

Study No -151

Performance Evaluation of Pradhan Mantri Fasal Bima Yojana (PMFBY) - *A Study in Assam*

Study Sponsored by
the Ministry of Agriculture and Farmers' Welfare
Government of India, New Delhi



सत्यमेव जयते

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Agro- Economic Research Centre for North-East India
Assam Agricultural University, Jorhat
2019

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**PERFORMANCE EVALUATION OF PRADHAN
MANTRI FASAL BIMA YOJONA (PMFBY):
A STUDY IN ASSAM**

**Study Sponsored by-
Ministry of Agriculture and Farmers' Welfare, GOI**

Coordinated by-

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PREFACE

The present study entitled “Performance Evaluation of Pradhan Mantri Fasal Bima Yojana (PMFBY) in Assam” is a part of an all India coordinated study and was undertaken at the instance of the Directorate of Economics and Statistics, DAC&FW, Ministry of Agriculture & Farmers’ Welfare, Government of India, New Delhi. The Center for Management in Agriculture (CMA), Indian Institute of Management, Ahmedabad had coordinated the study.

The Pradhan Mantri Fasal Bima Yojana (PMFBY), a flagship programme of the Government of India was launched by the Hon’ble Prime Minister of India on February 18, 2016. It is implemented across the country from *Kharif* 2016 season, replacing earlier National Agriculture Insurance Scheme (NAIS) and Modified National Agriculture Insurance Scheme (MNAIS). It is a comprehensive risk insurance scheme to cover the non-preventable yield losses on account of draught, dry spells, floods, inundation, pests and diseases, landslides, natural fire, lightening, storm, hailstorm, cyclone, typhoon, tempest, hurricane and tornado. The scheme is compulsory for loanee farmers and optional for non-loanee farmers.

In Assam, the scheme was first implemented in *Rabi* 2016-17. Therefore, the study was undertaken for *Rabi* 2016-17 only. The scheme was implemented in 26 districts of Assam for 5 notified crops *viz.*, mustard, potato, summer paddy, wheat and sugarcane for *Rabi* 2016-17. The scheme was executed by the National Insurance Company Limited (NICL).

The study was based on both secondary and primary level data. For collection of primary level data, three districts of the state were purposively selected *viz.*, Dhubri, Goalpara and Kamrup Metro. Altogether, the study covered 150 sample farmers from those three selected districts which included 100 loanee insured farmers, 10 non-loanee insured farmers and 40 non-insured (as Control group) farmers.

At the time of field survey, no claim was registered due to non-availability of Crop Cutting Experiment (CCE) data. Later on, at the behest of the State Level Coordination Committee on Crop Insurance (SLCCCI) for PMFBY, some claims as reported in the media were settled by the Implementing Agency in respect of 76 farmers, involving a sum of Rs. 13.6 Lakh. (source: [http://: agri-horti.assam.gov.in](http://agri-horti.assam.gov.in)). The status of implementation of the Yojana is yet to acquire desired momentum in the state of Assam. However, majority of the sample farmers (73 per cent of the loanee insured and 100 per cent non-insured farmers) were found to be happy with its implementation.

I duly acknowledge the help and co-operation extended by the implementing agency, *i.e.*, NICL, Guwahati and the Nodal Officers (PMFBY) of the state and the sample districts for accomplishment of the study.

The present study is a joint output of the AER Centre, Jorhat. The research staffs associated with the study have been mentioned elsewhere in the report.

I hope that the findings of the study will be useful to the researchers and to those who are involved in planning and policy-formulation.

(Anup Kr. Das)
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Background

The Pradhan Mantri Fasal Bima Yojana (PMFBY), a flagship programme of the Government of India was launched by Hon'ble Prime Minister of India on February 18, 2016. It is implemented throughout the country from *Kharif* 2016 season, replacing earlier National Agriculture Insurance Scheme (NAIS) and Modified National Agriculture Insurance Scheme (MNAIS). It is a comprehensive risk insurance scheme to cover the non-preventable yield losses on account of draught, dry spells, floods, inundation, pests and diseases, landslides, natural fire, lightening, storm, hailstorm, cyclone, typhoon, tempest, hurricane and tornado. The scheme is compulsory for loanee farmers and optional for non-loanee farmers. The scheme also covers post-harvest losses for maximum two weeks from the date of harvesting. A uniform percentage of the sum insured is worked out as premium and is to be paid by the farmers @ 2 per cent for all notified *Kharif* crops and 1.5 per cent for all notified *Rabi* crops. In case of commercial and horticultural crops, the rate of premium is to be paid is 5 per cent only. The balance premium will be equally borne by the State and Central Government. The PMFBY scheme was implemented in the country with the following main objectives,-

1. providing financial support to farmers suffering from crop loss/damage arising out of unforeseen events
2. stabilizing the income of farmers to ensure their continuance in farming
3. encouraging farmers to adopt innovative and modern agricultural practices
4. ensuring flow of credit to the agriculture sector; which will contribute to food security, crop diversification and enhancing growth and competitiveness of agriculture sector besides protecting farmers from production risks.

As per report of the Department of Agriculture, Government of Assam, the scheme was not implemented in the State during *Kharif* 2016 due to some technical reasons. It was implemented from *Rabi* 2016-17 onwards. Therefore, the study was undertaken for *Rabi* 2016-17 only.

Objectives:

The precise objectives of the study include-

- Assess the status of implementation of the PMFBY across the State for *Rabi* 2016-17
- Analyze the insurance uptake behaviour among the farmers of Assam

Methodology for field survey

To meet the objectives of the study, both primary and secondary level data were used. For collection of primary level data, three districts of the State were purposively selected *viz.*, Dhubri, Goalpara and Kamrup Metro. The district of Dhubri was selected as it recorded the highest number of (1358) insured loanee farmers. The district of Goalpara was selected as it was the only district where both loanee insured (478) and non-loanee insured (27) farmers were present. In the absence adequate number of samples as per the given norms, the districts of Karbi Anglong (7), Sivasagar (23) and Tinsukia (27) could not be picked up and finally, Kamrup Metro with 65 number of loanee farmers, with low insurance uptake behaviour was selected as the third district for the present study.

As per the given methodology, 50 sample farmers were selected randomly from each of the sample district based on the farmers' list collected from the executing agency, National Insurance Company Limited (NICL). Samples were taken from three categories of farmers, *viz.*, 30 loanee farmers who had availed of agricultural credit and enrolled for PMFBY, 10 non-loanee farmers but enrolled voluntarily for PMFBY and 10 non-insured farmers were selected as control group who were aware of the scheme but did not opt for the same for some reasons or others. Altogether, the study covered 150 sample farmers from those three selected districts. Further, information regarding governance and implementation of the scheme were collected from the State Nodal Officer and the District Nodal Officers of the PMFBY and other stakeholders associated with crop insurance together with the implementing agency (IA), *i.e.* National Insurance Company Limited (NICL).

Major Findings of the study:

Status of PMFBY in Assam for *Rabi* 2016-17

- The scheme was implemented in 26 districts of Assam for 5 notified crops *viz.*, mustard, potato, summer paddy, wheat and sugarcane for *Rabi* 2016-17
- The scheme was executed by the National Insurance Company Limited (NICL).
- Of the 26 districts, mustard covered 20 districts, potato 25 districts, summer paddy 21 districts, sugarcane 2 districts and wheat 1 district only.
- The scheme covered 8,516 farmers across the districts, of which 8,489 were loanee farmers and 27 were non-loanee farmers found in Goalpara district only.
- The sum total of insured area was about 4,312.94 hectares.

- Crop-wise State aggregate data indicate that, of the total 8,516 insured farmers, during the season, insurance covered 538 (6.32%) farmers under mustard crop covering 437.57 (10.15%) hectares, 4,458 (52.35%) farmers under potato covering 888.43 (20.60%) hectares, 3,494 (41.03%) farmers under summer paddy covering 2,982.27 (69.15%) hectares, 24 (0.28%) farmers under sugarcane covering 2.51 (0.06%) hectares and only 2 farmers (0.02%) covering 2.16 (0.05%) hectares under wheat.
- The sum insured was recorded at Rs.145.54 lakh in mustard with farmers' share of Rs.2.20 lakh, Rs.1,193.17 lakh in potato with farmers' share of Rs.58.98 lakh, Rs.1,670.10 lakh in summer paddy with farmers' share of Rs.24.97 lakh, Rs.2.29 lakh in sugarcane with farmers' share of Rs. 0.11 lakh and Rs. 0.09 lakh in wheat with farmers' share of Rs. 0.01 lakh.
- While the farmers' total share stood at Rs.86.28 lakh, the State and Centre's share at overall level was recorded at Rs.43.46 lakh each, resulting in a total share value of Rs.173.22 lakh.
- At the time of field survey, no claim was registered due to non-availability of CCE data for summer paddy. Later on, at the behest of the State Level Coordination Committee on Crop Insurance (SLCCI) for PMFBY, some claims, as reported in the media, were settled by the Implementing Agency in respect of 76 farmers, involving a sum of Rs. 13.6 Lakh. (source: [http://: agrihorti.assam.gov.in](http://agrihorti.assam.gov.in)).

Access to Credit

- The Cooperative Banks sanctioned a sum total of Rs. 5,25,761 against 8 farmers, while the Commercial Banks sanctioned an amount of Rs.17,30,325 against 66 farmers. The amount of loan sanctioned by the Rural Banks stood at Rs. 8,07,640 against 26 farmers during the reference year, 2016-17 against *Rabi* crops *i.e.*, for agricultural purpose only.
- The rate of interest was 5.50 per cent for Cooperative Bank and 7.00 per cent for Commercial Banks and Rural Banks. The amount of repayment was not found to be satisfactory in case of loanees under the Cooperative Bank and Rural Banks as compared to the Commercial Banks.
- The amount repaid with interest was recorded at Rs.72,500 against the Cooperative Bank with an outstanding loan to the tune of Rs. 5,11,533 which was 97.29 per cent of the total loan sanctioned.

- In case of Commercial Banks, the total repayment with interest was recorded at Rs.6,53,798 with an outstanding loan amount of Rs. 12,39,514 which accounted for 71.83 per cent of the total loan sanctioned.
- The amount repaid with interest was Rs.1,30,500 under the Rural Banks with an outstanding loan to the tune of Rs.7,66,653 which was 94.73 per cent of the total amount of loan sanctioned.
- In aggregate, the total amount of loan sanctioned by all the three banks stood at Rs.30,63,726 at an average interest rate of 6.88 per cent and the total amount paid inclusive of interest was recorded at Rs. 8,56,798 leaving an outstanding loan of Rs. 25,17,700 which constituted 82.18 per cent of the total loan sanctioned.

