

AN EVALUATION OF PRADHAN MANTRI FASAL BHIMA YOJANA (PMFBY) AND RESTRUCTURED WEATHER BASED CROP INSURANCE SCHEME (RWBCIS)

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ABSTRACT

Most of the Indian population is depended on agriculture for their daily bread and agriculture is the major sector which has provided enormous number of employment opportunities. But sometimes farmers do not proper returns for their hard labour due to improper yield for their grown crops and adverse weather conditions relating to rainfall, temperature, wind, humidity etc. In order to protect the farmers from all these Government of India launched the Pradhan Mantri Fasal Bima Yojana (PMFBY) and Restructured Weather Based Crop Insurance Scheme (RWBCIS). Through this paper an effort has been made to understand and evaluate the Pradhan Mantri Fasal Bima Yojana (PMFBY) and Restructured Weather Based Crop Insurance Scheme (RWBCIS).

Key Words: Sum Insured, reported claims, paid claims and farmers applications benefited.

ABOUT PRADHAN MANTRI FASAL BIMA YOJANA (PMFBY)

The Pradhan Mantri Fasal Bima Yojana (PMFBY) launched on 18 February 2016 by Prime Minister Narendra Modi is an insurance service for farmers for their yields. It was formulated in line with One Nation–One Scheme theme by replacing earlier two schemes National Agricultural Insurance Scheme (NAIS) and Modified National Agricultural Insurance Scheme (MNAIS) by incorporating their best features and removing their inherent drawbacks (shortcomings). It aims to reduce the premium burden on farmers and ensure early settlement of crop assurance claim for the full insured sum.

Pradhan Mantri Fasal Bima Yojana (PMFBY) aims to provide a comprehensive insurance cover against failure of the crop thus helping in stabilising the income of the farmers. The Scheme covers all Food & Oilseeds crops and Annual Commercial/Horticultural Crops for which past yield data is available and for which requisite number of Crop Cutting Experiments (CCEs) are being conducted under General Crop Estimation Survey (GCES). The scheme is implemented by empanelled general insurance companies.

Selection of Implementing Agency (IA) is done by the concerned State Government through bidding. The scheme is compulsory for loanee farmers availing Crop Loan /KCC account for notified crops and voluntary for other others. The scheme is being administered by Ministry of Agriculture.

The scheme has been beset by a number of problems for the farmers with unpaid dues in thousands of crores while insurance companies have pocketed the money.

Objectives of the Scheme

Pradhan Mantri Fasal Bima Yojana (PMFBY) aims at supporting sustainable production in agriculture sector by way of

- Providing financial support to farmers suffering crop loss/damage arising out of unforeseen events
- Stabilizing the income of farmers to ensure their continuance in farming
- Encouraging farmers to adopt innovative and modern agricultural practices
- 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.

ABOUT RESTRUCTURED WEATHER BASED CROP INSURANCE SCHEME (RWBCIS)

The Restructured Weather Based Crop Insurance Scheme (RWBCIS) was launched on 18th February 2016 by Hon'ble Prime Minister 12 states implemented the scheme in Kharif 2016 whereas 9 states have implemented the scheme in Rabi 2016-17.

Restructured Weather Based Crop Insurance Scheme (RWBCIS) aims to mitigate the hardship of the insured farmers against the likelihood of financial loss on account of anticipated crop loss resulting from adverse weather conditions relating to rainfall, temperature, wind, humidity etc. RWBCIS uses weather parameters as "proxy" for crop yields in compensating the cultivators for deemed crop losses. Payout structures are developed to the extent of losses deemed to have been suffered using the weather triggers.

Coverage of Crops

1. Food Crops (Cereals, Millets and Pulses)
2. Oilseeds
3. Commercial / Horticultural crops

Following major weather perils, which are deemed to cause "Adverse Weather Incidence", leading to crop loss, shall be covered under the scheme:

1. Rainfall – Deficit Rainfall, Excess rainfall, Unseasonal Rainfall, Rainy days, Dry-spell
2. Temperature– High temperature (heat), Low temperature
3. Relative Humidity
4. Wind Speed

5. A combination of the above

Hailstorm, cloud-burst may also be covered as Add-on/Index-Plus products for those farmers who have already taken normal coverage under RWBCIS.

LITERATURE REVIEW

Inderjeet (2016) has disclosed the benefits of Fasal Bhima Yojana for farmers. This study has examined crop insurance need, benefits of Pradhan Mantri Fasal Bhima Yojana (PMFBY) to the farmers and made comparison of PMFBY with other crop insurance schemes. Finally, concluded that, crop insurance is essential for farmers in the country like India, PMFBY is charging premium according to affordability of farmers with full coverage of risk. The general insurers have to create awareness among farmers by using mobile or satellite technology. IRDAI also has to provide supportive environment for PMFBY and the percentage of crop insurance holders can be increased by concentrated approach.

