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PERFORMANCE EVALUATION OF PRADHAN MANTRI FASAL BIMA YOJANA (PMFBY) IN WEST BENGAL

Bidhan Chandra Roy
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Study sponsored by Ministry of Agriculture and Farmers Welfare
Government of India, New Delhi

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Preface

The present study entitled "Performance Evaluation of Pradhan Mantri Fasal Bima Yojana (PMFBY) in West Bengal" is a part of 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 Center for Management in Agriculture (CMA), Indian Institute of Management, Ahmedabad.

Agriculture being highly prone to various kinds of risks and uncertainties, there is a necessity to protect the farmers from natural calamities and market failures. The risk confronted by the resource poor small and marginal farmers, who are the majority in West Bengal, is of particular importance as it not only affect the poor farmers but also the whole value chain and consumers. The Pradhan Mantri Fasal Bima Yojana (PMFBY), rechristened as Bangla Fasal Bima Yojana (BFBY) in West Bengal, is in operation since Kharif 2016 and is being provided entirely free of cost to the farmers, except in case of potato and sugarcane.

The present study is an attempt to evaluate the performance of the scheme in West Bengal in terms of issues related to governance, implementation and uptake behavior among the farmers and to make some policy suggestions for its better functioning.

The main objective of PMFBY/BFBY was to promote crop insurance and to provide risk cover to the farmers. The study revealed that so far as promoting crop insurance among the farmers in West Bengal is concerned, the scheme is a huge success as more than 4.1 million farmers were enrolled under PMFBY/BFBY in the very first year of its implementation. So far as governance and implementation issues are concerned, the performance under PMFBY/BFBY is also quite satisfactory. However, there are enough scope for further improvements in future particularly in increasing the awareness among the farmers, ensuring risk cover to the farmers at the time of distress, and in the use of smart technologies in estimating crop loss and in reporting claims.

The task of completion of this study was assigned to Prof. Bidhan Chandra Roy for overall coordination and Vivekananda Datta as Team Leader. Besides Prof Roy and Mr. Dutta, the study team also consist Dr. Bitan Mondal, Dr. Ranjan Kumar Biswas and Mr. K. S. Chattopadhyay. Drafting and analysis of the report was done by the Prof. B. C. Roy, Dr. Sabyasachi Ojha; Dr. R. K. Biswas and Dr. Bitan Mondal. Mr. Nrityananda Maji helped the study team in data entry while typing of the study was done by Munshi Abdul Khaleque and Dibyendu Mondal. Mr. D. Das, P. Mitra, A.R. Patra, B. Singh and S. Hansda helped in the office maintenance.

We acknowledge the generosity of Prof. Sabuj Koli Sen, Vice Chancellor (Officiating) Visva-Bharati, and Mr. S. Mukherjee, 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 Prof. Ranjan Kumar Ghosh & Ms. Diana Frenchman (CMA, IIM-A, Ahmedabad) for their effective coordination of the study.

We are particularly indebted to Shri P. C. Bodh, Adviser (AER Division) and Mr. Rakesh Kumar, Director (AER Division), Ministry of Agriculture & Farmers Welfare, Government of India, New Delhi; Dr. Debasis Sarkar and Prof. Amit Kumar Hazra, both Former

Directors, AERC, Visva Bharati for their valuable suggestions and help rendered during the execution of the study.

A word of appreciation is also to Dr. Sampad Ranjan Patra, Director & Ex-Officio Secretary, Mr.Uday Sankar Aich, Joint Director & OSD (FI), Mr. Prasenjit Hans, Joint Secretary, and Mr. Samaresh Halder, Additional Director, Department of Agriculture, Government of West Bengal, as well as to Mr. Chandan Burnwal, United India Insurance Co. Ltd., Kolkata Regional Office, for their valued opinion and supplying information regarding crop insurances in the state of West Bengal. On behalf of the entire study team, I would like to convey our sincere gratitude to all of them.

A word of appreciation is not enough for the kind of help and cooperation we received from Mr. Sourav Gupta, Administrative Officer, Agricultural Insurance Corporation of India Limited, Kolkata Regional Office, without which the present project would not have been completed. Last but not the least; thanks are due to innumerable respondents in the villages who ungrudgingly took the pain of answering to our questions for hours at end. We thank each one of them for their invaluable support.

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Abbreviations

ADA	Assistant Director of Agriculture
AIC	Agricultural Insurance Company of India Ltd
APR	Actuarial Premium Rate
BAES	Bureau of Applied Economics and Statistics
BFBY	Bangla Fasal Bima Yojana
BLMC	Block Level Management Committee
CAG	Comptroller and Auditor General
CCE	Crop Cutting Experiment
CCIS	Comprehensive Crop Insurance Scheme
CSC	Customer Service Centre
DAC&FW	Department of Agriculture, Cooperation and Farmers Welfare
DLMC	District Level Monitoring Committee
DLTC	District Level Technical Committee
DoA	Department of Agriculture
FGD	Focus Group Discussions
GCA	Gross Cropped Area
GIS	Geographic Information System
GoWB	Government of West Bengal
GPs	Gram Panchayat
IA	Implementing Agency/Insurance Agency/implementing Insurance Agency
IU	Insurance Unit
KPS	Krishi Prayukti Sahayaka
MGNAREGS	Mahatma Gandhi National Rural Employment Guarantee Scheme
MNAIS	Modified National Agricultural Insurance Scheme
MOA&FW	Ministry of Agriculture and Farmers Welfare
MSP	Minimum Support Price
NABARD	National Bank for Agriculture and Rural Development
NAIS	National Agricultural Insurance Scheme
PACS	Primary Agricultural Co-operative Societies
PCIS	Pilot Crop Insurance Scheme
PMFBY	Pradhan Mantri Fasal Bima Yojana
SI	Sum Insured
SLCCCI	State Level Coordination Committee on Crop Insurance
RST	Remote Sensing Technology
WBCIS	Weather Based Crop Insurance Scheme

EXECUTIVE SUMMARY

Background

Any successful crop insurance scheme, worldwide, requires government support and finance. According to a recent World Bank survey on crop insurance performed in 65 countries, premium subsidy by the government was found to be the most common strategy to support agricultural insurance market. While crop insurance is essentially a commercial activity, it is common to see that governments also play a role, as governments have an interest from the perspective of maintaining productivity and safeguarding the wellbeing of the farming community. Against this backdrop, introduction of Pradhan Mantri Fasal Bima Yojana (PMFBY) was a welcome step. As compared to previous crop insurance schemes, PMFBY holds a special place due to its wide coverage and for the innovativeness of its designs. The present study is an attempt to evaluate the performance of PMFBY in the state of West Bengal in terms of issues related to governance, implementation and uptake behavior among the farmers and to make some policy suggestions for its better functioning.

Objectives of the study

The specific objectives of the study are:

1. To analyze the governance of PMFBY implementation in West Bengal
    a. To examine the functioning of different stakeholders dealing with PMFBY in West Bengal
    b. To study the progress of PMFBY in West Bengal
2. To analyze the uptake behavior among the farmers in West Bengal
3. To recommend suitable policy suggestions for better functioning of PMFBY in West Bengal.

The present study is conducted in the state of West Bengal during 2017-18 and divided into two parts, namely: Governance and implementation of PMFBY in West Bengal; and Understanding uptake behavior. Both the component are carried out more or less simultaneously using mixed method of data collection. While the first part is based on secondary information and feedbacks collected from various stakeholders associated with implementation of PMFBY in the state of West Bengal; the second part is based on field surveys in three districts of West Bengal. The reference year for the study is agricultural year 2016-17 i.e., Kharif-2016 and Rabi-2016-17. The PMFBY was implemented in all the districts of West Bengal, except Kolkata, since its inception and has been rechristened as ‘Bangla Fasal Bima Yojna (BFBY)' as it was offered free of cost to the farmers and the state government borne the entire financial liability on account of farmers' share of premiums in addition to its own share. However, all other guidelines and norms remained unaltered. It was offered to all categories of farmers in the state and provided support to 4 major crops in Kharif and 11 crops in Rabi.

Major Findings

The major findings of the study are summarized below.

- As far as promoting crop insurance among the farmers in West Bengal is concerned, the scheme is a huge success as more than 3.06 million farmers were enrolled in the very first season of its implementation, registering an annual growth of 216.1% over the previous year against 5.6% at national level.

- In terms of area coverage too, the PMFBY made an impressive growth in West Bengal with 28.85% area covered during Kharif-2016 and 12.44% during Rabi-2016-17, much higher than the national average in both the season.

- AIC played a very active role in bringing more than 0.54 million new non-loanee farmers, in Cluster-IV, under the purview of PMFBY in the very first season. The total number of enrolment by AIC was around 1.3 million (nearly 42% of state total) and that too just from a single cluster allotted to them.

- The salient features of successful implementation of PMFBY in West Bengal are timely notification with wide coverage of crops; timely constitution of different committees at state/district/block level; following e-tendering & cluster approach in bidding process; and providing crop insurance at free of cost to the farmers.

- Though the performance of PMFBY, in terms of coverage, is quite satisfactory, the implementation of the scheme suffers from several weaknesses.

- Huge enrolment under PMFBY in West Bengal was mainly supply driven rather demand driven. Since it was offered free of cost, since it was mandatory for loanee farmers, and since GPs took special initiatives for mass enrollment; the coverage under PMFBY was very high in West Bengal. In fact voluntary enrollment was only 30% among the loanee farmers and 40% among the non-loanee farmers.

- Further, the coverage is particularly restricted in irrigated areas growing paddy, jute and potato as compared to rain-fed and hilly regions. Poor adoption rate among the non-loanee farmers is also a matter of concern, as they constitute more than 70% of farming community in the state.

- The governance and implementation was more or less in accordance with the stipulated operational guidelines, from pre-notification to enrolment phase. But the main problems was in conducting CCEs and settlement of claims which delayed by more than 6 to 12 months, as government failed to submit yield data and premium subsidy on time. This provided IAs an excuse to delay or deny compensation.

- While submission of yield data was delayed mainly due to failure in conducting huge number of CCEs, the delay in release of premium subsidy was mainly due to limited budget provisions.

- Another important reason for delay in payment was due to doubtful claims and incomplete documents submitted by the farmers during both enrolment as well as during reporting loss/claim.

- Though government officials claims a good level of awareness about PMFBY, the results of field survey shows a complete lack of awareness among the sample farmers. In fact nearly 70 % of the non-insured farmers not even heard the name of PMFBY.

- Even the farmers who heard the name of PMFBY or BFBY were not aware of the various features of the scheme. There was sheer lack of awareness, among 95% respondents about specific features of the scheme.

- Implementing IAs, barring AIC, have been found not to play an active role and their presence at local level was very poor. The GPs and banks played a crucial role in increasing the number of enrolment but not so during settlement of claims or explaining the features of the scheme.

- From the very first season of PMFBY, e-bidding was mandatorily practiced using clustering of district approach. But there was apprehension regarding lack of transparency in the e-bidding process.

- The actuarial premium rates (APR) were quite high during Rabi 2016-17 as compared to Kharif-2016. In many cases it was below the threshold level of 2%. during Kharif, but as high as 38.61% during Rabi. With the APR being quite high, IAs have found a good business opportunity under PMFBY, in West Bengal with overall claim to premium ratio being 57.73%.

- While PMFBY promised use of smart-phones, remote sensing images, GIS data, and drone technologies to carry out faster assessment of crop losses, the BAES & DoA failed to use such smart technologies to effectively reduce the number of CCEs.

- So far as claim settlement is concerned, the performance of PMFBY in West Bengal is particularly very poor where insurance companies collected Rs.730 crores in premium and the estimated claim settled till July, 2017 was less than Rs. 1 crore, which increased to Rs. 421 crores by the end of January, 2018. Therefore, during first year of implementation, PMFBY has proved to be a scheme most efficient when it comes to collection of premium, but not at all so in payment of claims.

- In-spite of not having any claim, 80% respondent farmers consider the scheme better than any previous crop insurance schemes they availed but two-third of them expressed their dissatisfaction regarding poor implementation of the scheme.

- The most demanded suggestion was for a more pro-active role on the part of GPs in dissemination of adequate information and help in claim settlement process. Other major suggestions were, simplification of enrollment and claim settlement process, need for direct contact with the IAs, timely payment of compensation, etc.

Policy Recommendations

The policy recommendation calls for an integrated approach involving all the stakeholders with multi-pronged emphasis on the larger issue of improving governance, implementations, and impact of PMFBY scheme in the state. Several initiatives have already been taken, during post 2016-17 period, by the concerned stakeholders. Few more policy suggestions are:

1. Awareness drive: Government and other stakeholders need to generate awareness about the benefits of PMFBY/BFBY among all categories of farmers, so that the farmers should take up crop insurance in an informed manner rather than taking it as a free lunch. Therefore, strategies for effective awareness campaign and mechanism for a transparent and accountable system of speedy payment of compensation should be evolved.

2. Technological intervention like digitization of land records to ensure genuine enrollment and faster claim settlement process; encourage on-line enrolment and claim settlement through Common Service Centres (CSC); use of smart technologies in effectively reducing the number of CCEs and to improve its reliability; and development of a dedicated, interactive and user friendly portal with regional languages.

3. Rational policy initiatives like introducing a nominal processing fee for enrollment through CSCs, which may be reimbursed to their account if all documents submitted for enrolment and claims found in order; introduction of no claim bonus for cash crops and horticultural crops, and for non-loanee farmers; expanding the role of GPs beyond enrollment; setting up own insurance firm by the state government in order to check the oligopolistic behavior by the private IAs; and extending free insurance cover, under BFBY, to horticultural crops too; in order to promote crop diversification in the state.

4. To ensure transparency and accountability, government must encourage long term bid under e-tendering; and improve monitoring and grievance redressal mechanism. There should be strict compliance of timelines with regard to submission of yield data by the DoA and timely compensation to farmers.

5. Improving delivery mechanism by ensuring presence of IAs at GP level and direct contact with the farmers; capacity building in terms of technological infrastructure and manpower; monitoring claim settlement process; and simplification of procedures.

Chapter – I

Overview of PMFBY

1.1 Introduction

Agriculture production and farm incomes in India are frequently affected by natural disasters such as droughts, floods, cyclones, storms, landslides and earthquakes. Susceptibility of agriculture to these disasters is compounded by the outbreak of epidemics and man-made disasters such as fire, sale of spurious seeds, fertilizers and pesticides, price crashes etc. All these events severely affect farmers through loss in production and farm income, and they are beyond the control of the farmers. With the growing commercialization of agriculture, the magnitude of loss due to unfavourable eventualities is also increasing. For a section of farming community, the minimum support prices (MSP) crops provide a measure of income stability. However, MSP does not cover many crops and the procurement mechanism is quite poor in eastern part of the country. Mechanisms like contract farming and future trading, another possible option for risk transfer, have their own limitations. Considering all these instruments, agricultural insurance is still considered as an important mechanism to tackle the physical risk both in case of output and income.

Agricultural Insurance is a means of protecting the farmer against financial losses due to uncertainties that may arise from named or all unforeseen perils beyond their control (AIC, 2018). Unfortunately, agricultural insurance in the country has not made much headway even though the need to protect Indian farmers from agriculture variability has been a growing concern for agricultural policy. According to the National Agriculture Policy 2000, "Despite technological and economic advancements, the condition of farmers continues to be unstable due to natural calamities and price fluctuations". In some extreme cases, these unfavourable events become one of the factors leading to farmers' suicides which are now assuming serious proportions (Raju and Chand, 2007). Agricultural insurance is one method by which farmers can stabilize farm income and investment and guard against disastrous effect of losses due to natural hazards or low market prices. It cushions the shock of crop losses by providing farmers with a minimum amount of protection. It spreads the crop losses over space and time and helps farmers to make more investments in agriculture. It forms an important component of safety-net programmes as is being experienced in many developed countries like USA and Canada as well as in the European Union. However, one need to keep in mind that crop insurance should be a part of overall risk management strategy. Insurance comes towards the end of risk management process. Insurance is the mechanism towards redistribution of cost of losses of few among many, and cannot prevent economic loss.

1.2 Progress of Agricultural Insurance in India

The question of introducing an agriculture insurance scheme was examined soon after the independence in 1947. Following an assurance given in this regard by the then Ministry of Food and Agriculture (MOFA) in the Central Legislature to introduce crop and cattle insurance, a special study was commissioned during 1947-48 to consider whether insurance should follow an *Individual approach* or a *Homogenous area approach*. The study favoured *homogenous area approach* as various agro-climatically homogenous areas are treated as a single unit and the individual farmers in such cases pay the same rate of premium and receive the same benefits, irrespective of their individual fortunes. In 1965, the Government introduced a Crop Insurance Bill and circulated a model scheme of crop insurance on a compulsory basis to State governments for their views. The bill provided for the Central government to frame a reinsurance scheme to cover indemnity obligations of the States. However, none of the States favoured the scheme because of the financial obligations involved in it. On receiving the reactions of the State governments, the subject was referred to an Expert Committee headed by the then Chairman, Agricultural Price Commission, in July, 1970 for full examination of the economic, administrative, financial and actuarial implications of the subject.

1.2.1 Different Approaches to Crop Insurance

There are two major categories of agricultural insurance i.e., single and multi-peril coverage. Single peril coverage offers protection from single hazard while multiple-peril provides protection from several hazards. In India, multi-peril crop insurance programme is being implemented, considering the overwhelming impact of nature on agricultural output and its disastrous consequences on the society, in general, and farmers, in particular.

It is important to mention that crop insurance is based on either Area approach or Individual approach. Area approach is based on defined areas which could be a district, a taluka, a block or any other smaller contiguous area. The actual average yield/hectare for the defined area is determined on the basis of Crop Cutting Experiments (CCEs). If the actual yield in CCEs of an insured crop for the defined area falls short of the specified guaranteed yield or threshold yield, all the insured farmers growing that crop in the area are entitled for claims.

The claims are paid to the credit institutions in the case of loanee farmers and to the individuals who insured their crops. The credit institution would adjust the amount against the crop loan and pay the residual amount, if any, to the farmer. Area yield insurance is practically all-risk insurance. This is very important for developing countries with a large number of small farms. In the case of individual approach, assessment of loss is made separately for each insured farmer. It could be for each plot or for the farm as a whole (consisting of more than one plot at different locations). Individual farm-based insurance is suitable for high value crops grown under standard practices. Liability is limited to cost of cultivation. This type of insurance provides for accurate and timely compensation. However, it involves high administrative costs.

Weather index insurance has similar advantages to those of area yield insurance. This programme provides timely compensation made on the basis of weather index, which is usually accurate. All communities whose incomes are dependent on the weather can buy this insurance. A basic disadvantage could arise due to changing weather patterns and poor density of weather stations. Weather insurance helps ill-equipped economies deal with adverse weather conditions (65% of Indian agriculture is dependent on natural factors, especially rainfall. Drought is another major problem that farmers face). It is a solution to financial problems brought on by adverse weather conditions. This insurance covers wide sections of people and a variety of crops; its operational costs are low; transparent, objective calculation of weather index; and quick settlement of claims.

1.2.2. Agricultural Insurance Schemes

1.2.2.1 Individual Approach Schemes (1972-1978)

Different forms of experiments on agricultural insurance on a limited, ad-hoc and scattered scale were started in 1972-73 when the General Insurance Corporation (GIC) of India introduced a Crop Insurance Scheme on H-4 cotton. In the same year, general insurance business was nationalized and, General Insurance Corporation of India was set up by an Act of Parliament. The new corporation took over the experimental scheme in respect of H-4 cotton. This scheme was based on "*Individual Approach*" and later included groundnut, wheat and potato. The scheme was implemented in the states of Andhra Pradesh, Gujarat, Karnataka, Maharashtra, Tamil Nadu and West Bengal. It continued up to 1978-79 and covered only 3110 farmers for a premium of Rs.4.54 lakhs against claims of Rs.37.88 lakhs.

1.2.2.2 Pilot Crop Insurance Scheme (PCIS) (1979-1984)

In the background and experience of the Individual Approach experimental scheme, a study was commissioned by the General Insurance Corporation of India and was entrusted to Prof. V.M. Dandekar in order to suggest a suitable approach to be followed towards the scheme. The recommendations of the study were accepted and a Pilot Crop Insurance Scheme (PCIS) was launched by the GIC in 1979, which was based on "Area Approach" for providing insurance cover against a decline in crop yield below the threshold level. The scheme covered cereals, millets, oilseeds, cotton, potato and chickpea and it was confined to loanee farmers of institutional sources on a voluntary basis. The premium paid was shared between the General

Insurance Corporation of India and State Governments in the ratio of 2:1. The maximum sum insured was 100 per cent of the crop loan, which was later increased to 150 per cent. The Insurance premium ranged from 5 to 10 per cent of the sum insured. Premium charges payable by small/marginal farmers were subsidized by 50 per cent shared equally between the state and central governments. Pilot Crop Insurance Scheme- 1979 was implemented in 12 states till 1984-85 and covered 6.23 lakh farmers for a premium of Rs.195.01 lakhs against claims of Rs.155.68 lakhs for the entire period.

The overall claim to premium ratio was 79.83 per cent indicating that about 79.83 per cent of the total premium collections were used for the payment of claims or indemnities. The average premium collected for crop insurance declined from Rs.41.95 per hectare in 1979-80 to Rs.22.13 per hectare during 1982-83 and increased thereafter to Rs.28.95 per hectare in 1984-85. Incidentally, the average premium collected per hectare was the lowest and the average indemnity paid per insured crop hectare was the highest (Rs.52.76 per insured hectare) during 1982-83. Following were some of the shortcomings that impinged upon the coverage of the crop insurance scheme.

- Since crop insurance was linked to crop loans, many small and marginal farmers could not participate in the crop insurance scheme because a majority of these farms have poor access to institutional credit.
- The unit of insurance was very large.
- Lack of awareness among the farmers about the crop insurance scheme.
- Major commercial crops like cotton and sugarcane were excluded from the crop insurance scheme.

1.2.2.3 Comprehensive Crop Insurance Scheme (CCIS) (1985-99)

CCIS scheme was linked to short term credit and implemented based on the homogenous area approach. Till Kharif 1999, the scheme was adopted in 15 states and 2 UTs. Both PCIS and CCIS were confined only to farmers who borrowed seasonal agricultural loan from financial institutions. The main distinguishing feature of these two schemes was that PCIS was on voluntary basis whereas CCIS was compulsory for loanee farmers in the participating states/UTs. Main Features of the Scheme were:

- It covered farmers availing crop loans from Financial Institutions, for growing food crops and oilseeds, on compulsory basis. The coverage was restricted to 100 per cent of the crop loan subject to a maximum of Rs.10,000/- per farmer.

