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A Study of Progress and Status of Pradhan Mantri Fasal Bima Yojana (PMFBY)

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Abstract

Agriculture continues to be the backbone of Indian economy, but the dependency of agriculture on monsoon and the uncertainty of monsoon are well known due to which India is always in the grip of Natural Calamities. India is the second most flood-affected country in the world after Bangladesh. Due to variability, uncertainty and long dry spells, about 68% of the cultivable area of the country remains drought-affected and 52% of the country's cultivated land is rain-fed. On an average, one year in every 5 years is drought-affected. One-third of the country's area opted less than 75 cm of rainfall, which is insufficient for normal productivity of crops. Sometimes the conditions of drought and flood are so devastating that they even break the backbone of the farmers. Apart from this, there are many external factors that affect farming, and cause extensive crop damage. In such a situation, providing the farmers of the country with options to deal with agricultural disasters is the most important and for this, agricultural insurance is the most powerful institutional tool to protect farmers from weather uncertainty and provide financial security. The paper examines the Progress and Status of the PMFBY.

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Introduction of PMFBY: Pradhan Mantri Fasal Bima Yojana (PMFBY), approved by the Cabinet on 13th January, 2016, is a result of the best experiences obtained so far in operating crop insurance in the country and continuous efforts made by the Government in this regards.

In PMFBY Insurance protection for notified food crops, oilseeds and annual horticultural/commercial crops, fixed maximum premium for all farmers Kharif season 2%, Rabi Season 1.5%, Annual Commercial/horticultural crops 5% of sum insured. The difference between actual premium and the rate of Insurance payable by farmers shall be shared equally by the Centre and State. Claims of full Sum Insured (SI) without capping in SI. If the sowing is not done due to adverse weather/climate, claims/indemnity upto 25% of sum insured will be paid for prevented sowing/planting risk. When the crop yield is less than the guaranteed yield of notified crops, the indemnity payment equal to shortfall in yield is payable to all insured farmers. On account advance payment, up to 25% of likely claims will be paid as immediate relief .Losses caused by inundation, hailstorm and landslide would be assessed at individual farm level. Post-harvest losses assessment for damage to crops in cut and spread in the field up to 14 days on account of cyclonic rain and unseasonal rain in the entire country.

The main objective of the PMFBY is to support sustainable production in agriculture sector by way of (a) providing financial support to farmers suffering crop loss/damage arising out of unforeseen events; (b) stabilizing the income of farmers to ensure their continuance in farming; (c) encouraging farmers to adopt innovative and modern agricultural practices; (d) ensuring flow of credit to the agriculture sector.

Literature Review:

S.S. Mahajan (2012) analyzed the National Agricultural Insurance Scheme (NAIS) for the period 1999-2008 i.e. 9 years. The study revealed that Maharashtra, Andhra Pradesh, Gujarat, Uttar Pradesh and Rajasthan have dominated in the implementation of NAIS compared to other states. The main problem is that most of the crops are not covered under NAIS as payment of insurance claims is subject to crop cutting experiments, while another is that there is a gap between data release at various departments and administrative level, delaying the timely availability of data.

Mamta Swain (2016) has done a comparative evaluation of the performance of National Agricultural Insurance Scheme (NAIS) and pilot Weather Based Crop Insurance Scheme (WBCIS) in the state of Odisha. The study revealed that WBCIS performed better than NAIS due to its higher acceptance rate, higher percentage of benefited farmers, lower premium, faster claim payment. The study also suggests encouraging private participation by providing subsidies, guarantees and reinsurance facilities.

Deepa, Limasunep and Feroz (2018) studied the implementation of National Agricultural Insurance Scheme (NAIS) in the North Eastern states based on indicators such as area insured per farmer, percentage of benefited farmers, claims paid per farmer, ratio of claims paid to gross premiums and profits to companies. They found that the penetration of NAIS is very inadequate. Insurance schemes have generally been co-sold with crop loans. They concluded that despite the introduction of NAIS as a tool for risk management in the North Eastern states, it has served very limited purpose. The obvious reason for low coverage in the Northeast could be lack of awareness about crop insurance schemes or high premiums.