Sumit Ghosh (2019) has analysed the expectations and reality about Pradhan Mantri Fasal Bhima Yojana (PMFBY). This study has given detailed picture of PMFBY and revealed agriculture risk and covariate insurance. This study has also analysed farmers covered under PMFBY in the different states of India. At the end, this study suggested that, participation and promotion of private insurance companies is needed to increase the crop insurance policies. There are some obstacles in the crop insurance are to be removed and remote sensing technology can be used to assess damage and claim settlement. The Government agencies, NGOs, banks and insurance companies have to necessary measures to create awareness about PMFBY.

Suman Devi (2016) has exhibited the overview of Pradhan Mantri Fasal Bhima Yojana. This study has portrayed crop insurance schemes so far in India, highlights of PMFBY like objectives of the scheme, coverage, implementing agency, monitoring and management, losses covered, use of technology and also compared PMFBY with crop insurance schemes of earlier. At last, it is suggested that, low premium is to be charged, due to burden to the Government a separate allocation to be made in the budget, etc. and concluded that, the success of this scheme is depending upon the sincerity of the insurance companies.

Asha Priyanka Paulraj and Nandakumar Easwaran (2020) have evaluated the revamped scheme of PMFBY in addressing issues concerned with crop insurance. This study has selected farmers who are growing paddy in Tamil Nadu and analysed problems faced by the farmers, difficulties to the insurance agency and agricultural official, hurdles in enrolment of uninsured farmers and impact of revamping. Finally concluded that, PMFBY is the successor compared earlier schemes, the aim of revamping was to address the problems and also use of technology to settlement of claim and suggested to state Governments to develop risk mitigation programmes in consultation with other stakeholders.

Krishna M and Manoj Kumara N V (2018) have described about an overview of Pradhan Mantri Fasal Bima Yojana. This study has examined, unit of the insurance, crops and notified area, planting risk, standing crop, post-harvest losses, localised calamities, etc. At the end, it is concluded that, the state Governments have to review the scheme every year and can make corrections.

OBJECTIVES OF THE STUDY

1. To know briefly about Pradhan Mantri Fasal Bhima Yojana (PMFBY) and Restructured Weather Based Crop Insurance Scheme (RWBCIS).
2. To evaluate the performance of Pradhan Mantri Fasal Bhima Yojana (PMFBY) and Restructured Weather Based Crop Insurance Scheme (RWBCIS) in India.

RESEARCH GAP

So many studies have been done on Pradhan Mantri Fasal Bhima Yojana (PMFBY). They might have not been in detail in analysis of the progress of the PMFBY and that studies have not considered Restructured Weather Based Crop Insurance Scheme (RWBCIS) for analysis and they are based on data of previous years. This study has considered both Pradhan Mantri Fasal Bhima Yojana (PMFBY) and Restructured Weather Based Crop Insurance Scheme (RWBCIS) recent data for analysis.

RESEARCH METHODOLOGY

■ **Sample Design:** State-wise farmers applications insured, area insured, sum insured, farmers share in premium, gross premium, reported claims, paid claims and farmers applications benefited published in the PMFBY Website.

■ **Tools for Data Collection:** Secondary Data has been used for this study to analyse the performance of Pradhan Mantri Fasal Bhima Yojana (PMFBY) and Restructured Weather Based Crop Insurance Scheme (RWBCIS).

■ **Tools for Data Analysis:** Tabular forms and ANOVA has been deployed for analysis.

HYPOTHESIS

H₀: There is a significant difference between Sum Insured, Reported Claims and Paid Claims.

H₁: There is no significant difference between Sum Insured, Reported Claims and Paid Claims.

Table-1

Combined State-wise Business Statistics of PMFBY & RWBCIS (as on 02.11.2020)