- The premium rates were 2 per cent for cereals and millets and 1 per cent for pulses and oilseeds. Farmers' share of premium was collected at the time of disbursement of loan. Half of the premium payable by small and marginal farmers was subsidized equally by the Central and State Governments (Tripathi, 1987).
- Burden of Premium and Claims was shared by Central and State Governments in a 2:1 ratio.
- The scheme was a multi-agency effort, involving Government of India, State Governments, Banking Institutions and GIC.

Table 1.1 Various schemes related to crop insurance in India and their features

Insurance scheme	Period	Approach	Crops covered	Farmers covered (Lakh)	Amount (Rs. Crores)		Salient features
					Premium	Claim	
Crop Insurance Scheme	1972-78	Individual	H-4 Cotton, groundnut, wheat, potato	0.03	0.05	0.38	Voluntary implemented in 6 states
Pilot Crop Insurance Scheme	1979-85	Area	Cereals, millets, oilseeds, cotton, potato and chick pea	6.23	1.95	1.56	Confined to loanee farmers, voluntary, 50% subsidy on premium for small and marginal farmers
Comprehensive Crop Insurance Scheme	1985-99	Area	Food grains and oil seeds	763	404	2303	Compulsory for loanee farmers
Experimental Crop Insurance Scheme	1997-98	Area	Cereals, pulses and oil seeds	4.78	2.86	39.78	For covering non-loanee small and marginal farmers also in addition to loanee farmers.
National Agricultural Insurance Scheme	1999-Continuing	Area and Individual	Food grains, oilseeds, annual commercial and horticultural crops	971	2944	9857	Available to all farmers. 10 per cent premium subsidy for small and marginal farmers
Farm Income Insurance Scheme	2003-04	Area	Wheat and rice	2.22	15.68	1.5	Insurance against production and market risks. Compulsory for loanee farmers.
Weather/ Rainfall Insurance	2003-04-	Individual	Food grains, oilseeds annual commercial and horticultural crops.	5.39	N.A	N.A	Available to all farmers. Based on rainfall received at the IMD/block rain gauges.

Source: Raju & Chand, 2007

The CCIS was implemented till *Kharif* 1999 and it covered 763 lakh farmers for a premium of Rs. 404 crores against claims of 2303 crores. The benefits of CCIS were highly skewed towards Gujarat, as more than half (58%) of the total indemnities under CCIS were paid to groundnut farmers in this state alone. The other participating states which contributed 84 per cent of the premium during 1985-99 received only 42 per cent of total claims. The claim-premium ratio was nearly 20.74 for Gujarat, while it was only about 5.72 at the all India level. Saurashtra experienced severe drought consecutively during 1985, 1986 and 1987. Large scale crop failures (especially groundnut in *Kharif*) were reported during 1990, 1991 and 1993. This resulted in very high indemnity payments. There were reports indicating that the farmers used to pressurize village level officials conducting crop cutting experiments to underestimate the crop yields so that farmers in the area could get the indemnity payments (Mishra, 1994). The major short comings of the scheme were area approach, coverage confined to loanee farmers, uniform premium rate for all the farmers and regions, coverage of few crops and time lag for indemnity payment (Jain, 2004). Despite several shortcomings, in Comprehensive Crop Insurance Scheme (CCIS), farmers received nearly 6 times the premium as claims. But at the same time its coverage was below 5% of the total farming community.

1.2.2.4 Experimental Crop Insurance Scheme (ECIS) (1997-98)

As demanded by various states from time to time attempts were made to modify the existing CCIS. During 1997, a new scheme, namely Experimental Crop Insurance Scheme (ECIS) was introduced during Rabi 1997-98 with the intention to cover even those small and marginal farmers who do not borrow from institutional sources. This scheme was implemented in 14 districts of five states. The Scheme provided 100 per cent subsidy on premium. The premium and claims were shared by Central and State Governments in 4:1 ratio. The scheme covered 4.78 lakh farmers for a sum insured of Rs.172 crores and the claims paid were Rs.39.78 crores against a premium of Rs.2.86 crores. The scheme was discontinued after one season and based on its experience National Agricultural Insurance Scheme was started (AIC, 2008).

Initially, only 9 states/UTs participated in the National Agricultural Insurance Scheme (NAIS). It covered 5.8 lakh farmers and 7.8 lakh hectares of cropped area. The coverage under NAIS was increased dramatically after the Kharif 2000. The number of farmers increased from 84.1 lakhs in *Kharif* 2000 to 129.3 lakhs by *Kharif* 2006 and the area coverage was reached 196.7 lakh hectares from 132.2 lakh hectares during this period. The coverage has been far larger during the *Kharif* than *Rabi* seasons. 73.14 million Farmers have been covered in seven Kharif seasons starting from Kharif 2000 and 23.94 million farmers were covered in eight Rabi seasons starting from Rabi 1999-2000. The trend in *Kharif* coverage appears to be linked to the expansion of participating states, crops notified, extent of drought, and non-borrower farmers' decision to participate in the scheme. Non-borrower farmers generally opted for crop insurance only selectively, after being almost certain of crop failure. During the entire period from 1999-00 to 2006-07, the NAIS covered

97.08 million farmers and 156.21 million hectares area. The total sum insured during *Kharif* and *Rabi* seasons taken together was to the tune of Rs 97183 crores and the premium collected was Rs 2944 crores. The average premium charged during *Kharif* was Rs 3.34 per hundred rupees of sum insured as against Rs 2.06 per hundred rupees of sum insured in the *Rabi* season. The average premium rate of Rs 3.03 indicates the dominance of risky crops in the crop area insured during the *Kharif* season (Raju & Chand, 2007).

From 1999-2000 to 2006-2007, the scheme covered 9-16 per cent farmers, 8-16 per cent crop area and 2.28 -3.77 per cent of crop output in value terms in between these years. The amount of claims was much higher than the premium paid, indicating loss in the operation of this scheme. During 2000-01 and 2002-03, the claims were more than five times of the premium paid. During 2003-04 and 2004-05, the amount of claims was more than double of the premium collected. As claims exceeded premiums, there was a net loss in the scheme, even without considering the administrative cost. The magnitude of loss can also be seen by comparing the ratio of "claims to sum assured" with ratio of "premium to sum assured". During the year 2005-06, claims constituted 7.52 per cent as against 2.97 per cent premium on the sum assured. This implies a loss of 4.55 per cent of the assured value of output (Raju & Chand, 2008; AIC, 2008).

1.2.2.5 Other Agricultural Insurance Schemes

The NAIS, which replaced CCIS and was in operation from 1999-2000 was an improved version but again agriculture insurance in India was concentrated only on crop sector and confined to compensate yield loss. Recently some other insurance schemes have also come into operation in the country which goes beyond yield loss and also cover the non-crop sector. These include Farm Income Insurance Scheme, Rainfall Insurance Scheme and Livestock Insurance Scheme. All these schemes except rainfall insurance and various crop insurance schemes discussed above remained in the realm of public sector.

1.2.2.5.1 Livestock Insurance

Livestock insurance is provided by public sector insurance companies and the insurance cover is available for almost all livestock species. Normally, an animal is insured up to 100 per cent of the market value. The premium is 4 per cent of the sum insured for general public and 2.25 per cent for Integrated Rural Development Programme (IRDP) beneficiaries. The government subsidizes premium for IRDP beneficiaries. Progress in livestock insurance, however, has been slow and poor (Table 1.1). In 2004-05 about 32.18 million heads were insured which comprised 6.58 percent of livestock population. The implementation of the livestock insurance as it obtains now, does not satisfy the farmers much and therefore, this calls for a relook.

1.2.2.5.2 Weather Based Crop Insurance/Rainfall Insurance

During the year 2003-04 the private sector came out with some insurance products in agriculture based on weather parameters. The insurance losses due to vagaries of weather, i.e. excess or deficit rainfall, aberrations in sunshine, temperature and humidity, etc. could be covered on the basis of weather index. If the actual index of a specific weather event is less than the threshold, the claim becomes payable as a percentage of deviation of actual index. One such product, namely Rainfall Insurance was developed by ICICI-Lombard General Insurance Company. This move was followed by IFFCO-Tokio General Insurance Company and by public sector Agricultural Insurance Company of India (AIC). Coverage for deviation in the rainfall index is extended and compensations for economic losses due to less or more than normal rainfall are paid under the scheme.

ICICI Lombard, World Bank and the Social Initiatives Group (SIG) of ICICI Bank collaborated in the design and pilot testing of India's first Index based Weather Insurance product was initiated in 2003-04. The pilot test covered 200 groundnut and castor farmers in the rain-fed district of Mahaboobnagar, Andhra Pradesh. The policy was linked to crop loans given to the farmers by BASIX Group, a NGO, and sold through its Krishna Bhima Samruddhi Area Bank. The weather insurance has also been experimented with 50 soya farmers in Madhya Pradesh through Pradan, an NGO, 600 acres of paddy crop in Aligarh through ICICI Bank's agribusiness group along with the crop loans, and on oranges in Jhalawar district of Rajasthan. Similarly, IFFCO-Tokio General Insurance (ITGI) also piloted rainfall insurance under the name Baarish Bima during 2004-05 in Andhra Pradesh, Karnataka and Gujarat. Agricultural Insurance Company of India (AIC) had introduced rainfall insurance (Varsha Bima) during 2004 in South-West Monsoon period. Varsha Bima provided for five different options suiting varied requirements of farming community. These are:

(1) Seasonal rainfall insurance based on aggregate rainfall from June to September,

(2) Sowing failure insurance based on rainfall between 15th June and 15th August,

(3) Rainfall distribution insurance with the weight assigned to different weeks between June and September,

(4) Agronomic index constructed based on water requirement of crops at different pheno-phases and

(5) Catastrophic option, covering extremely adverse deviations of 50 per cent and above in rainfall during the season. Varsha Bima was piloted in 20 rain gauge areas spread over Andhra Pradesh, Karnataka, Rajasthan and Uttar Pradesh in 2004-05.

The Weather Based Crop Insurance Scheme (WBCIS) of AIC was implemented in the selected areas of Karnataka on a pilot basis. WBCIS is a unique weather based insurance product designed to provide insurance protection against losses in crop yield resulting from adverse weather incidences. It provides payout against adverse rainfall incidence (both deficit and excess) during *Kharif* and adverse incidence in weather parameters like frost, heat, relative humidity, un-seasonal rainfall etc., during *Rabi*. It operated on the concept of area approach i.e., for the purpose of compensation, a reference unit area was linked to a reference weather station on the basis of which weather data and claims were processed. This scheme was available to both loanees (compulsory) and non-loanees (voluntary). The NAIS was not available for the locations and crops selected for WBCIS pilot. It had the advantage to settle the claims with the shortest possible time. The AIC had implemented the pilot WBCIS in Karnataka during *Kharif* 2007 season, covering eight rain-fed crops, insuring crops nearly 50,000 ha for a sum insured of Rs.50 crore. WBCIS was implemented in 2007-08 on a larger scale in selected states of Bihar, Chattisgarh, Haryana, Madhya Pradesh, Punjab, Rajasthan and Uttar Pradesh for Rabi 2007-08 season and was continued up to 2008-09 also as a pilot WBCIS).

1.3. Pradhan Mantri Fasal Bima Yojana (PMFBY)

The latest initiative in the insurance scheme, which came into effect from Kharif 2016 is known as Pradhan Mantri Fasal Bima Yojana (PMFBY) that replaced NAIS and Modified NAIS (MNAIS). The WBCIS) remains in place, though its premium rates have been made the same as in PMFBY. State governments have the authority to decide whether they want PMFBY, WBCIS or both in their respective states.

PMFBY is an improvement over NAIS and MNAIS and is designed to reduce the burden of crop insurance on farmers. The scheme came into operation from 1 April 2016 with a Central government budget allocation of Rs 5,500 crore for 2016-17. Further, the Central government plans to bring 40 per cent of agricultural area under PMFBY in 2017-18 and, accordingly, a provision of Rs 9,000 crore has been made in the 2017-18 budget (Bhusan & Kumar, 2017).

1.3.1 Bangla Fasal Bima Yojana (BFBY)

In West Bengal, crop insurance coverage under PMFBY is being provided entirely free of cost to the farmers. Considering the financial liability, where the entire share of farmers premium is borne by the state government, the PMFBY in West Bengal has been rechristened as ‘Bangla Fasal Bima Yojna (BFBY)'. However, all other guidelines and norms remained unaltered.

Table 1.2 Comparisons of PMFBY with other major insurance schemes

No.	Feature	NAIS (1999)	MNAIS (2010)	PMFBY (2016)
1.	Premium rate	Low (1.5-3.5 per cent) and no premium subsidy for horticulture/commercial	High (up to 15 per cent), premium subsidy for all crops	Almost equal to NAIS (1.5-5 per cent), premium subsidy for all crops
2.	Insurance unit	Gram panchayat, block and taluka	Village Gram panchayat for major crops	Village or Gram panchayat for major crops
3.	Indemnity level	60, 80, 90 per cent	80, 90 per cent	70, 80, 90 per cent
4.	Sum insured	Loan amount/value of TY/ 150% value of AY	Sanctioned credit limit/ value of TY/150% value of AY	Equal to scale of finance
5.	One season-one premium	Yes	No	Yes
6.	Insurance amount cover	Full	Capped	Full
7.	On-account payment	No	Yes	Yes
8.	Localized risk cover age	No	Hailstorm, landslide	Hailstorm, landslide, inundation
9.	Post-harvest loss coverage	No	Coastal areas—for cyclonic rain	All India—for cyclonic + unseasonal rain
10.	Prevented sowing coverage	No	Yes	Yes
11.	Use of technology for quick claim settlement	No	Intended	Mandatory
12.	Claim liability	NA -	Government will under-write losses beyond 500 per cent of seasonal gross premium	Government will underwrite losses beyond 350 per cent of seasonal gross premium
13.	Minimum sample size for CCE	Not specified	Same in PMFBY and MNAIS	Same in PMFBY and MNAIS
14.	Monitoring of scheme	-	Provision for social audit and sending list of beneficiaries to gram panchayat, 1-5 per cent of beneficiary to be crosschecked	Social audit provision removed completely, no beneficiary list will be sent to gram panchayat, 1-5 per cent of beneficiary to be crosschecked
15.	Crop insurance app and portal	No	No	Yes
16.	Insurance companies	Only government	Government and private both	Government and private both
17.	Criteria for performance assessment of insurance companies	No	1) Claim-to-premium ratio 2) Number of farmers benefited to farmers insured ratio 3) Percentage of non-loanee farmers to total number of insured farmers	1) Percentage of actual area insured to total cropped area in the allocated districts/ areas 2) Percentage of area insured of non-loanee farmers to total area insured 3) Percentage of claims paid to total admissible claims within the stipulated time 4) Percentage of own-retention of risk insured (SI) to total risk insured
18.	Toll-free number for grievances redressal	No	No	Yes, at the insurance company office
19.	Awareness	No	No	Yes (target to double coverage to 50 per cent)

Source: Bhusan & Kumar, 2017

1.3.2 Salient Features of PMFBY

Some of the salient features promised under PMFBY are discussed below:

(i) Coverage of farmers: The scheme covers loanee farmers, non-loanee farmers, sharecroppers and tenant farmers. It is compulsory for loanee farmers.

(ii) Coverage of crops: Crops will be notified by respective state governments in Rabi and Kharif seasons.

(iii) Coverage of risks and exclusions: The risks covered are: prevented sowing/planting; loss to standing crop (sowing to harvesting) due to non-preventable risks: post-harvest losses (up to a period of 14 days); and localized calamities such as hailstorms, landslides or inundation.

(iv) Insurance unit: PMFBY operates on an area-based approach. An insurance unit (IU) at the village/village-panchayat level or equivalent unit for major crops as notified in the state notification; for other crops the insurance unit could be block or even districts.

(v) Low premium rates: PMFBY fixes a uniform premium of 2 per cent of sum insured to be paid by farmers for Kharif crops, 1.5 per cent for Rabi crops, and 5 per cent for commercial and horticultural crops or actuarial rate, whichever is less. The balance premium will be paid equally by the state and central government. There is no upper limit on government subsidy for actuarial premium rate (APR).

(vi) Indemnity level: PMFBY has three levels of indemnity (level of protection against loss) 70 per cent, 80 per cent and 90 per cent corresponding to high, moderate and low-risk area for all notified crops by respective state governments. This means that farmers are themselves to bear the loss of 30 per cent, 20 per cent or 10 per cent respectively.

(vii) Threshold yield: Threshold yield of a specific crop will be calculated based on average yield of the last seven years excluding up to two calamity years and the corresponding indemnity level.

(viii) Sum insured: Sum insured (SI) per hectare for both a loanee and a non-loanee farmers is the same and equal to the scale of finance (equal to cost of cultivation plus some profit) as decided by the District Level Technical Committee (DLTC) and would be pre-declared by the State Level Coordination Committee on Crop Insurance (SLCCCI).

(ix) Innovative technology usage: Use of innovative technology is largely encouraged. The use of smartphones has been proposed to capture and upload data of crop cutting to reduce delays in claim payments to farmers. Drones and remote sensing will be used to reduce the number of CCEs.

(x) Payment of claims: Payment of final claims to farmers will be made electronically within three weeks from receipt of crop yield data by the insurance company.

(xi) Cluster approach for insurance company: For more effective implementation, a cluster approach will be adopted under which a group of districts with variable risk profiles will be allotted to an insurance company through competitive bidding.

(xii) Insurance company presence at local level: The insurance company has to establish a functional office in each tehsil and at least one agent should be deployed at the block level in allocated districts.

(xiii) Provision of crop insurance portal: A crop insurance portal (www.agri-insurance.gov.in) has been created under PMFBY to enable better administration, coordination amongst stakeholders, proper information dissemination and transparency.

(xiv) Toll-free number: A centralized dedicated toll-free number will be at the insurance company office for claim intimation.

In view of the above, it can be stated that State Governments/UTs have a moderate liability to ensure that this crop insurance scheme should provide comprehensive insurance coverage to the farmers on the basis of sound insurance principles as well efforts can also be made so that it can provide the best value for the premium. Though it is not mandatory, however, there is also scope for the State Government to review the progress of this scheme periodically and can undertake impact assessment after the completion of each season. The assessment report can also be sent along with their suggestion/recommendations to the central government for making further improvements in the scheme.

1.4. Review of Literature

The word ‘risk’ is a common and widely-used part of today’s vocabulary, yet somewhat surprisingly, there is still no broad consensus on the meaning of this term (Legesse and Drake, 2005). Knight was the first to distinguish risk from uncertainty. He distinguish between measurable uncertainty and un-measurable uncertainty, we may use the term ‘risk’ to designate the former and the term ‘uncertainty’ for the latter (Knight, 1921). Knight's famous definition of ‘risk’ relates to objective probabilities while ‘uncertainty’ relates to subjective probabilities (Holton, 2004). Most authors find a more useful distinction between uncertainty as imperfect knowledge and risk as exposure to uncertain unfavourable economic consequences (Legesse, 2006; Hardaker *et al*., 2004; Holton, 2004; Hardaker *et al*., 1997). Knowledge of farmers’ attitude towards risk is important in determining how farmers behave for new agricultural practices. According to Kouame and Komeman (2012) the theory of insurance demand shows that risk averse households will voluntarily purchase insurance if it is offered to them. However, an empirical study in Cote d'Ivoire showed inconsistent results with this theory of insurance demand. That is, high risk aversion negatively affects the demand for insurance.

There is a great deal of argument over whether risk is subjective or objective or some combination of both (Campell, 2006; Mitchell, 1999). Particularly, there are two different views or philosophies whether risk is objective or subjective. The former are the scientific realist researcher that believes in objective risk while the latter are the relativist researcher that believes in subjective risk (Mitchell, 1999). However other study (Hanson, 2010, pp.231) argued that 'risk is both fact-laden and value-laden and risk as objective as well as subjective components'. Mitchell (1999) reported that objective risk must exist in theory but what is lacking is the ability to measure it. Mitchell (1999) argues that experts can measure time risk, financial risk, physical injury and partly physical harm objectively but psychosocial risks (like depression) are subjective which are difficult to measure although psychometric scales, in some cases, could be devised to measure such phenomena.

Empirical research indicates that risks are the determinants of technology adoption, production, marketing and the investment decisions of farm households (Paudel *et al*., 2000; Mazid and Elizabeth, 1992; Smidts, 1990). According to Haile (2007) risks and uncertainties impact households' production and consumption decisions and knowledge of how subsistence farm households make economic decisions under risk provides useful information for policy makers.

Ifft (2017) uttered that the government of India started offering widespread crop insurance in 1985, with the CCIS. The CCIS has been replaced by the NAIS. The NAIS is considered to be an improvement over the CCIS, but it has simply replaced one flawed scheme with another slightly less flawed one. Government crop insurance has proved to be a failure worldwide, but India seems to have ignored both its own failure and the failure of other countries. The main flaws of the NAIS are the goal of financial viability, its mandatory nature, its failure to address adverse selection, arbitrary premiums, and the area approach. Internationally, private crop insurance is not highly developed but varied successful private programmes do exist. Even if India withdrew from crop insurance schemes, it could still support farmers through an income guarantee or investment in infrastructure.

Golait and Pradhan (2008) stated that though a number of factors affect the Indian agricultural production as well as productivity, the main risk being its excessive dependency on 'weather' which is beyond the control of human beings. The crop insurance as a risk management tool has been in practice quite for some time in Indian agriculture in different variants. They mentioned that information on weather is not free of cost and, therefore, insurance becomes expensive to farmers. Though farmers are perceived to know their risks better than the Government or other institutions, it is surprising that both farmers and decision makers tend to underestimate the risk of agriculture especially due to unpredictability of the nature's adversity.

'Weather insurance' is nothing but the insurance cover against losses incurred due to uncertainties in climatic conditions. Basically, it is aimed to be used as hedging instrument against any vulneRability of crops or any other damage incurred in agricultural activities due to erratic and irregular weather. It is also denoted as 'weather based index insurance' and 'weather event insurance'. However, weather insurance is not exclusive to the agriculture alone but industry, sports events or any other commercial events that incur loss due to the vagaries of weather. In western countries, most of the sports and entertainment events are being insured against the erratic behavior of weather. Weather insurance, therefore, has broader connotation. Weather insurance has been in practice in Canada, the US and European countries. There has been regular mapping of the weather risks in these countries. It is likely that as agriculture being one of the largest sectors predominantly dependent on the vagaries of weather conditions, the weather insurance has been more identified with respect to agriculture or farmers. Thus, in a broader sense weather insurance protects any financial loss one may incur due to specific weather perils. 'Rainfall contracts' are an example of weather insurance. Rain fall is relatively simple to monitor and the history of rainfall in most areas is well known and farmers would be compensated if the rainfall in an area would go below a benchmark level, with varying levels of payment depending upon the level of rainfall. However, the benefits are significant, including reduction of moral hazard, adverse selection and transaction costs (Skees, 2000).