Ashish Chauhan and Chetna Marwadi (2020) evaluated the performance of two main crop insurance schemes NAIS and PMFBY in Gujarat on four parameters such as farmers insured, farmers benefited, sum insured and claims paid. They found that under NAIS, the insured farmers benefited and the claims paid from the sum insured were the highest in the year 2009. After the implementation of the scheme, there was an increase of 39.53% in insured farmers. Though there was a decrease in the farmers benefited under PMFBY in the first year, thereafter it increased by about 58% in the Kharif season. However, the claims paid per farmer during the Kharif season of 2017 (52.08%) has been lower than the national average.

Madhusudan, G. Singh and Singh, Shambhu Nath (2024) in their study "Implementation of Crop Insurance Programme in Bharat: An Empirical Study" found that Since independence, the Government of Bharat (GOB) has launched various crop insurance schemes intermittently to sustain the farmers' income levels. Howeover, the success of PMFBY should be judged from coverage of non-loanees who are free to opt for the scheme and which the primary focus of the scheme is also. Coverage of non loanee farmers under PMFBY has increased to about 32% of the total coverage as against below 5% under erstwhile schemes. Another positive feature of the scheme has been the removal of cap on the sum insured and equating it with scale of finance. This has not only allowed maximum risk coverage to the farmers but claims per farmer and claims per hectare also went up substantially as compared to previous years. Sum insured per farmer per crop increased from Rs.22123 in 2014-15, Rs.23715 in 2015-16 to Rs.34968 in 2016-17. As compared to 2014-15 and 2015-16 which were bad monsoon years when the claims per hectare were Rs.1777 and Rs.4118 respectively, in 2016-17, despite it being a good monsoon year the claims per hectare are Rs.2525. Even claims per farmer in 2016-17 were Rs.12860 as compared to Rs.7256 in 2015-16 and Rs.4107 in 2014-15. Overall, the scheme envisages end to end solutions through integration of all stakeholders on a common crop insurance portal with tight timelines for each of the stages right uptill claim settlement in farmer's accounts. A lot however, depends on the progress of stakeholders in adoption of technological advancements envisaged in the scheme.

Objectives of the Study: In this research paper, an attempt has been made to know to what extent PMFBY has been successful in financially compensating farmers for crop loss due to non preventable risk. Therefore, the main objectives of study are as follows.
1) To study the nationwide expansion of the scheme.
2) To Study the coverage of States/UTs and Crops under scheme
3) To Study the coverage of Farmers and Area under Schemes
4) To Analyze the Cost-Benefit of the scheme for farmers.
5) To Study the insurance claims received by farmers due to crop loss.

Need for the Study: Since its inception, this scheme has been one of the selected flagship schemes of the Government of India and has been successfully implemented in 16seasons during the last 8years. During this period, to maintain the relevance of the scheme and to make its implementation effective, it is being reviewed at the national level every 6months. While the provisions of the scheme have been extensively revised twice so far. Despite all this, many states like Bihar, West Bengal and Gujarat have dropped the implementation of the scheme. Therefore, it becomes necessary to study the progress and status of the scheme in terms of the agriculture and the condition of farmers in the 8year period of implementation of the scheme.

Methodology: This study is completely based on secondary data. This study evaluates the performance of PMFBY in different states using data on insured farmers, benefited farmers, claims paid and sum insured. In case of PMFBY, data has been collected for the period from 2016-17 to 2023-24 i.e. for 8 years. Reports of various Government agencies including Ministry of Agriculture and Farmers Welfare, Government of India, Agriculture at a Glance, Agricultural Census 2015-16 and Crop Situation in India have been used. Thereafter, computerized numerical data analysis with the help of MS Excel software and graphical basis as required.

Coverage of States/UTs under PMFBY: As per Table-1 that the number of States/UTs implementing PMFBY in Kharif season ranged from 19 to 23. Out of the total States/UTs of the country, the States implementing the scheme in Kharif season was maximum 63.89% in Kharif 2017 and minimum 52.78% in Kharif 2020. Whereas, the number of States/UTs implementing PMFBY in Rabi season ranged from 18 to 25. Out of the total States/UTs of the country, the States/UTs implementing PMFBY in Rabi season was maximum 69.44% in Rabi 2016-17 and minimum 50.00% in Rabi 2020-21.

