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## Government of India's Pradhan Mantri Fasal Bima Yojana: A study

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### Abstract

Agriculture and associated industry sectors contribute significantly to the Indian economy, contributing around 16% of GDP and employing nearly fifty percent of the workforce. Recognizing the importance of agriculture, the government has launched several programs to assist farmers since the country's independence. The Pradhan Mantri Fasal Bima Yojana (PMFBY), initiated in 2016 as a "One Nation - One Scheme" strategy, is one such recent project. PMFBY provides comprehensive crop failure insurance coverage and helps covered farmers stabilize their income. An extensive literature search was done across significant databases to achieve this goal, which was supported by annual reports from the Indian government. The search method included terms like "Crop Insurance," "Pradhan Mantri Fasal Bima Yojana," "National Agriculture Schemes," and "India" to find related articles. Following that, a thorough study using multiple regression approaches was carried out for the years 2020-2021 and 2021-2022. In addition, as compared to other plans, the PMFBY has much lower beneficiary and claim premium ratios. This study attempts to evaluate the Government of India's smart scheme with recent initiatives taken by states and UTs to promote security farming to insured farmers. This study is an attempt to investigate the PMFBY scheme conceptual framework and determine the benefits of PMFBY in the country. Agricultural insurance protection under PMFBY has remained low concerning the number of farmers addressed, the area covered, claims paid out, and total farmers benefiting. The main problems of the PMFBY are settlement of claims delays, system complexity, and farmers' inadequate knowledge.

**Keywords:** Agriculture, government, PMFBY, crop, scheme, farmers

### 1. Introduction

Agriculture is vital for India's economy. Agriculture and allied industrial activities utilize 54.6 percent of the total population (Census 2011) and constitute an estimated 18.8 percent of the nation's GVA in 2021-22. Provided the importance of agriculture, the Indian government has made several steps to ensure its long-term growth. In the agrarian landscape of India, where millions depend on agriculture as their primary source of livelihood, ensuring the welfare of farmers and the stability of their crop yields is a paramount concern. India's agricultural sector faces numerous challenges, including unpredictable weather patterns, crop diseases, and pest infestations, which can result in devastating losses for farmers. Recognizing the critical need to safeguard farmers from these risks, in 2016, the GoI launched the Pradhan Mantri Fasal Bima Yojana (PMFBY), to revolutionize crop insurance. The PMFBY is a robust crop insurance program that replaces numerous previous crop insurance programs by combining them into a single framework. Its primary objective is to mitigate the financial risks faced by farmers due to crop failure or damage caused by natural calamities, thereby ensuring food security and improving the socio-economic well-being of rural communities. This research paper delves into the intricacies of the Pradhan Mantri Fasal Bima Yojana, examining its evolution, key features, implementation challenges, and impact on the lives of Indian farmers.

As we embark on a journey to unravel the facets of this ground breaking agricultural policy, it becomes evident that the PMFBY represents a pivotal step in the Indian government's commitment to transforming the agricultural landscape of the nation. With its potential to safeguard the livelihoods of countless farmers, enhance agricultural productivity, and foster economic resilience in rural areas, the PMFBY serves as a compelling case study in the realm of agricultural policy and rural development.

### 1.1 Pradhan Mantri Fasal Bima Yojana (PMFBY)

The Government of India initiated the 'Pradhan Mantri Fasal Bima Yojana' (PMFBY) in the season of Kharif, 2016, replacing previous programs such as the National Agriculture Insurance Scheme (NAIS) and the Modified National Agriculture Insurance Scheme (MNAIS). An "area approach" was used by the PMFBY plan. The program was necessary for farmers who took a loan from any external source and optional for non-loanee farmers; however, beginning in Kharif 2020, it was made voluntary for loanee farmers (Tiwari 2020) [23]. At a premium cost of 2 percent (Kharif crops), 1.5 percent (Rabi crops), and 5 percent (annual commercial and horticultural crops), the scheme provides complete crop failure insurance coverage to minimize loss and stabilize farmers' income. It also reaps benefits from digital technology such as mobile-based applications and other technologies like remote sensing/satellite imaging for loss assessment, among others. The plan also connects stakeholders on a single platform by connecting them to the National Crop Insurance Portal (NCI-Portal). It is comprehensive enough to cover all non-preventable natural risks, from pre-sowing to post-harvest, while highlighting the need to allow acceptable claim amounts and speedy claim payment. The premium cost over the farmers' portion of the market discovered rate is borne equally by the union and state governments.

