

Utilisation of Pradhan Mantri Fasal Bhima Yojna Scheme– State Wise Analysis

P. KANAKA DURGA

Faculty, National Institute of Agricultural Extension Management (MANAGE), Rajendranagar, Hyderabad

Abstract- In this Paper an attempt is made to find out the utilization of Pradhan Mantri Fasal Bhima Yojana (PMFBY) Scheme by farmers belonging different socio-economic profiles. Data is collected from PMFBY Dash Board Data published by Ministry of Agriculture and Farmers' Welfare, Government of India. It is clear from the findings that more than 80 percent of farmers who are enrolled in PMFBY are male farmers in states such as Chhattisgarh, Goa, Haryana, Himachal Pradesh, Jammu and Kashmir, Madhya Pradesh, Odisha, Rajasthan, Sikkim, Tripura, Uttar Pradesh and Uttarakhand. Quite a contrast is observed in case of States of Meghalaya, where 72 percent of farmers enrolled in PMFBY are female, followed by Kerala and Assam. Social category-wise analysis on an overall basis revealed that, 50 percent of enrolled farmers belong to general category and 32 percent belong to OBC. SC & ST and together constituted 18 percent. In Meghalaya, 99 percent of the enrolled farmers are scheduled tribes. More than 80 percent of enrolled farmers are marginal and small except in the states of Chhattisgarh, Madhya Pradesh and Rajasthan. Time series analysis on share of loanee farmers as per the PMFBY dashboard revealed that more than 90 percent who have availed loan, have enrolled in PMFBY for States like Chhattisgarh, Himachal Pradesh, Madhya Pradesh, and Rajasthan. In Assam, during 2018, about 95 percent of enrolled farmers have availed loans from the bank. But this share has fallen abruptly in 2019 and this trend continued in subsequent years. This trend is observed in the case of States such as Haryana, and Kerala with the lower magnitude of decline as compared to Assam. However, the acute fall in the proportion of enrolment of the farmers is an issue of concern. When analysed the coverage of total cropped area under PMFBY insured area, it is clear that very negligible area is covered under PMFBY insurance in case of States such as Karnataka,

Kerala, Uttarakhand, Himachal Pradesh, and Tripura. All these States either have negligible share in total cropped area or at 3 to 7 percent. More than 40 percent of gross cropped area is insured in the case of Madhya Pradesh, Rajasthan and Chhattisgarh. In Assam and Haryana at around 33 and 29 percent of area is insured respectively.

I. INTRODUCTION

Agriculture in India is highly susceptible to risks like droughts and floods. There are several kinds of risks and uncertainty faced by the farmers in India like weather related, yield loss, calamities, floods etc. Thus, access to crop insurance encourages farmers to shift investment on inputs away from low-yield and low-volatility crops to riskier ones. In the light of this background, Pradhan Mantri Fasal Bima Yojana (PMFBY) Scheme was started in the year 2016. It provides insurance coverage and financial support to the farmers in the event of failure of any of the notified crop as a result of natural calamities, pests and diseases.

1.1 Objectives of PMFBY:

- To provide insurance coverage and financial support to the farmers in the event of failure of any of the notified crop as a result of natural calamities, pests and diseases.
- To stabilise the income of farmers in order to ensure their continuance in farming.
- To encourage farmers to adopt innovative and modern agricultural practices.
- To ensure flow of credit to the agriculture sector.

1.2 Implementing Agency (IA):

The Scheme is being implemented through a multi-agency framework by selected insurance companies under the overall guidance and control of the Department of Agriculture and Farmers Welfare

(DA&FW), Ministry of Agriculture and Farmers Welfare (MoA&FW), Government of India (GOI). The concerned State in co-ordination with various other agencies; viz. Financial Institutions like Commercial Banks, Co-operative Banks, Regional Rural Banks and their regulatory bodies, Government Departments viz. Agriculture, Co-operation, Horticulture, Statistics, Revenue, Information/Science & Technology, Panchayat Raj etc. are part of this implementation.

