.1	8.8	9.8	11.4	11.3	13.5
LA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2	1.1	1.1
PD	91.4	1405.1	643.9	1468.5	1145.5	13.3	88.2	52.3	69.9	41.4	41.2	65.9
IN	11.6	15.2	17.1	18.0	17.4	15.4	12.5	13.9	13.5	13.8	14.6	16.1

Source: Author's calculation based on relevant data from NCRB and Census of India.

Note: AP is Andhra Pradesh, AR is Arunachal Pradesh, AS is Assam, BI is Bihar, CT is Chhattisgarh, GO is Goa, GU is Gujarat, HA is Haryana, HP is Himachal Pradesh, JK is Jammu and Kashmir, JN is Jharkhand, KA is Karnataka, KE is Kerala, MP is Madhya Pradesh, MR is Maharashtra, MU is Manipur, MY is Meghalaya, MZ is Mizoram, NA is Nagaland, OD is Odisha, PN is Punjab, RA is Rajasthan, SI is Sikkim, TN is Tamil Nadu, TR is Tripura, UP is Uttar Pradesh, UT is Uttaranchal, WB is West Bengal, AN is Andaman & Nicobar Islands, CN is Chandigarh, DA is Dadra & Nagar Haveli, DD is Daman & Diu, DE is Delhi, LA is Lakshadweep and has no farmer population, PD is Puducherry and IN is India. Suicide rates (suicide deaths per 100,000 people). The averages do not include Tamil Nadu in 1995, Jharkhand in 2003 and West Bengal in 2012. † refers to the undivided states with the same name prior to 2001 where BI included JN, MP included CT, and UP included UT. ‡ denotes not applicable.

Appendix - IV: Suicide Rates among Male Non-farmers (Self-employed or Others) across the States of India, 1995-2012

(per cent)