### 2. Research gap

Existing literature reviews lack thorough quantitative analyses using statistical tools for an individual scheme i.e., PMFBY for a certain period that might give important insights into program results, cost-effectiveness, and possible areas for development.

### 3. Objective of the study

To assess the efficacy and impacts of the Pradhan Mantri Fasal Bima Yojana in India during the last five years.

### 4. Research Methodology

The research paper adopts a descriptive research methodology and gathers data from the yearly reports of the Ministry of Welfare and the Farmers Department, Government of India, spanning a period of five years. This collected data is then subjected to thorough analysis using various statistical tools. By utilizing cumulative data, the study employs a multiple regression analysis to examine how different aspects of insurance features have influenced the coverage of farmers over this multi-year timeframe.

**5. Literature review:** (Ruchbah Rai, 2019) [18] highlighted execution challenges at the state and district levels. He recognized structural and budgetary issues and proposed boosting funding for rural infrastructure, leveraging information technology, and assuring fast and appropriate reimbursement for farmers through strict adherence to the scheme's claim settlement procedure.

(Ranjan Kumar Ghosh, 2018) [10] examined PMFBY implementation, performance in selected states, and governance challenges. He recommended increasing awareness about PMFBY's benefits after crop loss due to natural disasters and highlighted the importance of incorporating rural panchayats in this awareness drive.

(Bharat Singh Ghanghas, 2018) [9] examined that around 70% of farmers had a general awareness of PMFBY, including premium data. In terms of seasonality, 40.23%

were aware, and 34.43% were aware of the scheme's risk coverage. The high level of awareness of general and premium information can be linked to mandatory suggestions for loanee farmers, with 93.33% opting for it while just 6.67% choosing it willingly.

(Ashalatha and Dr. Prabhu, 2017) [5] identified two significant concerns in the Pradhan Mantri Fasal Bima Yojana (PMFBY): online registration and claim settlement. They emphasized that without increased knowledge and a reformed claims procedure, PMFBY's mission of encouraging sustainable agriculture and assisting farmers in dealing with disasters may remain unattained. According to the study, the efficient implementation of PMFBY might reduce farmer poverty and debt while promoting agricultural growth in the region.

(Indrajeet, 2016) [13] highlights the importance of crop insurance, such as PMFBY, in lowering yield risks for Indian farmers. PMFBY provides advantages such as cheaper premiums, comprehensive coverage, and protection against post-harvest losses. Its implementation is expected to enhance insurance usage in agriculture, resulting in increased production and wealth.

(Suman Devi, 2016) [22] discusses the scheme's aims, farmer coverage, implementing agency, and administration and monitoring features. There is a brief comparison with prior Agriculture insurance initiatives such as (NAIS) the National Agricultural Insurance Scheme. The article evaluates the plan severely for its shortcomings, including the lack of coverage for risks such as damage from wild animals, nuclear events, rioting, robbery, and so on. It also identifies implementation obstacles caused by factors such as incomplete land records, faulty land titles, and corruption.