Department of Agriculture and Farmers Welfare has designated/empaneled Agriculture Insurance Company of India (AIC) and some private insurance companies to participate in the Government sponsored agriculture /crop insurance schemes based on their financial strength, infrastructure, manpower and expertise.

1.3 Management of the Scheme:

The existing State Level Co-ordination Committee on Crop Insurance (SLCCCI), Sub- Committee to SLCCCI, District Level Monitoring Committee (DLMC) are already overseeing the implementation and monitoring of the ongoing crop insurance schemes like National Agricultural Insurance Scheme (NAIS), Weather Based Crop Insurance Scheme (WBCIS), Modified National Agricultural Insurance Scheme (MNAIS) and Coconut Palm Insurance Scheme (CPIS) and these committees shall be responsible for proper management of the Scheme. IA shall be an active member of SLCCCI and District Level Monitoring Committee (DLMC) of the scheme.

1.4 Unit of Insurance:

The Scheme shall be implemented on an 'Area Approach basis' i.e., Defined Areas for each notified crop for widespread calamities with the assumption that all the insured farmers, in a Unit of Insurance, to be defined as 'Notified Area' for a crop, face similar risk exposures, identical cost of production per hectare, earn comparable farm income per hectare, and experience similar extent of crop loss due to the operation of an insured peril in the notified area. For Risks of Localized calamities and Post-Harvest losses on account of defined peril, the Unit of Insurance for loss assessment shall be the affected insured field of the individual farmer.

1.5 Crops and Notified Area:

Crops: The Scheme can cover all the crops for which past yield data is available and grown during the notified season in a Notified Area and for which yield estimation at the Notified Area level will be available based on requisite number of Crop Cutting Experiments (CCEs) being a part of the General Crop Estimation Survey (GCES).

Notified Area: Notified Area is the Unit of Insurance decided by the State Govt. for notifying a Crop during a particular season. The size of the Unit of Insurance shall depend on the area under cultivation within the unit. For major crops, the Unit of Insurance shall ordinarily be Village/Village Panchayat level and for minor crops may be at a higher level so that the requisite number of CCEs could be conducted during the notified crop season. States may notify Village / Village Panchayat as insurance unit in case of minor crops too if they so desire. All farmers growing notified crops in a notified area during the season who have insurable interest in the crop are eligible.

1.6 Yield Losses (standing crops, on notified area basis):

Comprehensive risk insurance is provided to cover yield losses due to non-preventable risks, such as Natural Fire and Lightning, Storm, Hailstorm, Cyclone, Typhoon, Tempest, Hurricane, Tornado etc. Flood, Inundation and Landslide, Drought, Dry spells, Pests/ Diseases etc

II. In this backdrop, an attempt is made to analyse the status of PMFBY across states using PMFBY Data Board Data. This Article has the following objectives:

- i. To study the utilization of crop insurance through PMFBY Scheme by different social categories across different states
- ii. To analyse the gender composition of enrolment in PMFBY
- iii. To evaluate the category of farmers who have enrolled PMFBY
- iv. To study the composition of loanee and non loanee farmers utilising the PMFBY over the years across the states of India

III. METHODOLOGY

The data is obtained from PMFBY Dash Board, Ministry of Agriculture & Farmers’ Welfare on profile of enrolled farmers in terms of caste, gender, cropped area, land size and loanee farmers and non loanee farmers over period 2018 to 2022 across states. In order to analyse the data and to draw meaningful conclusions, percentage, mean and standard deviations are used.

IV. RESULTS & DISCUSSION

During 2022-23, enrolment for PMFBY happened in 20 states and Union Territories of India. During 2022-23 the number of enrolled applications for PMFBY were 6,73,74,453 across 20 states of India.