State	Self-employed (others)						Others					
	1995-97	1998-2000	2001-03	2004-06	2007-09	2010-12	1995-97	1998-2000	2001-03	2004-06	2007-09	2010-12
AP	22.7	24.9	19.8	22.1	26.2	34.5	14.2	12.8	31.0	33.8	22.6	19.0
AR	21.7	2.1	0.0	14.7	26.2	17.7	0.0	0.7	0.0	4.5	4.7	15.7
AS	24.9	23.5	31.5	37.5	41.7	39.3	39.0	14.9	16.3	13.1	12.0	11.8
BI†	20.0	21.0	24.4	11.7	15.4	18.8	35.2	31.2	51.4	37.7	39.8	38.4
BI	‡	‡	15.2	8.9	18.1	25.9	‡	‡	39.1	39.9	43.6	45.4
CT	‡	‡	28.2	27.9	29.5	38.7	‡	‡	29.6	36.3	22.8	25.5
GO	11.1	13.4	8.0	6.3	5.8	7.2	34.9	10.1	18.3	26.0	15.1	24.9
GU	20.1	20.0	15.9	18.1	18.1	18.6	10.8	7.9	6.9	11.1	10.9	15.2
HA	16.1	9.8	12.6	14.0	8.0	24.4	38.4	38.6	33.8	35.8	43.6	33.4
HP	26.0	27.6	13.3	14.3	19.7	12.9	18.2	17.0	29.3	26.7	23.6	27.2
JK	25.3	28.2	17.0	15.8	13.2	10.2	21.5	17.6	42.2	32.4	15.8	29.7
JN	‡	‡	28.5	13.8	13.4	14.2	‡	‡	33.3	36.2	37.0	33.8
KA	39.4	40.6	36.3	29.2	30.5	32.5	0.2	8.7	14.7	29.9	28.4	18.6
KE	26.3	27.7	29.7	42.7	33.4	35.7	16.9	14.7	17.1	18.8	29.3	28.8
MP†	38.5	38.5	27.8	29.1	26.7	35.6	8.4	4.4	19.8	24.3	20.7	22.7
MP	‡	‡	27.6	30.1	24.9	32.7	‡	‡	13.5	13.6	19.3	20.1
MR	12.9	24.8	35.4	29.2	32.8	32.0	43.3	25.8	2.6	2.3	2.6	6.9
MU	12.2	13.7	11.8	10.7	14.9	1.5	46.3	5.9	8.8	6.7	6.0	24.6
MY	6.5	12.4	35.3	17.1	18.6	12.0	23.0	8.0	6.6	5.7	21.4	10.0
MZ	0.0	10.6	30.7	14.6	15.1	6.6	8.9	0.0	11.4	42.7	65.1	13.1
NA	14.5	42.5	6.6	31.3	36.1	12.0	0.0	7.5	6.6	0.0	37.5	0.0
OD	25.8	36.4	30.7	37.7	32.0	29.5	20.4	22.0	16.4	17.3	17.9	15.2
PN	16.8	19.0	21.3	30.0	28.2	31.2	25.7	33.5	37.7	26.5	25.3	18.4
RA	10.2	21.5	28.7	25.3	32.1	26.8	47.7	33.5	22.3	42.4	27.2	38.2
SI	10.6	10.9	28.0	20.0	28.5	6.5	23.1	25.2	7.7	6.4	20.9	7.0
TN	8.7	23.0	22.1	26.7	30.2	21.0	12.5	18.5	15.2	17.7	15.3	33.7
TR	22.3	12.6	13.3	11.0	34.5	21.0	21.4	41.4	26.2	28.1	15.8	33.9
UP†	22.0	18.6	23.3	23.0	27.1	20.2	33.3	22.3	13.1	16.0	12.7	23.3
UP	‡	‡	22.9	24.0	28.7	20.6	‡	‡	14.0	15.2	12.9	23.1
UT	‡	‡	27.1	12.9	5.7	15.6	‡	‡	5.2	23.2	10.5	25.7
WB	17.2	15.6	16.5	20.4	22.4	24.4	12.1	26.2	22.9	15.3	22.2	27.8
AN	8.0	1.9	7.0	2.4	7.5	3.2	0.9	8.8	0.0	7.3	7.5	3.2
CN	14.1	13.2	3.8	12.4	3.7	24.5	7.0	33.3	36.1	2.9	3.1	0.0
DA	10.5	5.3	20.6	9.6	1.6	4.4	34.2	2.6	5.9	42.3	11.3	18.9
DD	21.1	3.8	14.6	23.8	2.9	3.2	26.3	3.8	24.4	14.3	20.0	32.3
DE	16.5	12.8	19.9	19.1	15.2	14.6	15.4	4.5	9.1	11.6	18.8	16.9
LA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.00	0.0	0.0	100.0
PD	62.4	6.0	27.6	2.4	34.0	15.7	0.0	0.2	0.4	10.6	2.0	0.2
IN	21.8	25.4	25.7	26.8	27.6	28.6	19.7	17.8	17.5	20.7	20.1	22.6

Source: Author's calculation based on relevant data from NCRB.

Note: AP is Andhra Pradesh, AR is Arunachal Pradesh, AS is Assam, BI is Bihar, CT is Chhattisgarh, GO is Goa, GU is Gujarat, HA is Haryana, HP is Himachal Pradesh, JK is Jammu and Kashmir, JN is Jharkhand, KA is Karnataka, KE is Kerala, MP is Madhya Pradesh, MR is Maharashtra, MU is Manipur, MY is Meghalaya, MZ is Mizoram, NA is Nagaland, OD is Odisha, PN is Punjab, RA is Rajasthan, SI is Sikkim, TN is Tamil Nadu, TR is Tripura, UP is Uttar Pradesh, UT is Uttaranchal, WB is West Bengal, AN is Andaman and Nicobar Islands, CN is Chandigarh, DA is Dadra and Nagar Haveli, DD is Daman and Diu, DE is Delhi, LA is Lakshadweep and has no farmer population, PD is Puducherry and IN is India. The averages do not include Tamil Nadu in 1995, Jharkhand in 2003 and West Bengal in 2012. † refers to the undivided states with the same name prior to 2001 where BI included JN, MP included CT, and UP included UT. ‡ denotes not applicable.