### 6. Analysis and Findings

The decrease in the number of farmer applicants during the 2017-18 period can be attributed to two main factors: the mandatory requirement of Aadhar for enrolments, which led to deduplication, and the announcement of certain state Debt Waiver Schemes. The farming community responded positively to the initiative, with 27 states and union territories (UTs) choosing to participate in one or more seasons. In its inaugural year (2016-17), the project achieved a remarkable milestone by covering 30% of the Gross Cropped Area (GCA), marking the largest crop insurance coverage in India's history. Despite the withdrawal of Bihar State from the scheme for the season of Kharif, 2018 and the West Bengal State Government's decision to exit the scheme for the season of Kharif, 2019 the coverage under the scheme exhibited an upward trend. The number of farmer applicants rose from Rs 533 lakh in 2017-18 to Rs 576 lakh in 2018-19, further rising to 616 lakh farmer applicants in 2019-20, and eventually reaching 831.37 lakhs during the 2021-2022 period. Notably, Andhra Pradesh, Gujarat, Telangana, and Jharkhand faced challenges in implementing the plan by the year 2020.

Table 2 shows the GP collection increased from Rs. 21770 crores in 2016-17 to Rs. 24649 crores in 2017-18, a rise of 13.22 percent which gradually kept increasing and it amounted to Rs 30197 crores in 2021-2022. Claims paid by insurance companies amounted to Rs. 16758 crores in 2016-17, which increased by 31 percent to Rs. 22113 crores in 2017-18, which again increased by 24 percent in 2018-19 and kept on increasing year by year depicted in the table. The figures demonstrate that insurance firms' GP collection was more than their claims paid out, depicting that they are

earning higher profits. From 156.6 lakh in 2016-17 to 177.2 lakh in 2017-18, the total number of farmers availing advantages from the plan climbed by 13%. Only 21.34

percent of the 481.58 lakh farmers eligible for assistance received assistance.

**Table 1:** Various crop insurance schemes implemented in India

Name of the Scheme	Features	Crop Covered	Farmers covered, premium paid and claims disbursed
Crop Insurance by GIC (1972-1979)	Individual basis (6 states)	Cotton, Groundnut, wheat, potato	Farmers: 3110.2 Premium: Rs 4.55 lakh Claim: Rs 37.8 lakh
Pilot Crop Insurance Scheme (PCIS) (1979-1985)	Area basis (13 states) Loanee only Voluntary 50% premium subsidy Optional for states	Cereals, Millets, oilseeds, Cotton, Potato, and Gram	Farmers: 6.25 lakh Premium: Rs 1.96 lakh Claim: Rs 1.58 lakh
Comprehensive Crop Insurance Scheme (CCIS) (1985-1999)	Area basis (17 states) Loanees compulsory 50% premium subsidy for SF/MF Optional for states	Cereals, Pulses, oilseeds	Farmers: 7.6 crore Premium: Rs 403.6 crore Claim: Rs 2303.4 cr
Experimental Crop Insurance Scheme (1997-1998)	Area Basis (5 states, 14 districts) Only for SF/MF 100% premium subsidy	Cereals, pulses, oilseeds	Farmers: 4.5 lakh Premium: Rs 2.84 crore Claim: Rs 168 crore
National Agricultural Insurance Scheme (NAIS) (1999-2016)	Area Approach (23 states and UTs)	Food crops, Oilseeds, and selected Commercial crops	Farmers: 2712.54 lakh Premium: 1411.69 crore Claim: 5600.77 crore
Modified National Agricultural Insurance Scheme (MNAIS) (2010-2016)	Area Approach (16 states)	Food crops (Cereals, Pulses, Millets), Oilseeds, Annual Commercial crops/ Horticulture crops	Farmers: 276.62 lakh Premium: 4935.77 crore Claim: 5578.42 crore
Weather-Based Crop Insurance Scheme (WBCIS) (2010-2016)	Area Approach (19 states)	Food crops, oilseeds, and Annual Commercial Crops/ Horticulture crops	Farmers: 720.22 lakh Premium: 12161.4 crore Claim: 9665.4 crore
Pradhan Mantri Fasal Bima Yojana (PMFBY) (2016-present)	Area Approach (22 states and UTs) Loanees compulsory	Food crops, oilseeds, and Annual Commercial Crops/ Horticulture crops	Farmers: 4397.35 lakh Premium: 17693.9 crores Claim: 11916.6 crores
Restructured Weather-Based Crop Insurance Scheme (RWBCIS) (2016-present)	Area Approach (21 states) Uses "proxy" as a weather parameter Loanee compulsory	Food crops, oilseeds, and Annual Commercial Crops/ Horticulture Crops	Farmers: 115.22 lakh Premium: 15586.8 crore Claim: 13283.3 crore
Coconut Palm Insurance Scheme (CPIS) (2016-present)	Contagious area Approach First insurance for coconut palm growers	Healthy nut, dwarf, and hybrid coconut palm	Farmers: 125.06 lakhs Premium: 345.93 lakh Claim: 445.84 lakh