Insurance Behaviour

- Both the categories of insured sample farmers, whether loanee or non-loanee, were aware of the PMFBY scheme. However, no sample farmers took any insurance cover for any crops prior to the PMFBY.
- About 40 per cent of the total loanee insured sample farmers reported to have enrolled under the PMFBY on its own and the rest (60 per cent) were motivated by others to do so. The loanee insured sample farmers came to know about the PMFBY from the Government awareness programme (10%), Insurance Company/Agent (78%) and other villagers (12%). The non-loanee farmers came to know all about it through the Government awareness programme only. However, no role in this endeavour was played by the *Panchayats* in the study area.
- In case of loanee insured farmers (100), 8 farm households had procured insurance cover for the notified crops under PMFBY through Co-operative Apex Bank, 54 households through State Bank of India (SBI), 26 households through Assam Gramin Vikash Bank (AGVB), 11 households through United Commercial Bank (UCO) and only 1 household had done it through ICICI Bank. In aggregate, per household premium rate was worked out at Rs.1,407.60.
- As against this, all the non-loanee insured sample farmers (10 households) got their insurance policy done directly by the National Insurance Company Limited and the premium rate per household stood at Rs.201.60 only.
- 73 per cent of the loanee insured farmers and 100 per cent of the non-loanee insured farmers were satisfied with the implementation of the PMFBY.

Awareness level of non-insured farmers (Control group)

- Of the total non-insured farmers (40), 19 farmers (47.50%) were aware of the PMFBY and its importance while the remaining 21 farmers (52.50%) did not heard about it.
- The sources of information about PMFBY were Agriculture Department (52.63%), Friend/Other villagers (36.84%) and News paper/TV (10.53%).
- They however, could not educate themselves about the scheme from any Insurance Company or Bank as they had no linkage with these institutions and of course, because of their inhibition.
- The reasons for non-opting of PMFBY, as perceived by the sample farmers included lack of confidence on PMFBY (42.11 per cent), lack of interest (31.38%), lack of active role of the implementing agencies (15.79 per cent) and not knowing the procedure to avail the benefits (10.53 per cent).

Suggestions and Policy Recommendations

On the basis of the farmers' opinions and interactions with other stake holders, following suggestions are recommended for policy prescriptions:

1. Settlement of claims and compensation should be done within the shortest possible time frame.
2. Should bring in more transparency in implementation of the programme.
3. Possibility may be explored for further reduction of the existing rate of premium.
4. Massive awareness campaign is essential to motivate the farmers to go for crop insurance.
5. The number of notified crops may be increased on the basis of area specific cropping pattern
6. Further, the settlement of claims, whenever arises, requires the results of the Crop Cutting Experiments and as such, the Departments of Agriculture and Economics & Statistics should come forward to undertake the job religiously so that the benefits really percolate down to the farmers on time.
7. Also, the farmers really do not have extra time to run after the officials for completion of the codal formalities for PMFBY registration. Therefore, a strong network of machineries backed by political will is the need of the hour to bring about a transition in the lives of the farming community.

8. Huge amount of outstanding loan lying with the Banks is really a matter of great concern. This liability is again expected to mount over the subsequent seasons thereby putting the farming community into more precarious position. Timely and workable mechanism is to be evolved with no further delay to bring this mass out of the morass of severe debt.

The status of implementation of the flagship programme on PMFBY is yet to acquire desired momentum in the State of Assam. However, it can be a unique programme to mitigate the plights of hardworking farmers, if implemented in true spirit as per the guidelines. As such, a concerted effort from all stakeholders is a must to bring in more and more farmers under its ambit. It can very well provide a safety net to the farmers in distress and carve a niche for itself. The Government, banking institutes and the insurance companies should come forward with necessary programmes and support to create a conducive environment for the same.

OVERVIEW OF PRADHAN MANTRI
FASAL BIMA YOJANA (PMFBY)

1.1 Introduction

The Pradhan Mantri Fasal Bima Yojana (PMFBY) is a flagship programme of the Government of India and was launched by the Hon'ble Prime Minister on February 18, 2016. It has been implemented across the country from *Kharif* 2016 season, replacing earlier National Agriculture Insurance Scheme (NAIS) and Modified National Agriculture Insurance Scheme (MNAIS). It is a comprehensive risk insurance scheme to cover the non-preventable yield losses on account of draught, dry spells, floods, inundation, pests and diseases, landslides, natural fire, lightning, storm, hailstorm, cyclone, typhoon, tempest, hurricane and tornado. The scheme is compulsory for loanee farmers and optional for non-loanee farmers. The scheme also covers post-harvest losses for a maximum period of two weeks from the date of harvesting. Certain percentage of the sum insured has been fixed as premium to be paid by the farmers uniformly throughout the country: 2 per cent for all *Kharif* crops and 1.5 per cent for all *Rabi* crops. In case of annual commercial and horticultural crops, the rate of premium to be paid is 5 per cent only. The balance premiums are to be borne by the State and Central Government. The farmers can stake their claims against the full sum insured without any deduction. The main objectives of the scheme are:

1. providing financial support to farmers suffering crop loss/damage arising out of unforeseen events
2. stabilizing the income of farmers to ensure their continuance in farming
3. encouraging farmers to adopt innovative and modern agricultural practices
4. ensuring flow of credit to the agriculture sector; which will contribute to food security, crop diversification and enhancing growth and competitiveness of agriculture sector besides protecting farmers from production risks.

As per report of the Department of Agriculture, Government of Assam, the scheme was not implemented in the State during *Kharif* 2016 due to some technical reasons. It was implemented from *Rabi* 2016-17 onwards in 26 districts of Assam for

5 notified crops (by the State Level Coordination Committee on Crop Insurance, SLCCI) viz., mustard, potato, summer paddy, wheat and sugarcane. The scheme was executed by the National Insurance Company Limited (NICL) and covered 8,516 farmers across the districts, of which 8,489 were loanee farmers and 27 were non-loanee farmers found only in the district of Goalpara. The sum total of insured area was about 4,312.94 hectares.

The farmers' share of premium was recorded at Rs. 86.28 lakh. An equal amount of premium of Rs. 43.46 lakh each has already been granted by the central and state Government. Combining all the shares of premium, the sum total stood at Rs.173.22 lakh. There was no report of claims registered during the period under reference.

1.2 District-wise Status of PMFBY in Assam for *Rabi* 2016-17

District-wise and crop-wise status of PMFBY during *Rabi* 2016-17 in Assam is presented in Table-1.1, Table-1.2, Table-1.3, Table-1.4 and Table-1.5. Of the 26 districts, mustard covered 20 districts, potato 25 districts, summer paddy 21 districts, sugarcane 2 districts and wheat covered 1 district only. Farmer's share to total sum insured was uniform for each notified crop, as prescribed by the PMFBY guidelines.

Crop-wise state aggregate data are presented in Table-1.6. Of the total 8,516 insured farmers, during the season, insurance covered 538 (6.32%) farmers under mustard crop covering 437.57(10.15%) hectares, 4,458 (52.35%) farmers under potato covering 888.43(20.60%) hectares, 3,494 (41.03%) farmers under summer paddy covering 2,982.27(69.15%) hectares, 24 (0.28%) farmers under sugarcane covering 2.51(0.06%) hectares and only 2 farmers (0.02%) covering 2.16(0.05%) hectares under wheat. The sum insured was recorded at Rs.145.54 lakh in mustard with farmers' share of Rs.2.20 lakh, Rs.1,193.17 lakh in potato with farmers' share of Rs.58.98 lakh, Rs.1.670.10 lakh in summer paddy with farmers' share of Rs.24.97 lakh, Rs.2.29 lakh in sugarcane with farmers' share of Rs.0.11 lakh and Rs. 0.09 lakh in wheat with farmers' share of Rs. 0.01 lakh. While the farmers' total share stood at Rs. 86.28 lakh, the State and Centre's share at overall level was recorded at Rs.43.46 lakh each, resulting in a total share value of Rs.173.22 lakh.

Table – 1.1
District-wise Data on the Status of PMFBY in Assam (Rabi: Mustard 2016-17)

		No. of Farmers Insured			Insured Area (Ha.)		Premium (in Lakh rupees)							
		Loanee	Non-Loanee	Total			Farmers' share	Farmers' Share (% to SI)	Grant by centre	Grant by State	Total Premium			
1	Baksa	35	0	35	19.7113	6.29	0.09	1.50	0.29	0.29	0.67			
2	Borpeta	7	0	7	2.5412	0.81	0.01	1.50	0.00	0.00	0.02			
3	Bongaigaon	1	0	1	1.0900	0.35	0.01	1.50	0.00	0.00	0.01			
4	Darrang	11	0	11	5.0156	1.60	0.02	1.50	0.01	0.01	0.05			
5	Dhemaji	117	0	117	81.9504	26.14	0.39	1.50	0.19	0.19	0.78			
6	Dhubri	1	0	1	1.2600	0.40	0.01	1.50	0.01	0.01	0.02			
7	Goalpara	5	0	5	4.6187	1.47	0.02	1.50	0.00	0.00	0.02			
8	Golaghat	33	0	33	30.7656	9.81	0.12	1.21	0.01	0.01	0.14			
9	Jorhat	4	0	4	2.0172	0.64	0.01	1.16	0.00	0.00	0.01			
10	Kamrup Metro	20	0	20	17.8349	5.69	0.09	1.50	0.03	0.03	0.15			
11	Kamrup Rural	44	0	44	101.0402	32.23	0.48	1.50	0.19	0.19	0.87			
12	Karbi-Anglong	1	0	1	2.1944	0.70	0.01	1.50	0.00	0.00	0.02			
13	Kokrajhar	1	0	1	0.4000	0.13	0.00	1.50	0.00	0.00	0.00			
14	Lakhimpur	2	0	2	1.6029	0.51	0.01	1.50	0.01	0.01	0.03			
15	Morigaon	1	0	1	0.7654	0.24	0.00	1.50	0.00	0.00	0.00			
16	Nagaon	97	0	97	29.1231	9.29	0.27	2.90	0.09	0.09	0.45			
17	Nalbari	24	0	24	16.9580	5.41	0.08	1.50	0.08	0.08	0.24			
18	Sibasagar	8	0	8	20.4890	6.54	0.10	1.50	0.13	0.13	0.36			
19	Sonitpur	14	0	14	20.8213	6.64	0.10	1.50	0.00	0.00	0.10			
20	Tinsukia	17	0	17	15.0783	4.81	0.07	1.50	0.00	0.00	0.08			
	State Total	538	0	538	437.57416	145.5387031	2.202925597	1.51	1.094923101	1.094923101	4.392771799	-	-	-

Source: Source: NICL Head Office, Guwahati

Table-1.2
District-wise Data on the Status of PMFBY in Assam (Rabi: Potato 2016-17)