Appendix - V: Triennium Ending Average Share of Male Farmers in Suicides across the States in India, 1995-2012

(per cent)

State	Male Farmers						All Males					
	1995-97	1998-2000	2001-03	2004-06	2007-09	2010-12	1995-97	1998-2000	2001-03	2004-06	2007-09	2010-12
AP	10.07	10.97	10.05	13.68	12.09	16.09	8.05	9.20	10.43	12.12	12.25	11.61
AR	0.04	0.03	0.10	0.08	0.09	0.11	0.07	0.08	0.10	0.09	0.10	0.11
AS	1.37	0.84	1.25	1.90	1.80	2.64	3.14	2.91	2.53	2.72	2.47	2.37
BI†	0.82	0.59	0.39	0.75	1.26	1.46	1.09	1.12	0.50	0.96	1.61	1.55
BI	‡	‡	0.38	0.20	0.52	0.58	‡	‡	0.53	0.38	0.69	0.61
CT	‡	‡	7.10	7.96	9.57	2.08	‡	‡	3.82	4.23	4.33	4.97
GO	0.15	0.06	0.10	0.05	0.02	0.05	0.39	0.27	0.29	0.27	0.23	0.24
GU	4.15	3.88	3.35	3.03	2.82	3.73	3.93	4.12	3.89	3.98	4.47	4.59
HA	1.00	1.40	1.12	0.99	1.27	2.34	1.95	2.15	2.21	2.13	2.34	2.55
HP	0.20	0.23	0.17	0.19	0.43	0.34	0.30	0.30	0.30	0.34	0.43	0.37
JK	0.01	0.08	0.07	0.07	0.10	0.10	0.05	0.09	0.12	0.18	0.21	0.17
JN	‡	‡	0.11	0.54	0.74	0.89	‡	‡	0.14	0.58	0.92	0.93
KA	15.18	13.98	14.80	10.58	11.76	14.19	11.80	11.76	11.83	10.74	10.28	9.67
KE	11.06	9.61	8.96	6.50	6.30	6.68	10.79	10.33	10.15	9.04	7.89	7.20
MP†	13.29	14.74	14.45	15.81	17.27	10.43	7.29	8.85	9.00	8.74	9.69	11.08
MP	‡	‡	7.35	7.86	7.70	8.36	‡	‡	5.18	4.51	5.36	6.11
MR	13.64	16.30	21.64	25.34	23.47	25.32	12.95	12.81	13.90	13.57	12.47	12.54
MU	0.00	0.00	0.02	0.01	0.00	0.00	0.03	0.03	0.04	0.04	0.03	0.02
MY	0.06	0.03	0.03	0.04	0.09	0.11	0.10	0.06	0.07	0.07	0.08	0.11
MZ	0.02	0.01	0.01	0.01	0.08	0.07	0.05	0.07	0.07	0.07	0.05	0.11
NA	0.05	0.00	0.00	0.00	0.00	0.03	0.06	0.02	0.03	0.03	0.03	0.02
OD	2.55	1.99	1.92	1.63	1.28	1.07	3.01	3.07	3.63	3.38	3.40	3.18
PN	1.13	0.67	0.24	0.45	0.56	0.66	0.83	1.02	0.63	0.73	0.79	0.86
RA	3.21	4.35	3.38	3.22	4.72	2.17	3.41	3.27	3.13	3.73	4.25	3.65
SI	0.08	0.09	0.09	0.20	0.18	0.10	0.08	0.10	0.09	0.10	0.17	0.17
TN	4.35	5.73	6.65	5.80	3.79	3.54	9.89	10.24	10.34	10.38	11.06	11.99
TR	0.81	0.58	0.16	0.11	0.21	0.22	0.62	0.76	0.70	0.57	0.55	0.55
UP†	4.36	4.85	3.37	2.71	3.66	4.44	4.35	4.02	3.29	2.71	2.86	2.88
UP	‡	‡	3.17	2.57	3.51	4.26	‡	‡	2.97	2.48	2.68	2.65
UT	‡	‡	0.20	0.14	0.15	0.18	‡	‡	0.32	0.23	0.18	0.23
WB	11.94	7.45	6.84	5.73	5.66	3.89	13.75	11.61	10.72	11.48	10.51	10.48
AN	0.07	0.09	0.03	0.04	0.13	0.02	0.15	0.13	0.12	0.12	0.12	0.11
CN	0.01	0.00	0.00	0.00	0.00	0.00	0.05	0.07	0.08	0.08	0.07	0.06
DA	0.12	0.11	0.14	0.07	0.10	0.08	0.05	0.04	0.05	0.04	0.04	0.05
DD	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.02	0.02	0.01	0.02
DE	0.14	0.18	0.12	0.05	0.10	0.11	1.08	0.90	1.03	1.15	1.12	1.28
LA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PD	0.12	1.16	0.43	0.95	0.78	0.01	0.67	0.58	0.54	0.46	0.41	0.42
IN	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Note: AP is Andhra Pradesh, AR is Arunachal Pradesh, AS is Assam, BI is Bihar, CT is Chhattisgarh, GO is Goa, GU is Gujarat, HA is Haryana, HP is Himachal Pradesh, JK is Jammu and Kashmir, JN is Jharkhand, KA is Karnataka, KE is Kerala, MP is Madhya Pradesh, MR is Maharashtra, MU is Manipur, MY is Meghalaya, MZ is Mizoram, NA is Nagaland, OD is Odisha, PN is Punjab, RA is Rajasthan, SI is Sikkim, TN is Tamil Nadu, TR is Tripura, UP is Uttar Pradesh, UT is Uttaranchal, WB is West Bengal, AN is Andaman and Nicobar Islands, CN is Chandigarh, DA is Dadra and Nagar Haveli, DD is Daman and Diu, DE is Delhi, LA is Lakshadweep and has no farmer population, PD is Puducherry and IN is India. The shares do not include Tamil Nadu in 1995 and West Bengal in 2012 for farmers and Jharkhand in 2003 for both categories. † refers to the undivided states with the same name prior to 2001 where BI included JN, MP included CT, and UP included UT. ‡ denotes not applicable.