A study by Sakurai and Reardon (1997) indicated that there was a long pending demand for formal and government sponsored drought insurance in Burkina Faso. The demand for drought insurance was found to decrease in households with higher overall incomes and more self-insurance schemes coming into being. The authors suggested that crop insurance alone is not sufficient; that policy and programmes that supports self-insurance, such as micro credit or increase of off-farm employment are also important. In Canada, crop insurance was administered through 'area approach', similar to that of India.

The studies conducted by Turkey and Islam since 1995 indicated that the area approach was not only inequitable but also inefficient. The empirical research covering 537 farms strongly confirmed the belief that individual crop insurance is better in terms of risk reduction, but premiums would be higher. The area approach in Canada was concluded to be inequitable, as benefits were not fairly distributed. The most benefits to be accrued would be by the farmers with yields closest to the average.

It is even more interesting and startling to note that a survey on the farmers' opinion revealed that the farmers were stated to have well aware of the rainfall-based index, nature of the contracts and the associated basis risk. Nevertheless, the farmers seem to value the quick payout of the rainfall policy, more than other aspects such as premium being little on higher side as also the existing crop insurance policy in India, where claims take at least one year to settle. Now that weather insurance has taken off the ground, the real challenge before us is to scale up the distribution and ensure fast claims settlement (Agrawal and Mahajan, 2004).

In the absence of formal risk sharing/diffusion mechanisms, farmers rely on traditional modes and methods to deal with production risk in agriculture. Many cropping strategies and farming practices have been adopted in the absence of crop insurance for stabilizing crop revenue. Availability and effectiveness of these risk management strategies or insurance surrogates depend on public policies and demand for crop insurance (Jodha, 1981).

A large farm household or a wealthy farmer is able to spread risk over time and space in several ways; he can use stored grains or savings during bad years, he can diversify his crop production across different plots. At a higher level of income and staying power, the farmer would opt for higher average yields or profits over a period of time even if it is achieved at the cost of high annual variability on output (Rao *et al.*, 1988). Binswanger (1980) after studying the risk in agricultural investments, risk averting tendencies of the farmers and available strategies for shifting risk, concludes that farmers' own mechanisms for loss management or risk diffusion are very expensive in arid and semi-arid regions.

The major role played by insurance programmes is the indemnification of risk-averse individuals who might be adversely affected by natural probabilistic phenomenon. The philosophy of insurance market is based on large numbers where the incidence of risk is distributed over individual. Insurance, by offering the possibility of shifting risks, enables individuals to engage in risky activities which they would not undertake otherwise (Ahsan *et al.*, 1982). Lack of data on yield levels as well as risk position of the individual farmer puts the insurance company in tight spot. As in the case of general insurance, agricultural insurance market also faces the problem of adverse selection and moral hazard. The higher premium rates discourage majority participation and only high risk clients participate leading to adverse selection. Moreover, in crop insurance the individuals do not have control over the event, but depending on terms of contract, the individuals can affect the amount of indemnity. Tendency of moral hazard tempts an insured individual to take less care in preventing the loss than an uninsured counterpart when expected indemnity payments exceed the value of efforts. The imperfect information (gathering information is costly) discourages participation of private agencies in crop insurance market. Similarly, incidence of random events may not be independent. Natural disasters may severely damage crops over a very large area and the domain of insurance on which it is based crumbles down i.e., working of the law of large number on which premium and indemnity calculations are based breaks down. The private insurance companies of regional nature will go bankrupt while paying indemnity claims unless it spread risk over space (Raju & Chand, 2007).

Efficient risk reducing and loss management strategies such as crop insurance would enable the farmers to take substantial risks without being exposed to hardship. Access to formal risk diffusing mechanisms will induce farmers to maximize returns through adoption of riskier options. Investment in development of groundwater, purchase of exotic breeds for dairy will be encouraged due to insurability of the investment. This will help the individual to augment and increase the farm income (micro perspective) and also help to augment aggregate production in the country (macro perspective). The benefits of crop insurance vary depending on the nature and extent of protection provided by the scheme.

It is argued that farmers' own measures to reduce the risk in farming in semi-arid tropical India were costly and relatively ineffective in reducing risk in farming and to adjust to drought and scarcity conditions. Jodha (1981) found that the riskiness of farming impinges upon the investment in agriculture leading to suboptimal allocation of resources. He also finds that official credit institutions are ill equipped to reduce the exposure of Indian farmers to risks because they cannot or do not provide consumption loans to drought-affected farmers.

Crop credit insurance also reduces the risk of becoming defaulter of institutional credit. The reimbursement of indemnities in the case of crop failure enables the farmer to repay his debts and thus, his credit line with the formal financial institutions is maintained intact (Hazell *et al.,* 1986; Pomareda, 1986; Mishra, 1996). The farmers do not have to seek loans from private moneylenders. The farmer does not have to go for distress sale of his produce to repay private debts. Credit insurance ensures repayment of credit, which helps in maintaining the viability of formal credit institutions. The government is relieved from large expenditures incurred for writing-off agricultural loans, providing relief and distress loans etc., in the case of crop failure.

A properly designed and implemented crop insurance programme will protect the numerous vulnerable small and marginal farmers from hardship, bring in stability in the farm incomes and increase the farm production (Bhende, 2002).

The farmer is likely to allocate resources in profit maximizing way if he is sure that he will be compensated when his income is catastrophically low for reasons beyond his control. A farmer may grow more profitable crops even though they are risky. Similarly, farmer may adopt improved but uncertain technology when he is assured of compensation in case of failure (Hazell, 1992). This will increase value added from agriculture, and income of the farm family.

Bhende (2002) found that income of the farm households from semi-arid tropics engaged predominantly in rain-fed farming was positively associated with the level of risk. Hence, the availability of formal instrument for diffusion of risk like crop insurance will facilitate farmers to adopt risky but remunerative technology and farm activities, resulting in increased income.

Mishra (1994) analysed the impact of a credit-linked CCIS on crop loans, especially to small farmers in Gujarat. It is observed that CCIS had a collateral effect as reflected through the increased loan amount per borrower and reduction in the proportion of non-borrowers among small farmers. The implications of credit expansion are that increased availability of credit can enhance input use and output and employment that increased share of small farmers in the total loan can have desirable effects on equity and efficiency considerations. It is observed that insured households invest more on agricultural inputs leading to higher output and income per unit of land. Interestingly, percentage increase in output and income is more for small farms. Based on 1991 data, CCIS was found to contribute 23, 15, and 29 per cent increase in income of insured farmers in Gujarat, Orissa and Tamil Nadu, respectively (Mishra 1994).

Many of the risks insured under public insurance programme are essentially uninsurable risks. Moreover, they occur frequently and hence are expensive to insure. The financial performance of most of the public crop insurance has been ruinous in both developed and developing countries. The multi-peril crop insurance thus is very expensive and has to be heavily subsidised (Hazell 1992).

In view of the above it can be gauged that insurance is one of the known risk pooling mitigation tools. It is part of the ex-ante (risk mitigation) strategies. Community based emergency fund is an informal risk mitigating strategies (informal insurance) in developing countries such as India. Under this approach, in the case of cattle death, the community recover partly the value of dead cattle for the owner by buying meat after slaughter. With regard to production contracts, the contract typically give the contractor (the buyer of the commodity) considerable control over the production process. These contracts normally specify the production inputs to be used, the quality and quantity of the final product and the price to be paid to the producer. In a marketing contract, a farmer agrees to sell a commodity at a certain price to a buyer before the commodity is ready to be marketed. The farmer retains full responsibility for all production management decisions. The contracts can take many forms. They can be based on a fixed price or alternatively depend on the commodities futures price (European Commission, 2001).

Risk coping strategy is concerned with reducing the impact of the risk after it has occurred. It is a methods used by households to survive when confronted with unanticipated livelihood failure (Ellis, 2000). Once the disaster has occurred, governmental and non-governmental organisations provide support in terms of disaster relief and social assistance. In developing countries the disaster relief is mainly food aid and other types of basic necessities. Holzmann and Jogersen (1999) and Valdivia *et al*. (1996) indicated that after the disaster households are engaged in activities like selling their livestock, drawing down food stock, increased child and female labour market participation, remittance, borrow money from various sources, taking children out of school, increased austerity (meal substitution, meal reduction, reducing household items, postponing health care expenditure).

In fine, it can be said that farmers in developing countries like India face multiple sources of risks such as production, market, financial, institutional and human risks. Farmers in developing countries such as India are mainly affected by catastrophic risks of livestock epidemics and drought. In addition, market related risks including a lack of timely information, price fluctuation and high transaction costs associated with transport and communication services. To manage agricultural risks, farmers use ex-ante strategies and ex-post coping strategies. Ex-ante strategies such as risk prevention that commonly used in developing countries such as India include migration, relocation, crop and livestock disease control, macroeconomic policy, disaster prevention programmes and investment in infrastructure while ex-ante strategies of risk mitigation include diversification (mixed farming, off-farm and non-farm investments), informal risk pooling, agricultural insurance, microfinance and share cropping through leasing cultivated land.

Once a disaster happened, farmers would engage in ex-post strategies of risk coping strategies like selling livestock and productive assets, borrowing from money lender, removing children from school and humanitarian assistances. In most cases, such short term coping strategies are costly to farmers that may destroy the livelihood strategies of farmers in the long run. Hence, understanding farmers' attitude to risk, risk sources and suggest viable risk management strategies that may able to reduce the vulneRability of farmers.

1.5. Scheme of the Chapters

As suggested by the Coordinating Centre, the present report is organised into six chapters. Chapter- I, which is the current chapter provides an overview of the study, and a brief review of literature. The second chapter essentially deals with the objectives and scope of the study, a detailed description of data and methodology along with limitations of the study. Based on secondary information and feedbacks from different stakeholders, the Chapter-III discusses the progress of the scheme in the state of West Bengal, particularly emphasizing the governance and implementation issues. Analysis of primary data is presented in Chapter-IV & Chapter-V. Socio-economic profile of the sample households have been elaborately discussed in Chapter-IV. Chapter-IV also dealt with the farm level characteristics of the sample households particularly the land holding information, cropping pattern, production and sale of farm produces. The insurance behavior of the sample farmers are mapped in chapter V, and finally conclusions and policy suggestions are covered in Chapter-VI.

Chapter – II

Study Design

The study was conducted in the state of West Bengal during the period 2017-18. The reference period for secondary as well as primary field survey covered two seasons, Kharif-2016 and Rabi-2016-17. The study was divided into two parts, namely:

A. Governance and implementation of PMFBY in West Bengal

B. Understanding uptake behavior

Both the component were carried out more or less simultaneously using mixed method of data collection. While the first part is based on secondary information and feedbacks collected from the government departments, insurance agencies, subject matter experts and other stakeholders associated with implementation of PMFBY in the state of West Bengal; the second part is based on primary data collected from field surveys across various districts and focused group discussions held with various stakeholders at grass root level. The purpose of second stage was to understand what factors promote or dissuade farmers from enrolling under PMFBY, what are the other risk management strategies that farmers have and what are the reasons behind farmers opting (or not opting) for each of them.

2.1. Study Objectives

The present study is an attempt to evaluate the performance of Pradhan Mantri Fasal Bima Yojana (PMFBY) in the state of West Bengal in terms of issues related to governance, implementation and uptake behavior among the farmers and to make some policy suggestions for its better functioning. The specific objectives of the study are:

1. To analyze the governance of PMFBY implementation in West Bengal
    a. To examine the functioning of different stakeholders dealing with PMFBY in West Bengal
    b. To study the progress of PMFBY in West Bengal

2. To analyze the uptake behavior among the farmers in West Bengal

3. To recommend suitable policy suggestions for better functioning of PMFBY in West Bengal.

2.2. Sampling Methodology

The study was conducted using mixed method of data collection. For understanding governance and implementation issues, we have compiled information for all the districts for two consecutive crop seasons, namely, Kharif-2016 and Rabi-2016-17. For getting feedbacks on governance and implementation, we could approach the State Department of Agriculture (DoA), Government of West Bengal (GoWB); concerned District Department of Agriculture (3 districts), Assistant Director of Agriculture (ADA) at Block level (3 blocks), representatives from Gram Panchayat (GP), implementing Insurance Agencies (IA), Primary Agricultural Co-operative Societies (PACS), and Krishi Prayukti Sahayakas (KPS).

2.2.1 Sampling Frame

The first part of the study i.e., evaluation of the scheme w.r.t. progress, governance and implementation, is based on district-wise information for all the districts in West Bengal and feed backs received from state level functionaries as stated above. This formed the basis for second part of the study i.e., understanding uptake behavior of the farmers at field level.

Table 2.1 District-wise number of insured farmers under PMFBY during Kharif-2016 & Rabi-2016-17

District	Number of Farmers with PMFBY	Rank	Category
Purba Medinipur	733726	1	High PMFBY(>3 Lakhs)
Burdwan	***584401***	***2***	***High PMFBY(>3 Lakhs)***
Paschim Medinipur	571914	3	High PMFBY(>3 Lakhs)
Hooghly	364317	4	High PMFBY(>3 Lakhs)
Nadia	290702	5	Moderate PMFBY (1-3 Lakhs)
South 24 Parganas	249074	6	Moderate PMFBY (1-3 Lakhs)
Bankura	247920	7	Moderate PMFBY (1-3 Lakhs)
North 24 Parganas	***234223***	***8***	***Moderate PMFBY (1-3 Lakhs)***
Birbhum	175012	9	Moderate PMFBY (1-3 Lakhs)
Murshidabad	159402	10	Moderate PMFBY (1-3 Lakhs)
Purulia	136098	11	Moderate PMFBY (1-3 Lakhs)
Howrah	94920	12	Low PMFBY (<1 Lakhs)
Cooch Behar	85593	13	Low PMFBY (<1 Lakhs)
Dakshin Dinajpur	***51855***	***14***	***Low PMFBY (<1 Lakhs)***
Malda	49704	15	Low PMFBY (<1 Lakhs)
Uttar Dinajpur	43751	16	Low PMFBY (<1 Lakhs)
Jalpaiguri	32132	17	Low PMFBY (<1 Lakhs)
Alipurduar	26453	18	Low PMFBY (<1 Lakhs)
Darjeeling	3744	19	Low PMFBY (<1 Lakhs)
West Bengal	**4134941**	**-**	**-**

Source: Compiled from documents provided by DoA, GoWB.

For field survey, district-wise enrollment under PMFBY during Kharif-2016 & Rabi-2016-17 were collected from the office of Joint Director, DoA, GoWB. The districts were then ranked and categorized into three categories according to the number of farmers enrolled under PMFBY (Table-2.1). Then, based on degree of coverage under PMFBY, three districts were selected purposively. One representing a district with very high uptake (Burdwan), another with moderate uptake (North 24 Parganas), and one with relatively low uptake (Dakshin Dinajpur).

In the second stage of sampling, in consultation with the district agricultural departments, a cluster of villages were identified for field survey keeping in mind the availability of sufficient number of representative categories of farmers. For this we have selected Batagram and Kalyanpur village from Ausgram-I block in Burdwan district (High uptake district); Khaspur, Hoogly, East Ramchandrapur & West Ramchandrapur villages from Baduria block in North 24 Pargana district (Moderate uptake district); and Dangi village from Balurghat block in Dakshin Dinajpur district (Low uptake district). The farm households were then categorized into three different categories, viz. loanee farmers, non-loanee farmers, and non-insured farmers.

Category 1

Loanee farmers: Farmers who availed cultural credit from institutional sources. These farmers, by default enrolled for PMFBY and the premium amount is deducted from their loan amounts at source by the banks.

Category 2

Non-loanee farmers – These are farmers who have not taken agricultural credit from institutional sources and hence do not automatically qualify for insurance under PMFBY. But they have voluntarily enrolled for PMFBY by paying premiums.

Category 3

Non-Insured farmers– These are farmers who are aware of the insurance scheme and have not opted for insurance under PMFBY for some reason – either they do not trust it, or do not think it is important enough or have other means of risk management. This category is also called the control group.

Finally, 50 farm households from each districts were selected randomly covering 30 loanee farmer; 10 non-loanee farmer, and 10 non-insured farmers. Thus a total of 150 farm households were selected for this study. The details of the sampling frame is given in Table 2.2. It is important to note that share-croppers or tenants with valid (legal) documents were also considered farmers in our sample.

2.2.2 Data

Information on crop insurance is of crucial significance for obvious reasons. In order to evaluate the performance of PMFBY in West Bengal, data were collected from both primary sources and secondary sources. The primary data was collected from the field survey among the farmers, and from state-officials and other stakeholders concerned with crop insurance in the state. Secondary information was collected from the DoA, GoWB and from AIC, which is a non-government autonomous body responsible for the operation of the scheme in the state.

For governance and implementation, we collected district-wise and season-wise information regarding number of farmers enrolled under PMFBY, area coverage, sum-assured, premium paid, claims, indemnity paid, etc. In field survey, data were collected on demographic characteristics; occupation and sources of income; asset positions; access to credit; cropping pattern; irrigation facilities; area, production and productivity of major crops; sale and family consumption of farm produces; etc. The data were also gathered on the awareness, experience and suggestions regarding PMFBY in the study area.

2.2.3 Tools Used

In order to evaluate the performance of the scheme in terms of governance and implementation, the tools involved include:

- Directed and open-ended questions to relevant state authority, insurance company or nodal agencies.
- Interaction with bank officials, agricultural officers, and subject matter experts.

The purpose was to gather information on the functioning of various agencies involved and district-wise progress under PMFBY for Kharif 2016 and Rabi 2016-17 in the state

In order to understand the uptake behavior at farm level, the following tools were used:

- A primary survey schedule (designed by CMA, Ahmedabad).
- Focus Group Discussions (FGDs) with villagers and representatives from panchayat.

Most questions in FGD were open ended and may lead to multiple secondary questions depending on the course of the discussion.

2.3. Sampled Districts

As described in the previous section, we have selected three districts, for the purpose of field survey to analyze the uptake behavior of the farmers. The selected districts were, Burdwan (High uptake district), North 24 Paraganas (Moderate uptake district), and Dakshin Dinajpur

(Low uptake district). These three districts also represents, three different agro-ecological region of the state. North 24 Pargana district represents the coastal region in extreme south; Dakshin Dinajpur represent Tarai region in Northern part of the state, and Burdwan district represent the Gangetic alluvium region in the middle of the state. Total number of farmers selected for field survey was 150, of which 90 belonged to insured loanee farmers, 30 insured non-loanee farmers, and 30 non-insured farmers (control).

Table-2.2 Sampling frame for field survey in West Bengal

Category of Districts (Selected District)	Selected blocks & villages	Sample size from different categories of farmers			
		Loanee Farmers (Insured)	Non-Loanee Farmers (Insured)	Non-insured (Control)	Total
High uptake district (Burdwan)	Block: Aushgram-I Villages: Batagram & Kalyanpur	30	10	10	50
Medium uptake district (North 24 Parganas)	Block: Baduria Villages: Khaspur, Hoogly, East & West Ramchandrapur	30	10	10	50
Low uptake district (Dakshin Dinajpur)	Block: Balurghat Village: Dangi	30	10	10	50
Total		**90**	**30**	**30**	**150**

2.4 Limitation of the Study

The study is confined to the state of West Bengal, but the primary data was collected from only 150 farmers encompassing three different districts of West Bengal. All the selected households were farmers, cultivating either their own land or on leased in land during the period of survey. The reference period for data collection was limited to only one year i.e., Kharif- 2016 & Rabi-2016-17. Further, the year 2016-17 was the first year of PMFB/BFBY and good monsoon year but the performance of any insurance scheme should be judged over a period of 3-5 years. Regarding district-wise secondary information on PMFBY/BFBY, we relied heavily on the information provided by the Joint Director & OSD (FI), DoA, GoWB but due to incompleteness in that data and delay, we had to rely on other sources too like government portals and websites; and on personal sources. We observed some discrepancies across the sources because most of them are provisional in nature. We also received feedback from some stakeholders over phone and on the conditions of anonymity, for which there was no scope to verify their claims.

Chapter – III

Governance and Implementation of PMFBY in West Bengal

The main objective of PMFBY was to promote crop insurance and to ensure an effective risk cover to the farmers. So far as promoting crop insurance among the farmers in West Bengal is concerned, the scheme is a huge success as more than 3.06 million farmers were enrolled under PMFBY/BFBY in the very first season (Kharif 2016) of its implementation, registering an annual growth of 216.1% over the previous year. So far as governance and implementation issues are concerned, the performance under PMFBY/BFBY is also quite satisfactory from pre-notification to enrolment phase. However, there are enough scope for further improvements in post enrolment phase particularly in conducting CCEs, monitoring claim settlement and claim disbursement process, and in increasing the awareness among the farmers regarding salient features of the scheme. The following sections discusses these in details, under two broad sub-headings : Implementation of PMFBY/BFBY in West Bengal and Physical Progress under PMFBY/BFBY in West Bengal.

3.1 Implementation of PMFBY/BFBY in West Bengal

In this section we tried to capture how the scheme was implemented during Kharif-2016 & Rabi-2016-17 in the state of West Bengal and the role played by different stakeholders. A summary of roles, responsibilities, time-line and performances in implementing the scheme is presented in Table 3.1 and Table 3.2. Season wise implementation details are provided in Table 3.3 to Table-3.8.

The PMFBY was implemented in all the districts of West Bengal, except Kolkata Metropolitan area, since its inception. However, the scheme has been rechristened as 'Bangla Fasal Bima Yojna (BFBY)' in the state since it was offered at free of cost to the farmers (except for potato, sugarcane and horticultural crops) and the state government borne the entire financial liability on account of farmers' share of premiums in addition to its own share. However, all other guidelines and norms remained unaltered.

A perusal of Table 3.1 and 3.2 reveals that implementation of PMFBY in West Bengal was more or less in accordance with the stipulated operational guidelines, till the phase of enrolment. But the main problem was with conducting CCEs and settling claims. For various reasons, settlement of insurance claims were delayed by 4 to 7 months and farmers were deprived of timely compensation for crop loss, in spite of the fact the IAs made huge profit during 2016-17.