Sl. No.	District	No. of Farmers Insured			Insured Area (Ha.)	Sum Insured (in Lakh Rs.)	Premium (in Lakh rupees)					Claims registered	Number of beneficiary farmers	Distributed Indemnity (in Lakhs)
		Loanee	Non-Loanee	Total			Farmers' share	% share of farmers to SI	Grant by centre	Grant by State	Total Premium			
1	Baksa	69	0	69	21.6751	29.11	1.46	5	1.04	1.04	3.53			
2	Borpeta	78	0	78	20.7631	27.88	1.39	5	0.27	0.27	1.94			
3	Bongaigaon	343	0	343	54.1014	72.66	3.63	4.99	0	0	3.63			
4	Cachar	118	0	118	44.759	60.11	3.01	5	2.14	2.14	7.28			
5	Chirang	252	0	252	83.8707	112.64	5.63	5	0	0	5.63			
6	Darrang	93	0	93	18.0488	24.24	1.21	5	0.79	0.79	2.79			
7	Dhemaji	100	0	100	9.045	12.15	0.61	5	0	0	0.61			
8	Dhubri	793	0	793	164.9488	221.53	11.08	5	0	0	11.08			
9	Goalpara	405	0	405	51.0739	68.59	3.42	4.98	0	0	3.42			
10	Golaghat	70	0	70	18.2964	24.57	1.23	5	0.47	0.47	2.16			
11	Hailakandi	57	0	57	7.8001	10.48	0.23	2.22	0	0	0.23			
12	Jorhat	116	0	116	11.1164	14.93	0.94	6.28	0	0	0.94			
13	Kamrup Metro	40	0	40	15.2962	20.54	1.03	5	1.14	1.14	3.32			
14	Kamrup Rural	136	0	136	37.5227	50.39	2.51	4.97	0	0	2.51			
15	Karbi-Anglong	2	0	2	4.172	5.6	0.28	5	0.09	0.09	0.47			
16	Karimjang	207	0	207	31.9049	42.85	2.14	5	0	0	2.14			
17	Kokrajhar	400	0	400	64.322	86.38	4.32	5	0	0	4.32			
18	Lakhimpur	324	0	324	52.7048	70.78	3.54	5	0	0	3.54			
19	Morigaon	258	0	258	33.748	45.32	2.27	5	0	0	2.27			
20	Nagaon	112	0	112	26.7196	35.88	1.25	3.47	0	0	1.25			
21	Nalbari	80	0	80	4.1559	5.58	0.28	5	0	0	0.28			
22	Sibasagar	15	0	15	3.812	5.12	0.26	5	0.05	0.05	0.35			
23	Sonitpur	302	0	302	82.8128	111.22	5.56	5	0.37	0.37	6.31			
24	Tinsukia	10	0	10	5.2256	7.02	0.35	5	0.4	0.4	1.15			
25	Udalguri	78	0	78	20.5365	27.58	1.38	5	0.25	0.25	1.88			
State Total		4458	0	4458	888.432	1193.166	58.977	4.94	7.00816	7.00816	72.9933			

Source: Source: NICL Head Office, Guwahati

Table-1.3
District-wise Data on Status of PMFBY in Assam (Rabi: Summer Paddy 2016-17)

Sl. No.	District	No. of Farmers Insured			Insured Area (Ha.)	Sum Insured (in Lakh Rs.)	Premium (in Lakh rupees)					Claims registered	Number of beneficiary farmers	Distributed Indemnity (in Lakhs)
		Loanee	Non-Loanee	Total			Farmers' share	% share of farmers to SI	Grant by centre	Grant by State	Total Premium			
1	Baksa	53	0	53	61.0992	34.22	0.51	1.5	0.24	0.24	1			
2	Borpeta	221	0	221	250.698	140.39	2.11	1.5	0.7	0.7	3.51			
3	Bongaigaon	273	0	273	217.7513	121.94	1.83	1.5	1.91	1.91	5.66			
4	Cachar	127	0	127	112.0904	62.77	0.94	1.5	3.19	3.19	7.33			
5	Chirang	192	0	192	172.5892	96.65	1.45	1.5	2.68	2.68	6.8			
6	Darrang	75	0	75	60.4427	33.85	0.51	1.5	0.09	0.09	0.69			
7	Dhemaji	103	0	103	110.2742	61.75	0.93	1.5	1.83	1.83	4.59			
8	Dhubri	564	0	564	502.7714	281.55	4.22	1.5	5.15	5.15	14.53			
9	Goalpara	77	27	104	53.763	30.11	0.45	1.5	0.29	0.29	1.02			
10	Golaghat	40	0	40	18.6224	10.43	0.15	1.4	0	0	0.15			
11	Jorhat	15	0	15	15.7151	8.8	0.13	1.5	0.1	0.1	0.33			
12	Kamrup Metro	5	0	5	2.2357	1.25	0.02	1.5	0	0	0.02			
13	Kamrup Rural	40	0	40	36.1415	20.24	0.28	1.4	1.5	0	0.28			
14	Karbi-Anglong	4	0	4	15.1371	8.48	0.13	1.5	0.09	0.09	0.3			
15	Karimjang	17	0	17	13.1719	7.38	0.11	1.5	0.29	0.29	0.68			
16	Kokrajhar	144	0	144	67.9048	38.03	0.57	1.5	0.82	0.82	2.21			
17	Lakhimpur	66	0	66	55.2833	30.96	0.46	1.5	1.92	1.92	4.31			
18	Morigaon	684	0	684	649.0802	363.48	5.45	1.5	15.21	15.21	35.88			
19	Nagaon	597	0	597	393.6023	220.42	3.26	1.5	0	0	3.26			
20	Nalbari	8	0	8	4.8341	2.71	0.04	1.5	0.05	0.05	0.14			
21	Sonitpur	162	0	162	169.064	94.68	1.42	1.5	0.77	0.77	2.95			
State Total		3467	27	3494	2982.27	1670.1	24.974	1.5	36.83684	35.34141	95.65703			

Source: Source: NICL Head Office, Guwahati

Table-1.4
District-wise Data on Status of PMFBY in Assam (Rabi: Sugarcane 2016-17)

Sl. No.	District	No. of Farmers Insured			Insured Area (Ha.)	Sum Insured (in Lakh Rs.)	Premium (in Lakh rupees)					Claims registered	Number of beneficiary farmers	Distributed Indemnity (in Lakhs)
		Loanee	Non-Loanee	Total			Farmers' share	% share of farmers to SI	Grant by centre	Grant by State	Total Premium			
1	Nagaon	23	0	23	2.2177	2.02	0.1	5	0	0	0.1			
2	Udalguri	1	0	1	0.2912	0.27	0.01	5	0	0	0.01			
State Total		24	0	24	2.5089	2.2882	0.11441	5	0	0	0.11441	Nil	Nil	Nil

Source: Source: NICL Head Office, Guwahati

Table-1.5
District-wise Data on Status of PMFBY in Assam (Rabi: Wheat 2016-17)

Sl. No.	District	No. of Farmers Insured			Insured Area (Ha.)	Sum Insured (in Lakh Rs.)	Premium (in Lakh rupees)					Claims registered	Number of beneficiary farmers	Distributed Indemnity (in Lakhs)
		Loanee	Non-Loanee	Total			Farmers' share	% share of farmers to SI	Grant by centre	Grant by State	Total Premium			
1	Goalpara	2	0	2	2.1585	0.92	0.01	1.5	0.02	0.02	0.06	Nil	Nil	Nil
State Total		2	0	2	2.1585	0.923867	0.01	1.5	0.02342	0.02342	0.060698	Nil	Nil	Nil

Source: Source: NICL, Head Office Guwahati

Table-1.6
Crop-wise Aggregate Data on Status of PMFBY in Assam (Rabi 2016-17)

Sl.No.	Crop	No. of loanee farmers	No. of non-loanee farmers	Total no. of Insured farmers	% to total farmers	Total Area covered (In ha.)	% to total Area	Sum Insured (In Lakh Rs.)	Farmer's Share (In Lakh Rs.)	State's Share (In Lakh Rs.)	Centre's Share (In Lakh Rs.)	Total (In Lakh Rs.)
1	Mustard	538	0	538	6.32	437.57	10.15	145.54	2.2	1.09	1.09	4.39
2	Potato	4,458	0	4,458	52.35	888.43	20.6	1,193.17	58.98	7.01	7.01	72.99
3	Summer paddy	3,467	27	3,494	41.03	2,982.27	69.15	1,670.10	24.97	35.34	35.34	95.66
4	Sugarcane	24	0	24	0.28	2.51	0.06	2.29	0.11	0	0	0.11
5	Wheat	2		2	0.02	2.16	0.05	0.09	0.01	0.02	0.02	0.06
Total		8,489	27	8,516	100	4,312.94	100	3,011.18	86.28	43.46	43.46	173.22

Source: Source: NICL Head Office, Guwahati

The Pradhan Mantri Fasal Bima Yojana (PMFBY) is reported to be one of the largest crop insurance schemes in the world. It is a comprehensive risk insurance to cover the non-preventable yield losses on account of diverse reasons. The scheme is compulsory for loanee farmers and optional for non-loanee farmers. A certain percentage of uniform premium against the sum insured is fixed to be paid by the farmers throughout the country, viz. 2 per cent for all notified *Kharif* crops and 1.5 per cent for all notified *Rabi* crops. In case of commercial and horticultural crops, the rate of premium to be paid is 5 per cent. After one year of its implementation, the Ministry of Agriculture and Farmer's Welfare, Government of India contemplated to have a performance evaluation study for which the AER network undertook the job throughout the country and AERC for NE India conducted the study for the State of Assam for the season *Rabi* 2016-17. The study was coordinated by the Centre for Management of Agriculture (CMA), IIM, Ahmedabad.

2.1 The objective of the study

- Assess the status of implementation of the PMFBY across the State for *Rabi* 2016-17
- Analyze the insurance uptake behavior among the farmers of Assam

2.2 Methodology for field survey

To meet the objectives of the study, both primary and secondary level data were used. For collection of primary level data, three districts of the State were purposively selected viz., Dhubri, Goalpara and Kamrup Metro. The district of Dhubri was selected as it recorded the highest number of (1358) insured loanee farmers. The district of Goalpara was selected as it was the only district where both loanee insured (478) and non-loanee insured (27) farmers were present. In the absence adequate number of samples as per the given norms, the districts of Karbi Anglong (7), Sivasagar (23) and Tinsukia (27) could not be picked up and finally, Kamrup Metro with 65 number of loanee farmers, with low insurance uptake behaviour was selected as the third district for the present study.