Table-1 :Number of PMFBY implementing States/UTs

Years	States/UTs in Kharif		States/UTs in Rabi		Total States/UTs
	(number)	(%)	(number)	(%)	(number)
17-2016	21	58.33	25	69.44	36
2017-18	23	63.89	21	58.33	36
19-2018	22	61.11	21	58.33	36
20-2019	20	55.56	19	52.78	36
21-2020	19	52.78	18	50.00	36
22-2021	20	55.56	20	55.56	36
23-2022	21	58.33	22	61.11	36
20232-4	21	58.33	21	58.33	36

Source: Department of Agriculture & Farmers' Welfare, Ministry of Agriculture and Farmers Welfare, Government of India, New Delhi.

Overall, the PMFBY has been not implemented all India level in the 16 crop seasons in the last 8 years (2016-17 to 2023-24) and maximum of 70% of the States/UTs of the country have implemented the scheme. Therefore, it may be stated that the coverage of PMFBY is not all India level.

Coverage of Crops under PMFBY: As per Table-2, that the year 2016-17 to 2023-24, the number of both agricultural and horticultural crops insured under PMFBY in Kharif season has ranged from 82 to 123. Whereas in Rabi season, the number of crops insured under PMFBY has ranged from 105 to 165. However, in the total insured crops under PMFBY, the share of Kharif season crops has ranged from 39.61 to 44.44% and Rabi season crops has ranged from 55.56 to 60.39%.

Table- :2Number of Crops Insured under PMFBY

Years	Crops insured in Kharif			Crops insured in Rabi			Total Crops insured
	Agriculture	Horticulture	Total	Agriculture	Horticulture	Total	
2016-17	35	49	**84**	36	69	**105**	**189**
2017-18	38	56	**94**	39	81	**120**	**214**
19-2018	38	57	**95**	40	82	**122**	**217**
20-2019	37	48	**85**	40	83	**123**	**208**
21-2020	36	46	**82**	36	89	**125**	**207**
22-2021	49	57	**106**	53	95	**148**	**254**
23-2022	54	59	**113**	60	98	**158**	**271**
20232-4	54	69	**123**	59	106	**165**	**288**

Source: Department of Agriculture & Farmers' Welfare, Ministry of Agriculture and Farmers Welfare, Government of India, New Delhi.

Overall, there has been a steady increase in the number of crops insured under PMFBY in the last 8years (17-2016to (24-2023 except for some deviations during the 16crop seasons. The number of crops insured under PMFBY in both seasons of 17-2016was 189, which increased to 288 in .24-2023

Coverage of Farmers under PMFBY: According to Table-3, in 2016-17, the first year of implementation of PMFBY, a total of 562.71 lakh farmer applications were insured. This number of insured farmer applications has been 512.43in 18-2017, 560.37in 19-2018, 592.61in 20-2019, 613.06in 21-2020, 819.93in 22-2021, 1108.12in 23-2022and 1390.06lakh in .24-2023 It is clear that after the increase in of insured farmer applications under the scheme in 2016-17, a sudden decrease has been observed. But after this, a continuous increase has been observed.

If look at the insured farmers according to Kharif and Rabi seasons, insured farmer applications has always been higher in Kharif season as compared to Rabi season. Under the scheme, 392.2 lakh farmer applications were insured in Kharif-2016, 342.8 in 2017, 334.1 in 2018, 407.9 in 2019, 418.6 in 2020, 498.1 in 2021, 684.3 in 2022 and 854.1 lakh in Kharif-2023. Whereas 170.5 lakh farmer applications were insured in Rabi 2016-17, 169.7 in 2017-18, 226.3 in 2018-19, 184.6 in 2019-20, 194.4 in 2020-21, 321.8 in 2021-22, 423.8 in 2022-23 and 535.9 lakh in Rabi 2023-24.

In the year 2016-17, total loanee farmer applications were 427.69 lakh. This number of loanee farmer applications was 370.61 lakh in 2017-18, 345.91 in 2018-19, 369.26 in 2019-20, 392.16 in 2020-21, 610.46 in 2021-22, 748.92 in 2022-23 and 861.63 lakh in 2023-24. It is clear that after the increase of insured loanee farmer applications under the scheme in the 2016-17, a sudden decrease was observed but thereafter a continuous increase has been observed from 2019-20 onwards. Thus, the share of loanee farmer applications in total farmer applications has ranged from 61.99 to 76.01% during the last 8 years (2016-17 to 2023-24).