(Source: (Raju & Chand 2008) Compilation done by authors

**Table 2:** Season-wise performance under Pradhan Mantri Fasal Bima Yojana (PMFBY) combined from 2016 to 2022

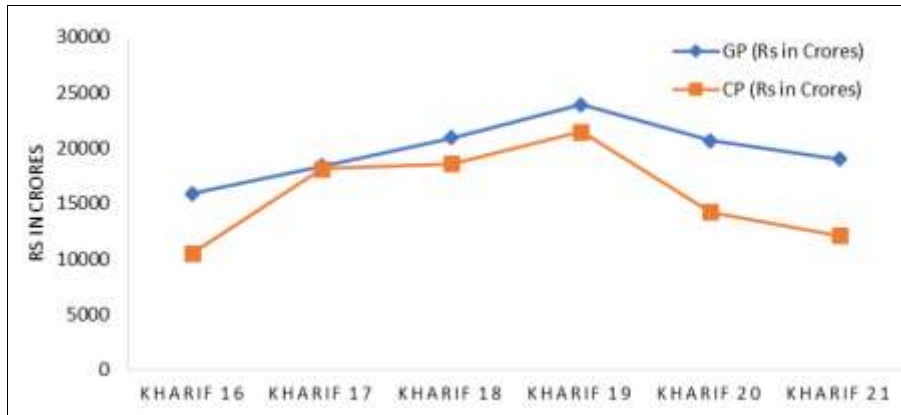
Period	Season	Insured Farmers	Area Covered	Insured Sum	Gross Premium	Paid Claims	Farmers Benefitted
2016-2017	Kharif	407.6	379.7	128758	15926	10568	115.6
	Rabi	176	187.6	72522	5844	6190	41
	Total	583.6	567.3	201279	21770	16758	156.6
2017- 2018	Kharif	357.7	330.7	124524	18416	18149	147.1
	Rabi	175.3	177.7	77742	6232	3964	30.1
	Total	533	508.3	202265	24649	22113	177.2
2018- 2019	Kharif	344.8	317.4	136754	20926	18606	138.9
	Rabi	231.4	205.6	93307	8422	8884	85.7
	Total	576.2	523	230060	29348	27491	224.6
2019-2020	Kharif	424.06	337.35	145382	23914	21490	186.7
	Rabi	192.1	171.09	76179	8415	5870	42.6
	Total	616.16	508.44	221561	32329	27360	229.3
2020-2021	Kharif	424.38	285.65	116307	20692	14227	76.1
	Rabi	198.81	209.79	83365	11007	6165	37.4
	Total	623.19	495.44	199672	31699	20392	113.5
2021-2022	Kharif	504.17	251.64	102150	19036	12113	59.4
	Rabi	327.2	207.37	78947	11161	2794	152.1
	Total	831.37	459.01	181097	30197	14907	211.5
Total		3763.52	3061.49	12,35,934	1,69,992	1,29,021	1112.7