Source: Author's calculation based on relevant data from NCRB.

N.B. Appendix II to Appendix V is reproduced from Mishra, S. (2014).

Appendix - VI: Distribution of Farmers' Suicides by Sex and by Age Groups during 2014

Sl. No	Cause	Below 14 years				14 and above – below 18 years				18 and above – below 30 years			
		Male	Female	Trans gender	Total	Male	Female	Trans gender	Total	Male	Female	Trans gender	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1.	Poverty	0	0	0	0	0	0	0	0	22	2	0	24
2.	Property Dispute	0	0	0	0	0	0	0	0	13	0	0	13
3.	Marriage Related Issues	0	0	0	0	0	2	0	2	36	41	0	77
	3.1 Non Settlement of Marriage	0	0	0	0	0	0	0	0	11	10	0	21
	3.2 Dowry Related Issues	0	0	0	0	0	1	0	1	1	30	0	31
	3.3 Extra Marital Affairs	0	0	0	0	0	0	0	0	4	0	0	4
	3.4 Divorce	0	0	0	0	0	0	0	0	1	0	0	1
	3.5 Others	1	0	0	1	0	1	0	1	19	1	0	20
4.	Family Problem	0	0	0	0	5	0	0	5	300	39	0	339
5.	Farming Related Issues	0	0	0	0	16	10	0	26	191	33	0	224
	5.1 Failure of Crop	0	0	0	0	16	10	0	26	191	33	0	224
	5.2 Due to Natural Calamities	0	0	0	0	12	10	0	22	96	13	0	109
	5.3 Due to Other Reasons	0	0	0	0	4	0	0	4	96	20	0	115
	5.4 Inability to Sell	0	0	0	0	0	0	0	0	0	0	0	0
6.	Illness	0	0	0	0	3	1	0	4	127	13	0	140
	AIDS/STD	0	0	0	0	0	0	0	0	0	0	0	0
	6.1 Cancer	0	0	0	0	0	0	0	0	1	0	0	1
	6.2 Paralysis	0	0	0	0	0	0	0	0	0	0	0	0
	6.3 Insanity/ Mental	0	0	0	0	1	0	0	1	37	4	0	41
	6.4 Other Prolonged Illness	0	0	0	0	2	1	0	3	89	9	0	98
7.	Drug Abuse/Alcoholic Addiction	0	0	0	0	1	0	0	1	42	0	0	42
8.	Fall in social reputation	0	0	0	0	0	0	0	0	2	0	0	2
9.	Bankruptcy or Indebtedness	0	0	0	0	2	0	0	2	166	2	0	168
	9.1 Due to Crop Loan	0	0	0	0	0	0	0	0	135	2	0	137
	9.2 Due to Farm equipment's Loan (Tractor, Pump-set etc)	0	0	0	0	2	0	0	2	0	0	0	0
	9.3 Due to Non-Agriculture Loan	0	0	0	0	0	0	0	0	31	0	0	31
10	Causes Not Known	0	0	0	0	2	0	0	2	50	15	0	65
11	Other Cases	0	2	0	2	5	9	0	14	182	24	0	206
12	Total	1	2	0	3	34	22	0	56	1131	169	0	1300

Contd.....