Table-3: Farmer Applications Insured under PMFBY

Year (Both Season)	Farmer Applications Insured				
	Loanee		Non-Loanee		Total
	(lakh)	(%)	(lakh)	(%)	(lakh)
2016-17	427.69	76.01	135.02	23.99	562.71
2017-18	370.61	72.32	141.81	27.67	512.43
2018-19	345.91	61.73	214.46	38.27	560.37
2019-20	369.26	62.31	223.36	37.69	592.61
2020-21	392.16	63.97	220.91	36.03	613.06
2021-22	610.46	74.45	209.47	25.55	819.93
2022-23	748.92	67.58	359.2	32.42	1,108.12
2023-24	861.63	61.99	528.43	38.01	1,390.06
Grand Total	**4,126.65**	**67.00**	**2,032.65**	**33.00**	**6,159.30**

Note: *Business Statistics as on 30.06.2024, but Kharif-2023 & Rabi 2023-24 enrollment and claim data yet to be finalized, Kharif-2022 & Rabi 2022-23 claim calculations not yet finalized.*

Source: Department of Agriculture & Farmers' Welfare, Ministry of Agriculture and Farmers Welfare, Government of India, New Delhi.

The total non-loanee farmer applications were 135.02 lakh in 2016-17. This number of non-loanee farmer applications has been 141.8 in 2017-18, 214.5 in 2018-19, 223.4 in 2019-20, 220.9 in 2020-21, 209.5 in 2021-22, 359.2 in 2022-23 and 528 lakh in 2023-24. It is evident that the absolute number of non-loanee farmer applications insured under the scheme has shown a steady increase from 2016-17 to 2019-20, but the absolute coverage of non-loanee farmer applications has decreased in the years 2020-21 and 2021-22. After this, a continuous increase has been observed. Thus, during the last 8 years (2016-17 to 2023-24), the share of non-loanee farmer applications in total insured farmer applications has ranged from 23.99 to 38.27 percent.

Since the coverage of loanee farmers has been mandatory till Kharif 2020 under the scheme, it was difficult to estimate the voluntary coverage of loanee farmers. Therefore, it becomes necessary to estimate the trend of coverage of non-loanee farmers to understand the reach of the scheme after the provision of mandatory coverage of loanee farmers is abolished. In this regard, the share of non-loanee farmer applications in total insured farmer applications was 23.99 percent in

2016-17. This share has been 27.67 in the year 2017-18, 38.27 in 2018-19, 37.69 in 2019-20, 36.03 in 2020-21, 25.55 in 2021-22, 32.42 in 2022-23 and 38.01 percent in 2023-24.

Table-4: Insured Farmer against Operational Holdings

Year (Both Season)	Total Farmer Insured (lakh)	No. of Operational Holdings, 2015-16 in India (lakh)	Insured Farmer against Operational Holdings (%)
2018-19	363.49	1464.54	24.82
2019-20	297.11	1464.54	20.29
2020-21	268.79	1464.54	18.35
2021-22	259.01	1464.54	17.69
2022-23	302.60	1464.54	20.66
2023-24	375.23	1464.54	25.62

Source: https://pmfby.gov.in/adminStatistics/dashboard and Operational Holdings as per All India Agri Census 2015-16, Ministry of Agriculture and Farmers Welfare, Government of India, New Delhi.

In this way, during the last 8 years (2016-17 to 2023-24), the share of non-loanee farmer applications in total insured farmer applications has been from 23.99 to 38.27 percent. It is clear that even after the abolition of the provision of mandatory coverage of loanee farmers; there has been no significant change in the coverage trend of the scheme. The coverage of non-loanee farmers was 38.27 percent in 2018-19, which was the maximum. After this, the second maximum coverage was in 2023-24, which was 38.01 percent.