4.1 Gender-wise enrollment of Farmers in PMFBY

During Kharif 2022-23, it is observed from the secondary data that on overall basis, more than 80 percent of farmers who are enrolled in PMFBY are males. The states which are above the overall average of 80 percent at national level having male farmers enrolled are Chhattisgarh, Goa, Haryana, Himachal Pradesh, Jammu and Kashmir, Madhya Pradesh, Odisha, Rajasthan, Sikkim, Tripura, Uttar Pradesh and Uttarakhand. Remaining States have enrolment of male farmers at around 67 percent to 80 percent. But, in the case of Meghalaya, it is interesting to note that 72 percent of farmers enrolled in PMFBY are female. Kerala is the second largest State with 32 percent of female farmers enrolled in PMFBY followed by Assam with 22 percent. On the contrary less than 10 percent of enrolled farmers were female with respect to Himachal Pradesh and Uttarakhand (Table 1).

Table-1 Profile of Sample Farmers of PMFBY (Kharif 2022-23)

Sl. No.	States	Gender (%)			Category (%)				Type of Farmer (%)		
		M	F	Oth ers	SC	ST	OB C	GE N	Marg inal	Sma ll	Oth ers
1.	Andaman and Nicobar	76.30	23.70	0.00	0.00	0.00	95.40	4.60	0.00	100.00	0.00

2.	Assam	77.90	22.10	0.00	4.90	8.10	11.90	75.00	18.30	79.40	2.20
3.	Chhattisgarh	89.50	10.40	0.10	8.90	26.20	59.50	5.30	21.00	53.50	25.30
4.	Goa	88.40	11.60	0.00	0.00	27.80	16.70	55.50	3.90	86.90	9.20
5.	Haryana	89.50	10.50	0.00	1.00	0.00	13.90	85.00	21.20	58.50	20.10
6.	HP	91.80	8.20	0.00	5.50	2.80	8.10	83.60	35.10	59.40	5.40
7.	Jammu and Kashmir	95.70	4.30	0.00	6.50	1.70	1.80	90.10	33.00	63.50	3.50
8.	Karnataka*	79.10	20.90	0.00	4.70	3.00	24.50	67.80	21.40	55.00	23.60
9.	Kerala	67.60	32.00	0.40	0.80	0.10	25.70	73.40	35.50	60.80	3.50
10.	Madhya Pradesh	89.50	10.40	0.10	4.60	7.20	62.20	26.00	14.50	52.90	32.50
11.	Maharashtra	80.10	19.90	0.00	5.10	2.10	33.10	59.60	7.90	87.10	4.90
12.	Meghalaya	27.80	72.20	0.00	0.00	99.30	0.00	0.74	56.60	41.80	1.40
13.	Odisha	83.20	16.70	0.00	7.70	15.70	56.60	19.90	16.70	78.20	5.00
14.	Puducherry	71.00	29.00	0.00	5.90	0.20	59.30	34.50	4.70	93.30	2.00
15.	Rajasthan	87.10	12.80	0.10	7.90	8.10	63.70	20.20	19.20	50.20	30.40
16.	Sikkim	85.20	14.80	0.00	0.60	4.10	8.50	86.80	37.30	60.00	2.50
17.	Tripura	81.80	18.20	13.10	13.00	28.30	11.60	46.90	10.70	48.80	4.50
18.	Uttar Pradesh	88.20	11.80	0.00	6.50	0.70	39.70	53.00	31.90	59.40	8.50
19.	Uttarakhand	90.60	9.40	0.00	12.40	9.70	12.00	65.90	17.30	81.00	1.50
	Overall	81.10	18.90	0.00	5.10	12.90	31.80	50.20	21.40	66.80	9.80

The category wise analysis of sample respondents in 19 states revealed that 50 percent of enrolled farmers belong to general category and 32 percent belong to OBC. SC & ST together constituted 18 percent. States such as Assam, Haryana, Himachal Pradesh, Jammu & Kashmir, Kerala, Sikkim and Uttarakhand have more than 70 percent of enrolled farmers belonging to

General Category. The SC Category enrolled farmers comprised of less than 10 percent in all the States except Uttarakhand. In Meghalaya, 99 percent of the enrolled farmers are Scheduled Tribes. More than 80 percent of enrolled farmers are marginal and small except in the states of Chhattisgarh, Madhya Pradesh and Rajasthan (Table 1).