As per the given methodology, 50 sample farmers were selected randomly from each of the sample district based on the farmers' list collected from the executing agency, National Insurance Company Limited (NICL). Samples were taken from three categories of farmers, viz., 30 loanee farmers who had availed of agricultural credit and enrolled for PMFBY, 10 non-loanee farmers but enrolled voluntarily for PMFBY and 10 non-insured farmers were selected as control group who were aware of the scheme but did not opt for the same for some reasons or others. Altogether, the study covered 150 sample farmers from those three selected districts. Further, information regarding governance and implementation of the scheme were collected from the State Nodal Officer and the District Nodal Officers of the PMFBY and other stakeholders associated with crop insurance together with the implementing agency (IA), i.e. National Insurance Company Limited (NICL).

2.3 Sample Districts

In the absence of non-loanee farmers insured under PMFBY, the sample distribution for Dhubri and Kamrup Metro comprised of 35 loanee insured farmers and 15 non-insured farmers as control group for each district. In case of Goalpara district, the sample distribution comprised of 30 loanee insured farmers, 10 non-loanee insured farmers under the PMBY and 10 non-insured farmers as control group. Further, all the

Table-2.1
Sample Distribution of the Selected District

Sl. No.	Selected Districts	Total PMFBY Beneficiaries		Sample Beneficiaries under PMFBY		Non-beneficiaries	Total sample
		Loanee farmers	Non loanee farmers	Loanee farmers	Non loanee farmers		
1	Dhubri	1358	-	35	-	15	50
2	Goalpara	489	27	30	10	10	50
3	Kamrup Metro	65	-	35	-	15	50
Total	3 (three)	1912	27	100	10	40	150

secondary information were captured by means of another set of schedules from the District Nodal Officers of the PMFBY of the sample districts. Altogether, the study covered 150 sample farmers from three different districts of Assam. Complete layout of sample distribution is given in the Table-2.1

**SOCIO-ECONOMIC CHARACTERISTICS
OF THE SAMPLE HOUSEHOLDS**

This chapter deals with some of the important of socio-economic characteristics of the sample households which include loanee insured farmers, non-loanee insured farmers and the famers not covered under the PMFBY as control group in three different sample districts of the State.

3.1 Socio-Economic Profile

Table-3.1 presents the socio-economic profile of the study area, depicting their age-groups, educational attainment and the community they belong to against three different types of farmers, *viz.* insured loanee farmers, non-loanee insured farmers and control group of farmers. The highest number of family members (27.42 per cent) was found under minor age group (below 16 years) against loanee insured farmers followed by non-loanee insured farmers (25.86 per cent) and the control group (22.49 per cent). Loanee and non-loanee insured farmers together constituted about 61.37 per cent of the total family members under the adult age group (16-59 years) while 66.90 per cent of the family members under the control group belonged to this group. Under the senior age group (above 60 years), 11.69 per cent and 8.62 per cent of the family members belonged to loanee insured farmers and non-loanee insured farmer categories, respectively with an overall total of 11.37 per cent. Again, about 10.53 per cent of the senior population belonged to the control group of farmers. It has further been observed from the table that the farmers from each group had to look after a large percentage of family members under the minor and senior groups within their limited income. The higher percentage of adult population in each category of farmers is a positive indication in the sense that the maturity and responsibilities normally go directly with age.

The educational level of the family members in each group was measured under four slabs *viz.* illiterate, primary, secondary and graduate & above. Only 5.00 per cent of the family members were reported to be illiterate under loanee insured farmers group and there were no illiterate members in rest of the groups. Combining both loanee and non-loanee insured farmers, about 31.82 per cent of the members had primary level of

education. On an average, nearly 30.00 per cent of the sample farmers attained the education up to primary level under the control group. Sixty per cent of the family members completed secondary level of education under non-loanee insured farmers while it was 46.00 per cent for loanee insured farmers and 57.50 per cent for the control group farmers. Only 18.00 per cent of the family members completed graduation and above against loanee insured farmer category and it was 12.50 per cent in respect of control group of farmers.

Table – 3.1
Socio-economic Profile

Type of Sample Farmers	Particulars									
	Age group of family member (% to sample)			Years of schooling of family members (% to sample)				Caste (% to sample)		
	Minor < 16 years		Senior > 60 years							
Loanee insured farmers	27.42	60.89	11.69	5.00	31.00	46.00	18.00	21.00	22.00	57.00
Non-loanee insured farmers	25.86	65.52	8.62	0.00	40.00	60.00	0.00	10.00	20.00	70.00
Total insured farmers	27.26	61.37	11.37	4.55	31.82	47.27	16.36	20.00	21.82	58.18
Farmers (Control)	22.49	66.99	10.53	0.00	30.00	57.50	12.50	15.00	27.50	57.50

Source: Primary data

Caste is an important factor from sociological point of view as there is special provision in the Indian Constitution to upgrade their socio-economic condition through numerous interventions. Among the total samples (150) in the study area, the percentage of general caste was recorded at a much higher side as compared to SC/ST or OBC categories. Of the total sample, SC/ST category was recorded at 21.00 per cent against loanee insured farmers, 10.00 per cent against non-loanee insured farmers and 15.00 per cent against the control group of farmers. Under OBC category, 22.00 per cent were loanee insured farmers, 20.00 per cent were non-loanee insured farmers and 27.50 per cent of the total sample farmers were from control group. Under general category, 57.00 per cent were loanee insured farmers, 70.00 per cent were non-loanee insured farmers and 57.50 per cent of the total sample households were from the control group of farmers.

3.2 Occupations and Income Status

Table-3.2 presents the occupational distribution of the sample households mainly in primary and secondary sectors, family members engaged in farming and per household income generated by three different categories of sample farmers. It has been observed from the table that agriculture (primary) was the main occupation for a large percentage of sample households. In case of loanee insured farmers, about 77 per cent of the households were engaged in agriculture leaving aside the remaining farmers (23 per cent) involved in secondary occupations like salaried jobs, grocery shops or self-employed in household industry or works. In case of non-loanee insured farmers, 100 per cent households were engaged in primary occupation. In totality, about 79.09 per cent of the households were involved in agriculture as primary occupation and nearly 20.91 per cent of the households had some secondary occupations. In case of control group of farmers,

Table – 3.2
Occupations, Members Engaged in Farming and Household Income

Type of Sample Farmers	Occupations of sample H.H. (% to Sample)		Family members engaged in farming (% to sample)	Per H.H. income (in Rs.)
	Primary	Secondary		
Loanee Insured Farmers	77.00	23.00	45.97	56,736
Non-Loanee Insured Farmers	100.00	0.00	44.83	31,586
Total Insured Farmers	79.09	20.91	45.85	54,449
Farmers (Control)	72.50	27.50	43.54	41,591

Source: Primary data

about 72.50 per cent of the sample households had agriculture as primary occupation and the rest (27.50 per cent) had some secondary occupations. As has been observed, more than 40 per cent of the family members of the sample households were engaged in farming under all three types of sample farmers. Corresponding figures were recorded at 45.97 per cent for loanee insured farmers, 44.83 per cent for non-loanee insured farmers and 43.54 per cent for the control group. As against this, the aggregate per household income from all sorts of economic activities were recorded at Rs.56,736.00 for loanee insured farmers, Rs 31,586.00 for non-loanee insured farmers, Rs. 54,449.00 for total insured farmers and Rs.41,591.00 for control farmers.

It was further observed that the income from agriculture was not sufficient enough to support their families and the farmers had to opt for other non-agricultural sources to raise the level of income. Table 3.3 gives a brief account of the income generated from

non-agricultural sources on per household basis, viz., milk sale, sale of other livestock, salary from employment, farm labor, MGNREGA, remittance, pension, house rent/other rent, business/trade and others. The income from selling of milk was Rs.3,199 per household for loanee insured farmers, Rs.525 per household for non-loanee insured farmers and Rs.2,998.00 per household for control farmers. The highest per household income from sale of other livestock was recorded at Rs.3,340 for the control group while it stood at Rs.1,802 and Rs.1,840 against the loanee insured farmers and non-loanee insured farmers, respectively. The average income from salary was not found to be significant, indicating that very few households were associated with salaried jobs. The samples under non-loanee insured farmers did not have any job as such. The average per household income from salary stood at Rs. 16,710 in case of loanee insured farmers and Rs.11,100 for non-insured farm households (Control group).

The average per household income from farm labor was found at a lower side which indicates that the farmers belonging to a very few households only engaged themselves as farm laborers. It was Rs.1, 290 for loanee insured farmers, Rs.2,875 for non-loanee insured farmers and only Rs.230 for non-insured farmers (Control group). It has also been noted that only a few people from amongst the sample households offered their services under MGNREGA, and too under loanee insured category. Per household income from MGNREGA was reported to be Rs.335 only. Similar situation was seen in case of income earned from pension benefits and house/land rent as well. Per household income from these two sources against loanee insured farmers category stood at Rs.1,920 and Rs.500, respectively. From the table, it is also observed that all categories of sample farmers were engaged in some business/trade activities and the per household annual income from business and trade stood at Rs14,130 for the loanee insured farmers, Rs.2,500 for the non-loanee insured farmers and Rs.21,075 for the control group of farmers. The average household income from other sources was recorded at Rs.8,020 for the loanee insured farmers and Rs.10,338 for the control group of farmers.

Table – 3.3
Per Household Annual Income from Non-agricultural Sources

(in Rs.)

Type of Sample Farmers	Income from non-agricultural sources										
	Name of sources										
	Milk sale	Sale of other live stock	Salary from employment	Farm labor	MGNREGA	Remittances	Pension	Rents house/land	Business / trade	Others	Total
Loanee insured farmers	3,199	1,802	16,710	1,290	335	0	1,920	500	14,130	8,020	47,906
Non-loanee insured farmers	525	1,840	0	2,875	0	0	0	0	2,500	0	7,740
Total insured	2,956	1,805	15,191	1,434	305	0	1,745	455	13,073	7,291	44,255
Non-insured (Control)	2,998	3,340	11,100	230	0	0	0	0	21,075	10,338	49,080

Source: Primary data

Going by the analysis of all non-agricultural income sources, it was found that the total average annual household income stood at Rs.47,906 for the loanee insured farmers, Rs.7,740 for the non-loanee insured farmers and Rs.49,080 for the control group of farmers.

3.3 Status of Value of Assets

Table 3.4 reveals the value of assets owned by the sample household for all three different types of farmers. I included the value of owned land, value of machinery, value of building (dwelling houses) and the value of livestock. No value could be worked out against any other assets. The value of owned land and dwelling houses were found at much higher side. It was also observed that most of the farm household possessed equipment and machineries, particularly power tiller, shallow tube wells and tractor for farming and other purposes. The table also reveals that each household owned sizable number of livestock assets.