Table 3.1 Performance of key stakeholders, against stipulated roles/responsibilities, in implementing PMFBY in West Bengal

Phases	Stakeholders	Department of Agriculture (DoA)	Bureau of Applied Economics and Statistics (BAES)	Implementing Insurance Agencies (IAs)	Bank or Financial Institutions (Banks/PACS)
Pre-Notification	Responsibility	• Finalization of calendar for implementation • Formation of clusters (based on risk levels) • Identification of IUs across the state and indemnity levels (season-wise and crop-wise) • Provide historical yield data • E-bidding for invitation & evaluation of bids, and selection of IAs.	• Finalization of crop-wise acreage estimates across IUs for previous years • Sharing the same with DoA	• Submitting bids with actuarial premiums for different crops/clusters • Negotiation of terms sheets and clauses	• Decide district-wise and crop-wise scale of finance, based on the advice of concerned DLTCs.
	Performance	• All responsibilities were performed on time. • Re-clustering were done for every season based on perceived risk levels. • Lack of transparency in bidding process (delay, re-tendering, season-wise bidding instead of for 3-5 years; ignoring penalty clause, etc). • No involvement of land revenue department	• Being the very first year of its implementation, there was delay.	• Submitted bids but with high APR in Rabi-2016-17. • Apprehension regarding formation of cartel by some empanelled IAs.	• District Central Co-operative Backs completed the task within the stipulated time.
Notification	Responsibility	• Issuing of notification with IU, indemnity level, actuarial premium rates, sum insured, cut off dates, etc. • Release the share of premium share to IAs (100% farmer's share and 50% of states share) • Instruction to DLMC for publicity • Ensure uploading details in website/ portal	• Prepare plan for conducting CCEs in collaboration with DoA. • Training for primary workers and supervisors	• Plan to witness the CCEs	NA
	Performance	• The scheme was renamed as BFBY and offered at free of cost to the farmers. • Notification made with necessary details. • Instructions were given in the notification itself, without much follow-up at district or block level. • Notifications and a tracking app *MK-BFBY* uploaded in *Matirkatha* website without much details.	• There was inordinate delay in planning for CCEs as well as in training the primary workers possibly due to manpower shortages.	• In most of the cases IAs could not participate due to either time constraints or lack of co-ordination with the DoA/BAES.	NA

Enrollment	Responsibility	• Publicity campaign • Monitoring of enrolment by DLMCs & BLMCs	NA	• Distribution of enrolment forms for facilitating enrolment • Adequate publicity among the farmers	• Facilitate enrolment • Maintain hard copies of application • Verify application related documents • Prepare and forward consolidated statements to IAs.
	Performance	• Though government official claims for enough publicity campaign but the same was not supported by the sample farmers/ground • There was not much follow-up and monitoring at block or district level. • GPs played crucial role only in increasing number of enrolment.	NA	• Limited presence at local level • Many IAs found not to play any role except for providing application form through GPs/banks	• Played a key role for enrolment of loanee farmers. • Lack of stringent verification of documents
Post enrolment phase (Claims)	Responsibility	• Generate IU wise and crop wise data on yield loss based on CCEs • Initiate claims payable based on yield loss data • Share the yield loss data with the concerned IAs • Mediate claims or CCE related disputes • Monitoring claim settlement process • Release remaining 50% of states share in premium subsidy • Reporting the claim related information to government for subsidy payments	• Conduct the CCEs as planned • Overseeing the Insured Crop Verification • Provide additional data on CCEs for dispute settlements • Enumeration and reconciliation of crop wise area sown statistics.	• Witness CCEs and contest the same in case of discrepancies • Verify the claims payable and settle the claims directly with the farmers • Payment of insurance claims based on crop loss data received from the DoA.	• Intervene in case of discrepancies related to bank accounts and online transfers (If needed) • Apportionment of claims by nodal bank and credit claim to the bank account of beneficiary farmers.
	Performance	• There was too much delay in sharing crop loss data with the IAs. • Poor handling of claim related disputes • Lack of monitoring in claim settlements process • No punitive action/accountability for lapses • Delay on the part of the government in paying premium subsidy	• Failed to conduct sufficient CCEs • Failed to use remote sensing data (RTS), drones, GIS, smart-phones, etc to effectively reduce number of CCEs. • Failed in out-sourcing the job	• Received crop loss data & second installment of premium subsidy much after harvest. • Used this as an excuse to delay and deny claim payments. • No direct contact with the farmers.	• More or less timely intervention made as and when situation demanded. • Problems with KYC and account transfer

Note: Adapted from Pancharatnam et al (2018) and CAG, 2017.

The IAs admitted the inordinate delay in payment of claims but hold the state government responsible for the mess as payment of claims was dependent on receipt of yield data and premium subsidy from the state governments. On the conditions of anonymity, officials with IAs reported that such an inordinate delay provided the private IAs an excuse to delay or even deny compensation to the farmers who suffered crop losses. As a result large number of farmers who suffered crop losses in 2016-17, did not receive any compensation till date. Another reason for delay in payment was due to doubtful claims and incomplete documents submitted by the farmers during both enrolment as well as during reporting loss/claim. Multiple claims on a same land, claims with fake/forged pictures and land documents, non-verification of documents by the banks and/or GP officials during enrolment, KYC problem with bank accounts, complete lack of information among the farmers, etc. are few to mention. For example many loanee farmers who received loan for a crop say mustard or wheat, but actually cultivated potato, and accordingly when registered claim rejected. There were several fake claims also. As a result many claims for Kharif-2016/Rabi-2016-17 were not paid till date.

According to government officials, the main reason for inordinate delay was due to failure in conducting sufficient numbers of CCEs to record and upload crop loss data. Given the manpower shortages and time constraints, conducting so many CCEs were virtually impossible. In many instances, district level officials were therefore required to carry out their crop loss assessment without even visiting farmers fields. Which were contested by the IAs. Now the question is why it was so? While PMFBY promised use of smart-phones, remote sensing images, GIS data, and drone technologies to carry out faster assessment of crop losses, the BAES & DoA failed to use such smart technologies to effectively reduce the number of CCEs. Therefore, proper mechanism like out-sourcing CCEs and/or capacity building with smart technologies need to be developed so that yield data can be furnished promptly and delay in settlement of insurance claims can be avoided. At the same time government should encourage common service centres (CSC) to facilitate on-line enrolment of non-loanee farmers and submission of claim documents.

While assessment of yield data was delayed mainly due to manpower problem, the delay in release of premium subsidy was mainly due to limited budget provisions. Commitment on the part of state government, to offer crop insurance at free of cost to the farmers, put an extra burden on government exchequer. Even as the first installment, just a token advance was paid to the implementing IAs against the stipulated amount of full farmers share and 50% of state government premium subsidy. So the IAs too need not to face any punitive action or paying penalty.

Implementing IAs, barring AIC, have been found not to play an active role except for providing application forms through GPs and financial institutions. Their presence at local level is very poor. Though the implementing IAs should have a functional office in each tehsil with at least one agent deployed at the block level, in practice only few of them had offices that too at sub-division level with one field officer deployed for multiple blocks even beyond the sub-divisions. Further, IAs were supposed to make adequate publicity among the farmers but they failed miserably on this. For example, farmers were supposed to get an acknowledgement slip at the time of submission of application form for enrolment. The same was collected by or handed over to the GPs or Banks. Neither it was handed over to the farmers, nor were they informed by the implementing IAs about their enrolment. There was complete absence of information regarding enrolment status and various features of PMBFY. In fact the insured farmers were not even knowing the name of the implementing IAs. The GPs and banks played a crucial role in increasing the number of enrolment but not so during settlement of claims or explaining the features of the scheme. Our interactions with farmers too revealed that the proposal forms were made available at the GP office and the local GP had assigned one of its own staffs with the task of collection of all the mandatory documents for submission. The farmers were asked to sign on the blank enrolment form and to provide available documents with them. The same was submitted without proper verification. Any free lunch have its own limitations. Since crop insurance is offered free of cost to the farmers, they too were not serious in demanding information or in providing valid documents during enrolment/claims. Therefore, government may charge a token money from the farmers during enrolment and the same may be reimbursed to their account if all documents submitted for enrolment and claims found in order.

3.1.1 Season-wise and crop-wise Implementation of PMFBY/BFBY

3.1.1.1 Implementation of PMFBY/BFBY During Kharif-2016

During Kharif-2016, the PMFBY (in the name of BFBY) provided support to both loanee and non-loanee farmers in case of non-preventable risks like plant disease, pests, flood, inundation, etc. The four (4) major crops of the Kharif season in the state viz., Aus Paddy, Aman Paddy, Maize and Jute were notified. While blocks were the notified Insurance Unit (IU) in case of Aus Paddy, Maize and Jute; for Aman paddy GP was the NIU for the purpose of crop insurance. The three insurance companies viz., Agricultural Insurance Corporation of India (AICI) Ltd., Cholamondalam MS GIC, and Future Generali of India have been selected through e-tender following clustering of districts approach. For e-tendering purposes, all the districts in the state were divided into four clusters as given in Table 3.2.

Crop-wise details of APR is presented in Table 3.3 which shows that though there is substantial variation across the districts and crops, the APRs were quite low during Kharif-2016. In many cases it was below the threshold level of 2%. It ranged from just 0.49% in Nadia to as high as 15%.in Purulia for jute. Similar variation was also observed in other crops too but average APR was quite low as compared to Rabi-2016-17. So was the case with some insured. The indemnity claim was fixed at 80% for Aman Paddy and Jute and at 90% for Aus paddy and Maize (Table-3.4).

Table 3.2 Clusters for E-tendering and selected insurance agencies for Kharif-2016

Clusters	Districts	Selected Insurance Agency
Cluster-I	Alipurduar, Bankura, Howrah, Jalpaigudi, Murshidabad and North 24 Parganas	Cholamondalam MS GIC
Cluster-II	Dakshin Dinajpur, Malda, Paschim Medinipur and Uttar Dinajpur	Cholamondalam MS GIC
Cluster-III	Birbhum, Coochbehar, Nadia and South 24 Parganas	Future Generali of India
Cluster-IV	Burdwan, Darjeeling, Hoogly, Purba Medinipur and Purulia	Agricultural Insurance Corporation of India (AICI) Ltd.

Data Source: Compiled from Government of West Bengal notifications & www.matirkatha.net

Table 3.3 Crop wise APR (%) under PMFBY during Kharif 2016

Districts	Aus Paddy	Aman Paddy	Maize	Jute
Alipurduar	3.85	4.08	9.36	1.50
Bankura	2.92	0.90	X	X
Birbhum	X	1.13	X	X
Burdwan	5.00	3.00	X	3.00
Cooch Behar	0.68	0.98	X	1.98
Dakshin Dinajpur	X	1.49	X	1.62
Darjeeling	10.00	2.50	5.00	X
Hooghly	X	5.00	X	2.00
Howrah	X	9.00	X	1.00
Jalpaiguri	3.85	4.08	9.36	1.50
Malda	3.50	1.20	1.37	1.95
Murshidabad	2.79	1.51	X	1.23
Nadia	2.74	0.99	X	0.49
North 24 Parganas	1.00	1.64	X	1.00
Paschim Medinipur	3.55	3.82	X	3.82
Purba Medinipur	15.00	9.00	X	X
Purulia	X	5.00	X	15.00
South 24 Parganas	0.98	1.98	X	0.78
Uttar Dinajpur	X	1.54	1.31	0.15

Data Source: Compiled from Government of West Bengal notifications & www.matirkatha.net

Table 3.4 Crop-wise indemnity level, premium rates and sum insured during Kharif-2016

Crops	Aus Paddy	Aman Paddy	Maize	Jute
Indemnity level (%)	90	80	90	80
Premium rates (%)	0.68 - 15.00	0.90 - 9.00	1.31 - 9.36	0.49 - 15.00
Sum Insured (Rs./Ha)	37000-67500	34710-75000	16968-55250	50000-67500

Data Source: Compiled from Government of West Bengal notifications & www.matirkatha.net

3.1.1.2 Implementation of PMFBY/BFBY During Rabi-2016-17

PMFBY/ BFBY was implemented in Rabi 2016-17 for the crops Boro Paddy, Wheat, Rapeseed & Mustard, Groundnut, Sesame, Gram, Mung, Lentil, Sugarcane, Potato, and Maize. Two insurance companies, ICICI-Lombard GIC & United India Insurance Limited (UIIC) were selected on the basis of e-tender. For e-tendering purposes, all the districts in the state were divided into four clusters as given in Table 3.5:

Table 3.5 Clusters for E-tendering and selected insurance agencies for Rabi 2016-17

Clusters	Districts	Selected Insurance Agency
Cluster-I	Alipurduar, Hoogly, Jalpaigudi and Purulia	United India Insurance Limited (UIIC)
Cluster-II	Burdwan, Dakshin Dinajpur, Nadia, Purba Medinipur and Uttar Dinajpur	ICICI-Lombard GIC
Cluster-III	Birbhum, Darjeeling, Murshidabad, Paschim Medinipur and South 24 Parganas	United India Insurance Limited (UIIC)
Cluster-IV	Bankura, Coochbehar, Howrah, Malda and North 24 Parganas	ICICI-Lombard GIC

Data Source: Compiled from Government of West Bengal notifications & www.matirkatha.net

As compared to Kharif 2016, the crop-wise APR during Rabi 2016-17 was quite high with too much variation across the districts (Table 3.6). The L1 bid for APR ranges from 2% to 38.61% for mustard, 6.8 % to 20% for boro paddy, and 3.08% to 20% for potato. A similar variation, across the districts, is also observed for other notified crops. But the claims received by the farmers were too scanty for Rabi season. As a result the implementing IAs made huge profit during Rabi-2016-17. There was apprehension regarding lack of transparency in the e-bidding process during Rabi-2016-17 and a re-tendering was done. The rate of sum insured, which was equivalent to scale of finance, also varied substantively across the districts. The indemnity level was fixed at 70% for potato and 90% for all other crops.

Table 3.6 Crop wise APR (%) under PMFBY during Rabi 2016-17

Districts	Potato	Boro Paddy	Mustard	Til	Lentil	Mung	Gram	Wheat	Groundnut	Maize	Sugarcane
Alipurduar	9.44	14.16	9.44	21.65	9.44	9.44	X	9.44	9.44	9.44	X
Bankura	20.00	10.00	9.22	9.00	11.15	X	X	6.19	2.00	X	X
Birbhum	13.82	13.80	15.02	32.52	14.59	9.36	9.36	9.36	X	X	9.98
Burdwan	8.83	7.00	9.32	10.00	12.52	X	X	4.00	11.45	X	17.76
Cooch Behar	10.00	12.92	9.80	X	11.19	X	X	7.00	X	2.46	5.36
Dakshin Dinajpur	3.19	12.39	12.75	X	X	X	X	2.65	X	X	X
Darjeeling	9.36	9.36	23.71	X	X	X	X	9.58	X	X	X
Hooghly	17.68	9.44	9.44	9.50	9.44	X	X	9.44	9.44	X	21.96
Howrah	11.38	11.71	12.96	19.63	X	2.67	X	13.60	2.00	X	X
Jalpaiguri	9.44	14.16	9.44	21.65	9.44	9.44	X	9.44	9.44	9.44	X
Malda	3.08	8.00	8.11	X	7.83	2.00	9.86	3.96	X	2.00	6.35
Murshidabad	12.64	9.36	10.64	22.40	23.29	X	24.94	9.36	X	9.36	12.32
Nadia	9.00	13.50	3.16	3.00	5.00	2.00	8.96	4.14	3.89	2.00	13.68
North 24 Parganas	4.35	6.80	2.00	2.56	4.62	X	11.48	5.55	2.00	X	10.51
Paschim Medinipur	9.36	9.36	14.04	21.42	9.36	9.36	X	9.36	13.97	10.60	22.11
Purba Medinipur	4.70	7.00	9.68	X	X	X	X	3.14	11.62	X	X
Purulia	9.44	18.25	24.57	X	X	X	X	18.81	X	X	37.67
South 24 Parganas	9.36	9.36	38.61	15.15	21.72	9.36	9.36	9.36	X	X	X
Uttar Dinajpur	3.24	20.00	6.19	3.59	5.96	4.94	X	4.57	X	2.00	5.97

Data Source: Compiled from Government of West Bengal notifications & www.matirkatha.net

Table 3.7 Crop-wise indemnity level, premium rates and sum assured during Rabi-2016-17

Crops	Potato	Boro Paddy	Mustard	Til	Lentil	Mung	Gram	Wheat	Ground nut	Maize	Sugar cane
Indemnity level (%)	70	90	90	90	90	90	90	90	90	90	90
Premium rates (%)	3.19 - 20.00	7.00-20.00	2.00-38.61	3.00-32.52	4.62-23.29	2.00-9.44	8.96-24.94	2.65-18.81	2.00-13.97	2.00-10.60	5.36-37.67
Sum Insured (Rs./Ha)	73500-182500	59500-96250	25935-64350	19227-40000	37500-38125	30750-37750	39375	27500-75000	35000-75000	55250-61375	45000-111000

Data Source: Compiled from Government of West Bengal notifications & www.matirkatha.net

3.1.2 Timeliness of implementation and adherence to various cut off dates

Regarding timelines of various stipulated activities for implementation of PMFBY/BFBY and adherence to various cut-off dates in West Bengal, it was a mixed experience for both the crop season (Table 3.8). As per the operational guidelines of PMFBY, the meeting of SLCCCI were convened on time. The State Government was also required to ensure the issuance of the notification and its circulation to all concerned at least one month in advance of the commencement of the crop season. Being the first session, under PMFBY it was a bit delayed but the notifications did covered most of the essential details about insured crops, notified areas (districts/blocks/GP), scale of finance, sum insured, premium rates, etc. except threshold yields and cutoff date for the farmers. But there was confusion regarding extension of cut-off dates for receiving proposals from the farmers during Kharif 2016. Though it was extended till 15.08.2016, but the last three days were holidays for the financial institutions (Saturday, Sunday and Independence day). The delay in notification during first year was mainly due to teething problems, but in the subsequent years, the notifications were on time. Further the notification covered all the districts (except Kolkata) for all the major crops like Aus Paddy, Aman Paddy, Summer Paddy, Potato, Wheat, and Mustard. For minor crops the number of districts covered ranges from 4 (for Kharif Maize) to 14 (for Jute) based on reasonability and regional sensitivities of the crop. Horticultural crops were not covered under PMFBY.

For the proper implementation and execution of PMFBY in the state, a number of committees have been constituted at different stages. All the committees (like SLCCCI, DLTC, & BLMC) responsible for implementation, co-ordination and monitoring of the scheme were constituted in time and they met more or less twice in a season to address the problems and to monitor the progress made. The composition of the committee is also quite exhaustive as it included representatives from all the major stakeholders namely; Department of Agriculture, Department of Extension, Department of Planning and Statistics, Local governments (Panchayats), Implementing insurance agencies, Financial Institutions including NABARD, Subject matter specialists, NGOs, Farmers, and few invitee members. But there was no representatives from the land revenue department which is crucial for successful verification of land records of the farmers.

There was lack of transparency in e-bidding also. As per operational guideline of PMFBY, initially e-bids were invited by the DoA from the empanelled IAs for 3 years i.e., six crop seasons (vide E-bid notice 773-Ev dated 04.10.2016). But after one and half months (before selecting the L1 bids), another re-tender was issued cancelling the original one inviting bid only for one season (vide E-bid notice 852-Ev dated 22.11.2016). This resulted unnecessary delay and confusion among the IAs. There are apprehension that this was done to favour some private IAs who were trying to form a cartel while bidding. In fact, public sector IAs preferred long term bidding while the same was not the case with private IAs. There is an issue here. There are possibilities, that the implementing private IAs may not return after huge profits in a normal season/year, if they find that next season/year, their profits may go down or vice-versa. And exactly same thing happened in West Bengal. Bidding for a longer period of time helps the IAs to serve the farmers better by reducing overhead costs, developing infrastructure and recruiting man power at local and ultimately can bid at a competitive actuarial premium rate (APR).

Table 3.8 Performance evaluation in terms of timeliness of implementation

Particulars	Kharif 2016		Rabi 2016-17		Remarks
	Stipulated requirements	***Actual***	***Stipulated requirements***	***Actual***	
Submitting historical yield data to IAs	Before the bidding process	31.05.2016	Before the bidding process	September, 2016	On time for Rabi but delayed for Kharif.
Tender released	31.03.2016	18.03.2016	30.09.2016	September	On time
Last date for bid submission	15.04.2016	04.04.2016	15.10.2016	06.12.2016	Delayed due to re-tendering in Rabi-2016-17
Notification issued	At least one month before the commencement of crop season	01.03.2016	At least one month before the commencement of crop season	26.12.2016	A bit delayed for Rabi season
Constitution of SLMC, DLTC, DLMC and BLMC	31.03.2016	01.03.2016	31.12.2016	26.12.2016	On time
SLCCCI meeting	31.03.2016 (but preferably within February)	29.02.2016	30.09.2016	13.07.2016	On time
DLTC meeting	Before crop season starts	On time	Before crop season starts	On time	On time and very regular with DCC
DLMC meeting	At least twice in each season (As and when required)	In most of the blocks/districts it was irregular	At least twice in each season (As and when required)	In most of the blocks/districts it was irregular	Mostly irregular with no follow-up action
BLMC meeting					
Cut off date for receipt of proposal from the farmers	31.07.2016 (10.08.2016)	15.08.2016	31.12.2016	31.12.2016	Cut off dates were extended for Kharif 2016
Cut off date for submission of yield data	Within one month after harvest	Delayed by 4 to 6 months	Within one month after harvest	Delayed by 4 to 6 months	Delayed inordinately
Payment of claims to the farmers	Within 3 weeks after receipt of yield data	Delayed by more than 6-12 months and still pending in some areas	Within 3 weeks after receipt of yield data	Delayed by more than 6-7 months and still pending in some areas	Inordinate delay due to
Payment of subsidy component by the state governments	50% initially 50% after submission of final bills	Delayed by 4-7 months. Only a token advance given initially.	50% initially 50% after submission of final bills	Delayed by more than 6 months	In-ordinate delays due to budget constraints faced by the government

So in a nutshell, as already mentioned in the earlier sections, time line and cut off dates were more of less maintained in accordance with the stipulated operational guidelines, till the phase of enrolment only. But the GoWB is highly responsive and deeply interested in improving the processes to make the scheme better suited to the needs of small and marginal farmers while also making it economically viable for insurance companies. There was some deficiency in timely intervention and active involvement on the part of DLMCs & BLMCs but the main problem was with inordinate delay in conducting CCEs and paying premium subsidy to the IAs which in turn resulted in inordinate delay in the payment of compensation to the farmers.

3.2. Physical Progress Under PMFBY/BFBY in West Bengal

This section discusses physical progress in terms of various parameters like enrolment, area covered, premium paids, claim settlements, etc.

3.2.1 Relative performance in West Bengal vis-a-vis other states

Table 3.9 provides a state-wise comparative performance in enrolment under PMFBY for the very first crop season i.e., Kharif-2016. While at national level, the total number of farmers insured has increased just by 5.6% (from 30.95 million to 32.69 million) between Kharif-2015 and Kharif-2016; the corresponding increase in West Bengal was as high as 216.1% . The increase in number of farmers insured was also significant in Gujarat, Uttar Pradesh, Karnataka, Himachal Pradesh, Assam, Jharkhand, Uttarakhand, Chattisgarh and Madhya Pradesh. While it was a poor show, during Kharif-2016, in Maharashtra, Odisha, Bihar, Telengana, Tamilnadu, and Rajasthan.