State / UTs Name	Farmers Applications Insured (Lakh)	Area Insured (Lakh ha)	Sum Insured	Farmers Share in Premium	Gross Premium	Reported Claims	Paid Claims	Farmer Applications Benefitted (Lakh)
A & N Islands	7	6	2.69	0.013	0.24	0.09	-	-
Andhra Pradesh	24,462	18,911	11,305.54	262.134	1,128.89	1,884.50	1,884.50	15.962
Assam	741	491	316.89	2.046	13.25	0.39	0.09	0.004
Bihar	-	-	-	-	-	-	-	-
Chhattisgarh	15,702	22,743	7,868.29	160.856	888.82	1,087.00	1,087.00	6.558
Goa	0003	3	3.25	0.033	0.03	0.10	0.10	0.000
Gujarat	21,710	26,112	13,676.83	402.563	3,141.39	2,778.39	2,777.77	13.767
Haryana	14,439	20,549	13,742.45	253.404	856.53	946.57	941.60	4.199
Himachal Pradesh	2,690	900	725.44	29.723	79.43	55.00	55.00	1.272
Jammu & Kashmir	1,537	1106	1,365.61	16.909	76.67	26.23	26.23	0.197
Jharkhand	12,936	6295	3,496.91	20.127	413.05	499.53	21.11	0.577
Karnataka	19,330	22,400	9,708.35	272.880	1,857.57	2,935.04	2,903.81	13.629
Kerala	570	432	315.97	6.156	35.93	25.82	25.82	0.397
Madhya Pradesh	74,196	1,29,329	47,340.96	934.818	5,542.01	3,607.69	3,425.86	20.322
Maharashtra	1,48,196	88,486	30,257.87	789.010	6,118.32	6,065.31	6,057.23	79.952
Manipur	15	8	5.22	0.104	0.21	0.00	0.00	0.000
Meghalaya	9	9	4.42	0.103	0.14	0.09	-	-
Odisha	20,985	14,854	8,740.84	172.659	1,112.34	1,170.44	1,170.44	6.581
Puducherry	101	81	46.65	-	2.69	0.45	0.45	0.005
Rajasthan	71,907	77,432	29,301.18	658.831	3,638.38	3,282.73	3,266.56	19.867
Sikkim	2	1	1.14	0.027	0.03	0.00	0.00	0.000
Tamil Nadu	24,219	14,552	8,907.13	157.109	1,641.47	2,499.75	2,490.13	17.529
Telangana	7,894	8026	6,064.98	151.186	540.11	551.69	112.02	0.388
Tripura	21	3	2.16	0.079	0.12	0.02	0.02	0.002
Uttar Pradesh	61,270	51,343	21,887.98	399.870	1,418.87	468.87	464.82	6.204
Uttarakhand	1,928	1089	866.09	20.993	75.06	72.38	72.38	0.847
West Bengal	51,266	17,763	14,081.37	140.728	765.07	539.83	535.65	7.050
Grand Total	576.1	522.9	230,036	4,852	29,347	28,498	27,319	215.3

* Rabi 2018-19 claims yet to be fully reported

Information is based on declarations received from Implementing Insurance Companies and is currently being verified by Department of Agriculture, Cooperation and Farmers Welfare, Government of India with concerned State Governments

\$ Majority of claim settlement is pending due to pending State subsidy and/or pending yield data. Some claims are also pending due to issues such as payment failure, discrepancies in yield data etc.

Source: <https://pmfby.gov.in>.

The above table exhibits Combined State-wise Business Statistics of PMFBY & RWBCIS as on as on 02.11.2020. It shows Farmers Applications Insured, Area Insured, Sum Insured, Farmers Share in Premium, Gross Premium, Reported Claims, Paid Claims and Farmer Applications Benefitted.

Table-2

Percentage of Claims Reported and Paid in Sum Assured and Percentage of Claims Paid in Reported Claims (as on 02.11.2020)

State / UTs Name	Sum Insured	Reported Claims	Reported Claims Percentage in Sum Assured	Paid Claims	Paid Claims Percentage in Sum Assured	Paid Claims Percentage in Reported Claims
A & N Islands	2.69	0.09	3.35	0	0	0
Andhra Pradesh	11,305.54	1,884.50	16.67	1,884.50	16.67	100.00
Assam	316.89	0.39	0.12	0.09	0.03	23.08
Bihar	0	0	0	0	0	0
Chhattisgarh	7,868.29	1,087.00	13.81	1,087.00	13.81	100.00
Goa	3.25	0.1	3.08	0.1	3.08	100.00
Gujarat	13,676.83	2,778.39	20.31	2,777.77	20.31	99.98
Haryana	13,742.45	946.57	6.89	941.6	6.85	99.47
Himachal Pradesh	725.44	55	7.58	55	7.58	100.00
Jammu & Kashmir	1,365.61	26.23	1.92	26.23	1.92	100.00
Jharkhand	3,496.91	499.53	14.28	21.11	0.60	4.23
Karnataka	9,708.35	2,935.04	30.23	2,903.81	29.91	98.94
Kerala	315.97	25.82	8.17	25.82	8.17	100.00
Madhya Pradesh	47,340.96	3,607.69	7.62	3,425.86	7.24	94.96
Maharashtra	30,257.87	6,065.31	20.05	6,057.23	20.02	99.87
Manipur	5.22	0	0	0	0	0
Meghalaya	4.42	0.09	2.04	0	0.00	0.00
Odisha	8,740.84	1,170.44	13.39	1,170.44	13.39	100.00
Puducherry	46.65	0.45	0.96	0.45	0.96	100.00
Rajasthan	29,301.18	3,282.73	11.20	3,266.56	11.15	99.51
Sikkim	1.14	0	0	0	0	0
Tamil Nadu	8,907.13	2,499.75	28.06	2,490.13	27.96	99.62
Telangana	6,064.98	551.69	9.10	112.02	1.85	20.30
Tripura	2.16	0.02	0.93	0.02	0.93	100.00
Uttar Pradesh	21,887.98	468.87	2.14	464.82	2.12	99.14
Uttarakhand	866.09	72.38	8.36	72.38	8.36	100.00
West Bengal	14,081.37	539.83	3.83	535.65	3.80	99.23
Grand Total	230,036	28,498		27,319		