Table – 3.4
Asset Value (in Rs. per HH)

Type of Sample Farmers	Asset type					
	Value of owned land	Value of machinery	Value of building	Value of livestock	Others	Total
Loanee Insured	10,36,461	12,468	3,90,415	7,485	0	14,46,829
Non-Loanee Insured	6,52,810	22,401	6,21,500	5,600	0	13,02,311
Total Insured	10,01,583	13,371	4,11,423	7,313	0	14,33,690
Non-insured (Control)	7,87,762	10,741	4,32,638	8,411	0	12,39,552

Source: Primary data

The total value of all assets on per household basis stood at Rs.14,46,829 for the loanee insured farmers, Rs. 13,02,311 for the non-loanee insured farmers and Rs.12,39,552 for the control group of farmers. The maximum value of assets, in all cases, was attributed to owned land followed by dwelling houses/buildings.

3.4 Access to Credit

Table-3.5 presents the status of access to credit for the loanee insured farmers. Of the total loanee farmers (100), 8 farmers accessed credit from Cooperative Bank, 66 from Commercial Banks and 26 from Rural Banks. No loanee farmers were reported to have accessed any credit from Money Lenders, Savings Group or any other sources. Field data

also made it clear that it is not necessary to have a close linkage or personal rapport with the banking institutes for access of credits. In case of Cooperative Banks, about 50 per cent the loanee farmers did not have any special link with the bank personnel and the rest of the loanees had some connection with the bank through relatives or friends. Similarly, in case of Commercial Banks, 54.55 per cent of the loanee farmers had no special link with the banks and only 45.45 per cent came into contact with the banks through relatives and friends. The situation was no different for Rural Banks as well. Nearly 61.54 per cent of the loanee farmers accessed the credits on its own, and only the remaining 38.46 per cent had some contacts with the banking institutes, and that too, through their relatives and friends.

Submission of land documents was the main collateral to get the loan/credit sanctioned by all those Banks.

The Cooperative Banks sanctioned a sum total of Rs.5,25,761 against 8 farmers, while the Commercial Banks sanctioned an amount of Rs.17,30,325 against 66 farmers. The amount of loan sanctioned by the Rural Banks stood at Rs.8,07,640 against 26 farmers during the reference year, 2016-17 against *Rabi* crops *i.e.*, for agricultural purpose only. As per terms and conditions, all the loanees are to repay the loan within a year from the date of sanction. The rate of interest was 5.50 per cent for Cooperative Bank and 7.00 per cent for Commercial Banks and Rural Banks. The amount of repayment was not found to be satisfactory in case of loanees under the Cooperative Bank and Rural Banks as compared to the Commercial Banks. However, there were some loanees, spotted during the survey, who always tried to make the repayment on time. The amount repaid with interest was recorded at Rs.72,500 against the Cooperative Bank with an outstanding loan to the tune of Rs.5,11,533 which was 97.29 per cent of the total loan sanctioned. In case of Commercial Banks, the total repayment with interest was recorded at Rs.6,53,798 with an outstanding loan amount of Rs. 12,39,514 which accounted for 71.83 per cent of the total loan sanctioned.

Table – 3.5
Access to Credit for Loanee Insured Farmers

Source of borrowing name	No of Loanee	Relation		Collateral		Amount (Rs.)	Purpose of loan (%)		Duration (%)				Rate of Interest (%)	Amount paid with interest (Rs.)	Outstanding loan from-2016 present (Rs.)
		Code	%	Code	%		Agri.	Non-agri.	6 month	1 year	2 year	2-5 years			
		0	50.00	0	0.00										
		3	50.00	1	100.00										
		0	54.55	0	0.00										
		3	45.45	1	100.00										
		0	61.54	0	0.00										
		3	38.46	1	100.00										
		-	-	-	-										
		-	-	-	-										
		-	-	-	-										
		-	-	-	-										
		-	-	-	-										
Total	100					30,63,726	100.00	0.00	0	300	0	0	6.88	856,798	25,17,700

Source: Primary data

The amount repaid with interest was Rs.1,30,500 under the Rural Banks with an outstanding loan to the tune of Rs.7,66,653 which was 94.73 per cent of the total amount of loan sanctioned. In aggregate, the total amount of loan sanctioned by all the three banks stood at Rs.30,63,726 at an average interest rate of 6.88 per cent and the total amount paid inclusive of interest was recorded at Rs.8,56,798 leaving an outstanding loan of Rs.25,17,700 which constituted 82.18 per cent of the total loan sanctioned. Huge amount of outstanding loan lying with the Banks is really a matter of great concern. This liability is again expected to mount over the subsequent seasons thereby putting the farming community into more precarious position. Timely and workable mechanism is to be evolved with no further delay to bring this mass out of the morass of severe debt.

In this chapter an attempt has been made to focus on some important farm level characteristics, such as land holding pattern, irrigation status, cropping pattern, volume of production, quantity sold out and value of production *etc.*, in respect of the sample households, *viz.*, loanee insured farmers, non-loanee insured farmers and the farmers not covered under the PMFBY, as control group under three different sample districts of Assam.

4.1 Land Holding Pattern

Table-4.1 visualizes per household land holding characteristics and area under irrigation across the loanee insured farmers, non-loanee insured farmers and non-insured farmers (Control group). The average size of owned land was 3.12 acre for the loanee insured farmers, 3.63 acre for the non-loanee insured farmers and 2.86 acre for the non-insured farmers. The average size of owned land per household, which remained uncultivated was recorded at 0.27 acre for the loanee insured farmers, 0.73 acre for the non-loanee insured farmers and 0.23 acre for the non-insured farmers. Of the total owned cultivated land, the average size of operational holding for loanee insured farmers was 2.85 acres, of which 0.99 acre (34.74%) was under irrigation. For non-loanee insured farmers, the average size of operational holding was recorded at 2.90 acres, of which 1.54 acres (53.10%) were irrigated. In case of non-insured farmers, the average size of cultivated owned land was 2.63 acres, out of which 0.56 acre (21.29%) was reported to be under irrigation.

The per household leased in land was recorded at 0.20 acre for the loanee insured farmers of which 0.12 acre was under irrigation. For non-loanee insured farmers, the average size of leased in land with irrigation facility was 0.15 acre. The leased-in land, in case of non-insured farmers (Control group), was found at 0.12 acre, of which 0.02 acre was under irrigation. Per household leased-out land was recorded at 0.09 acre for the loanee insured farmers, 0.22 acre for the non-loanee insured farmers and 0.11 acre for the non-insured farmers. The per household net operated area stood at 2.96 acre of which

36.49 per cent was irrigated for the loanee insured farmers. The corresponding figure for non-loanee insured farmers was 2.83 acre of which 56.18 per cent was irrigated area.

And the average size of net operated area in case of non-insured farmers was recorded at 2.64 acre, out of which 19.70 per cent was under irrigation. The per household gross cropped area was recorded at 4.49 acres with 48.11 per cent irrigated area for the loanee insured farmers. In case of non-loanee insured farmers, the gross cropped area was reported to be 4.47 acres with 71.14 per cent of irrigated area while the corresponding figure for non-insured farmers stood at 3.63 acres with 28.65 per cent of irrigated area.

Table - 4.1
Characteristics of Operational Holdings per Household
(Area in acres)

Type of Land	Loanee insured	Non-loanee insured	Non-insured (Control)
Owned land			
Irrigated	0.99	1.54	0.56
Un-irrigated	2.13	2.09	2.30
Total	3.12	3.63	2.86
Uncultivated land			
Irrigated	0.00	0.00	0.00
Un-irrigated	0.27	0.73	0.23
Total	0.27	0.73	0.23
Cultivated land			
Irrigated	0.99	1.54	0.56
Un-irrigated	1.86	1.36	2.07
Total	2.85	2.90	2.63
Leased-in land			
Irrigated	0.12	0.15	0.02
Un-irrigated	0.08	0.00	0.10
Total	0.20	0.15	0.12
Leased-out land			
Irrigated	0.03	0.10	0.06
Un-irrigated	0.06	0.12	0.05
Total	0.09	0.22	0.11
Net operated land			
Irrigated	1.08	1.59	0.52
Un-irrigated	1.88	1.24	2.12
Total	2.96	2.83	2.64
Gross cropped area (GCA)			
Irrigated	2.16	3.18	1.04
Un-irrigated	2.33	1.29	2.59
Total	4.49	4.47	3.63

Source: Primary data

4.2 Irrigation status

In the State, the farmers accessed irrigated water from two different sources *viz.*, Bore-well and Canal (Table-4.2) irrigation. The average per household irrigated area from Bore-well source was found at 0.52 acre for loanee insured farmers, 0.86 acre for non-loanee insured farmers and 0.37 acre for non-insured farmers. The per household irrigated area was found at 0.56 acre under canal irrigation for loanee insured farmers, 0.73 acre for non-loanee insured farmers and 0.14 acre for non-insured farmers across the sample districts. Combining both the sources, the per household irrigated area was found

Table - 4.2
Source-wise Distribution of Irrigated Area
(in acre per household)

Type of Sample Farmers	Sources					
	Dugwell	Borewell	Canal	Tank	Others	Total
Loanee Insured	0.00 (0.00)	0.52 (48.27)	0.56 (51.73)	0.00 (0.00)	0.00 (0.00)	1.08 (100.00)
Non-loanee Insured	0.00 (0.00)	0.86 (54.19)	0.73 (45.81)	0.00 (0.00)	0.00 (0.00)	1.59 (100.00)
Total Insured	0.00 (0.00)	0.55 (49.03)	0.57 (50.97)	0.00 (0.00)	0.00 (0.00)	1.13 (100.00)
Non-insured (Control)	0.00 (0.00)	0.37 (71.99)	0.14 (28.01)	0.00 (0.00)	0.00 (0.00)	0.52 (100.00)

Note: Figures in brackets indicate percentages to total irrigated area

Source: Primary data

at 1.08 acres for loanee insured farmers, 1.59 acres for non-loanee insured farmers and 0.52 acre for non-insured farmers. The percentage of irrigated area for all the insured farmers stood at 49.03 per cent from Bore-well sources and 50.97 per cent from Canal sources.

4.3 Cropping Pattern

Tables 4.3 and 4.4 indicate the cropping pattern of the study area for *Kharif* and *Rabi* season. In *Kharif* season, paddy was the dominant crop followed by vegetables and jute while in *Rabi* season, potato (0.46 acre per farm) was the dominant crop for the loanee insured farmers and summer paddy occupied the highest area (1.16 acre per farm) amongst the non-loanee insured farmers. Other crops grown under *Rabi* season included

mustard (0.40 acre per farm), summer paddy (0.37 acre per farm) and *Rabi* vegetables (0.29 acre per farm) under loanee insured category. The total area under non-insured loanee farmers stood at 1.64 acres per farm, higher than loanee insured group (1.52 acre per farm), which included *Rabi* vegetables (0.22 acre), potato (0.15 acre) and mustard (0.12 acre per farm). The total gross cropped area was recorded at 4.49 acres in loanee insured group closely followed by 4.47 acres in non-loanee insured group. The corresponding figure for non-insured farmers group (Control) stood at 3.63 acres only. The highest cropping intensity with 158 per cent was recorded against the non-loanee insured farmers followed by 151 per cent and 138 per cent in respect of the loanee insured farmers and non-insured farmers, respectively.