Contd.....

Sl. No	Cause	30 and above – below 45years				45 and above – below 60years				60 years and above			
		Male	Female	Trans gender	Total	Male	Female	Trans gender	Total	Male	Female	Trans gender	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1.	Poverty	71	4	0	75	36	3	0	39	11	0	0	11
2.	Property Dispute	23	0	0	23	14	0	0	14	2	0	0	2
3.	Marriage Related Issues	17	12	0	29	8	1	0	9	2	2	0	4
	3.1 Non Settlement of Marriage	3	0	0	3	1	0	0	1	0	0	0	0
	3.2 Dowry Related Issues	0	9	0	9	1	0	0	1	0	0	0	0
	3.3 Extra Marital Affairs	0	0	0	0	1	0	0	1	0	0	0	0
	3.4 Divorce	3	1	0	4	0	0	0	0	0	2	0	2
	3.5 Others	11	2	0	13	5	1	0	6	2	0	0	2
4.	Family Problem	394	37	0	431	233	10	0	243	105	11	0	116
5.	Farming Related Issues	330	36	0	366	270	15	0	285	61	7	0	68
	5.1 Failure of Crop	314	36	0	350	270	15	0	285	60	7	0	67
	5.2 Due to Natural Calamities	157	14	0	171	148	4	0	152	36	1	0	37
	5.3 Due to Other Reasons	157	22	0	179	122	11	0	133	24	6	0	30
	5.4 Inability to Sell	16	0	0	16	0	0	0	0	1	0	0	1
6.	Illness	225	26	0	251	193	13	0	206	134	10	0	144
	AIDS/STD	4	0	0	4	1	0	0	1	0	0	0	0
	6.1 Cancer	0	0	0	0	2	0	0	2	3	0	0	3
	6.2 Paralysis	1	0	0	1	1	0	0	1	0	0	0	0
	6.3 Insanity/ Mental	61	7	0	68	54	5	0	59	13	3	0	16
	6.4 Other Prolonged Illness	159	19	0	178	135	8	0	143	118	7	0	125
7.	Drug Abuse/Alcoholic Addiction	102	0	0	102	85	0	0	85	20	0	0	20
8.	Fall in social reputation	3	1	0	4	1	0	0	1	0	0	0	0
9.	Bankruptcy or Indebtedness	479	21	0	500	333	15	0	348	132	13	0	145
	9.1 Due to Crop Loan	396	19	0	415	271	15	0	286	114	13	0	127
	9.2 Due to Farm equipment's Loan (Tractor, Pump-set etc)	7	1	0	8	9	0	0	9	3	0	0	3
	9.3 Due to Non-Agriculture Loan	76	1	0	77	53	0	0	53	15	0	0	15
10	Causes Not Known	98	4	0	102	46	4	0	50	12	0	0	12
11	Other Cases	285	23	0	308	234	7	0	241	53	4	0	57
12	Total	2027	164	0	2191	1453	68	0	1521	532	47	0	579

Contd....