(Source: www.agriculturalstatistics-at-a-Glance-2022.com) computed by authors

**6.3 Gross Premium and Claims Paid during the seasons of Kharif and Rabi from 2016 to 2021**

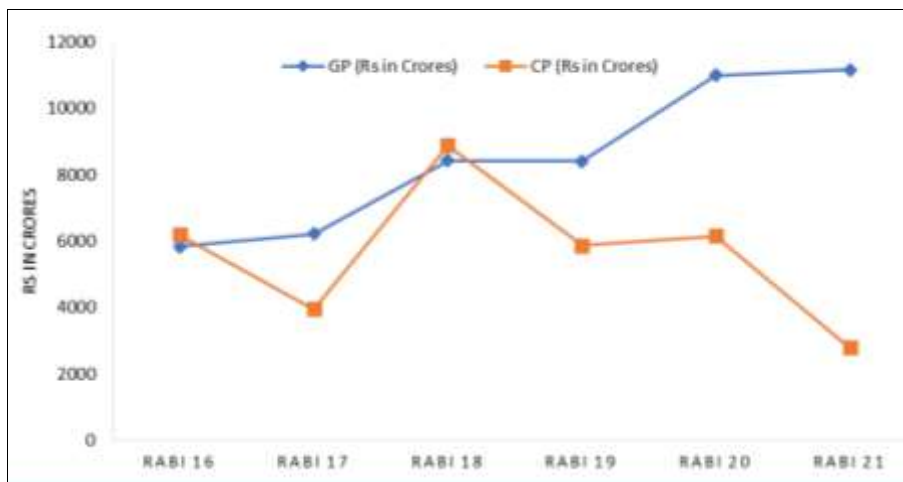
Figures 1 and 2 show the shifts in total premium amounts and claims paid under PMFBY from 2016 to 2021 for each of the Kharif and Rabi seasons. The gross premium amount increased consistently over this period for both the Kharif and Rabi seasons. From 2016 through 2021, the total

number of settlements given was usually less during the season of Kharif compared to the season of Rabi. The lone exception was in 2017-2018 when more claims were filed during the season of Kharif than during the Rabi season. As a result, from 2016-17 to 2018-19, the gross premium collected exceeded the total number of demands disbursed under the Pradhan Mantri Fasal Bima Yojana.



(Source: Agricultural statistics at glance 2022) computed by using MS Excel

**Fig 1:** Gross premium collection and claims paid under Pradhan Mantri Fasal Bima Yojana for the seasons of Kharif (2016–2021).



(Source: Agricultural Statistics at a Glance 2022) computed by using MS Excel

**Fig 2:** Gross premium collection and claims paid under Pradhan Mantri Fasal Bima Yojana for the seasons of rabi (2016 to 2021).

**6.4 Beneficiary ratio and claim premium ratio of pmfby from 2016 to 2021**

Table 3 presents the beneficiary and claim premium ratios for the PMFBY plan in India from 2016 to 2022. Across all schemes, the beneficiary ratios were consistently below one, indicating that the number of farmers who received

payments was less than the total number of farmers covered by the program. On the contrary, the claim payment premium ratios for PMFBY were constantly less than one, indicating that total claims paid by insurance companies were less than the total premiums collected. As a result, insurance businesses profited more under PMFBY, notably throughout the 2020-2021 and 2021-2022 years.

**Table 3:** Computation of Beneficiary Ratio & Claim Ratio

Year	Farmers Insured	Farmers Benefitted	Gross Premium	Claims Paid	Beneficiary Ratio	Claim Ratio
2016-2017	583.6	156.6	21770	16758	0.27	0.77
2017-2018	533	177.2	24649	22113	0.33	0.90
2018-2019	576.2	224.6	29348	27491	0.39	0.94
2019-2020	616.16	229.3	32329	27360	0.37	0.85
2020-2021	623.19	113.5	31699	20392	0.18	0.64
2021-2022	831.37	211.5	30197	14907	0.25	0.49

(Source: 2022 Agricultural Statistics at a Glance) Note: Claim Ratio= Claims Paid/Gross Premium; Beneficiary Ratio= Farmers benefitted/Farmers insured.