Table – 4.3
Cropping Pattern (*Kharif*)
(in acre per farm)

Type of Sample Farmers	<i>Kharif</i>			Total
	Paddy	Vegetables	Jute	
Loanee Insured	2.58	0.36	0.03	2.97
Non-loanee Insured	2.72	0.11	0.00	2.83
Total Insured	2.52	0.34	0.02	2.88
Non-insured (Control)	2.39	0.23	0.01	2.63

Source: Primary data

Table – 4.4
Cropping Pattern (*Rabi*)

(in acre per farm)

Type of Sample Farmers	<i>Rabi</i>					Total GCA	Cropping Intensity (%)
	Summer Paddy	Rabi Vegetables	Potato	Mustard	Total		
Loanee Insured	0.37	0.29	0.46	0.40	1.52	4.49	151
Non-loanee Insured	1.16	0.22	0.15	0.12	1.64	4.47	158
Total Insured	0.44	0.29	0.43	0.37	1.53	4.41	153
Non-insured (Control)	0.13	0.39	0.30	0.18	1.00	3.63	138

Source: Primary data

4.4 Production

Table-4.5 presents the estimated per farm production (Main product plus by-product) of *Kharif* crops grown by the sample farmers. The production of paddy per farm was 34.98 quintal and its by-product was 9.43 quintal for loanee insured farmers. On the other hand, the production of paddy per farm was 35.01 quintal and its by-product was 9.43 quintal for the non-loanee insured sample farmers while in case of non-insured farmers, the production of paddy per farm was 32.16 quintal and its by-product was 8.44 quintals. The highest per farm production of 12.38 quintals of vegetables was found amongst the loanee insured farmers and the lowest production of 0.99 quintals of vegetables was recorded against the non-loanee insured farmer category. As against this, the per farm production of vegetables was 9.18 quintal in case of non-insured sample farmers (Control). There was no by-products of vegetables. The per farm production of jute (Main product) was recorded at 0.25 quintal (Main product) and 0.06 quintal (By-products) for the loanee insured sample farmers and it was 0.11 quintal and 0.03 quintal in case of non-insured sample farmers as main product and by-product, respectively.

Table - 4.5
Per Farm Production (*Kharif*)

(Quantity in Qtl.)

Type of Sample Farmers	<i>Kharif</i>					
	Paddy		Vegetables		Jute	
	Main product	By-product	Main product	By-product	Main product	By-product
Loanee Insured	34.98	9.43	12.38	0.00	0.25	0.06
Non-loanee Insured	35.01	5.34	0.99	0.00	0.00	0.00
Total Insured	34.98	9.06	11.35	0.00	0.23	0.05
Non-insured (Control)	32.16	8.44	9.18	0.00	0.11	0.03

Source: Primary data

Table-4.6 gives the estimated per farm production (Main products and by-products) of *Rabi* crops grown by the sample farmers. The highest production of summer paddy was noted against the non-loanee insured sample farmers with 21.22 quintals main

product and 2.67 quintals of by-products. The corresponding figures for loanee insured category were recorded at 6.53 and 0.82 quintal, respectively. Comparatively much lesser

Table - 4.6
Per Farm Production (*Rabi*)

(Quantity in Qtl.)

Type of Sample Farmers	<i>Rabi</i>							
	Summer Paddy		Vegetables		Potato		Mustard	
	Main product	By-product	Main product	By-product	Main product	By-product	Main product	By-product
Loanee Insured	6.53	0.82	9.73	0.00	16.37	0.00	1.43	0.00
Non-loanee Insured	21.22	2.67	1.99	0.00	4.95	0.00	0.32	0.00
Total Insured	7.86	0.98	9.03	0.00	15.33	0.00	1.33	0.00
Non-insured (Control)	2.27	0.28	10.69	0.00	9.24	0.00	0.58	0.00

Source: Primary data

quantity of summer paddy was produced by the non-insured category of farmers with 2.27 quintal main product and 0.28 quintal by-product. The highest vegetable production (10.69 quintals) was recorded against the non-insured sample farmers, followed by loanee insured sample farmers (9.73 quintals) and non-loanee insured sample farmers (1.99 quintals). By-products of all other *Rabi* crops, namely, vegetables, potato and mustard were reported to be nil in the study area. Potato was the most dominant crop amongst the loanee insured sample farmers (16.37 quintals per farm) followed by non-insured sample farmers (9.24 quintals per farm) and non-loanee insured sample farmers (4.95 quintals per farm). In case of mustard crop, the highest production of 1.43 quintals was recorded against the loanee insured sample farmers, followed by the non-loanee insured farmers (0.32 quintal per farm) and non-insured sample farmers (0.58 quintal per farm).

Table 4.7 shows the quantity and percentage of crops sold and retained on per farm basis out of the total production in respect of *Kharif* crops viz., paddy, vegetables and jute. The per farm quantity of paddy sold was found to be 59.22 per cent for loanee insured farmers, 60.84 per cent for non-loanee insured farmers and 54.07 per cent for the non-insured sample category. Rest of the produces were retained for home consumption

Table - 4.7
Quantity Sold per Farm (Kharif)

(in Qtl.)

Type of Sample Farmers	<i>Kharif</i>								
	Paddy			Vegetables			Jute		
	Production	Sold	Retained	Production	Sold	Retained	Production	Sold	Retained
Loanee Insured	34.98 (100.00)	20.71 (59.22)	14.27 (40.78)	12.38 (100.00)	9.27 (74.86)	3.11 (25.14)	0.25 (100.00)	0.22 (88.19)	0.03 (11.81)
Non-loanee Insured	35.01 (100.00)	21.30 (60.84)	13.71 (39.16)	0.99 (100.00)	0.72 (72.58)	0.27 (27.42)	-	-	-
Total Insured	34.98 (100.00)	20.77 (59.37)	14.21 (40.63)	11.35 (100.00)	6.47 (57.03)	4.88 (42.97)	0.23 (100.00)	0.20 (88.19)	0.03 (11.81)
Non-insured (Control)	32.16 (100.00)	17.39 (54.07)	14.77 (45.93)	9.18 (100.00)	6.47 (70.47)	2.71 (29.53)	0.11 (100.00)	0.10 (91.56)	0.01 (8.44)

Note: Figures in brackets indicate percentage to total production

Source: Primary data

Table - 4.8
Quantity Sold per Farm (Rabi)

(in Qtl.)

Type of Sample Farmers	<i>Rabi</i>											
	Summer Paddy			Vegetables			Potato			Mustard		
	Production	Sold	Retained	Production	Sold	Retained	Production	Sold	Retained	Production	Sold	Retained
Loanee Insured	6.53 (100.00)	5.60 (85.82)	0.93 (14.18)	9.73 (100.00)	7.00 (71.95)	2.73 (28.05)	16.37 (100.00)	13.49 (82.38)	2.88 (17.62)	1.43 (100.00)	1.00 (69.97)	0.43 (30.03)
Non-loanee Insured	21.22 (100.00)	18.32 (86.33)	2.90 (13.67)	1.99 (100.00)	1.39 (69.51)	0.61 (30.49)	4.95 (100.00)	3.00 (60.62)	1.95 (39.38)	0.32 (100.00)	0.11 (34.38)	0.21 (65.63)
Total Insured	7.86 (100.00)	6.76 (85.95)	1.10 (14.05)	9.03 (100.00)	6.49 (71.90)	2.54 (28.10)	15.33 (100.00)	12.53 (81.75)	2.80 (18.25)	1.33 (100.00)	0.92 (69.19)	0.41 (30.81)
Non-insured (Control)	2.27 (100.00)	1.67 (73.74)	0.60 (26.26)	10.69 (100.00)	7.91 (74.03)	2.78 (25.97)	9.24 (100.00)	6.16 (66.64)	3.08 (33.36)	0.58 (100.00)	0.36 (61.55)	0.22 (38.45)

Note: Figures in brackets indicate percentage to total production

Source: Primary data

and saved seeds. The quantities of vegetables sold were to the tune of 74.86 per cent for the loanee insured sample farmers, 72.58 per cent for the non-loanee insured farmers and 70.47 per cent for the non-insured sample farmers. The remaining quantities of vegetables were used for home consumption.

Jute is a cash crop and hence more than 88 per cent of the total production was sold by the loanee insured sample farmers. Jute produced by the non-insured sample farmers in the study area was reported to be very insignificant and the question of selling of jute did not arise. However, the non-insured category of farmers in the sample area sold as high as 91.56 per cent of their produce in the market.

Table 4.8 indicates the quantity/percentage of crops sold and retained per farm out of the total production of *Rabi* crops viz., summer paddy, vegetables potato and mustard in the study area. The percentage of summer paddy sold was recorded at 85.82 per cent for loanee insured farmers, 86.33 per cent for non-loanee insured farmers and 73.74 per cent for the non-insured sample farmers. And the remaining amount of the produces were kept for home consumption.

The percentage of *Rabi* vegetables sold by the loanee insured group of farmers stood at 71.95 per cent and the corresponding figure for non-loanee insured sample farmers was recorded at 69.51 per cent. As against this, non-insured sample farmers reported to have sold 74.03 per cent of their total production. The remaining quantities of vegetables were retained for home consumption. So far as potato was concerned, about 82.38 per cent of the total production was sold by the loanee insured farmers and the corresponding figures for non-loanee insured and non-insured farmers stood at 60.62 and 66.64 per cent, respectively.

Per farm mustard crop sold was found at 69.97 per cent for the loanee insured sample farmers, 34.38 per cent for the non-loanee insured sample farmers and 61.55 per cent for the non-insured sample farmers. Rest of the quantities of mustard were retained by the farmers for home consumption and as saved seeds.

Table 4.9 gives the per farm value of the products grown as *Kharif* crops worked out on the basis of the existing price rate at the time of survey. *Sali* paddy was found to dominate the crops grown by all three types of sample farmers. In totality, the per farm value of the produces grown by the loanee insured farmers stood at Rs. 57,880 of which

Table - 4.9
Per Farm Value of Production (*Kharif*)

(in Rs.)