Sl. No.	Cause	Total			
		Male	Female	Transgender	Total
(1)	(2)	(3)	(4)	(5)	(6)
1.	Poverty	140	9	0	149
2.	Property Dispute	52	0	0	52
3.	Marriage Related Issues	63	58	0	121
	3.1 Non Settlement of Marriage	15	10	0	25
	3.2 Dowry Related Issues	2	40	0	42
	3.3 Extra Marital Affairs	5	0	0	5
	3.4 Divorce	4	3	0	7
	3.5 Others	37	5	0	42
4.	Family Problem	1038	97	0	1135
5.	Farming Related Issues	868	101	0	969
	5.1 Failure of Crop	851	101	0	952
	5.2 Due to Natural Calamities	449	42	0	491
	5.3 Due to Other Reasons	402	59	0	461
	5.4 Inability to Sell	17	0	0	17
6.	Illness	682	63	0	745
	AIDS/STD	5	0	0	5
	6.1 Cancer	6	0	0	6
	6.2 Paralysis	2	0	0	2
	6.3 Insanity/ Mental	166	19	0	185
	6.4 Other Prolonged Illness	503	44	0	547
7.	Drug Abuse/Alcoholic Addiction	250	0	0	250
8.	Fall in Social Reputation	6	1	0	7
9.	Bankruptcy or Indebtedness	1112	51	0	1163
	9.1 Due to Crop Loan	916	49	0	965
	9.2 Due to Farm equipment's Loan (Tractor, Pump-set etc)	21	1	0	22
	9.3 Due to Non-Agriculture Loan	175	1	0	176
10	Causes Not Known	208	23	0	231
11	Other Cases	759	69	0	828
12	Total	5178	472	0	5650

Source: Economic Survey- 2014-15, Government of India.

Note: Family Problem excludes Marriage Related Issues.

Coordinators Comments on the Draft Report and Action Taken

- 1. Title of the draft report examined:** Farmer Suicides in West Bengal
- 2. Date of receipt of the Draft report:** 30, January 2017
- 3. Date of dispatch of the comments:** 01, February, 2017
- 4. Chapter-wise comments.**

Chapter 1:

- Kindly adhere to the Table-1.1 format sent by us as it helps in consolidation of state reports.
[*Action: Necessary changes made as suggested*]
- Background appears good, however, avoid repetition of information and be consistent in the write-up.
[*Action: Necessary changes were made to avoid repetition*]

Chapter 2:

- Kindly adhere to the Table 2.1 format sent by us as it helps in consolidation of state reports and accordingly modify the write-up.
[*Action: Necessary changes made as suggested*]
- We appreciate for providing victim's family photographs in suitable manner.
[*Action: Added suitable captions to the photographs*]

Chapter 3:

- Percentage mentioned in Table-3.2 related to farm size is not tallying to 100%.
[*Action: Necessary changes made as suggested*]
- Kindly re-estimate the data in Table-3.4 as results on irrigated area per HH appears unreasonable
[*Action: Necessary changes made as suggested*]

Chapter 5:

- Text of Chapter-5 is repetition of first chapter. For example: the objectives of study and methodology which are discussed in Chapter-I and is again discussed in Chapter-5. Kindly avoid the repetitions.
[*Action: Necessary changes made as suggested in order to avoid repetition*]

5. General comments.

- The report has adhered to the outline provided except for a couple of tables as mentioned in chapter-wise comments. However, repetition of paragraphs and tables need to be avoided.
[*Action: Necessary changes were made to avoid repetition*]

6. Overall view on acceptability of report

- 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 report can be sent to us at the earliest as it helps in consolidating the state reports.
[*Action: The final report is thoroughly revised to incorporate the comments received from Shri P. C. Bodh, Adviser (AER)*]

Action Taken on the Comments Received from Shri P. C. Bodh, Adviser (AER), Ministry of Agriculture & Farmers Welfare, Government of India vide F. No. 9-2/2016-AER-ES dated 17th April, 2017.

Comments and Action Taken:

1. Needful for necessary corrections marked in the Report
[Action: Necessary changes were made to the extent possible. We have sincerely tried to incorporate all the suggested changes.]
2. Revised draft should be thoroughly checked up and read for finalizing the report to ensure that it comes out as properly edited and factually accurate document.
[Action: We have incorporated many changes beyond marked on the report including re-writing several sections and sub-sections and avoiding repetitions.]
3. The report submitted is an appreciable attempt with rich analytical input. It has full potential of making an excellent document once through with the suggested exercise.
[Action: Sincere attempt is made to revise the document to the extent possible.]
4. Let the report go through a rigorous language editing and submit fifteen copies of the final report.
[Action: We got the report thoroughly edited by two distinguished professors from Visva-Bharati University; Prof. Amrit Sen, Professor of English, & Prof. Bidhan Chandra Roy, Professor of Agricultural Economics. They made several changes in language, formats, interpretations, style of presentation, system of citations, etc. Accordingly, several sections of the report were re-written with addition, deletion and alteration of various sections and sub-sections.]