**Table 4:** Descriptive statistics (Combined from 2016-2017 to 2022-2023)

Variables	Mean	Standard Deviation	Skewness	Kurtosis	Min	Max
Farmers Insured	167.1322	272.05749	2.289	5.106	.02	1086.09
Farmers Premium	1041.9622	1555.52450	1.838	2.510	.04	5179.26
Paid Claims	4905.5648	7700.97984	1.901	2.794	.14	25849.84
Total Claims	5017.8052	7833.28126	1.895	2.709	.14	26114.10

(Source: Agricultural statistics at a glance 2022) computed using SPSS software by authors

Table 4 shows farmers insured varied from 0.02 lakhs to 1086.09 lakhs, with an average of 167.1322 lakhs for the period of the 2016-2023 year, simultaneously paid claim and total claims varied similarly.

**Table 5:** Regression analysis

Year Cumulative 2016-2022	Dependent		Independent	
	Farmer Insured	Farmers Premium	Total Claim	Paid Claims
Coefficients	-4.073 (-.208)	0.072 (2.080)	0.349* (4.871)	-0.337* (-4.730)
Adjusted R2	.905			
P-Value	.8373	0.049	.000	.000

Source: Calculation done by authors from Table A1. \* Significant at 1%. T-values are given in brackets.

A multiple regression model was created using cumulative data to evaluate the impact of crop insurance features on farmer coverage for a certain period i.e., (2016-2023). According to the data, the farmers' insurance premiums have a significant impact on the farmers covered during the course of the study. Insurance company claims hurt farmers' coverage in the early years but had a positive impact in the following years. The claims paid and farmer premiums are considerable at 1%, which is less than 0.50.

**7. Challenges faced under Pradhan Mantri Fasal Bima Yojana (PMFBY) scheme**

As previously indicated, the PMFBY has encountered several challenges. The most complicated duty is to pay for the yojana. Although the study's data suggested that crop insurance coverage increased in Kharif 2016 concerning the no. of farmers addressed, area covered, claims paid out, and farmers received benefits, it fell in Kharif 2017 (Bhushan and Kumar 2017) [6]. A lack of knowledge is the main root cause of the scheme's low coverage. State governments, the national government, and insurance firms are required to begin a public awareness campaign in remote areas about the PMFBY (Rai, 2019; Mukherjee and Pal 2017) [18, 14].

The Pradhan Mantri Fasal Bima Yojana (PMFBY) faces challenges, including delays in claims settlement and regulatory complexities, which have led to a reluctance among farmers to adopt the policy (Tiwari, 2020; Ghosh, 2019; Mukherjee & Pal, 2017) [11, 14, 23]. To address these issues, the updated rules for PMFBY in 2020 now require state governments to promptly disburse their subsidy share to insurance companies within specified timeframes. If these deadlines are not met, states may lose their status to take part in the program in future seasons. This is a substantial improvement over previous norms, but it also demands close monitoring.

Recognizing the importance of food security in India, especially in light of the country's rapidly growing population, resource constraints, climate change challenges, and the effect of the COVID-19 pandemic, prioritizing food security has become a crucial policy objective.

**Conclusions**

Following India's independence, the government introduced various crop insurance policies aimed at safeguarding farmers' income. Presently, India has two active crop insurance programs: the Pradhan Mantri Fasal Bima Yojana

(PMFBY) and the Restructured Weather-Based Crop Insurance Scheme (RWBCIS). In comparison to earlier schemes, PMFBY has introduced several enhancements. These include the integration of a single premium for all seasons, comprehensive coverage spanning both kharif and rabi seasons, addressing all agricultural risks throughout the year, from pre-sowing to post-harvest stages, employing drones and GPS technology for accurate loss estimation, direct payment of claims into farmers' accounts, and offering three distinct indemnity levels, namely 70%, 80%, and 90%.

Additionally, PMFBY has incorporated new features to enhance its effectiveness and farmer-friendliness. These include the option for voluntary enrolment for all farmers, extended allocations to insurance firms for a three-year duration instead of one, integration with the Aadhaar identification system, imposing obligatory standards on states for timely aid disbursement, and granting states the flexibility to make decisions regarding higher-risk protection.