Type of Sample Farmers	<i>Kharif</i>			
	<i>Sali</i> Paddy	Vegetables	Jute	Total
Loanee Insured	45,971 (79.43)	11,074 (19.13)	835 (1.44)	57,880 (100.00)
Non-loanee Insured	44,418 (97.48)	1,146 (2.52)	0 (0.00)	45,564 (100.00)
Total Insured	45,830 (80.74)	10171 (17.92)	759 (1.34)	56,760 (100.00)
Non-insured (Control)	41,795 (83.92)	7651 (15.36)	360 (0.72)	49,805 (100.00)

Source: Primary data

Note: 1. Value of by-product is also added with the value of production of Paddy and Jute
2. Figures in brackets indicate percentage to the total

79.43 per cent came from paddy, 19.13 per cent from vegetables and 1.44 per cent from jute. In case of non-loanee insured sample farmers, the per farm total value of production with its by-product was worked out at Rs.45,564, out of which 97.80 per cent came from paddy and 2.52 per cent came from vegetables. The total value of production per for non-insured farmers group was recorded at Rs.49,805, of which 83.92 per cent came from paddy, 15.36 per cent came from vegetables and 0.72 per cent came from jute.

Table - 4.10
Per Farm Value of Production (*Rabi*)

(in Rs.)

Type of Sample Farmers	<i>Rabi</i>				
	Summer Paddy	Vegetables	Potato	Mustard	Total
Loanee Insured	8,213 (23.32)	7,144 (20.28)	15,492 (43.98)	4,373 (12.41)	35,222 (100.00)
Non-loanee Insured	25,255 (75.44)	2,331 (6.96)	4,906 (14.66)	983 (2.94)	33,475 (100.00)
Total Insured	9,763 (27.84)	6,706 (19.13)	14,529 (41.44)	4,065 (11.59)	35,063 (100.00)
Non-insured (Control)	2,870 (12.86)	9,154 (41.01)	8,430 (37.76)	1,869 (8.37)	22,322 (100.00)

Source: Primary data

Note: 1. Value of by-product is also added with the value of production of Paddy
2. Figures in brackets indicate percentage to total

Table 4.10 reflects the per farm value of the products grown under *Rabi* season and was worked out on the basis of the prevailing price rate at the time of survey. Summer paddy was found to dominate over all other crops grown by the sample farmers. In totality, per farm value of the produces earned by the loanee insured farmers stood at Rs. 57,880, of which 23.32 per cent came from summer paddy, 20.28 per cent from vegetables, 43.98 per cent came from potato and 12.41 per cent came from mustard. In case of the non-loanee insured sample farmers, the per farm total value of production with its by-product was recorded to the tune of Rs.33,474, of which 75.44 per cent came from summer paddy, 6.96 per cent from vegetables, 14.66 per cent from potato and 2.94 per cent came from mustard. For non-insured sample farmers, total value of production was recorded at Rs.22,322, out of which 12.86 per cent came from summer paddy, 41.01 per cent came from vegetables 37.76 per cent came from potato and 8.37 per cent came from mustard.

5.1 Introductory

Human behavior, in essence, is very difficult to predict. Under the same set of given circumstances, two persons may behave differently. Further, risk aversion factor is ingrained with the human nature and farmers are also no exception to this normal practice. And insurance can be panacea to cover many a risk factors pertaining to agriculture. The PMFBY is a new approach towards this end initiated by the Government in recent time. In this section, analysis has been undertaken to capture the level of farmers' awareness, their experience with the status of implementation, different implementing agencies, insurance companies associated with PMFBY together with their suggestions for improvement. The opinions of the sample farmers not covered by the PMFBY also were documented to get their feedback on PMFBY and reason for non-opting of the Yojana. A set of six queries were posed before the farmers to document their opinion.

5.2 Awareness Level of Insured Farmers

It has been seen from the Table-5.1 that both the categories of insured sample farmers, whether loanee or non-loanee, had heard of the scheme prior to their acceptance. However, no sample farmers took any insurance cover for any crops prior to the PMFBY. As reported at the time of survey, all the farmers (100%) in the study area insured for the notified crops under PMFBY. The loanee insured farmers insured their crops because they had applied for loan while the non-loanee insured farmers insured the crops voluntarily because of their own interest. They came to know all about it through the Government awareness programme only. About 40 per cent of the total loanee insured sample farmers reported to have enrolled under the PMFBY on its own and the rest (60 per cent) were motivated by others to do so. The loanee insured sample farmers came to know about the PMFBY from the Government awareness programme (10%), Insurance Company/Agent (78%) and other villagers (12%). However, no role in this endeavors was played by the *Panchayats* in the study area.

Table – 5.1
Enrollment and Awareness

Type of Sample 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	Yes	No	Yes	No	Government awareness programs	Insurance Company/Agent	Panchayat	Other Villagers	Others
Loanee Insured	100 (100.00)	0 (0.00)	0 (0.00)	100 (100.00)	100 (100.00)	0 (0.00)	100 (100.00)	0 (0.00)	40 (40.00)	60 (60.00)	10 (10.00)	78 (78.00)	0 (0.00)	12 (12.00)	0 (0.00)
Non-loanee Insured	10 (100.00)	0 (0.00)	0 (0.00)	10 (100.00)	10 (100.00)	0 (0.00)	0 (0.00)	10 (100.00)	10 (100.00)	0 (0.00)	10 (100.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)

Note: Figures in brackets indicate percentage to sample farmers

Source: Primary data

Table – 5.2
Insurance Details

Type of Sample Farmers	Name of implementing agency / Bank						Premiums in Rs.	Event of Losses (code)				Compensation Secured (Rs.)
	National Insurance Company Ltd.	Co-op. Apex Bank	SBI	AGV Bank	UCO Bank	ICICI Bank		1	2	3	4	
Loanee	-	8 (8.00)	54 (54.00)	26 (26.00)	11 (11.00)	1 (1.00)	1,407.60	-	-	-	-	-
Non-loanee	10 (100.00)	-	-	-	-	-	201.60	-	-	-	-	-

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.*

Source: Primary data

Note: Figures in brackets are percentages to sample farmers

5.3 Insurance and Bank Details

The insurance details per household together with the names of implementing agencies and premium amounts for both the group of farmers are presented in Table 5.2. In case of loanee insured farmers (100), 8 farm households had procured insurance cover for the notified crops under PMFBY through Co-operative Apex Bank, 54 households through State Bank of India (SBI), 26 households through Assam Gramin Vikash Bank (AGVB), 11 households through United Commercial Bank (UCO) and only 1 household had done it through ICICI Bank. In aggregate per household premium rate was worked out at Rs.1,407.60. As against this, all the non-loanee insured sample farmers (10 households) got their insurance policy done directly by the National Insurance Company Limited and the premium rate per household stood at Rs.201.60 only. Further, the event of losses of crops were measured in terms of 4 events *viz.*, prevented sowing/planting due to deficit rainfall or adverse weather (as code-1); yield loss due to drought, dry spells, floods, pests and diseases *etc.*, (as code-2), post-harvest losses due to spoilage during storage (as code 3) and losses due to localized calamities such as cyclones, landslides *etc.* (as code 4). As there was no report of losses of any crops during the survey, the event of losses together with compensation secured could not be collected.

5.4 Farmers Experiences

The experience of the sample farmers with PMFBY (Table 5.3), it has been observed that about 75 per cent of the loanee farmers and 80 per cent of the non-loanee farmers came forward to insure their crops for the first time, and as such they could not share any relative experience with other schemes. However, 25 per cent of the loanee farmers and 20 per cent of the non-loanee farmers had some earlier experience of crop insurance, but they remained silent to comment on the functioning of PMFBY, when asked for. It might be due to the fact that they did not register any claim for losses of crops to express their views on it.

5.5 Status of Implementation

The status of implementation of PMFBY in respect of both the groups of farmers (Loanee and non-loanee) is presented in Table 5.4. As no claim was registered till the date of survey, the matter of informing about the event of loss did not arise, not to speak of any given time frame. No officials had ever visited the farms during the Crop Cutting

Table - 5.3
Experiences with the PMFBY

Type of Sample Farmers	Experience with PMFBY					Event of loss: Did you inform any authority		Whom did you inform					
	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	0 (0.00)	0 (0.00)	0 (0.00)	75 (75.00)	25 (25.00)	0 (0.00)	100 (100.00)	-	-	-	-	-	-
Non-loanee	0 (0.00)	0 (0.00)	0 (0.00)	8 (80.00)	2 (20.00)	0 (0.00)	10 (100.00)	-	-	-	-	-	-

Note: Figures in brackets indicate percentage to sample farmers

Source: Primary data

Table - 5.4
Implementation Status

Type of Sample Farmers	Event of loss: Did you inform them within how many days				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 claims		What was role of panchayat	Are you satisfied with the implementation of PMFBY	
					Yes	No							
Loanee	-	-	-	-	0 (0.00)	100 (100.00)	100 (100.00)	0 (0.00)	-	-	-	73 (73.00)	27 (27.00)
Non-loanee	-	-	-	-	1 (10.00)	9 (90.00)	10 (100.00)	0 (0.00)	-	-	-	10 (100.00)	0 (0.00)

Note: Figures in brackets indicate percentage to sample farmers

Source: Primary data

Experiment (CCE), as informed by the loanee farmers during the survey. But visits of the officials were reported in case of a non-loanee farm household. An important feature noted in the study area was that all the farm households were aware of the practice of yield assessment through CCE that are taking place in the villages. The role of Panchayats in the process of claims settlement also did not arise as there was no report of claim for insurance. But 73 per cent of the loanee insured sample farmers and 100 per cent of the non-loanee insured sample farmers were satisfied with the implementation of PMFBY.

5.6 Suggestions for Further Improvement

Suggestions were sought from the sample farmers for further improvement of the PMFBY and the results are presented in Table 5.5. Options were given to the sample households and their responses were documented to identify the means of improvement. Accordingly, 88.89 per cent of the sample farmers insisted on release of timely compensation, followed by more transparency in implementation (44.44 per cent), reduction of time for completion of paper work (40.74 per cent), further lowering of premium (18.52 per cent), more awareness campaign (7.41 per cent) and increase in number of notified crops (3.70 per cent).