Table 3.9 State-wise change in coverage under crop insurance in Kharif-2016

States	**Number of farmers enrolled in 2015**			**Number of farmers enrolled in 2016**			% change
	Loanee	Non-loanee	Total	Loanee	Non-loanee	Total	
Andaman & Nicobar	0.004	0.001	0.01	NA	NA	NA	NA
Andhra Pradesh	15.00	0.06	15.06	14.42	0.67	15.09	0.20
Assam	0.31	0.00	0.31	0.51	NA	0.51	63.99
Bihar	15.90	0.65	16.55	14.26	0.23	14.49	-12.45
Chhattisgarh	11.64	0.39	12.03	11.69	1.57	13.26	10.22
Goa	0.10	0.00	0.10	0.01	0.00	0.01	-93.00
Gujarat	5.02	0.02	5.04	11.89	0.02	11.91	136.31
Haryana	NA	NA	NA	6.90	0.06	6.96	NA
Himachal Pradesh	0.28	0.01	0.29	0.95	0.02	0.97	237.98
Jharkhand	1.38	3.98	5.36	1.61	6.88	8.49	58.40
Karnataka	3.81	4.92	8.73	8.33	2.26	10.59	21.31
Kerala	0.21	0.01	0.22	0.22	0.00	0.22	0.46
Madhya Pradesh	31.19	0.00	31.19	32.60	3.94	36.54	17.15
Maharashtra	89.39	0.00	89.39	20.95	45.84	66.79	-25.28
Manipur	0.02	0.05	0.07	NA	NA	NA	NA
Meghalaya	0.50	0.00	0.50	0.001	0.00	0.001	-99.88
Odisha	19.81	1.72	21.53	17.30	0.29	17.59	-18.30
Poducherry	0.00	0.004	0.004	NA	NA	NA	NA
Rajasthan	64.10	0.00	64.10	53.05	0.01	53.06	-17.23
Tamil Nadu	1.44	0.03	1.47	0.13	NA	0.13	-91.16
Telangana	8.77	0.73	9.50	6.00	0.56	6.56	-31.00
Tripura	0.01	0.00	0.01	0.01	0.01	0.02	100.00
Uttar Pradesh	16.88	0.01	16.89	30.03	0.01	30.04	77.91
Uttarakhand	0.84	0.02	0.86	1.17	0.11	1.28	48.84
West Bengal	***7.97***	***2.28***	***10.25***	***17.31***	***15.09***	***32.40***	***216.10***
All India	**294.57**	**14.88**	**309.45**	**249.34**	**77.56**	**326.89**	**5.64**

Source: Reply to Loksabha Question No.-196 dated 9th November, 2016 Note: NA=Not Available

Season-wise achievement in terms of coverage under PMFBY/BFBY in West Bengal during 2016-17 is given in Table 3.10. Out of 6.75 million farmers in West Bengal, 45.33% farmers (3.06 million) opted for crop insurance during Kharif-2016, but the corresponding figure during Rabi-2016-17 was only 16.00% (1.08 million). This was much higher than the national average of 26% during Kharif-2016 and 11% during Rabi-2016-17. Such an outstanding performance deserves appreciation, in-spite of the fact that there were teething issues during very first season under PMFBY. However, poor adoption rate for PMFBY among the non-loanee farmers is a matter of concern. Crop insurance under PMFBY is mandatory for loanee farmers but less than 30% of the farmers in West Bengal are taking loan from institutional sources. Non-loanee farmers constitute more than 70% of farming community in the state. So the proportion of farmers opting for crop insurance without taking loan (i.e. non-loanee farmers) is very very low (28.33 % during Kharif-2016 and only 0.18% during Rabi-2016-17). This is particularly because lack of awareness among the farmers as enrolment for loanee farmers were automatic. Further, there is no incentives for banks to sell crop insurance to farmers who do not subscribe for loan. Therefore, initiatives need to be taken to popularise the PMFBY among the non-loanee farmers.

In terms of area coverage too, the PMFBY/BFBY made an impressive growth due to new and improved features like wide coverage of crops and zero premium for the farmers. The net sown area in West Bengal is 5.20 million hectare; while gross cropped area is 9.46 million hectare. Therefore, so far as coverage in terms of area insured is concerned, 28.85 % (1.50 million hectare out of 5.20 million hectare) area was covered during Kharif-2016 and the corresponding figure during Rabi-2016-17 was just 12.44% (0.53 million hectare out of 4.26 million hectare). This is particularly because crop insurance was offered free of cost for all the Kharif crops like paddy & jute, but the same was not the case with potato, sugarcane and other horticultural crops grown mostly during Rabi season.

Table 3.10 Achievements in terms of coverage under PMFBY/BFBY in West Bengal

Category of Farmers	**No. of Farmers Covered (in millions)**			**Area Insured (in million hectares)**			**Sum Insured (in billion rupees)**		
	Kharif 2016	Rabi 2016-17	Total	Kharif 2016	Rabi 2016-17	Total	Kharif 2016	Rabi 2016-17	Total
Loanee Farmers	1.71	1.08	2.79	0.97	0.53	1.50	50.01	45.18	95.19
Non-loanee farmers	1.34	0.01	1.35	0.53	0.01	0.53	28.10	0.17	28.27
TOTAL	**3.06**	**1.08**	**4.14**	**1.50**	**0.53**	**2.03**	**78.11**	**45.35**	**123.46**

Data Source: Compiled from Government of West Bengal notifications & www.matirkatha.net

Table 3.11 gives a comparative picture about performance of PMFBY across the states in terms of claims paid vis-a vis premium received; and share of insured farmers who benefitted from PMFBY. The table is based on latest available data as presented to the Loksabha on 17.12.2017. Based on the latest available data on premiums collected by insurance companies and claims paid to farmers, number of insured farmers and number of benefited farmers who received premium payments under PMFBY for 2016-17 (including both the Kharif and Rabi seasons), we have calculated claim to premium ratio and share of farmers benefited from the scheme PMFBY. Claim to premium ratio is an indicator for financial performance of the scheme. Ideally it should be around 100%. A higher ratio indicates loss incurred to IAs while a lower ratio indicates profit earned by the insurance companies.

Table 3.11 Premium receipts vs. claims paid for 2016-17 under PMFBY

States	No. of insured farmers (in Lakhs)	Gross premium paid (Rs. Crore)	Total claim received (Rs. Crore)	Claim to premium ratio (%)	Share of benefitted farmers (% of total insured)
Andaman & Nicobar	0.00	0.02	0.15	898.77	91.05
Andhra Pradesh	17.72	917.30	894.13	97.47	49.64
Assam	0.60	8.64	5.02	58.10	38.76
Bihar	27.13	1420.94	401.93	28.29	5.59
Chhattisgarh	15.49	328.18	154.54	47.09	9.08
Goa	0.01	0.07	0.03	42.43	13.88
Gujarat	19.75	2360.49	1002.48	42.47	25.34
Haryana	13.36	363.41	292.48	80.48	15.87
Himachal Pradesh	3.79	71.54	44.19	61.77	20.28
Jharkhand	8.78	271.95	26.90	9.89	5.15
Karnataka	29.21	1625.00	1105.23	68.01	25.20
Kerala	0.77	33.17	17.70	53.36	27.72
Madhya Pradesh	68.98	3433.53	1893.14	55.14	17.51
Maharashtra	120.11	4739.43	2292.11	48.36	23.99
Manipur	0.08	3.59	1.96	54.60	99.50
Meghalaya	0.00	0.04	0.03	75.00	53.93
Odisha	18.20	539.03	428.45	79.49	9.17
Poducherry	0.09	3.10	7.34	236.77	49.83
Rajasthan	92.85	2518.53	1313.17	52.14	24.21
Tamil Nadu	14.46	1242.01	2550.13	205.32	49.37
Telangana	9.77	314.06	183.89	58.55	22.66
Tripura	0.13	0.39	0.08	20.51	3.22
Uttar Pradesh	65.70	1038.11	531.85	51.23	16.09
Uttarakhand	2.62	41.58	27.47	66.07	23.54
West Bengal*	***41.35***	***729.62***	***117.70 (421.19)***	***16.13 (57.73)***	***5.98 (7.55)***
All India*	**570.96**	**22003.75**	**13292.07 (15101.00)**	**60.41 (68.05)**	**20.33**

Data Source: Reply to Loksabha Question No.-549 dated 19th December, 2017
Note:* Figures in the parenthesis are based on latest available data as on January, 2018.

The table shows a very interesting picture when compared with the Table 3.9. The table reveals that at national level the overall claim to premium ratio is 60.41 per cent indicating thereby that about 60.41 per cent of the total premium collections were used for the payment of claims or indemnities. But the table also points to the fact that the claim to premium ratio is very low in the states like West Bengal, Bihar, Jharkhand, Chattishgarh, Madhya Pradesh, Rajasthan, Gujarat, Maharashtra, Andhra Pradesh, Telengana, and Uttar Pradesh. And these are the states which are particularly prone to natural disasters, and where the rate of farmers suicide due to crop failure is also very high (barring West Bengal & Jharkhand). The share of insured farmers, who actually received indemnity under PMFBY is also very low in these states.

The performance of PMFBY/BFBY in West Bengal is particularly very poor where insurance companies collected Rs.730 crores in premium and the estimated claim settled till 17.12.2017 was around Rs. 118 crores only. But by the end of January, 2018 total claim paid was Rs. 421 crores. Most of the claims were paid during last few months i.e., there was inordinate delay by more than 6-12 months. According to a report published in The Indian Express (July 27, 2017), farmers in West Bengal actually received less than just Rs. 1 crore till July, 2017. For Kharif-2016, against claims worth Rs 101 crore, only Rs 93,000 has been paid on time while in Rabi-2016-17 corresponding figures were just zero. As on 17.12.2017, the claim to premium ratio was much lower in West Bengal (only 16.13%) as compared to the national average of 60.41% for the year 2016-17. But the same increased to 57.73% by the end of January, 2018. It only shows poor implementation of the scheme as most of the claims payments for 2016-17 were made after 6-12 months of harvest. Because timely payment of claims depends on timely payment of states' share in the subsidy and providing yield loss data to the insurance companies. Private sector insurance companies used this deficiency as an excuse to delay and deny claim re-imbursement to the affected farmers. Low farmer awareness, coupled with such delay, gave the IAs all the more reason not to expedite claim payments.

At national level, gross premium receipts by the insurance companies during the scheme’s very first year aggregated to Rs 22003 crores, of which roughly Rs 4,000 crore was shelled out by farmers and the balance coming as subsidy from the Centre and state governments. Whereas in West Bengal, two-third of the premium subsidy was borne by the state government (Rs. 489 crores) and one-third by the central government (Rs. 241 crores) with zero cost to the farmers..

3.2.2 Insurance Agency wise performance of PMFBY/BFBY in West Bengal

Insurance company-wise financial performance of PMFBY/BFBY is presented in Table 3.12. It is to be noted here that the table is based on latest available data provided by the Joint Secretary & OSD (FI), DoA, GoWB with claim data till January, 2018 indicating thereby an inordinate delay in settlement of claims which was supposed to be paid within 3 weeks after intimation of crop loss.

Table 3.12 IA wise premium receipts vs. claims paid during 2016-17in West Bengal

Insurance Companies	No. of insured farmers (in lakhs)	Gross premium paid (Rs. Crore)	Total claim received (Rs. Crore)	Claim to premium ratio (%)	Share of benefitted farmers (% of total insured)
Kharif-2016					
Agricultural Insurance Corporation of India (AICI)	12.90	150.80	49.01	32.50	7.71
Cholamondalam MS GIC	10.87	83.76	49.70	59.34	9.42
Future Generali of India	6.78	25.23	8.44	33.45	5.42
Rabi-2016-17					
ICICI-Lombard GIC	6.27	252.69	263.83	104.41	30.19
United India Insurance Limited (UIIC)	4.53	217.13	36.30	16.72	3.16

Data Source: Reply to Loksabha Question No.-549 dated 19th December, 2017 & Jt. Sec & OSD, DoA, GoWB (Claim data till end of January, 2018)

With the actual premium being quite high, IAs have found a good business opportunity in PMFBY. Participation of insurance companies in West Bengal is mostly driven by the fact that state government bears the difference between very high actuarial premium and zero premium paid by the farmers. So IAs does not face much problem from the suffering farmers for delayed and claim payments and even for denial of the same. A perusal of the table reveals that except for ICICI-Lombart, both the claim to premium ratio as well as percentage farmers benefitted from PMFBY is particularly low in both the season. A higher claim to premium ratio for ICICI-Lombart is only because of large scale damage to boro paddy in a single district, Burdwan, where the company required to pay insurance claim amounting Rs. 229.00 crores against the gross premium of Rs. 58.92 crores only. But for others, the claim to premium ratio is much lower than 100%. Such a low claim to premium ratio and delayed claim settlement process in West Bengal indicates that insurance companies have made huge profits at the cost of government and suffering by the farmers.

Therefore, a close perusal of Table 3.9 to Table-3.12 points to the fact that during first year, PMFBY has proved to be a scheme most efficient when it comes to collection of premium, but not at all so in payment of claims. So far as promoting crop insurance among the farmers in West Bengal is concerned, the PMFBY/BFBY is a huge success as more than 3 million farmers were enrolled under the scheme in the very first season (Kharif 2016) of its implementation, registering an increase of 216.1% over Kharif 2015, which was highest among all the states in India. And the credit for more than three-fold increase in enrolment, goes to the DoA, GPs and implementing IAs.

3.2.3 District-wise performance of PMFBY/BFBY in West Bengal

District-wise performance and achievement under BFBY/PMFBY in West Bengal is presented in Table 3.13. There is high variation across the districts both in terms of coverage and sum insured. While the coverage, both in terms of number of farmers enrolled and area covered, is quite high in southern and plain districts like Purba Midnapur, Paschim Midnapur, Burdwan, and Hoogly; the same is very low in northern and hilly districts like Darjeeling, Alipurduar, Jalpaigudi, Uttar Dinanjpur Dakshin Dinajpur, Coochbehar, and Maldah. While Purba Medinipur has highest coverage in terms of number of farmers, the area coverage was highest in Paschim Medinipur district. But in terms of sum insured, Burdwan district is much ahead of all other districts. This is particularly because of higher proportion area under of Boro Paddy and Potato, for which the scale of finance was much higher. The same is also true for some other districts like Bankura, Birbhum, Hoogly, and Nadia.

The table also reveal that, in all the districts the coverage during Kharif season was much higher than in Rabi. In fact coverage during Rabi season was restricted in Boro Paddy and Potato growing regions of Burdwan, Birbhum, Bankura, Hoogly, Nadia, Purba Midnapur, Paschim Midnapur, and Murshidabad. However, it is to be noted here that most of the increase in enrollment in West Bengal was in cluster-IV i.e., in Burdwan, Hoogly, Purba Medinipur, and Purulia under the jurisdiction of AICI as IA. The total number of enrolment by them was around 1.3 million (nearly 42% of state total) and that too just from a single cluster allotted to them (Cluster-IV). The AIC played a very active role in bringing more than 0.54 million new non-loanee farmers, in cluster-IV, under the purview of PMFBY/BFBY in the very first season, which deserve appreciation and raises expectations from others too.

Table 3.14 gives shows the performance of PMFBY across the districts of West Bengal in terms of claims paid vis-a vis premium received and sum insured. A perusal of the table shows that claim to premium ratio is more than 100% only in Burdwan and North 24 Pargana district. This is only because of large scale damage to boro paddy during Rabi season. For all other districts, the claim to premium ratio is less than 53% i.e., implementing IAs could make profit in all these districts. Claim to premium ratio is particularly low (less than 10%) in hilly northern districts like Darjeeling, Jalpaigudi, Alipurduar, and Malda; and also in Nadia and Purulia.

So far as claim as percentage to sum insured is concerned, a similar inter-district variation is visible. It is less than 1% in as many as 11 districts out of 19 districts. It is more than 10%, only in one district (Burdwan) and more than 5% in another district (North 24 Parganas). This implies that, even with 1% actuarial premium rate, the insurance companies could have made profit in 11 districts, but the crop loss in Burdwan and North 24 Pargana was so high, that the average crop loss in the state was 3.41%.

Table 3.13 District-wise achievements in coverage under PMFBY/BFBY in West Bengal

Districts	No. of Farmers Covered (in lakhs)			Area Insured (in lakh hectares)			Sum Insured (in crore rupees)		
	Kharif	Rabi	Total	Kharif	Rabi	Total	Kharif	Rabi	Total
Bankura	1.42	1.06	2.48	1.13	0.68	1.81	537.72	619.85	1157.57
Birbhum	1.29	0.46	1.75	0.75	0.33	1.08	457.83	210.44	668.27
Burdwan	3.59	2.25	5.84	2.52	1.40	3.92	1206.47	1056.31	2262.78
Coochbehar	0.56	0.29	0.86	0.32	0.12	0.45	140.02	156.08	296.09
Dakshin Dinajpur	0.45	0.07	0.52	0.33	0.07	0.39	178.75	43.80	222.56
Darjeeling	0.03	0.003	0.04	0.01	0.00	0.02	5.89	2.58	8.47
Hoogly	2.17	1.47	3.64	0.97	0.40	1.37	418.46	491.52	909.98
Howrah	0.85	0.10	0.95	0.27	0.02	0.28	199.35	22.68	222.03
Jalpaigudi*	0.45	0.12	0.59	0.25	0.07	0.32	131.31	110.74	242.04
Malda	0.40	0.10	0.50	0.33	0.06	0.39	124.33	37.49	161.82
Murshidabad	1.27	0.33	1.59	0.68	0.26	0.94	413.29	216.49	629.78
Nadia	2.57	0.34	2.91	1.06	0.40	1.47	544.25	240.14	784.39
North 24 Pargana	1.91	0.42	2.34	0.88	0.19	1.06	460.51	152.72	613.23
Paschim Midnapur	3.73	1.97	5.72	1.71	0.65	2.36	939.91	678.71	1618.62
Purba Midnapur	5.76	1.58	7.34	1.58	0.54	2.12	866.69	372.21	1238.89
Purulia	1.35	0.01	1.36	0.90	0.01	0.91	313.29	8.03	321.32
South 24 Pargana	2.36	0.14	2.49	1.07	0.09	1.16	723.01	89.37	812.38
Uttar Dinajpur	0.40	0.04	0.44	0.27	0.04	0.31	150.11	25.60	175.70
West Bengal (Total)	**30.55**	**10.75**	**41.35**	**15.02**	**5.33**	**20.35**	**7811.18**	**4534.75**	**12345.93**

Note: * includes Alipurduar

Table 3.14 District-wise premium receipts vs. claims paid for 2016-17 under PMFBY

Districts	No. of insured farmers (in Lakhs)	Gross premium paid (Rs. Crore)	Total claim received (Rs. Crore)	Claim to premium ratio (%)	Claim to sum insured ratio (%)
Bankura	2.48	81.17	15.42	19.00	1.33
Birbhum	1.75	34.17	15.82	46.31	2.37
Burdwan	5.84	114.05	238.62	209.23	10.55
Coochbehar	0.86	17.44	2.48	14.23	0.84
Dakshin Dinajpur	0.52	7.41	1.00	13.56	0.45
Darjeeling	0.04	0.41	0.02	5.46	0.27
Hoogly	3.64	104.95	31.60	30.11	3.47
Howrah	0.95	20.48	5.40	26.36	2.43
Jalpaigudi*	0.59	15.46	1.48	9.56	0.61
Malda	0.50	4.25	0.33	7.75	0.20
Murshidabad	1.59	26.47	13.90	52.51	2.21
Nadia	2.91	36.48	0.59	1.62	0.08
North 24 Pargana	2.34	17.88	35.57	198.96	5.80
Paschim Midnapur	5.72	98.99	15.75	15.91	0.97
Purba Midnapur	7.34	104.05	33.96	32.64	2.74
Purulia	1.36	17.14	1.32	7.72	0.41
South 24 Pargana	2.49	22.68	6.61	29.13	0.81
Uttar Dinajpur	0.44	6.13	1.31	21.32	0.74
West Bengal (Total)	**41.35**	**729.62**	**421.19**	**57.73**	**3.41**

* including Alipurduar district ** This table is based on claims paid till the end of January, 2018

3.2.4 Crop-wise performance of PMFBY/BFBY in West Bengal

Like district wise and season wise variations, coverage under PMFBY also varies substantially across the crops and categories of farmers (Table 3.15). Enrollment for Aman Paddy, constituted more than 95% coverage in Kharif-2016. Jute was another Kharif crop which constituted remaining 5%. Coverage under Aus Paddy and Maize was almost negligible. In Rabi-2016-17, though the number of notified crops were 11, enrollment was mainly for two crops Boro Paddy and Potato with a little bit coverage under wheat and mustard. Coverage in terms of number of farmers or area was negligible for all other crops like Groundnut, Sesame, Gram, Mung, Lentil, Sugarcane, and Summer Maize.