It is revealed from the above analysis that the proportion of enrolment is not so encouraging for female farmers and SC /ST Categories. However, it is on a positive note that about 60 percent of small and 21.40 percent of marginal farmers have enrolled in PMFBY. Off late, this section of farmers are realizing the importance of risk mitigating mechanism in the form of Crop Insurance, thereby resorting to enrollment under PMFBY.

4.1 Share of Loanee Farmers in total enrollment

The results presented in the Table 3.1.2 explains the percentage of loanee farmers enrolled in PMFBY across the States from 2018 to 2022. Interesting results are obtained while analyzing the proportion of enrolled farmers availing loan. In Assam, during 2018, about 95 percent of the enrolled farmers have availed loans from the bank. But this share has fallen abruptly in 2019 and this trend continued in subsequent years and as a result, during *Kharif 2022*, only the three percent of loanee farmers have enrolled in PMFBY. This trend is observed in the case of States such as Haryana, and Kerala, however with the lower magnitude of decline as compared to Assam.

Table-2: Share of Loanee Farmers in Total Enrolment in Kharif Season (%)

Sl. No.	States	Share of Loanee Farmers in Total Enrolment				
		2018	2019	2020	2021	2022
1.	Assam	94.60	6.80	2.40	4.20	3.40
2.	Chhattisgarh	87.70	91.00	93.90	94.10	95.50
3.	Haryana	99.10	96.40	87.70	90.10	80.60
4.	Himachal Pradesh	98.70	98.50	99.50	99.30	99.20
5.	Kerala	99.80	95.60	74.90	71.10	60.20
6.	Karnataka	31.40	42.20	32.90	NA	NA

			0			
7.	Madhya Pradesh	96.40	98.80	85.50	99.40	95.00
8.	Maharashtra	15.50	11.80	12.80	12.40	7.80
9.	Odisha	86.30	60.50	80.30	71.40	69.80
10.	Rajasthan	99.90	98.70	97.70	94.80	94.20
11.	Tripura		6.30	5.60	6.30	4.60
12.	Uttar Pradesh	97.40	95.50	97.40	93.10	87.20
13.	Uttarakhand	83.40	78.60	57.30	49.70	60.10

Source: Calculated from PMFBY Dash Board; NA: not available

More than 90 percent who have availed loan have enrolled in PMFBY for the States like Chhattisgarh, Himachal Pradesh, Madhya Pradesh, and Rajasthan. It is interesting to note that in Maharashtra, only eight percent of the enrolled farmers have availed loans and this proportion was 15 percent during 2018 and thereafter a declining trend is observed. In the case of Karnataka, about 30 to 40 percent loanee enrolled farmers are found over a period of time. However, there is no data available for the last two years. Similarly in Tripura, only four percent of the enrolled farmers have availed loan. The declining trend of loanee farmers enrolled is observed in Uttarakhand from 83 percent during 2018 to 60 percent during 2022. Similar trend was observed even in Kerala as the proportion of loanee enrolled farmers declined from 100 percent during 2018 to 60 percent during 2022.

The declining trend of enrollment of loanee farmers is because of two seasons. Firstly, earlier, it was compulsory for the farmers availing crop loan/KCC loan to subscribe for crop insurance and banks were deducting the premium amount from the loan. Secondly, the enrollment through CSC has increased in the recent years.

4.3 Cropped Area insured during 2020-21

When analyzed the coverage of total cropped area v/s area insured under PMFBY, it is clear from the Table 3.1.3 that very negligible area is covered under PMFBY insurance in the case of States such as

Karnataka, Kerala, Uttarakhand, Himachal Pradesh, and Tripura. All these States have negligible share of insured area in total cropped area ranging from 3 to 7 percent.