Table - 5.5
Suggestions for Further Improvement of PMFBY

Type of sample farmers	Premium should be lower	Less time to finish paperwork	Higher compensation	Timely compensation	Number of notified crops should be increased	Improve transparency in implementing PMFBY	Need more Awareness
Loanee	5 (18.52)	11 (40.74)	-	24 (88.89)	1 (3.70)	12 (44.44)	2 (7.41)
Non-loanee	-	-	-	-	-	-	-

Note: 1. Figures in brackets indicate percentage to sample farmers

2. Suggestions for further improvement of PMFBY are based on 27 sample farmers only, out of 100 loanee insured farmers.

Source: Primary data

5.7 Level of Awareness of Non-insured Farmers

Table 5.6 reveals the level of awareness and concept of PMFBY in respect of non-insured farmers (Control group) of the study area. The present study also covered 40 such farmers and of these, 19 farmers (47.50%) were aware of the PMFBY and its importance

while the remaining 21 farmers (52.50%) did not hear about it. The sources of information about PMFBY were Agriculture Department (52.63%), Friend/Other villagers (36.84%) and Newspaper/TV (10.53%). They however, could not educate themselves about the scheme from any Insurance Company or Bank as they had no linkage with these institutions and of course, because of their inhibition. The reasons for non-opting of PMFBY, as perceived by the sample farmers included lack of confidence on PMFBY (42.11 per cent), lack of interest (31.38%), lack of active role of the implementing agencies (15.79 per cent) and not knowing the procedure to avail the benefits (10.53 per cent).

Table 5.6
Awareness and Concept Level of Non-insured (Control group) Farmers on PMFBY

Type of Sample Farmers	Heard of PMFBY		Source of information					Reason for not opted for the scheme			
	Yes	No	Agril. Dept.	Insurance Company	Bank	Friend / Other villagers	Newspaper /Tv	Not interested	Lack of confidence on PMFBY	Lack of active role of PMFBY implementing agency	Don't Know Procedure to avail the facilities
Non-insured (Control)	19 (47.50)	21 (52.50)	10 (52.63)	0 (0.00)	0 (0.00)	7 (36.84)	2 (10.53)	6 (31.58)	8 (42.11)	3 (15.79)	2 (10.53)

Note: Figures in brackets indicate percentage to sample farmers
Source: Primary data

The foregoing analysis amply demonstrates the general behavior and experiences of the farmers towards crop insurance. As the programme (PMFBY) covers all sort of crop losses due to climatic conditions, crop damage due to disease & pests, post-harvest losses and localized calamities, the need of the hours will be to educate the farmers, motivate them to go for it and to make agriculture truly a dependable and profitable venture.

6.1 The Premise

As per report of the Department of Agriculture, Government of Assam, the Pradhan Mantri Fasal Bima Yojana (PMFBY), was not implemented in the State during *Kharif* 2016 due to some technical reasons. It was implemented in 26 districts of Assam for 5 notified crops *viz.*, mustard, potato, summer paddy, wheat and sugarcane for *Rabi* 2016-17 onwards. Therefore, the study was undertaken for *Rabi 2016-17* only, with the following objectives:

- Assess the status of implementation of the PMFBY across the State for *Rabi* 2016-17
- Analyze the insurance uptake behavior among the farmers of Assam

The samples were selected as per the prescribed methodology taking as many as 150 farmers under three different categories *viz.*- loanee insured, non-loanee and non-insured farmers.

6.2 Major Findings of the Study:

6.2.1 Status of PMFBY in Assam for *Rabi* 2016-17

- The scheme was executed by the National Insurance Company Limited (NICL).
- Of the 26 districts, mustard covered 20 districts, potato 25 districts, summer paddy 21 districts, sugarcane 2 districts and wheat 1 district only.
- The scheme covered 8,516 farmers across the districts, of which 8,489 were loanee farmers and 27 were non-loanee farmers found in Goalpara district only.
- The sum total of insured area was about 4,312.94 hectares. Of this summer paddy occupied maximum area (69.15%) followed by Potato (20.60%), Mustard (10.15%), Sugarcane (0.06%) and Wheat (0.05%).
- The sum insured was recorded at Rs.145.54 lakh in mustard with farmers' share of Rs.2.20 lakh, Rs.1,193.17 lakh in potato with farmers' share of Rs.58.98 lakh, Rs.1.670.10 lakh in summer paddy with farmers' share of Rs.24.97 lakh, Rs.2.29 lakh in sugarcane with farmers' share of Rs. 0.11 lakh and Rs. 0.09 lakh in wheat with farmers' share of Rs. 0.01 lakh.

- The farmers' total share of premium stood at Rs. 86.28 lakh, while the State and Centre's share at overall level was recorded at Rs.43.46 lakh each, resulting in a total share value of Rs.173.22 lakh.
- At the time of field survey, no claim was registered due to non-availability of CCE data for summer paddy. Later on, at the behest of the State Level Coordination Committee on Crop Insurance (SLCCI) for PMFBY, some claims, as reported in the media were settled by the Implementing Agency in respect of 76 farmers, involving a sum of Rs. 13.6 Lakh. (Source: [http://: agrihorti.assam.gov.in](http://agrihorti.assam.gov.in)).

6.2.2 Access to Credit

- Of the total loanee farmers (100), 8 farmers accessed credit from Cooperative Bank, 66 from Commercial Banks and 26 from Rural Banks. No loanee farmers were reported to have accessed any credit from Money Lenders, Savings Group or any other sources.
- Submission of land documents was the main collateral to get the loan/credit sanctioned by all those Banks.
- The Cooperative Banks sanctioned a sum total of Rs. 5,25,761 against 8 farmers, while the Commercial Banks sanctioned an amount of Rs.17,30,325 against 66 farmers. The amount of loan sanctioned by the Rural Banks stood at Rs. 8,07,640 against 26 farmers during the reference year, 2016-17 against *Rabi* crops *i.e.*, for agricultural purpose only.
- The rate of interest was 5.50 per cent for Cooperative Bank and 7.00 per cent for Commercial Banks and Rural Banks. The amount of repayment was not found to be satisfactory in case of loanees under the Cooperative Bank and Rural Banks as compared to the Commercial Banks.
- The amount repaid with interest was recorded at Rs.72,500 against the Cooperative Bank with an outstanding loan to the tune of Rs. 5,11,533 which was 97.29 per cent of the total loan sanctioned.
- In case of Commercial Banks, the total repayment with interest was recorded at Rs.6,53,798 with an outstanding loan amount of Rs. 12,39,514 which accounted for 71.83 per cent of the total loan sanctioned.

- The amount repaid with interest was Rs.1,30,500 under the Rural Banks with an outstanding loan to the tune of Rs.7,66,653 which was 94.73 per cent of the total amount of loan sanctioned.
- In aggregate, the total amount of loan sanctioned by all the three banks stood at Rs.30,63,726 at an average interest rate of 6.88 per cent and the total amount paid inclusive of interest was recorded at Rs. 8,56,798 leaving an outstanding loan of Rs. 25,17,700 which constituted 82.18 per cent of the total loan sanctioned.

6.2.3 Insurance Behaviour

- Both the categories of insured sample farmers, whether loanee or non-loanee, were aware of the PMFBY scheme. However, no sample farmers took any insurance cover for any crops prior to the PMFBY.
- About 40 per cent of the total loanee insured sample farmers reported to have enrolled under the PMFBY on its own and the rest (60 per cent) were motivated by others to do so. The loanee insured sample farmers came to know about the PMFBY from the Government awareness programme (10%), Insurance Company/Agent (78%) and other villagers (12%). The non-loanee farmers came to know all about it through the Government awareness programme only. However, no role in this endeavour was played by the *Panchayats* in the study area.
- In case of loanee insured farmers (100), 8 farm households had procured insurance cover for the notified crops under PMFBY through Co-operative Apex Bank, 54 households through State Bank of India (SBI), 26 households through Assam Gramin Vikash Bank (AGVB), 11 households through United Commercial Bank (UCO) and only 1 household had done it through ICICI Bank. In aggregate, per household premium rate was worked out at Rs.1,407.60.
- As against this, all the non-loanee insured sample farmers (10 households) got their insurance policy done directly by the National Insurance Company Limited and the premium rate per household stood at Rs.201.60 only.
- 73 per cent of the loanee insured farmers and 100 per cent of the non-loanee insured farmers were satisfied with the implementation of the PMFBY.

6.2.4 Awareness level of non-insured farmers (Control group)

- Of the total non-insured farmers (40), 19 farmers (47.50%) were aware of the PMFBY and its importance while the remaining 21 farmers (52.50%) did not heard about it.
- The sources of information about PMFBY were Agriculture Department (52.63%), Friend/Other villagers (36.84%) and Newspaper/TV (10.53%).
- They however, could not educate themselves about the scheme from any Insurance Company or Bank as they had no linkage with these institutions and of course, because of their inhibition.
- The reasons for non-opting of PMFBY, as perceived by the sample farmers included lack of confidence on PMFBY (42.11 per cent), lack of interest (31.38%), lack of active role of the implementing agencies (15.79 per cent) and not knowing the procedure to avail the benefits (10.53 per cent).

6.3 Policy Implications

On the basis of the farmers' opinions and interactions with other stakeholders, following suggestions are recommended for policy prescriptions:

1. Settlement of claims and compensation should be done within the shortest possible time frame.
2. Should bring in more transparency in implementation of the programme.
3. Possibility may be explored for further reduction of the existing rate of premium.
4. Massive awareness campaign is essential to motivate the farmers to go for crop insurance.
5. The number of notified crops may be increased on the basis of area specific cropping pattern
6. Further, the settlement of claims, whenever arises, requires the results of the Crop Cutting Experiments and as such, the Departments of Agriculture and Economics & Statistics should come forward to undertake the job religiously so that the benefits really percolate down to the farmers on time.
7. Also, the farmers really do not have extra time to run after the officials for completion of the codal formalities for PMFBY registration. Therefore, a strong

network of machineries backed by political will is the need of the hour to bring about a transition in the lives of the farming community.

8. Huge amount of outstanding loan lying with the Banks is really a matter of great concern. This liability is again expected to mount over the subsequent seasons thereby putting the farming community into more precarious position. Timely and workable mechanism is to be evolved with no further delay to bring this mass out of the morass of severe debt.

6.4 Conclusion

The status of implementation of the flagship programme on PMFBY is yet to acquire desired momentum in the State of Assam. However, it can be a unique programme to mitigate the plights of hardworking farmers, if implemented in true spirit as per the guidelines. As such, a concerted effort from all stakeholders is a must to bring in more and more farmers under its ambit. It can very well provide a safety net to the farmers in distress and carve a niche for itself. The Government, banking institutes and the insurance companies should come forward with necessary programmes and support to create a conducive environment for the same.

1. Operational Guidelines

Pradhan Mantri Fasal Bima Yojana, Dept. of Agriculture, Cooperation & Farmers' Welfare, Ministry of Agriculture & Farmers' Welfare, Krishi Bhawan, New Delhi

2. Performance Evaluation of Pradhan Mantri Fasal Bima Yojana (PMFBY) Summary for Policy Makers – Ranjan Kumar Ghosh

Center for Management in Agriculture(CMA), Indian Institute of Management Ahmedabad, Vastrapur, Ahmedabad – 380015

3. Performance Evaluation of Pradhan Mantri Fasal Bima Yojana (PMFBY) in Uttar Pradesh- Prof R.S. Singh

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