Table-4 shows the comparative coverage of farmers insured under the scheme and total operational holdings farmers of the country during the last 6 years (2018-19 to 2023-24). As per table that in both the seasons of 2016-17, 363.49 lakh farmers were insured under the scheme, which was 24.82 percent of the total operational holder farmers. This share has been 20.29 in the year 2019-20, 18.35 in 2020-21, 17.69 in 2021-22, 20.66 in 2022-23 and 25.62 percent in 2023-24. In this way, from 259.01 lakh to 375.23 lakh farmers have been insured under the scheme during the last 6 years. Overall, out of 1464.54 lakh landholding farmers in the country, only 17.69 to 25.62 percent farmers could be insured under the scheme, which can’t be called satisfactory.

Coverage of Area under Crop Insurance Schemes: Coverage of insured area against Gross Cropped Area (GCA) under Crop Insurance Schemes operated in the country is given in Table-5.

Table-5: Coverage of GCA under Crop Insurance Schemes

Years	Area Insured (Lakh Hectares)	All India Gross Cropped Area (Lakh Hect.)	Coverage of GCA under Crop Insurance	GCA of Crop Insurance Implementing States (Lakh Hect.)	Coverage of GCA of Crop Insurance Implementing States
2000-01	163.3	1,853.4	8.8%	1,483.4	11.0%
2005-06	277.5	1,930.5	14.4%	1,841.3	15.1%
2010-11	375.1	1,976.8	19.0%	1,887.2	19.9%
2015-16	523.9	1,970.5	26.6%	1,804.3	29.0%
2016-17	565.6	2,002.0	28.3%	1,901.1	29.8%
2017-18	508.1	2,002.0	25.4%	1,912.7	26.6%
2018-19	534.8	2,002.0	26.2%	1,836.4	28.6%
2019-20	571.8	2,002.0	25.2%	1,728.4	29.2%
2020-21	483.0	2,002.0	24.1%	1,454.1	33.2%
2021-22	452.7	2,002.0	22.6%	1,462.8	30.9%
2022-23	501.3	2,002.0	25.0%	1,628.4	30.8%

2023-24	597.6	2,002.0	29.9%	1,654.5	36.1%

Source: Directorate of Economics and Statistics, Ministry of Agriculture and Farmers Welfare, Government of India, New Delhi. **Note:** GCA data for the year 2016-17 has been used for subsequent years to understand the coverage of PMFBY.

As per Table-5 that the status of crop insurance coverage of the country before implementing PMFBY, 16 years ago, i.e. in the year 01-2000, the insured area of the country was 163.3 lakh hectares, which increased to 277.5 in 06-2005, 375.1 in 11-2010 and 523.9 lakh hectares in .16-2015Thus, the crop insurance coverage in the country was %8.8 of the gross cropped area in 01-2000, which increased to %14.4 in 06-2005, %19.0 in 11-2010 and %26.6 in .16-2015 Thereafter, PMFBY was operated from the year 2016-17 and in the initial year 2016-17, the insured area of the country increased to 565.6 lakh hectares, which was 28.3% of the GCA of that year. However, after this, there has been a deviation in the insured area. But in the year 2023-24, the insured area of the country increased to 597.6 lakh hectares, which is 29.9 percent of this year's GCA and this is the maximum crop insurance coverage as yet.

Overall, the insured area in the country under the crop insurance schemes during the implementation period of PMFBY over the last 8 years has ranged from 452.7 to 597.6 lakh hectares, covering 22.6 to 29.9 percent of the gross cropped area of the country.

Cost-Benefit Analysis of PMFBY for Farmers: As per Table-6 shows the amount of claim paid against farmer premium, gross premium and sum insured under PMFBY for both the seasons from 2016-17 to 2023-24, so that the status of claim amount received by the farmers who insured crops under the scheme may be understood.