Source: <https://pmfby.gov.in>.

The above Table-3 portrays, Percentage of Claims Reported and Paid in Sum Assured and Percentage of Claims Paid in Reported Claims.

FINDINGS OF THE STUDY

With regard to sum assured Madhya Pradesh (Rs. 47,340.96 crores) is having highest amount of sum assured compared all other states and union territories. Maharashtra (Rs. 30,257.87 crores), Rajasthan (Rs. 29,301.18 crores), Uttar Pradesh (Rs. 21,887.98 crores), West Bengal (Rs. 14,081.37 crores), Haryana (Rs. 13,742.45 crores) and Gujarat (Rs. 13,676.83 crores) are the states which are occupied major share in the sum assured amount of PMFBY & RWBCIS after Madhya Pradesh. Bihar is having nil sum assured amount

and Sikkim (Rs. 1.14 crores) is having lowest amount sum assured compared to all other states and union territories.

Similarly, with reference to reported claims percentage in sum assured, Karnataka (30.23 per cent) is having highest percentage of reported claims compared to all other states and union territories, followed by Tamil Nadu (28.06 per cent), Gujarat (20.31 per cent), Maharashtra (20.05 per cent), Andhra Pradesh (16.67 per cent), Jharkhand (14.28 per cent), Chhattisgarh (13.81 per cent) and Odisha (13.39 per cent) are the major states reported claims of PMFBY & RWBCIS after Karnataka State. Again Bihar, Manipur and Sikkim States have not reported any claims and Assam (0.12 per cent) is having lowest percentage of reported claims.

Likewise, with respect to paid claims percentage in sum assured, again Karnataka (29.91 per cent) State has got first place in receiving claims of PMFBY & RWBCIS compared to all other states and union territories. Again Tamil Nadu (29.91 per cent), Gujarat (20.31 per cent), Maharashtra (20.02 per cent) and Andhra Pradesh (16.67 per cent) have maintained the same place in receiving claims which they had maintained in reported claims. Again Bihar, Manipur and Sikkim States have not claimed any claims and again Assam (0.03 per cent) is in the last place in receiving claims.

Finally, regarding Paid Claims Percentage in Reported Claims, Andhra Pradesh, Chhattisgarh, Goa, Himachal Pradesh, Jammu & Kashmir, Kerala, Odisha, Puducherry, Tripura and Uttarakhand states have achieved 100 per cent in receiving claims. Again Bihar, Manipur and Sikkim States have not received any claims and Jharkhand (4.23 per cent) is having lowest percentage paid claims in sum assured compared to all other states and union territories.

Table-3
ANOVA ANALYSIS

Groups	Count	Sum	Average	Variance		
Sum Insured	27	230036.21	8519.85963	1.38E+08		
Reported Claims	27	28497.91	1055.47815	2352195		
Paid Claims	27	27318.59	1011.79963	2358459		
Source of Variation	SS	Df.	MS	F	P-value	F crit.
Between Groups	1008808773	2	504404387	10.56708	8.689E-05	3.113792
Within Groups	3723217046	78	47733551.9			
Total	4732025819	80				

The above Table-2 reveals that, there is a significant difference between Sum Insured, Reported Claims and Paid Claims.

CONCLUSION

It can be concluded that, only small percentage of farmers have awareness about Pradhan Mantri Fasal Bhima Yojana (PMFBY) and Restructured Weather Based Crop Insurance Scheme (RWBCIS). The Government has to conduct awareness programmes to the farmers and according to literature review cumbersome procedures are to be reduced.

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