Moreover, we observed significant growth in agricultural insurance protection under the PMFBY concerning the number of insured farmers, the covered agricultural area, claims disbursed, and the overall benefit to farmers. According to the data, the count of insured farmers increased by 42.46 percent over five years, rising from 583.6 lakhs in 2016-17 to 831.37 lakhs in 2021-22. Furthermore, insurance companies' claims payouts experienced a growth of 21.68 percent, going from Rs. 16,758 crores in 2016-2017 to Rs. 20,392 crores in 2020-2021. Over the same period, the number of farmers receiving assistance from the programme grew by 35%, from 156.6 lakh in 2016-2017 to 211.5 lakh in 2021-2022. It's worth mentioning that the beneficiaries and claims coverage percentages under the PMFBY were determined to be substantially lower.

To delve deeper into the factors influencing farmers' coverage under PMFBY, we employed a multiple regression model. This analysis revealed that farmers' premiums played a substantial role in determining the number of farmers enrolled in the insurance scheme over time, while the subsidy offered did not have a significant impact on farmers' participation in the program.

**Reference**

1. Agriculture Insurance Company of India Ltd; c2021.

Evolution of Crop Insurance. Available online: <https://www.aicofindia.com>.

- Agriculture Statistics at a Glance. Directorate of Economics and Statistics; New Delhi: Ministry of Agriculture and Farmers Welfare, Government of India; c2022.
- Adeeth Cariappa AG, Mahida DP, Lal P, Chandel BS. Correlates and impact of crop insurance in India: Evidence from a nationally representative survey. *Agricultural Finance Review*. 2020;80(5):643-660.
- Chamuah A, Singh R. Chapter 11 Emerging Civilian UAV Innovations Promoting Sustainability in Indian Agri-Insurance Through Embedding Culture-Specific Values. Springer Science and Business Media LLC; c2023.
- Ashalatha GS, Prabhu M. Pradhan Mantri Fasal Bima Yojana (PMFBY). *International Journal of Economic and Business Review*. 2017;5(12):34-40.
- Bhushan, Chandra, Kumar V. Pradhan Mantri Fasal Bima Yojana: An Assessment. New Delhi: Centre for Science and Environment; c2017.
- Krishnaveni C. Dynamics of Demand for National Agricultural Insurance Scheme with Special Reference to Erode District of Tamil Nadu. *HuSS: International Journal of Research in Humanities and Social Sciences*. 2016;3(12):22-31.
- Dandekar VM. Crop insurance in India: A review, 1976–1977 to 1984–1985. *Economic and Political Weekly*. 1985;20(46):1991-1999.
- Ghanghas BS. Awareness of Pradhan Mantri Fasal Bima Yojana among Farmers of Haryana State; c2018.
- Ghosh RK. Performance Evaluation of Pradhan Mantri Fasal Bima Yojana (PMFBY): Part I: “Governance Analysis”. Ahmedabad: Indian Institute of Management Ahmedabad (IIMA); c2018.
- Ghosh S. An Analysis of Pradhan Mantri Fasal Bima Yojana: Expectations and Reality. *International Journal of Advanced Science and Technology*. 2019;28:788-794.
- Hussain S. What Can the Centre Learn from How States Are Managing Their Crop Insurance Schemes? *Economic and Political Weekly*; c2020.
- Underjeet. Study on the benefits of Fasal Bima Yojana for farmers; c2016.
- Mukherjee S, Pal P. Impediments to the spread of crop insurance in India. *Economic and Political Weekly*. 2017;52(10):24-29.
- Paresh T, Sanjay R. A Descriptive Study on PMFBY Insurance Schemes. *International Journal of Scientific Research*. 2022;9(3):22-28.
- Pankaj S, Gaurav A. Development, present status and performance analysis of agriculture insurance schemes in India. *International Journal of Social Economics*. 2020;47(8):1021-1038.
- Kait R, Sheoran V. Progress of Crop Insurance Schemes in Haryana, India. *Economic and Regional Studies / Studia Ekonomiczne I Regionalne*; c2022.
- Rai R. Pradhan Mantri Fasal Bima Yojana: An Assessment of India’s Crop Insurance Scheme. Observer Research Foundation; c2019.
- Raju SS, Chand R. Agricultural Insurance in India: Problems and Prospects. NCAP Working Paper 8. National Centre for Agriculture Economics and Policy Research; c2008.
- Sushma N, Shrabana M. Farm Debt Waiver in India. In: *Handbook of Research on Agricultural Debt Waiver and Its Impact on Rural Economy*. IGI Global; c2019. p. 211-224.
- Kaur S, Raj H, Singh H, Kumar CV. Crop Insurance Policies in India: An Empirical Analysis of Pradhan Mantri Fasal Bima Yojana. *Risks*. 2021;9(11):191. <https://doi.org/10.3390/risks9110191>
- Devi S. Pradhan Mantri Fasal Bima Yojana - An Overview. *Journal of Agricultural Sciences*. 2016;5(8):112-118.
- Tiwari R, Chand K, Anjum B. Crop Insurance in India: A Review of Pradhan Mantri Fasal Bima Yojana (PMFBY). *FIIB Business*. 2020;9(2):67-75.
- Sheoran V, Kait R. Evaluation of the Crop Insurance Performance in Haryana. *Economic and Regional Studies*; c2023.
- Pradhan Mantri Fasal Bima Yojana. <http://pmfby.gov.in>
- Ministry of Agriculture and Farmers Welfare, Government of India. <http://agricoop.nic.in>
- Indian Society of Agricultural Statistics. [www.isas.org.in](http://www.isas.org.in)
- Kalahani Journals. [www.kalahanijournals.com](http://www.kalahanijournals.com)
- Sri Padmavati Mahila Visvavidyalayam. [www.spvnn.edu](http://www.spvnn.edu)
- National Bank for Agriculture and Rural Development. [www.nabard.org](http://www.nabard.org)
- Medical Publishing and Development, Inc. [www.mpd.com](http://www.mpd.com)