Table 3.15 Crop-wise coverage under PMFBY/BFBY in West Bengal

Crops	No. of Farmers Covered (in lakhs)			Area Insured (in lakh hectares)			Sum Insured (in crore rupees)		
	LF	*NLF*	*Total*	*LF*	*NLF*	*Total*	*LF*	*NLF*	*Total*
Aman Paddy	16.02	13.42	29.45	8.97	5.32	14.28	4565.12	2809.87	7374.99
Jute	1.09	0.00	1.09	0.73	0.00	0.73	432.87	0.00	432.87
Aus Paddy	0.01	0.00	0.01	0.01	0.00	0.01	2.94	0.00	2.94
Kharif Maize	Neg	Neg	Neg	Neg	Neg	Neg	Neg	Neg	Neg
Kharif Total	**17.13**	**13.42**	**30.55**	**9.71**	**5.32**	**15.02**	**5001.32**	**2809.87**	**7811.18**
Boro Paddy	7.15	0.05	7.20	4.28	0.02	4.30	3098.64	16.11	3114.75
Potato	3.55	0.00	0.20	1.00	0.00	0.06	1404.62	0.00	1404.62
Wheat	0.03	0.00	0.03	0.02	0.00	0.02	10.85	0.88	11.73
Mustard	0.01	0.00	0.01	0.01	0.00	0.01	3.12	0.25	3.37
Others	Neg	Neg	Neg	Neg	Neg	Neg	Neg	Neg	Neg
Rabi Total	**10.75**	**0.05**	**10.80**	**5.31**	**0.02**	**5.33**	**4517.51**	**17.23**	**4534.74**

LF=Loanee farmer NLF=Non-loanee farmer

Table 3.16 Crop-wise premium receipts vs. claims under PMFBY in West Bengal

Crops	No. of insured farmers (in Lakhs)	Gross premium paid (Rs. Crore)	Total claim received (Rs. Crore)	Claim to premium ratio (%)	Claim to sum insured ratio (%)
Aman Paddy	29.45	254.73	106.65	41.87	1.45
Jute	1.09	4.98	0.47	9.44	0.11
Aus Paddy	0.01	0.09	0.04	41.35	1.22
Kharif Maize	Neg	Neg	Neg	Neg	Neg
Kharif Total	**30.55**	**259.80**	**107.15**	**41.24**	**1.37**
Boro Paddy	7.20	285.02	292.93	102.78	9.40
Potato	0.20	185.07	21.00	11.35	0.81
Wheat	0.03	0.56	0.07	13.16	0.63
Mustard	0.01	0.45	0.03	6.99	0.94
Others	Neg	Neg	Neg	Neg	Neg
Rabi Total	**10.80**	**471.13**	**314.04**	**66.66**	**6.92**

A perusal of the table also indicates that, crop insurance under PMFBY is relatively popular among the farmers growing paddy (particularly summer paddy and aman paddy), potato and jute. However, the chances of crop failure is more in rainfed and hilly areas due to high fluctuations in weather; as well as market prices in case of cash crops and horticultural crops. At the same time, enrollment among non-loanee farmers under PMFBY is restricted with Aman Paddy farmers. Thus there is a need to increase the coverage among non-loanee farmers and for those crops being cultivated under high risk environments in rainfed and hilly areas.

Table 3.16 shows the crop-wise performance in terms of claims received under PMFBY/BFBY in West Bengal during 2016-17. The claim to premium ratio was higher during Rabi season than in Kharif. It was more than 100% only in case of summer paddy; a little more than 40% for Aman Paddy and Aus Paddy; and nearly 10% for Jute, Potato, Wheat and Mustard. So far as claim as a percentage to sum insured is concerned, it was highest for Boro Paddy, followed by Aman Paddy, Aus Paddy, Mustard, Potato, Wheat and Jute.

Chapter – IV

Socio-Economic & Farm Level Characteristics

This part of the report is based on a field survey undertaken during 2017-18 among the loanee insured farmers, non-loanee insured farmers and non-insured farmers in three different districts across the state of West Bengal as well as our discussion with the field level stakeholders involved in the implementation of PMFBY/BFBY for 2016-17. In this chapter the results are discussed under the following sub-heads:

4.1. Socio-economic characteristics of sample households.

4.2. Farm level characteristics of sample households

4.1 Socio-economic Characteristics of Sample Households

An attempt has been made in this section to examine the socio-economic profile of the sample households, their occupations and income from various sources, asset positions, and access to credit. As mentioned earlier, the findings are based on a sample survey with 150 farm households from the selected districts. The results are presented for different categories of farmers i.e., loanee insured farmers, non-loanee insured farmers, and non-insured farmers (control group).

The socio-economic profile of different types of sample farmer is presented in Table -4.1a. A close perusal of the table shows that the total number of family members in the 150 households is 776 i.e., the average family size in the study area is 5.17. The average family size is highest among the loanee farmers (5.51), followed by non-insured farmers (4.77) and non-loanee insured farmers (4.57). So far as age distribution is concerned, on an average 20 % of the household member are minor and nearly 10% of them are senior citizen. This means that working population constitute of roughly 70% across the farmer categories. The rate f literacy is found to be very high across all farm categories. It ranges from 90 % among non-insured farmers to as high as 94.55% among loanee farmers. The prevalence of higher education (Graduation and above) is also very high (16.67% to 26.67%) in the study area with more so among the loanee farmers. The caste composition is more or less similar across the categories of farmers. It is important to note that the caste does not put any entry barrier in participation under PMFBY in West Bengal, rather the rate of participation is higher among the disadvantageous sections.

Table-4.2a shows that agriculture is the main source of livelihood for all the sampled farmers. It is primary source of income for nearly 95% of the households and secondary source of income for remaining 5% of sample households across various categories of farmers. It is to be noted here that though agriculture is either primary or secondary sources of income for all the sample households; there are more than one source of livelihood/income for majority of the households. It is also evident from the table that, on an average, 30 to 40% of family members were engaged in farming activities. This means that half of the working member (which is around 70%) were engaged in farming. The per household annual income of sample farmers from agricultural sources ranges from Rs. 72213/- among non-insured farmers to Rs. 126586/- among loanee farmers i.e. loanee farmers were economically much better than non-insured farmers or in other words, majority of the poor farmers are opting out of crop insurance in the study area.

When looked into different sources of non-agricultural income, it is found that salary income and income from petty business constitute the main source of non-farm income for loanee and non-loanee insured farmers, but it is earning from casual labour job, MGNAREGA and petty business are most important for non-insured farmers (Table 4.3a). Though agriculture remains the most important source of livelihood, among all categories of farmers, the poor farmers are forced to diversify their livelihood options. Widespread and increasing reliance on nonfarm activities are very common and expected too but what is disturbing is that job creation has now shifted to more of casual and marginal work instead of allied activities like dairying, fisheries, animal husbandry, etc.

Now if we look into the asset position of sample households, it is evident that the main assets of the sample households are mainly the land and residential buildings (Table 4.4a). Loanee farers have the highest asset base, nearly double than the non-insured farmers. The per household value of total assets for loanee farmers was maximum being Rs 23,37,222/- against Rs 19,49,366/- for non-loanee insured farmers . While it was only Rs. 12,45,588/- for non-insured farmers.

Information on access to credit for loanee farmers are presented in Table 4.5a. It is to be noted here that the non loanee sample farmers did not borrow from any institutional sources during the reference year. Hence, access to credit for non loanee farmers have not been mentioned in Table-4.5a. The table shows that PACS was the only source of institutional financing in our study area. Average borrowing per household was to the tune of Rs. 37766/- in Kharif-2016 and Rs. 41666/- in Rabi 2016-17. The PACS had given loan only for agricultural purpose i.e., to meet the expenses incurred towards purchase of farm inputs and farm machineries. Majority of the loans were availed for 6 month tenure and there was no outstanding before availing the loans.

Table 4.1a Socio-economic profile of the sample households

Type of Farmers	Particulars											
	Age group of family member (% to sample)			Educational Status (% to sample)						Caste (% to sample)		
	Minor < 16 years	Adults 16-59	Senior > 60 years	Illiterate	Literate	Primary	Secon-dary	Graduate and above	Others	SC/ST	OBC	General
Loanee insured farmers	109 (21.97)	342 (68.95)	45 (9.07)	5 (5.55)	7 (7.78)	21 (23.33)	31 (34.44)	24 (26.67)	2 (2.22)	23 (25.55)	35 (38.89)	32 (35.55)
Non-loanee insured farmers	22 (16.06)	99 (72.26)	16 (11.68)	2 (6.67)	3 (10.00)	14 (46.67)	5 (16.67)	5 (16.67)	1 (3.33)	10 (33.33)	13 (43.33)	7 (23.33)
Total insured farmers	131 (20.69)	441 (69.67)	61 (9.64)	7 (5.83)	10 (8.33)	35 (29.17)	36 (30.00)	29 (24.17)	3 (2.5)	33 (27.50)	48 (40.00)	39 (32.50)
Non-insured farmers (Control)	24 (16.78)	102 (71.33)	17 (11.89)	3 (10.00)	5 (16.67)	9 (30.00)	8 (26.67)	5 (16.67)	0 (0.00)	13 (43.33)	8 (26.67)	9 (30.00)

Note: Figures in parenthesis indicate % to sample

Table 4.2a Occupations, members engagement in farming and household income among the sample households

Type of Farmers	Occupations of sample households		Average number of family members engaged in farming (% to sample)	Per household annual income from agriculture (in Rs.)
	Agriculture as Primary source	Agriculture as Secondary source		
Loanee insured farmers	85 (94.44)	5 (5.55)	$^{150}/_{496}$ = 30.24%	1,26,585.55
Non-loanee insured farmers	30 (100.00)	0 (0.00)	$^{54}/_{137}$ = 39.42%	1,24,950.00
Total insured farmers	115 (95.83)	5 (4.17)	$^{204}/_{633}$ = 32.23%	1,26,176.67
Non-insured farmers (Control)	29 (96.67)	1 (3.33)	$^{50}/_{143}$ = 34.96%	72,213.33

Note: Figures in parenthesis indicate % to sample

Table 4.3a Annual income from non-agricultural sources (Rs./Household)

Type of Farmers	Income from non-agricultural sources								
	Name of sources								
	Salary from employment	Farm labor	MGNREGA	Remittances	Pension	Rents house/land	Business / trade	Others	Total
Loanee insured farmers	30,088.00	6,855.00	4,542.00	0	7,333.00	2,888.00	15,422.00	7,022.00	74,108.00
Non-loanee insured farmers	1,600.00	7,816.00	5,200.00	400.00	6,000.00	0	25,100.00	1,466.00	47,583.00
Total insured farmers	22,966.00	7,095.00	4,706.00	100.00	7,000.00	2,166.00	17,841.00	5,633.00	67,477.00
Non-insured farmers (Control)	8,400.00	14,266.00	6,696.00	0	0	0	17,166.00	4,466.00	50,996.00

Table 4.4a Asset value across the categories of sample households (in Rs.)

Type of Farmers	Per HH asset type (in Rs.)					
	Value of Land owned	Value of machinery	Value of building	Value of livestock	Others	Total
Loanee insured farmers	15,32,222.00	47,827.00	6,32,222.00	21,250.00	3,700.00	22,37,222.00
Non-loanee insured farmers	12,31,666.00	25,550.00	6,77,500.00	14,650.00	0.00	19,49,366.00
Total insured farmers	14,57,083.00	42,258.00	6,43,541.00	19,600.00	2,775.00	21,65,258.00
Non-insured farmers (Control)	7,68,333.00	24,555.00	4,38,666.00	14,033.00	0.00	12,45,588.00

Table 4.5a Asset value across the categories of sample households (in Rs.)

Particulars	Kharif 2016	Rabi 2016-17
Source of borrowing	Primary Agricultural Credit Society (PACS)	
Amount (Rs./household)	37,766	41,666
Purpose of loan		
Agricultural	Variable farm inputs & Farm equipment	Variable farm inputs & Farm equipment
Non-agricultural	-	-
Duration of loan		
< 6 months	26 (28.88)	21 (23.33)
6 months	53 (58.88)	65 (72.22)
>6 months - 1 year	10 (11.11)	4 (4.44)
>1 year	1 (1.11)	-
Amount paid with interest (Rs./household)	39,044	43,300
Outstanding loan from-2016 (Rs./household)	Nil	Nil

Note: Figures in brackets are percentage of total loanee farmers

4.2 Farm Level Characteristics of Sample Households

An attempt has been made in this section to discuss about the farm level characteristics in the study area based on information received from the sample households in field survey. Particularly, we tried to examine the land holding pattern, cropping pattern, irrigation sources, production and sale of farm outputs. As mentioned earlier, the results are presented for different categories of farmers i.e., loanee insured farmers, non-loanee insured farmers, and non-insured farmers (control group).

The average size of holding (acres/ha) is presented in Table 4.1b. The table reveals that average size of holding is more than 2.5 acres/among the loanee and non-loanee insured farmers but the same is less than 1.5 acres among the control group. This means that insured farmers have relatively higher operational holding than the non-insured farmers, who are basically the marginal farmers. But though their land holdings are small, the cropping intensity is highest among the non-insured farmers. In fact cropping intensity is quite high in the study area irrespective of categories of farmers. This is perhaps because most of the cultivable land (more than 95%) in the study area is under assured irrigation and all the irrigated area is under cultivation for at least twice in a year. Leasing in of irrigated land was found a common practice across all categories of farmers, and more so among the non-loanee farmers (insured & non-insured). This shows the importance attached to farming enterprises by the farmers in the study area.

Table 4.1b Characteristics of operational holdings per household (area in acres)

Particulars	Loanee insured farmers	Non-loanee insured farmers	Non-insured farmers (Control)
Own land			
Irrigated	2.36	2.00	1.02
Un-irrigated	0.48	0.37	0.23
Total	2.84	2.37	1.25
Uncultivated land			
Irrigated	-	-	-
Un-irrigated	0.15	0.14	0.09
Total	0.15	0.14	0.09
Cultivated land			
Irrigated	2.36	2.00	1.02
Un-irrigated	0.33	0.23	0.14
Total	2.69	2.23	1.16
Leased-in land			
Irrigated	0.11	0.38	0.26
Un-irrigated	0.05	-	-
Total	0.16	0.38	0.26
Leased-out land			
Irrigated	0.21	-	-
Un-irrigated	0.07	-	-
Total	0.28	-	-
Net operated land			
Irrigated	2.26	2.38	1.28
Un-irrigated	0.31	0.23	0.14
Total	2.57	2.61	1.42
Gross cropped area (GCA)			
Irrigated	4.66	5.51	3.03
Un-irrigated	0.31	0.23	0.14
Total	4.97	5.74	3.17
Cropping Intensity (%)	**193**	**220**	**223**

Regarding source of irrigation, all the sample households have at-least one assured sources of irrigation which is shallow tube well. In fact shallow tube well is the most preferred and thus common source of irrigation across the state, except in areas adjacent to Jharkhand. Nearly one third of them also have access for canal irrigation.

Table 4.2 Sources of irrigation (% to sample)

Type of Farmers	Sources of irrigation (% to sample)					
	Dug well	**Bore well**	**Canal**	**Tank**	**Others***	**Total**
Loanee insured farmers	NIL	NIL	29 (32.22)	NIL	90 (100)	90 (100)
Non-loanee insured farmers	NIL	NIL	11 (36.67)	NIL	30 (100)	30 (100)
Total insured farmers	NIL	NIL	40 (33.33)	NIL	120 (100)	120 (100)
Non-insured farmers (Control)	NIL	NIL	11 (36.67)	NIL	30 (100)	30 (100)

Note: Figures in brackets are percentages to total households Others*= Shallow Tube Well (STW)

Table 4.3b Cropping pattern on the sample farms during Kharif Season (in acres/households)

Type of Farmers		Kharif		
	Aman Paddy	**Sugarcane**	**Others***	**Total**
Loanee insured farmers	2.12 (42.66)	0.05 (1.01)	0.33 (6.64)	2.50 (52.74)
Non-loanee insured farmers	2.12 (36.93)	0.06 (1.05)	0.23 (4.01)	2.41 (41.99)
Total insured farmers	2.12 (40.69)	0.05 (0.96)	0.31 (5.95)	2.48 (47.60)
Non-insured farmers (Control)	1.19 (37.54)	-	0.14 (4.42)	1.33 (41.96)

Note: Figures in brackets are percentages to GCA *Mostly vegetables

Table 4.4b Cropping pattern on the sample farms during Rabi Season ((in acres/household)

Type of Farmers	Rabi			
	Masoor	**Mustard**	**Potato**	**Total**
Loanee insured farmers	0.04 (0.80)	0.15 (3.02)	0.51 (10.26)	0.70 (14.08)
Non-loanee insured farmers	0.13 (2.26)	0.22 (3.83)	0.55 (9.58)	0.90 (15.68)
Total insured farmers	0.07 (1.34)	0.17 (3.26)	0.52 (9.98)	0.76 (14.59)
Non-insured farmers (Control)	0.04 (1.26)	0.09 (2.84)	0.40 (12.62)	0.53 (16.72)

Note: Figures in brackets are percentages to GCA

Table 4.3b to 4.5b shows the cropping pattern in the study area during three main cropping seasons, Kharif, Rabi and Zaid (summer). Because of agro-climatic condition paddy is the dominant crop in the study area during both Kharif and Zaid (summer) season. While aman has an universal presence, summer paddy (boro) is restricted in irrigated lands only. So is the case The other major crops are potato, jute, mustard, lentil, sugarcane, and minor crops like vegetables. The percentage acreage under various crops is more or less uniform across the categories of farmers.

Table 4.5b Cropping pattern on the sample farms during Zaid (in acres/household)

Type of Farmers	Zaid			Total GCA	Cropping Intensity (%)
	Boro paddy	Jute	Total		
Loanee insured farmers	1.16 (23.34)	0.63 (12.68)	1.79 (36.01)	4.97 (100.00)	193
Non-loanee insured farmers	1.37 (23.87)	1.06 (18.47)	2.43 (42.33)	5.74 (100.00)	220
Total insured farmers	1.21 (23.22)	0.74 (14.20)	1.95 (37.43)	5.21 (100.00)	200
Non-insured farmers (Control)	0.72 (22.71)	0.59 (18.61)	1.31 (41.32)	3.17 (100.00)	223

Note: Figures in brackets are percentages to GCA

Average production of different crops per farm, across various categories of farmers, during three main cropping season is presented in Table 4.6b to 4.8b. It is to be noted here that we could not gather physical production of sugarcane, rather in value terms. It is also to be noted that the production of minor crops or vegetables could not be collected during field survey. A perusal of Table 4.6b shows that average production (in quintals/farm) of aman paddy was highest among non-loanee insured farms followed by loanee farms and control farms. The amount of production of aman paddy was quite high across the categories of farmers and so was the case with potato and summer paddy (Table 4.7b & 4.8b).

Table 4.6b Production per farm during Kharif (quantity in Quintals)

Type of Farmers	Kharif			
	Paddy		Sugarcane (in value term)	
	Main product	By-product	Main product	By-product
Loanee insured farmers	36.41	49.64	Rs. 1127.77	-
Non-loanee insured farmers	37.69	51.34	Rs. 1500.00	-
Total insured farmers	36.73	50.07	Rs. 1220.83	-
Non-insured farmers (Control)	23.69	32.52	-	-

Table 4.7b Production per farm during Rabi (quantity in Quintals)

Type of Farmers	Rabi					
	Masoor		Mustard		Potato	
	Main product	By-product	Main product	By-product	Main product	By-product
Loanee insured farmers	0.16	-	0.78	-	56.88	-
Non-loanee insured farmers	0.73	-	1.27	-	61.98	-
Total insured farmers	0.30	-	0.89	-	58.16	-
Non-insured farmers (Control)	0.175	-	0.39	-	51.70	-

Table 4.8b Production per farm during Summer/Zaid (quantity in Quintals)

Type of Farmers	Zaid			
	Boro paddy		Jute	
	Main product	By-product	Main product	By-product
Loanee insured farmers	26.99	23.20	6.03	8.59
Non-loanee insured farmers	33.60	28.63	12.20	17.76
Total insured farmers	28.65	24.56	7.58	10.89
Non-insured farmers (Control)	19.58	16.34	6.65	9.63

Table 4.9b Quantity sold (Main product) per farm in Kharif (in Quintals)

Type of Farmers	Kharif					
	Amon Paddy			Sugarcane (in value term)		
	Production	Sold	Retained	Production	Sold	Retained
Loanee insured farmers	36.41	28.95 (79.51)	7.46 (20.49)	Rs 1127.77	Rs 1127.77 (100.00)	-
Non-loanee insured farmers	37.69	28.76 (76.31)	8.93 (23.69)	Rs. 1500.00	Rs. 1500.00 (100.00)	-
Total insured farmers	36.73	28.90 (78.68)	7.83 (21.32)	Rs. 1220.83	Rs. 1220.83 (100.00)	-
Non-insured farmers (Control)	23.69	16.73 (70.62)	6.96 (29.38)	-	-	-

Note: Figures in brackets are the percentages of production

Table 4.10b Quantity sold (Main product) per farm in Rabi (in Quintals)

Type of Farmers	Rabi								
	Masoor			Mustard			Potato		
	Produc-tion	Sold	Retained	Produc-tion	Sold	Retained	Produc-tion	Sold	Retained
Loanee insured farmers	0.16	0.08 (50.00)	0.08 (50.00)	0.775	0.35 (45.16)	0.425 (54.84)	56.88	54.68 (96.13)	2.20 (3.87)
Non-loanee insured farmers	0.73	0.64 (87.67)	0.09 (12.33)	1.27	1.00 (78.74)	0.27 (21.26)	61.98	59.80 (96.48)	2.18 (3.52)
Total insured farmers	0.30	0.22 (73.33)	0.08 (26.67)	0.89	0.50 (56.18)	0.39 (43.82)	58.16	55.97 (96.23)	2.19 (3.77)
Non-insured farmers (Control)	0.175	0.096 (54.86)	0.079 (45.14)	0.39	0.07 (17.95)	0.32 (82.05)	51.70	49.81 (96.34)	1.89 (3.66)

Note: Figures in brackets are the percentages of production

The average amount of sale and retention for family consumption, of different farm produces, across the categories of farms as well as over different crop seasons are given in Table 4.9b to Table 4.11b. As the average production of paddy (both during Kharif and summer) was quite high in the sample farms, 70 to 90% of the same was sold in market. Since sugarcane and jute being the cash crops, the entire production was sold. A similar trend was also observed in the case of potato. Potato being a perishable crop, and also the volume of production was quite high, nearly 95% of the potato output was sold. But in case of other crops, particularly for pulses, a different trend was observed. This is because both the acreage and production of pulses were quite low and pulses being more perishable could be stored for several months by are farmers themselves. In a nutshell, it can be concluded that though the farmers in West Bengal have very small amount of operational holding, most of them are now cultivating for sale in the market rather for own family consumption. So a better price realization will help them to a great extent.

Table 4.11b Quantity sold (Main product) per farm in Zaid (in Quintals)

Type of Farmers	Zaid					
	Boro Paddy			Jute		
	Production	Sold	Retained	Production	Sold	Retained
Loanee insured farmers	26.99	24.44 (90.55)	2.55 (9.45)	6.03	6.03 (100.00)	-
Non-loanee insured farmers	33.60	31.13 (92.65)	2.47 (7.35)	12.20	12.20 (100.00)	-
Total insured farmers	28.65	26.12 (91.17)	2.53 (8.83)	7.58	7.58 (100.00)	-
Non-insured farmers (Control)	19.58	17.64 (90.09)	1.94 (9.91)	6.65	6.65 (100.00)	-

Note: Figures in brackets are the percentages to production

Table 4.12 Value of production per farm during Kharif-2016 (in Rs.)

Type of Farmers	Kharif			
	Paddy	Sugarcane	Others	Total
Loanee insured farmers	57537.85	1127.77	-	58665.62
Non-loanee insured farmers	59327.53	1500.00	-	60827.53
Total insured farmers	57985.27	1220.00	-	59205.27
Non-insured farmers (Control)	37713.10	-	-	37713.10

The value of farm output, per farm, is also presented in Table 5.12b to 5.1b. A perusal of these table clearly indicated a regular flow of income across the crop seasons. The per farm value of output is highest during Kharif season, followed by summer and Rabi seasons. Among different categories of farmers, per farm value of output was highest for non-loanee insured farmers, followed by loanee farmers and non-insured farmers respectively. In a nutshell, paddy, jute, and potato were the main output in the sample farms and 2016-17 being a normal year their production and prices received were on the higher side.