Table-3 Total Cropped Area v/s Insured area during 2020-21

Sl. No.	States	Total Cropped Area (000 ha)	Total Insured Area (000 ha)	% of Cropped Area Insured
1.	Assam	3888	1297.13	33.4
2.	Chhattisgarh	5712	2450.44	42.9
3.	Haryana	6566	1904.57	29.0
4.	Himachal Pradesh	899	64.08	7.1
5.	Karnataka	14910	1.47	0.0
6.	Kerala	2569	10.88	0.4
7.	Madhya Pradesh	29903	13028.81	43.6
8.	Maharashtra ¹	24917	6520.11	26.2
9.	Odisha	4819	1190.48	24.7
10.	Rajasthan	26100	11379.13	43.6
11.	Tripura	487	38.39	7.9
12.	Uttar Pradesh (Provisional)	27109	3168.66	11.7
13.	Uttarakhand	997	24.74	2.5

Source: PMFBY Dash Board & Indiatat.com; shares are calculated

More than 40 percent of gross cropped area is insured in the case of Madhya Pradesh, Rajasthan and Chhattisgarh. In Assam and Haryana, it is around 33 and 29 percent of area respectively. In Maharashtra and Odisha area insured under PMFBY is moderate and the proportion is 26.5 percent and 24.7 percent, respectively.

On account of various seasons, the area covered under the crop insurance is not satisfactory among Karnataka, Kerala, Uttarakhand and Himachal Pradesh. Hence, there exists a need to promote and motivate the farmers to go for crop insurance under PMFBY as a means of risk mitigation tool. It is apparent from the above analysis that the enrolment of loanee farmers is consistent with little variations in the case of Chhattisgarh, Himachal Pradesh, and Rajasthan. There was a slight decline in the case of

Haryana and Uttara Pradesh. However, the situation in Karnataka, Maharashtra and Uttarakhand is not satisfactory.

CONCLUSION

In this Paper an attempt is made to find out the utilization of PMFBY by farmers belonging to different socio-economic profiles. It is clear from the analysis that more than 80 percent of farmers who are enrolled in PMFBY are male farmers. States which are above the overall average of 80 percent at national level having male farmers enrolled are Chhattisgarh, Goa, Haryana, Himachal Pradesh, Jammu and Kashmir, Madhya Pradesh, Odisha, Rajasthan, Sikkim, Tripura, Uttar Pradesh and Uttarakhand. Quite contrast is observed in case of State of Meghalaya, where 72 percent of farmers enrolled in PMFBY are female, followed by Kerala and Assam. Category-wise analysis on an overall basis revealed that, 50 percent of enrolled farmers belong to general category and 32 percent belong to OBC. SC & ST and together constituted 18 percent. In Meghalaya, 99 percent of the enrolled farmers are scheduled tribes. More than 80 percent of enrolled farmers are marginal and small except in the states of Chhattisgarh, Madhya Pradesh and Rajasthan. Time series analysis on share of loanee farmers as per the PMFBY dashboard revealed that more than 90 percent who have availed loan, have enrolled in PMFBY for States like Chhattisgarh, Himachal Pradesh, Madhya Pradesh, and Rajasthan. In Assam, during 2018, about 95 percent of enrolled farmers have availed loans from the bank. But this share has fallen abruptly in 2019 and this trend continued in subsequent years. This trend is observed in the case of States such as Haryana, and Kerala with the lower magnitude of decline as compared to Assam. However, the acute fall in the proportion of enrolment of the farmers is an issue of concern. When analysed the coverage of total cropped area under PMFBY insured area, it is clear that very negligible area is covered under PMFBY insurance in case of States such as Karnataka, Kerala, Uttarakhand, Himachal Pradesh, and Tripura. All these States either have negligible share in total cropped area or at 3 to 7 percent. More than 40 percent of gross cropped area is insured in the case of Madhya Pradesh, Rajasthan and Chhattisgarh. In Assam and Haryana at around 33 and 29 percent of area is insured respectively.

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