**Appendix-A**

**Table A1:** State-wise performance of PMFBY- Cumulative from 2016-2023

States	Farmers' Insured	Farmers' Premium	Total Claim	Paid Claim
A & N	0.02	0.04	0.24	0.23
Andhra Pradesh	88.41	710.56	4838.35	4828.12
Assam	41.64	14.23	271	210.82
Bihar	50.17	383.92	749.37	749.37
Chhattisgarh	272.35	1161.33	6309.56	6220.91
Goa	0.03	0.18	0.14	0.14
Gujarat	83.95	1499.44	5417.54	5232.62
Haryana	101.14	1875.65	6057.65	5891.26
HP	19.87	172.15	308.21	291.25
J&K	4.54	36.71	91.85	87.98
Jharkhand	44.62	75.15	572.72	98.08
Karnataka	148.54	1706.36	10151.24	10123.08
Kerala	4.94	45.23	377.94	333.86
MP	573.8	5179.26	25728.01	25674.12

Maharastra	841.83	5012.88	26114.1	25849.84
Manipur	0.28	2.61	5.24	-5.24
Meghalaya	0.05	0.79	0.51	0.51
Odisha	364.96	1126.11	6232.47	6150.04
Puducherry	0.84	0.23	29.08	15.68
Rajasthan	1086.09	4548.72	21772.25	20403.66
Sikkim	0.05	0.22	0.67	0.67
Tamilnadu	238.6	959.94	12758.76	12699.81
Telangana	36.36	652.94	1845.78	1811.67
Tripura	8.94	2.64	5.14	5.13
Uttarpradesh	350.88	2473.45	4119.56	4060.1
Uttarakhand	14.76	186.73	500.53	487.54
Westbengal	134.91	305.51	1222.83	1218.52

(Source: Agricultural Statistics at a Glance 2022) compiled by authors