Table 4.13b Value of production per farm during Rabi-2016-17 (in Rs.)

Type of Farmers	Rabi				
	Masoor	Mustard	Potato	Others	Total
Loanee insured farmers	617.55	2569.27	17262.61	-	20449.43
Non-loanee insured farmers	2887.75	4440.00	17830.16	-	25157.91
Total insured farmers	2745.10	3036.96	17404.50	-	23186.56
Non-insured farmers (Control)	663.58	1214.00	14532.75	-	16410.33

Table 4.14 Value of production per farm during Zaid 2016-17 (in Rs.)

Type of Farmers	Zaid			
	Boro Paddy	Jute	Others	Total
Loanee insured farmers	43255.62	17130.59	-	60386.21
Non-loanee insured farmers	52152.60	38420.21	-	90572.81
Total insured farmers	45479.84	22453.00	-	67932.84
Non-insured farmers (Control)	30828.85	18977.13	-	49805.98

Chapter – V

Insurance Behavior

The purpose of this section of the study is to understand the uptake behavior of the sample households i.e., to understand what factors promote or dissuade farmers from enrolling under PMFBY, what are the other risk management strategies that farmers have, how they perceive about the usefulness of the scheme and about its implementation, how different stakeholders delivered in the field level and, what are the reasons behind farmers opting (or not opting) for the scheme. Therefore, basically this section deals with farmers experiences regarding, awareness, enrolment, implementation, and expectations from different stakeholders as well as their suggestions for further improvement in the implementation of PMFBY.

At the very outset it must be noted that crop insurance in West Bengal is offered to the farmers at free of cost since 2013 following the commitment on the part of state government in its agricultural policy. Farmers need not to pay anything for crop insurance. The same is true with PMFBY too. The state government borne the entire farmers' share of premiums in addition to its own 50% subsidy. This is why the scheme was rechristened as Bangla Fasal Bima Yojna (BFBY) in West Bengal. This should be kept in mind before drawing any conclusion on farmers insurance behavior in West Bengal.

5.1 Enrolment and Awareness about PMFBY/BFBY among the sample households

Table 5.1 reports the status of general awareness regarding PMFBY scheme among the insured respondents (excluding the control group) in our study area. The interesting fact is that 23 to 28% farmers who are already enrolled under PMFBY, have not heard the name of the scheme. And 10% of the insured respondents claimed that they are not enrolled, with another 30% were not sure about their enrollment status. An important observation is that the farmers might be aware of crop insurance but not necessarily the specific name of the scheme. The question put forth to the respondents was ‘Are you aware of the PMFBY? which could have led them to answer ‘No’ in this instance.

Our field experience is that the quality of awareness regarding PMFBY/BFBY among the farmers in the study area is very poor. Farmers were mostly aware that they have filled up some forms related to crop insurance but not beyond that. Even the farmers who heard the name of PMFBY or BFBY were not aware on the various features of the scheme. General awareness about the scheme does not mean awareness of the specific features of the same. There was sheer lack of awareness, among the respondents, about specific features of the scheme.

Table 5.1 Enrolment and Awareness

Type of farmers	Heard of PMFBY		Availed any other insurance scheme		Insured in PMFBY			Insured because you had applied for loan		Voluntary enrollment under PMFBY		How did you know about PMFBY Scheme				
	Yes	No	Yes	No	Yes	No	Unsure	Yes	No	Yes	No	1	2	3	4	5
Loanee	65 (72.33)	25 (27.78)	41 (45.56)	49 (54.44)	53 (58.89)	09 (10.00)	28 (31.11)	51 (56.67)	39 (43.33)	27 (30.00)	63 (70.00)	06 (6.67)	05 (5.56)	86 (95.56)	21 (23.33)	30 (33.33)
Non-loanee	23 (76.67)	07 (23.33)	11 (36.67)	19 (63.33)	17 (56.67)	03 (10.00)	10 (33.33)	0 (0.00)	30 (100.00)	12 (40.00)	18 (60.00)	-	-	30 (100.00)	16 (53.33)	-

Note: Figures in brackets are percentages to sample farmers
Code: 1. Government awareness programs; 2. Insurance Company/Agent; 3. Panchayat; 4. Other Villagers; 5. Others (PACS)

Out of total 90 loanee insured sample farmers, only 41 (45.56%) had availed other crop insurance scheme in past while 11 out of 30 (36.67%) non-loanee insured sample farmers had availed other crop insurance schemes earlier. That means more than 60% respondents were first time insurer in the study area during 2016-17. Only 56.67% of loanee farmers were aware that since they applied for crop loan, their enrolment is done. While non-loanee sample farmers had not applied for loan. Among those who have heard the name of PMFBY and even voluntarily enrolled under PMFBY, nearly 72% of them have no idea about various features of the scheme.

GPs and PACS were the main source of information for the loanee farmers but it was mainly the GPs in case of non-loanee farmers. Quite a few respondents received information from the fellow farmers. But near complete lack of engagement from the IAs resulted in vacuum of information not only during enrolment but also in settling the claims too. Though the implementing IAs should have a functional office in each tehsil with at least one agent deployed at the block level, in practice only few of them had offices that too at sub-division level with one field officer deployed for multiple blocks even beyond the sub-divisions. Our interactions with farmers revealed that the proposal forms were made available at the GP office and the local GP had assigned one of its own staffs with the task of collection of all the mandatory documents for submission. But the farmers were asked to sign on the blank enrolment form and to provide available documents with them. The same was submitted without proper verification.

Therefore, it can very easily be concluded that huge enrolment under PMFBY/BFBY in West Bengal was mainly supply driven rather demand driven. Since it was offered free of cost, since it was mandatory for loanee farmers, and since GPs took special initiatives for mass enrollment; the coverage under PMFBY was very high in West Bengal. In fact voluntary enrollment was only 30% among the loanee farmers and 40% among the non-loanee farmers.

5.2 Insurance details of sample households under PMFBY/BFBY

In our study area there were three IAs namely, Cholamondalam MS GIC and Agricultural Insurance Corporation of India Limited during Kharif-2016, and ICICI-Lombard GIC during Rabi-2016-17. The crop-wise insurance details among the sample respondents in the study area is given in Table 5.3. The table shows that farmers in the study area insured for only Aman Paddy and Jute during Kharif-2016; and for Boro Paddy, Mustard, and Lentil during Rabi-2016-17. Another interesting point to note here is that, some farmers in the study area growing potato, had enrolled themselves under PMFBY for a different crop and were not even aware of this. On enquiry with the IAs and PACS it was found that, they were given loans for cultivating different crops (mustard or wheat) instead of potato. This shows the level of ignorance among the farmers and in-efficient document verification process during enrolment.

Table 5.2 Insurance details (number of households)

Name of Insured Crops	Type of farmers	Name of implementing agency			Premiums paid (Rs.)	Name of implementing bank	Event of Losses (code)				Compen-sation Secured (Rs.)
		Chola MS	AICI	ICICI			1	2	3	4	
AMAN PADDY	Loanee	60	30		NIL (In West Bengal, crop insurance is being provided entirely free of cost to the farmers. The entire farmers' share of premium is borne by GoWB. This is why the PMFBY scheme in West Bengal has been renamed as 'Bangla Fasal Bima Yojna)'.	PACS		2			Nil
	Non-loanee	20	10					2			Nil
MASOOR	Loanee			08		PACS		2			Nil
	Non-loanee			04				2			Nil
MUSTARD	Loanee			22		PACS		2			Nil
	Non-loanee			06				2			Nil
POTATO*	Loanee			08		PACS		2			Nil
	Non-loanee			04				2			Nil
BORO PADDY	Loanee			63		PACS		2			Nil
	Non-loanee			23				2			Nil
JUTE	Loanee	23				PACS		2			Nil
	Non-loanee	10						2			Nil

Code: 1. Prevented sowing/planting due to deficit rainfall or adverse weather; 2. Yield loss (due to drought, dry spells, floods, pests and diseases etc.); 3. Post harvest losses (spoilage during storage); 4. Localized calamities such as cyclones, landslides etc. Note: * Farmers insured for different crops but cultivated potato

PACS was the only implementing financial institution among the sample loanee farmers and yield loss due to flood, dry spell and attack of pest and diseases in was the reason for loss. Since there was no large scale occurrence of flood or drought or unfavourable events, government did not declare yield loss and thus no CCEs held in the sample villages. And due to complete lack of knowledge and co-ordination farmers failed to report for individual crop loss.

5.3 Experience with PMFBY/BFBY among the sample households

The experience of the enrolled sample households with PMFBY/BFBY is presented in Table 5.3. A perusal of the table reveals that, in-spite of not having any claim, the respondent farmers consider the scheme better than any previous crop insurance schemes they availed. Not a single farmer, consider this worse than other previous schemes. Since majority of the farmers (45 to 70%) are first time insurer, they could not compare it with previous schemes. At the same time, twenty five percent of the farmers (30 out of 120) could not share their experience mainly due to complete ignorance about the scheme. Such a poor awareness and ignorance is also reflected from the fact that none of the farmer reported to any one at the event of yield loss.

5.4 Implementation details of PMFBY/BFBY in the study area

The information regarding the implementation of the scheme is presented in Table-5.4. Since there was no formal claim intimation by the sample households who suffered yield loss, there was no question of conducting CCEs to estimate crop loss. At the event of yield loss, they did enquired verbally with the GPs whether government declared any compensation or not. But since, neither there was any declaration on the part of DoA, nor any formal reporting by the individual farmers, farmers did not receive any compensation. The role of GP was restricted only with enrollment and that too providing enrolment forms and getting it signed by the farmers without much verification of documents/facts. Therefore, two-third of the enrolled farmers, in-spite of considering the scheme much better than previous schemes, are not satisfied with its implementation at the field level.

5.5 Suggestions by the sample households for further improvement of PMFBY/BFBY

More than 95% of the insured farmers (115 out of 120) in the study area, irrespective of their category, were not even aware about the major provisions under PMFBY/BFBY, particularly regarding mandatory enrollment for loanee farmers, cut-off dates, procedures for claim settlement, etc. Therefore, initially they were not able to compare the PMFBY/BFBY scheme and its implementation. After hearing major provisions from the field investigators, nearly 90% of them came forward with suggestions for further improvement of the scheme.

Table 5.3 Experiences with PMFBY

Type of sample Farmers	Experience with PMFBY					Event of loss did you inform any authority		Whom did you inform - NA					
	Better than earlier schemes	Worse than earlier scheme	Same any other scheme	Never insured earlier	Cannot say	Yes	No	Insurance company	Bank	Local Govt. official	Toll free number	KVK officer	Others
Loanee	24 (26.67)	0 (0.00)	01 (1.11)	40 (44.44)	25 (27.78)		√	NA	NA	NA	NA	NA	NA
Non-loanee	4 (13.33)	0 (0.00)	0 (0.00)	21 (70.00)	05 (16.67)		√	NA	NA	NA	NA	NA	NA

Note: Figures in brackets are percentages to sampled farmers

Table 5.4 Implementation of PMFBY

Type of sample farmers	Event of loss did you inform how many days - NA				Did anyone visit your farm during CCE		Are you aware of any yield assessment of CCE taking place in village		Role of panchayat in process of insurance/claims		What was role of panchayat	Are you satisfied with the implementation of PMFBY	
	Within 48 hours	Within 15 days	Within one month	Within 3 months	Yes	No	Yes	No	Yes	No		Yes	No
Loanee	NA	NA	NA	NA		90 (100.00)		90 (100.00)	39 (43.33)	51 (56.67)	Given PMFBY Information	33 (36.67)	57 (63.33)
Non-loanee	NA	NA	NA	NA		30 (100.00)		30 (100.00)	07 (23.33)	23 (76.67)	Helped in form fill up	08 (26.67)	22 (73.33)

Note: Figures in brackets are percentages to sampled farmers

Therefore, government and other stakeholders need to generate awareness about the benefits of PMFBY/BFBY among the farmers. At the same time it is a matter of concern that nearly two-third of all the insured farmers (79 out of 120) expressed their dissatisfaction regarding poor implementation of the scheme particularly because of lack of information and awareness that led to denial of claim at the event of yield loss..

Table 5.5 Suggestions for further improvement of PMFBY

Type of sample farmers	Premium should be lower	Less time to finish paperwork	Higher compen-sation	Timely compen-sation	Others			
					Individual approach	Compen-sation for partial damage	Direct contact with IAs	Pro-active role of GP
Loanee	NA	21 (23.33)	4 (4.44)	16 (17.78)	17 (18.89)	16 (17.78)	6 (6.67)	32 (35.56)
Non-loanee	NA	08 (26.67)	5 (16.67)	5 (16.67)	6 (20.00)	8 (26.67)	12 (40.00)	2 (6.67)

Note: Figures in brackets are percentages to sampled farmers

Major suggestions given by the enrolled farmers are given in Table 5.5. A perusal of the table reveals that lack of information given by various stakeholders is the main concern among the sample farmers. Therefore, the most important or demanded suggestion was for a more pro-active role on the part of GPs in dissemination of adequate information and help in claim settlement process. Other major suggestions are

1. Simplification of enrollment and claim settlement process (Less time to finish paperwork)

2. Need for direct contact with the IAs (instead through the GPs or PACS)

3. Compensation for partial damage

4. Timely payment of compensation

5. Individual approach (instead of area approach) for compensation

6. Full compensation (irrespective of scale of finance or indemnity level).

Since crop insurance in West Bengal is provided free of cost to the farmers, they did not suggest lowering of premium which otherwise would have been a common suggestion. As the demand for crop insurance is highly price-sensitive (Mukherjee and Pal, 2017), zero premium rate and its wide coverage made the scheme most attractive among the farmers. The households are in the opinion that since crop insurance is provided at free of cost, the possibility of increased coverage under BFBY/PMFBY is most likely, provided there is large scale awareness is created among the farming community. Main reasons for low confidence on PMFBY are complicated and lengthy procedures for enrolment and claim settlements.

Several farmers suggested a direct linkage with the insurance companies as it is done in case of other insurance schemes like life, vehicle or health insurance. Our interaction with IAs also reveals that they too prefer direct contact with the farmers but unable to do so because of socio-political interference, administrative wrangling, and their limited presence at local level. Since e-biddings are made for each season, the IAs are hesitant to recruit sufficient number of field level staffs and to develop basic infrastructure at local level. Therefore, as per the operational guidelines, long term bidding need to be encouraged by the DoA. Another important suggestion is that the insurance unit has to bring down to individual farm level. At present insurance unit is at village level, which is a one major factor demotivates farmers to apply for this scheme. Keeping insurance unit at village level means, insured farmers even with 100 per cent crop loss might not be eligible to get any claim at all, if there is no loss in sample farms selected for crop cutting experiments. Respondent farmers also suggested provision for full compensation even if there is partial damage to their crops, because it is very cumbersome for them to prove partial yield loss or damages in individual farms.

5.6 Awareness about PMFBY/BFBY among the non-insured sample households

A large number of farmers in West Bengal remained outside the gambit of PMFBY/BFBY mainly because of lack of awareness regarding PMFBY/BFBY. Nearly 70 % of the non-insured farmers not even heard the name of PMFBY (Table 5.6). Only a small proportion of them (13.33%), did not opt for PMFBY because they are not interested and feel no need for insuring crops due to complex procedures and poor past experiences. Another 6.7 % of the non-insured farmers did not opt because they have poor experience in not receiving the claim in past. Though it is only 6.7% but it a matter of serious concern as the success of any scheme in future largely depends on the past experiences for whom it is meant. The above reason, therefore, requires sincere attention. We will discuss these in details in the next chapter, under policy prescription. Remaining farmers, who constitute 80% of the non-insured group, are interested to participate provided awareness is created. These farmers remained uninsured because they do not have clear idea about the scheme and its salient features like how to apply, when to apply, how much is the premium, whom to approach for enrolment and claims, how to get compensation, etc. Therefore, strategies for effective awareness campaign and mechanism for a transparent and accountable system of speedy payment of compensation should be evolved.

Table 5.6 Awareness and non-uptake of control farmers

Particulars	Yes	No	Total
Have you heard of PMFBY (Yes/No)	9 (30.00)	21 (70.00)	30 (100.00)
If Yes, who informed you (Name of the source)			
Gram Panchayat	8 (26.67)	NA	NA
NGO	1 (3.33)	NA	NA
Why did you not enroll for PMFBY (up to 3 reasons)			
Not interested	4 (13.33)	0 (0.00)	4 (13.33)
No compensation received previously	2 (6.67)	0 (0.00)	2 (6.67)
No conception about the limit of crop loss for getting compensation	2 (6.67)	21 (70.00)	23 (76.67)
No clear idea about the yojana	2 (6.67)	21 (70.00)	23 (76.67)
Don't know where & when to apply	1 (3.33)	21 (70.00)	22 (73.33)
Don't know about the benefit of the yojana	2 (6.67)	21 (70.00)	23 (76.67)
Don't know whether I have to pay premium or not	1 (3.33)	21 (70.00)	22 (73.33)

Note: Figures in brackets are percentages to sampled farmers

Chapter – VI

Summary and Policy Implications

Any successful crop insurance scheme, worldwide, requires government support and finance. According to a recent World Bank survey on crop insurance performed in 65 countries, premium subsidy by the government was found to be the most common strategy to support agricultural insurance market wherein public sector support was found to be as high as 70 percent of the written premiums in United States and Canada (World Bank, 2009). Success of any government scheme also depends on its sincere implementation with active participation by all the stakeholders. The key problems such as poor land records, flawed land titles, lack of transparency, lack of awareness and ignorance, fake claims, and corruption are common challenges any crop insurance scheme in India faces.

While crop insurance is essentially a commercial activity, it is common to see that governments is also playing a role, as governments have an interest from the perspective of maintaining productivity and safeguarding the wellbeing of the farming community. A decline in capital formation in agriculture since mid-1980s and reduction in government subsidies for agriculture since 1990s, exposed the resource poor small and marginal farmers to a high cost production system and to commercial input suppliers, raising the magnitude of risk. Therefore, given the changing role of government after 1991, during post economic liberalization and post globalization era, introduction of PMFBY is a welcome step. As compared to previous crop insurance schemes, PMFBY holds a special place due to its wide coverage and for the innovativeness of its designs.

The present study is an attempt to evaluate the performance of Pradhan Mantri Fasal Bima Yojana (PMFBY) in the state of West Bengal in terms of issues related to governance, implementation and uptake behavior among the farmers and to make some policy suggestions for its better functioning.

6.1 Objectives of the study

The specific objectives of the study are:

1. To analyze the governance of PMFBY implementation in West Bengal
    a. To examine the functioning of different stakeholders dealing with PMFBY in West Bengal
    b. To study the progress of PMFBY in West Bengal
2. To analyze the uptake behavior among the farmers in West Bengal
3. To recommend suitable policy suggestions for better functioning of PMFBY in West Bengal.

6.2 Study design

The study is conducted in the state of West Bengal during 2017-18 and divided into two parts, namely: Governance and implementation of PMFBY in West Bengal; and Understanding uptake behavior. Both the component are carried out more or less simultaneously using mixed method of data collection. While the first part is based on secondary information and feedbacks collected from various stakeholders associated with implementation of PMFBY in the state of West Bengal; the second part is based on primary data collected from field surveys across various districts and focused group discussions held with various stakeholders at grass root level. The purpose of field survey is to understand what factors promote or dissuade farmers from enrolling under PMFBY, what are the other risk management strategies that farmers have and what are the reasons behind farmers opting (or not opting) for each of them. The reference year for the study is agricultural year 2016-17 i.e., Kharif-2016 and Rabi-2016-17.

The first part of the study i.e., evaluation of the scheme w.r.t. progress, governance and implementation, is based on district-wise information for all the districts in West Bengal and feed backs received from state level functionaries. This formed the basis for second part of the study i.e., understanding uptake behavior of the farmers at field level. For field survey, based on degree of coverage under PMFBY, three districts were selected purposively. One representing very high uptake (Burdwan), another with moderate uptake (North 24 Parganas), and the third with low uptake (Dakshin Dinajpur). Then, in consultation with the district agricultural departments, a cluster of villages were identified for field survey keeping in mind the availability of sufficient number of representative categories of farmers i.e., Loanee insured farmers, Non-loanee insured farmers and Non-insured farmers. For this we have selected Batagram and Kalyanpur village from Ausgram-I block in Burdwan district (High uptake district); Khaspur, Hoogly, East Ramchandrapur & West Ramchandrapur villages from Baduria block in North 24 Pargana district (Moderate uptake district); and Dangi village from Balurghat block in Dakshin Dinajpur district (Low uptake district). Finally, 50 farm households from each district were selected randomly covering 30 loanee farmer; 10 non-loanee farmer, and 10 non-insured farmers. Thus a total of 150 farm households were selected for this study. It is important to note that share-croppers or tenants with valid (legal) documents were also considered farmers in our sample.

6.3 Implementation of the scheme in West Bengal

- The PMFBY was implemented in all the districts of West Bengal, except Kolkata Metropolitan area, since its inception. However, the scheme has been rechristened as ‘Bangla Fasal Bima Yojna (BFBY)' in the state since it was offered at free of cost to the farmers (except for potato, sugarcane and horticultural crops) and the state government borne the entire financial liability on account of farmers' share of premiums in addition to its own share. However, all other guidelines and norms remained unaltered.

- PMFBY was offered to all categories of farmers in the state of West Bengal (both loanee and non-loanee farmers, including cultivators and tenants). It provided support to 4 major crops viz., Aus Paddy, Aman Paddy, Maize and Jute during Kharif-2016 & 11 crops namely, Boro Paddy, Wheat, Rapeseed & Mustard, Groundnut, Sesame, Gram, Mung, Lentil, Sugarcane, Potato, and Maize during Rabi 2016-17.

- Three insurance companies viz., AIC, Cholamondalam, and Future Generali have been selected for Kharif-2016 and two insurance companies, ICICI-Lombard & UIIC were selected for Rabi 2016-17 through e-tender and following clustering of districts approach.

6.4 Major Findings

For better understanding and clarity, findings of the study are summarized under major themes of the scheme as given below.

6.4.1 Coverage related

- So far as promoting crop insurance among the farmers in West Bengal is concerned, the scheme is a huge success as more than 3.06 million farmers were enrolled under PMFBY/BFBY in the very first season of its implementation, registering an annual growth of 216.1% over the previous year.