Table-6: Cost-Benefit Analysis of PMFBY for Farmers

Year (Both Season)	Farmers Premium (Rs. Crore)	Gross Premium (Rs. Crore)	Reported Claims (Rs. Crore)	Paid Claims (Rs. Crore)	Farmer Applications Paid Claims (lakh)	Claim Ratio	Claim Ratio to Sum Insured	Claim Ratio to Farmers Premium
2016-17	3,698.0	20,071.0	15,148.9	15,148.9	139.2	75.50%	7.86%	409.65%
2017-18	3,741.8	22,230.1	20,298.9	20,292.2	161.6	91.30%	10.65%	542.31%
2018-19	4,168.9	26,765.1	25,904.7	25,843.2	216.6	96.80%	11.72%	619.90%
2019-20	3,880.3	28,751.3	24,596.8	24,333.8	221.0	85.60%	11.97%	627.11%
2020-21	3,702.6	29,954.0	20,324.4	20,132.5	192.3	67.90%	10.46%	543.74%
2021-22	3,348.2	27,968.7	18,860.8	18,643.8	337.1	67.40%	10.73%	556.83%
2022-23	3,569.4	28,459.6	16,715.6	16,463.8	309.1	58.70%	8.01%	461.25%
2023-24	2,726.0	26,386.1	10,108.6	7,375.3	149.1	38.30%	2.87%	270.55%
Grand Total	**28,835.1**	**2,10,585.8**	**1,51,958.8**	**1,48,233.5**	**1,725.9**	**72.20%**	**9.06%**	**514.07%**

Business Statistics as on 30.06.2024, but Kharif-2023 & Rabi 2023-24 enrollment and claim data yet to be finalized, Kharif-2022 & Rabi 2022-23 claim calculations not yet finalized.

Source: Department of Agriculture & Farmers' Welfare, Ministry of Agriculture and Farmers Welfare, Government of India, New Delhi.

It is clear from the table that during the last 8 years (2016-17 to 2023-24), claims amount Rs.1,48,233.5 crore have been paid to the insured farmers against the farmer premium of Rs 28,835.1 crore collected from the farmers. This claim amount was 514.07 percent against the farmer's premium. This means that the insured farmers received 5.14 times more claim amount than their paid premium.

It is significant that during the last 8 years, an amount of Rs 16,35,557.00 crore was sum insured by the insurance companies against the gross premium of Rs 2,10,585.8 crore, while claims amount Rs 1,48,233.5 crore were paid. In this view, the scheme can't be termed as a successful as only 9.06 percent of the sum insured and 72.20 percent of the gross premium have been claims paid.

Overall, the claim ratio against farmer premium ranged from 270.55 to 627.11 percent, against gross premium from 38.30 to 96.80 percent and against sum insured from 2.87 to 11.97 percent has been paid during the years 2016-17 to 2023-24.

Farmers Benefited under PMFBY: Insurance is a business of risk and the payment of claims under the scheme is based on the notified area, risk level and crop loss. Therefore, the benefit to farmers under the scheme depends on the loss in the yield of the notified crop and the risk level of area. If the monsoon conditions are favorable for the crops, the claims will be less, whereas in case the seasonal conditions are adverse for the crops, the claims will be high.

Table-7: Beneficiary Farmer Applications against insured Farmer Applications under PMFBY

Year (Both Season)	Total Farmer Applications Insured (lakh)	Benefitted Farmer Applications (lakh)	Beneficiary Farmer Applications against insured Farmer Applications (%)
2016-17	562.71	139.18	24.73
2017-18	512.43	161.58	31.53
2018-19	560.37	216.57	38.65
2019-20	592.61	220.97	37.29
2020-21	613.06	192.29	31.37
2021-22	819.93	337.11	41.11
2022-23	1,108.12	309.12	27.90
2023-24	1,390.06	149.08	10.72
Grand Total	**6,159.30**	**1,725.91**	**28.02**

Business Statistics as on 30.06.2024, but Kharif-2023 & Rabi 2023-24 enrollment and claim data yet to be finalized, Kharif-2022 & Rabi 2022-23 claim calculations not yet finalized.

Source: Department of Agriculture & Farmers' Welfare, Ministry of Agriculture and Farmers Welfare, Governmentof India, New Delhi.

As per table-7, it is clear that during the last 8 years (2016-17 to 2023-24), 1725.91 lakh farmer applications have benefited in comparison to 6159.30 lakh insured farmer applications, which is 28.02 percent of the total insured farmer applications. This share of benefited farmers has been 24.73 in 2016-17, 31.53 in 2017-18, 38.65 in 2018-19, 37.29 in 2019-20, 31.37 in 2020-21, 41.11 in 2021-22, 27.90 in 2022-23 and 10.72 percent in 2023-24.

It is clear that the benefited farmer applications from 2016-17 to 2018-19 has reflected an increase, but thereafter a deviation in the growth has been observed. Overall, during the last 8 years, 41.11 farmer applications have benefited in 2021-22, which is the maximum level as yet. On this basis, it may be stated that at the all-India level, the percentage of insured and benefited farmers has increased in the subsequent years as compared to the year 2016-17.