- Such an outstanding performance deserves appreciation, in-spite of the fact that there were teething issues during very first season under PMFBY. However, poor adoption rate under PMFBY among the non-loanee farmers is a matter of concern, as non-loanee farmers constitute more than 70% of farming community in the state. So was the case in Rabi season. While 45.33% farmers opted for crop insurance during Kharif-2016, the corresponding figure during Rabi-2016-17 was only 16%.

- The AIC as IA played a very active role in bringing more than 0.54 million new non-loanee farmers, in cluster-IV, under the purview of PMFBY/BFBY in the very first season, which deserve appreciation and raises expectations from others too. The total number of enrolment by AIC was around 1.3 million (nearly 42% of state total) and that too just from a single cluster allotted to them (Cluster-IV).

- In terms of area coverage too, the PMFBY/BFBY made an impressive growth as it was 28.85% during Kharif-2016 and 12.44% during Rabi-2016-17, much higher than the national average in both the season.

- There is high variation across the districts both in terms of coverage and sum insured. While the coverage is high in southern and plain districts like Purba Midnapur, Paschim Midnapur, Burdwan, and Hoogly; the same is very low in northern and hilly districts like Darjeeling, Alipurduar, Jalpaigudi, Uttar Dinanjpur Dakshin Dinajpur, Coochbehar, and Maldah.

- Crop insurance under PMFBY in West Bengal is relatively popular among the farmers growing paddy, potato and jute under irrigated condition. However, the chances of crop failure are more in rain-fed and hilly areas due to high fluctuations in weather.

- As the demand for crop insurance is highly price-sensitive, zero premium rate made the scheme most attractive among the farmers. The households are in the opinion that since crop insurance is provided at free of cost, the possibility of increased coverage under BFBY/PMFBY is most likely, provided there is large scale awareness is created among the farming community.

- The salient features of successful implementation of PMFBY/BFBY in West Bengal are timely notification with wide coverage of crops; timely constitution of different committees at state/district/block level; following e-tendering & cluster approach in bidding process; and providing crop insurance at free of cost to the farmers.

6.4.2 Governance related

- Though the performance of PMFBY/BFBY, in terms of coverage, is quite satisfactory, the implementation of the scheme suffers from several weaknesses.

- Huge enrolment under PMFBY/BFBY in West Bengal was mainly supply driven rather demand driven. Since it was offered free of cost, since it was mandatory for loanee farmers, and since GPs took special initiatives for mass enrollment; the coverage under PMFBY was very high in West Bengal. In fact voluntary enrollment was only 30% among the loanee farmers and 40% among the non-loanee farmers.

- The governance and implementation of PMFBY/BFBY in West Bengal was more or less in accordance with the stipulated operational guidelines, from pre-notification to enrolment phase. But the main problem was in the post enrollment phase particularly in conducting CCEs and settlement of claims.

- The composition of various committees at state/district/block levels were more or less exhaustive as it included representatives from all the major stakeholders except from land revenue department which would have been crucial for digitization of land records for successful verification at the time of enrollment and claims.

- However, there are enough scope for further improvements in post enrolment phase particularly in conducting CCEs, monitoring claim settlement and claim disbursement process, and in increasing the awareness among the farmers regarding salient features of the scheme.

- Implementing IAs, barring AIC, have been found not to play an active role except for providing application forms through GPs and financial institutions. Their presence at local level was very poor. Though the implementing IAs should have a functional office in each tehsil with at least one agent deployed at the block level, in practice only few of them had offices that too at sub-division level with one field officer deployed for multiple blocks even beyond the sub-divisions.

- Further, IAs were supposed to make adequate publicity among the farmers but they failed miserably on this. For example, farmers were supposed to get an acknowledgement slip at the time of submission of application form for enrolment. The same was collected by or handed over to the GPs or Banks. Neither it was handed over to the farmers, nor were they informed by the implementing IAs about their enrolment.

- There was complete absence of information regarding enrolment status and various features of PMBFY. In fact the insured farmers were did not even know the name of the implementing IAs. The GPs and banks played a crucial role in increasing the number of enrolment but not so during settlement of claims or explaining the features of the scheme.

- It is very difficult to get proper information on PMFBY online in West Bengal. At national level, a crop insurance portal (www.agri-insurance.gov.in) has been created under PMFBY to enable better administration, coordination amongst stakeholders, proper information dissemination and transparency. During the very first season itself, states like Bihar, Haryana, Karnataka, Odisha and Tamilnadu sent the complete yield data through CCE Agri App, but West Bengal did it partially.

- Some states like Karnataka developed highly informative and interactive web-based portals to disseminate and facilitate PMFBY in their respective states but similar attempt is lacking in West Bengal. The information uploaded in *Matirkatha* website & *MK-BFBY* apps is very limited, irregular, not at all user friendly.

6.4.3 Adherence to cut-off dates

- Regarding timelines of various stipulated activities for implementation of PMFBY/BFBY and adherence to various cut-off dates in West Bengal, it was a mixed experience for both the crop season.
- Being the very first year of implementation, notifications were a bit delayed but the notifications did cover most of the essential details. Various committees at state/district/block levels were constituted and the meetings of the SLCCCI were convened on time.
- There was some deficiency in timely intervention and active involvement on the part of DLMCs & BLMCs but the GoWB is highly responsive and deeply interested in improving the processes to make the scheme better suited to the needs of small and marginal farmers while also making it economically viable for insurance companies.
- For various reasons, settlement of insurance claims was delayed by more than 6 to 12 months and farmers were deprived of timely compensation for crop loss. The IAs admitted the inordinate delay in payment of claims but hold the state government responsible for the mess as payment of claims was dependent on receipt of yield data and premium subsidy from the state governments.
- While submission of yield data was delayed mainly due to manpower shortages in conducting huge number of CCEs, the delay in release of premium subsidy was mainly due to limited budget provisions. Commitment on the part of state government, to offer crop insurance at free of cost to the farmers, put an extra burden on government exchequer.
- Delayed submission of yield data and premium subsidy by the state government, provided an excuse to the Insurance companies to delay and deny payment of claims.

6.4.4 E-tendering related

- From the very first season of PMFBY/BFBY, e-bidding and e-tendering was mandatorily practiced in West Bengal. E-bids were invited from the empanelled IAs using clustering of district approach.
- There was apprehension regarding lack of transparency in the e-bidding process during Rabi-2016-17 as a re-tendering was done for a single season only cancelling

the earlier notification for a longer term i.e., six crop seasons. This resulted unnecessary delay and confusion among the IAs. There are apprehension that this was done to favour some private IAs who were trying to form a cartel while bidding. There is an issue here, The IAs win a bid for one season are not bound to come for next season/year. Due to this, private insurers may not return after good profits in a season/ year, if they find that next season/year, their profits may go down. And exactly the same thing happened in West Bengal for next year.

- Though there is substantial variation across the districts and crops, the actuarial premium rates (APR) were quite high during Rabi 2016-17 as compared to Kharif-2016. In many cases it was below the threshold level of 2%. during Kharif, but as high as 38.61% during Rabi.

6.4.5 CCEs related

- The need for building technological infrastructure and capacity building is well articulated within PMFBY. But progress in that line is very poor in West Bengal. Lack of comprehensive and genuine information for assessing farm level risks and damages is the main reason for delay in submission of yield loss data.

- A minimum of 16 CCEs at block level and 4 CCEs at GP level were required to be conducted by the BAES in collaboration with DoA. Given the manpower shortages and time constraints, conducting so many CCEs were virtually impossible. In many instances where required numbers of CCEs could not be conducted, the yield estimates were made from neighboring units.

- In several instances, district level officials were required to carry out their crop loss assessment without even visiting farmers fields, which were contested by the IAs.

- While PMFBY promised use of smart-phones, remote sensing images, GIS data, and drone technologies to carry out faster assessment of crop losses, the BAES & DoA failed to use such smart technologies to effectively reduce the number of CCEs.

6.4.6. Claim related

- Participation of insurance companies in West Bengal is mostly driven by the fact that state government bears the difference between very high actuarial premium and zero premium paid by the farmers. So IAs does not face much problem from the suffering farmers for delayed and claim payments and even for denial of the same.

- With the actual premium being quite high, IAs have found a good business opportunity under PMFBY, in West Bengal with claim to premium ratio being higher than 100% only for two districts out of 19. The overall claim to premium ratio was 57.73%.

- The claim to premium ratio was higher during Rabi season than in Kharif. It was more than 100% only in case of summer paddy; a little more than 40% for Aman Paddy and Aus Paddy; and nearly 10% for Jute, Potato, Wheat and Mustard.

- So far as claim settlement is concerned, the performance of PMFBY/BFBY in West Bengal is particularly very poor where insurance companies collected Rs.730 crores in premium and the estimated claim settled till July, 2017 was less than Rs. 1 crore. Which increased to Rs. 118 crores by December, 2017 and by the end of January, 2018 total claim paid was Rs. 421 crores.

- Therefore, during first year of implementation, PMFBY has proved to be a scheme most efficient when it comes to collection of premium, but not at all so in payment of claims.

- As already mentioned, the delay in claim settlement was mainly because of delay on the part of DoA & BAES in providing crop loss data and in paying state government's share in the premium subsidy to the implementing IAs. Since claim assessments is linked to CCEs, such a delay in claim settlement impairs the ability of the farmers to repay the crop loan.

- Another important reason for delay in payment was due to doubtful claims and incomplete documents submitted by the farmers during both enrolment as well as during reporting loss/claim. Multiple claims on a same land, claims with fake/forged pictures and land documents, non-verification of documents by the banks and/or GP officials during enrolment, KYC problem with bank accounts, as well as complete lack of information among the farmers are few to mention.

6.4.7. Awareness related

- Though government officials claims a good level of awareness about PMFBY among the farmers, views of different stakeholders and also the results of the field survey shows a very poor level of awareness among the farmers in the study area.

- A large number of farmers in West Bengal remained outside the gambit of PMFBY/BFBY mainly because of lack of awareness regarding PMFBY/BFBY. Nearly 70 % of the non-insured farmers not even heard the name of PMFBY. Even 23 to 28% farmers who are already enrolled under PMFBY, have not heard the name of the scheme.

- Even the farmers who heard the name of PMFBY or BFBY were not aware on the various features of the scheme. General awareness about the scheme does not mean awareness of the specific features of the same. There was sheer lack of awareness, among the respondents, about specific features of the scheme.

- More than 95% of the insured farmers, irrespective of their category, were not even aware about the major provisions under PMFBY/BFBY, particularly regarding mandatory enrollment for loanee farmers, cut-off dates, procedures for claim settlement, etc.

- At the same time it is a matter of concern that nearly two-third of insured farmers expressed their dissatisfaction regarding poor implementation of the scheme particularly because of lack of information and awareness that led to denial of claim at the event of yield loss.

- Complete lack of information among the farmers and in-efficient document verification process during enrolment, is another problem. Our field survey shows that several loanee farmers in the study area growing potato, had got enrolled themselves under PMFBY, but for a different crop. They did not even know this. On enquiry with the IAs and PACS it is found that, they got loan for cultivating different crops (mustard or wheat) instead of potato.

- Since there was no large scale occurrence of flood or drought or unfavourable events, government did not declare yield loss and thus no CCEs held in the sample villages. And due to complete lack of knowledge and co-ordination farmers failed to report for individual crop loss.

6.4.8 Farmers' perception and suggestions

- The improved features of PMFBY/BFBY, made it popular among the farmers. In-spite of not having any claim, the respondent farmers consider the scheme better than any previous crop insurance schemes they availed. Not a single farmers, consider this worse than other previous schemes.

- But, two-third of the enrolled farmers, in-spite of considering the scheme much better than previous schemes, expressed their dissatisfaction regarding poor implementation of the scheme particularly because of lack of information and awareness that led to denial of claim at the event of yield loss.

- Eighty percent of non-insured farmers remained uninsured because they do not have clear idea about the scheme and its salient features like how to apply, when to apply, how much is the premium, whom to approach for enrolment and claims, and how to get compensation. Remaining 20% have their issues of poor perception regarding the scheme based on past experiences.

- The most important or demanded suggestion, given by the farmers, was for a more pro-active role on the part of GPs in dissemination of adequate information and help in claim settlement process. Other major suggestions were, simplification of enrollment and claim settlement process, need for direct contact with the IAs, compensation for partial damage, timely and full payment of compensation, and adopting individual approach (instead of area approach) for compensation.

- Several farmers suggested a direct linkage with the insurance companies as it is done in case of other insurance schemes like life, vehicle or health insurance. Our interaction with IAs also reveals that they too prefer direct contact with the farmers but unable to do so because of socio-political interference, administrative wrangling, and their limited presence at local level. Since e-biddings are made for each season, the IAs are hesitant to recruit sufficient number of field level staffs and to develop basic infrastructure at local level.

6.5 Policy Recommendations

The policy recommendation that flows from the above discussion calls for an integrated approach involving all the major stakeholders with multi-pronged emphasis on the larger issue of improving governance, implementations, and impact of PMFBY scheme in the state. Several initiatives have already been taken, during post 2016-17 period, by the DAC&FW, GoI; DoA, GoWB; financial institutions, and implementing IAs, in this direction such as:

- Revision in the operational guidelines of PMFBY is under process wherein, among many changes, it was proposed to allow any empanelled IAs to start business in any clusters for enrollment of non-loanee farmers at APR below the L1 bid in that particular cluster.

- Considering the huge profits earned by the private IAs, Government of India allowed state governments to set up their own crop insurance firms to execute PMFBY.

- Mandatory Aadhar linking, KYC compliance, and direct benefit transfer (DBT) for all the bank accounts to check fake enrollment and faster claim disbursal.

- Mandatory submission of land records (mutation certificate/deed/rent receipts) at the time of enrollment in West Bengal has helped in substantially reducing false or multiple enrolment.

- Encouraging online enrollment through Customer Service Centres (CSCs). A CCE App (MK-BFBY) is developed though it requires major changes to make it user friendly.

The following policy suggestions need immediate action from the concerned stakeholders:

6.5.1. Awareness drive

- Government and other stakeholders need to generate awareness about the benefits of PMFBY/BFBY among all categories of farmers. Therefore, strategies for effective awareness campaign and mechanism for a transparent and accountable system of speedy payment of compensation should be evolved.

- The farmers should take up crop insurance in an informed manner rather than taking it as a free lunch. The implementing IAs, local government functionaries (GPs and ADAs), and PACS have a critical role to role in informing farmers and influencing the uptake. For this, intensive campaigning is needed in the block level annual Krishi Melas, which are being held very regularly with much fan fair; and in other forums.

6.5.3 Technological intervention

- Digitization of land records is a must for smooth implementation of the scheme. The progress with digitization of land records in West Bengal is very slow but this is very important to ensure genuine enrollment and faster claim settlement process.

- Encourage on-line enrolment and claim settlement in the state. For this government should encourage Common Service Centres (CSC) to facilitate on-line enrolment of non-loanee farmers and submission of claim documents.

- A dedicated, interactive and user friendly portal need to be developed at state level for the same, in regional languages. The GoWB can think of using the successful model of Karnataka, where a highly informative and interactive web-based portal, *Samrakshane*, and digitised land records in *Bhoomi* helped in understanding targeting patterns of crops, notified areas and uptake pattern under PMFBY as well as substantially reducing the verification time for enrolment and claims.

- Use of smart technologies. The high level of diversity in terms of crop coverage, area coverage, and risks covered coupled with very high percentage of small and marginal farmers in West Bengal pose a serious challenge in conducting high number of CCEs. An intervention that could effectively reduce the number of CCEs and improve its reliability is use of smart technologies.

- Capacity building with smart technologies need to be developed at block or GP level so that yield data can be furnished promptly and delay in settlement of insurance claims can be avoided. This could influence the efficiency and delivery of the scheme immensely. An improvement in the CCEs would benefit not only the PMFBY but also other schemes in operation, as the CCE is conducted for the purposes of estimating yields even in absence of this scheme.

6.5.3 Rational policy initiatives

- Introduce nominal processing fee. Any free lunch has its own limitations. Since crop insurance in West Bengal is offered free of cost to the farmers, the scheme witnessed a large number of cases with fake enrollment or claims. It put lot of strain on the functionaries like IAs, banks, DoA, BAES and GPs to verify the documents/claims which ultimately results in to delay in settlement of claims. In order to avoid this, the government may charge a token amount of money from the farmers during enrolment and the same may be reimbursed to their account if all documents submitted for enrolment and claims are found in order.

- Introduction of no claim bonus for cash crops and horticultural crops, and for non-loanee farmers, may be an option. Since crop insurance is offered free of cost, under BFBY in West Bengal, sans cash crops and horticultural crops; a provision for "no-claim bonus" on the premium paid by the farmers, could serve as an incentive for farmers to sustain enrolment in the scheme. The same logic applies for non-loanee farmers, who neither benefits from the interest subsidy schemes for agricultural credits, nor does the banks or insurance agencies help them in completing the formalities for crop insurance.

- Expand the role of GPs beyond enrollment. Since the presence of IAs at local levels are very limited, given the complexity and enormity of tasks involved, it is believed that the local GPs can be given a central role in creating awareness, enrolment drives and providing regular information/communication about the claim application and settlement process. The DoA and district authorities should play a central role in establishing directives and goals.

- Setting up own insurance firm in order to check the oligopolistic behavior by the private IAs. At present there are only 5 public sector and 13 private sector empanelled

IAs and all are making huge profit. So, setting up own firm will increase competition and act as a countervailing power to the oligopolistic cartels.

- Extend free insurance cover, under BFBY, to horticultural crops too. At present crop insurance under BFBY is offered free of cost but not for cash crops or horticultural crops. As a result, more than 95% enrolment in West Bengal is under paddy and remaining 5% under jute (Kharif) or potato (Rabi). This can act as an impediment to crop diversification in the state.

- Adopt a combination of Area Approach and Individual Approach. Another important suggestion emerged from the field survey is that the insurance unit has to bring down to individual farm level. Currently insurance unit is at village level which does not guarantee relief for individual farmer even with 100% crop loss. However, it can be a great challenge and scope for expanding the insurance cover particularly among voluntary insurers.

6.5.4 Transparency and Accountability

- For better administration, coordination amongst stakeholders, proper information dissemination and transparency, the DoA should regularly submit the yield data in the crop insurance portal (www.agri-insurance.gov.in) through CCE Agri App & make its own App (*MK-BFBY*) & website *Matirkatha* more informative and user friendly.

- Encourage long term bid under e-tendering. The nature of insurance business has to be seen over a cycle of 3 to 5 years, which includes good, bad and normal years. Bidding for a longer period of time helps the IAs to serve the farmers better by reducing overhead costs, developing infrastructure and recruiting man power at local level and ultimately can bid at a competitive actuarial premium rate (APR).

- Improve monitoring and grievance redressal mechanism. Farmers should be able to avail of a single window, at least within the block level, that is accountable to them for all aspects of the scheme.

- There should be strict compliance of timelines with regard to the process of claim settlement to provide adequate and timely compensation to farmers. Delay in claim settlement is another important areas of concern. For Kharif 2016 and Rabi 2016-17, a large number of claims are yet to be settled (till May, 2018). Since past experience is very important for taking a decision regarding buying insurance cover, this needs to be addressed immediately.

- Strict compliance of timely submission of yield data by the DoA also need to be ensured. The concerned bodies need to be more accountable for any delay in submission of yield data as the main excuse cited by the implementing insurance agencies regarding delay in claim settlement was delay in receiving crop loss data and subsidy component from the state government.

6.5.4 Delivery mechanism

- Presence of IAs at GP level and direct contact with the farmers need to be ensured by the monitoring agencies. At the same time government should encourage Common Service Centres (CSC) to facilitate on-line enrolment of non-loanee farmers and submission of claim documents.

- Design some attractive scheme to increase the coverage among non-loanee farmers and for those crops being cultivated under high risk environments in rainfed and hilly areas.

- However, the main excuse cited by the implementing insurance agencies regarding delay in claim settlement was delay in receiving crop loss data and subsidy component from the state government. The state government must improve its governance on these very particular issues if the targeted coverage of crop insurance in West Bengal, under PMFBY/BFBY, needs to be achieved .

- Government should monitor and ensure speedy claim settlement and indemnity payment, through GP and BLMC, on the event of loss suffered by the farmers.

- Simplification of procedures: Majority of the respondents perceived the procedures of buying a crop insurance complicated and time consuming. This is more so with non-loanee farmers. In the long run this might make them more receptive. Therefore, new and attractive designs with simple procedures need to be formulated at local levels.

- Augmenting credit flow to agriculture: Since crop insurance is mandatory for loanee farmers, increase in credit flow to agriculture will automatically increase the coverage under PMFBY. So there is a need to bring the non-loanee farmers under institutional finance.

Conclusion:

A new market for crop insurance is developing throughout the country, including West Bengal, where both public sector as well as private firms are participating actively. Several factors have contributed to that growth. Government support for crop insurances has increased a lot during last few years. Diversification towards high value crops, particularly potato, vegetables and summer rice, increased the value of agricultural production in recent years along with commensurate increase in production for the market. Therefore, good governance is important for effective dissemination of PMFBY and its easy acceptance by the farmers. The existing institutional arrangements are not sufficient to cater the growing requirement of the farming community. To ensure the same, transparency and accountability on the part of government, implementing agencies, and farmers are of paramount importance. The government is highly responsive and deeply interested in improving the processes to make the scheme better suited to the needs of small and marginal farmers while also making it economically viable for insurance companies. Therefore, based on the suggestions given in this report, strategies for effective awareness campaign and mechanism for a transparent and accountable system of speedy payment of compensation should be evolved that could make a difference in terms of increasing the uptake and enhancing efficiency of the scheme.

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URL:

www.agri-insurance.gov.in

www.matirkatha.net

Appendices

Annexure – I

Coordinators Comments on the Draft Report and Action Taken

1. **Title of the draft report examined:** Performance Evaluation of Pradhan Mantri Fasal Bima Yojana (PMFBY) in West Bengal

2. **Date of receipt of the Draft report:** 07/06/2018

3. **Date of dispatch of the comments:** 16/07/2018

4. **Chapter-wise comments and action taken**

Please find attached the reviewed version with minor changes in a track change format so that you can choose which changes to keep.

[**Action**: The report has been revised in the light of comments received from the Centre for Management in Agriculture, IIM, Ahmedabad. All the changes suggested by the coordinator/reviewer were incorporated.]

5. General comments:

Thank you very much for the excellent draft report!.

6. Overall view on acceptability of report:

We highly appreciate all the efforts put in by the AERC, Visva-Bharati in the preparation of PMFBY draft report for West Bengal, which reflects in its quality.

Minor changes made in track changes format, may be considered before finalization of the report in order to keep uniformity in the table format and terminologies.

[**Action**: Incorporated all the changes suggested by the Coordinator/Reviewers from Centre for Management in Agriculture, IIM, Ahmedabad in order to keep uniformity in table formats and terminologies]

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