Results and Suggestions: On the basis of the results obtained from the presented study, it may be concluded that the PMFBY has been not implemented all India level in the 16 crop seasons in the last 8 years (2016-17 to 2023-24) and maximum of 70% of the total States/UTs of the country have implemented the scheme. The number of crops insured under PMFBY in the last 8 years (2016-17 to 2023-24) has been steady increase in except some deviations during the 16 crop seasons. The number of crops insured under both seasons of 2016-17 was 189, which increased to

288 in 2023-24. Therefore there is a need to expand the scheme to more states and crops of the country.

A total of 562.71lakh farmer applications were insured in the first year of implementation of PMFBY in 17-2016, which has increased to 1390.06lakh insured farmer applications in -2023 .24 It is clear that after the increase of insured farmer applications under the scheme in 2016-17, a sudden decrease has been observed. But after this, a continuous increase has been observed. In the last 8 years (2016-17 to 2023-24), the share of non-loanee farmer applications in total insured farmer applications has been from 23.99 to 38.27 percent. It is clear that even after the abolition of the provision of mandatory coverage of loanee farmers; there has been no significant change in the coverage trend of the scheme.

The insured area of country under the crop insurance schemes during the implementation period of PMFBY over the last 8 years has ranged from 452.7 to 597.6 lakh hectares, covering 22.6 to 29.9 percent of the gross cropped area of the country. The insured area of the country has shown a decrease during the years 2020-21 and 2021-22. Hence, the coverage of the insured area has not increased as per the target of the scheme nor has there been any success in attracting more states in terms of area expansion.

In the last 8 years, an amount of Rs. 16,35,557.00 crore was insured by the insurance companies against the gross premium of Rs.2,10,585.8 crore, while claims amount Rs. 1,48,233.5 crore were paid. In this view, the scheme can't be termed as a successful as only 9.06 percent of the sum insured and 72.20 percent of the gross premium have been claims paid. Although, the claim ratio against farmer premium ranged from 270.55 to 627.11 percent, against gross premium from 38.30 to 96.80 percent and against sum insured from 2.87 to 11.97 percent has been paid during the years 2016-17 to 2023-24.

The benefited farmer applications from 2016-17 to 2018-19 has reflected an increase, but thereafter a deviation in the growth has been observed. During the implementation of last 8 years, 41.11 farmer applications have benefited in 2021-22, which is the maximum level as yet. On this basis, it may be stated that at the all-India level, the percentage of insured and benefited farmers has increased in the subsequent years as compared to the year 2016-17.

It is also clear from the discussion that PMFBY would not be sufficient to cover all the pure risks arising from agricultural activities. To protect farmers against various kinds of climatic risks, a comprehensive risk mitigation strategy needs to be planned rather than just focusing on crop insurance.

Conclusion: Since independence, the Government of India has launched various crop insurance schemes intermittently to sustain the farmers' income levels. Currently, two crop insurance schemes are operating in India, i.e., Pradhan Mantri Fasal Bima Yojana (PMFBY) and the Restructured Weather-Based Crop Insurance Scheme (RWBCIS). As compared to previous schemes, the PMFBY has come up with modified features, i.e., one premium, one season; coverage of all kharif and rabi seasons and all annual commercial and horticulture crops; risks covered from the pre-sowing period to the post-harvesting period; use of modern technology for assessment of crop losses, such as drones and GPS; claim paid directly into farmers accounts; three levels of indemnity offered, namely 70 percent, 80 percent, and 90 percent. To make it more successful and farmer-friendly, some new features have been added, such as voluntary participation for all farmers, business allocation to insurance companies for three years rather than one, linking with the Aadhaar card, mandatory requirements for states to pay subsidies on time, and flexibility for states to decide on additional risk coverage; however, we found that PMFBY showed limited success during 2016–17 to 2023–2024.

In conclusion, insurance is a business of risk and risk is an inherent part of our agriculture. Therefore, PMFBY is a better option to provide risk mitigation tool to the agriculture sector and provide financial security to farmers against natural calamities, which needs to be expanded in area and coverage along with making insurance easy and quick in the claim payment system.

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