



# A Study On The Performance And Effectiveness Of Pradhan Mantri Fasal Bima Yojana In Uttarakhand

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## ABSTRACT

The Pradhan Mantri Fasal Bima Yojana (PMFBY) was established to protect farmers financially from agricultural losses brought on by diseases, pests, and natural disasters. This study uses secondary data from published sources and official papers to analyze PMFBY's efficacy and performance. The coverage, premium structure, and plan claim settlement are the main topics of the analysis. The results demonstrate that PMFBY has decreased farmers' financial risk and increased crop insurance coverage, particularly for small and marginal farmers. But problems like lack of awareness and claim settlement delays still exist. The study comes to the conclusion that PMFBY's overall efficacy can be increased by bolstering implementation and enhancing claim settlement procedures.

**Keywords:** Pradhan Mantri Fasal Bima Yojana (PMFBY), Crop Insurance, Agricultural Risk, Farmers' Income, Claim Settlement, Financial Inclusion

## INTRODUCTION

India, as an agricultural nation, has a significant portion of its population reliant on this sector, with the bulk of these individuals categorized as farmers, rendering agriculture their primary source of income. Volatility in production and market hazards render agriculture a precarious enterprise, directly impacting farmers' income levels. Production instability arises from the reliance of most crops on rainfall, whose patterns are erratic, hence increasing the risks associated with agriculture, which supports 58 percent of the Indian people

(India Brand Equity Foundation (IBEF) 2021). Income levels are adversely affected because to the dependence of agricultural courses on natural causes, rendering them very susceptible and vulnerable to risks such as drought and floods. Over the next few decades, it is likely that changeable climate conditions, a rising global population, escalating food prices, and various environmental stressors would significantly and ambiguously affect food security, hence impacting social security substantially. One option available to farmers to mitigate income unpredictability is crop insurance (**Mulay and Biradar,2022**).

The National Agriculture Policy states, "Despite technological and economic advancements, farmers' conditions remain precarious due to natural disasters and price volatility." In certain extreme instances, these adverse circumstances contribute to farmers' suicides, which are now reaching alarming levels. Undoubtedly, there is an escalation in natural risks such as floods, droughts, and hailstorms. Occasionally, farmers' harvested crops are devastated by unseasonal rainfall or hailstorms. Considering the facts, the Government of India initiated the Pradhan Mantri Fasal Bima Yojna on 13 January 2016 to alleviate risks and uncertainties in agriculture, while stabilizing farmers' income through low premium rates of 2.0% for kharif crops, 1.5% for rabi crops, and 5.0% for commercial crops based on the insured sum (**Ghanghas,2018**).

### Genesis of PMFBY:

The 'Pradhan Mantri Fasal Bima Yojana' was initiated by the Government in 2016 for the kharif season, regarded as a reform due to the unsatisfactory results of previous initiatives. The Prime Minister's crop insurance scheme is fundamentally an area yield-based indexed insurance program, which constitutes approximately 90 to 92 percent of the crop insurance portfolio, according to the latest statistics. Launched with considerable publicity in 2016, it aims to offer extensive insurance coverage against crop production failures, recognizing the significance of agriculture and the substantial portion of the workforce engaged in this sector.

Providing income stability is essential, and the Prime Minister's Office has significantly advocated for digitalization and innovation, resulting in numerous changes to the scheme aimed solely at promoting these advancements and enhancing coverage. It encompasses all varieties of food crops. However, the initiative also discourages the cultivation of crops in high-risk locations to conserve government funds. Currently, under the PMFBY, farmers are required to pay a premium of 2% of the sum insured for all Kharif food grains and oilseeds, 1.5% for all Rabi food grains and oilseeds, and 5% for all horticultural crops. The disparity between the actual premium rate and the insurance premium rate payable by farmers, referred to as the 'Rate of normal premium subsidy,' is evenly distributed between the central and state governments. The Pradhan Mantri Fasal Bima Yojana (PMFBY) was sanctioned four years ago and characterized as a groundbreaking initiative for farmers' welfare, featuring no upper limit on government subsidies.

The Government of India has recently implemented reforms in the Pradhan Mantri Fasal Bima Yojana (PMFBY), granting flexibility to states and Union territories in its execution. This allows for the selection of additional risk coverage options, including prevented sowing, localized calamities, mid-season adversities, and post-harvest losses. Furthermore, obtaining insurance will no longer be compulsory for all borrowing farmers.

## Main Features of the Pradhan Mantri Fasal Bima Yojana (PMFBY):

**1. Objective** – To furnish insurance coverage and financial assistance to farmers in the occurrence of crop loss attributable to natural disasters, pests, and diseases.

### **2. Crop Coverage**

Kharif crops (agricultural products such as grains, millets, and pulses).

Rabi crops (wheat, barley, legumes, etc.).

Annual commercial and horticultural crops, such as sugarcane, cotton, fruits, and vegetables.

### **3. Premium Rates (Minimal & Consistent) –**

Kharif crops: Farmers contribute merely 2% of the insured amount.

Rabi crops: Farmers contribute only 1.5% of the insured amount.

Commercial and Horticultural Crops: Farmers contribute 5% of the insured amount.

The remaining premium is subsidized by the Central and State Governments.

### **4. Comprehensive Risk Coverage -** Addresses yield losses resulting from:

Natural disasters such as droughts, floods, cyclones, landslides, and hailstorms.

Infestations and ailments.

Specific threats such as hailstorms, landslides, and flooding.

Post-harvest losses (within 14 days post-harvest) attributable to cyclones, unseasonal precipitation, and hailstorms.

**5. Unlimited Government Subsidy –** Although the premium exceeds the farmers' portion, the remaining premium is subsidized by the Government.

**6. Utilization of Technology –** Utilization of satellite imaging, drones, mobile applications, GPS, and remote sensing for expedited and precise assessment of crop loss. \* Integration of Aadhaar for enhanced transparency and direct benefit transfer (DBT) of claims into farmers' bank accounts.

**7. Cluster-based Insurance Model –** States are categorized into clusters, and insurance providers are chosen for numerous years via a bidding process.

**8. Mandatory & Optional Coverage -** Mandatory for all borrowing farmers (those having crop loans). Optional for non-borrowing farmers.

**9. Prompt Claim Resolution -** Claims shall be resolved within two months post-harvest, contingent upon yield data.

**10. Awareness Program -** Comprehensive campaigns are conducted to inform farmers about the system and its advantages.

## **Pradhan Mantri Fasal Bima Yojana (PMFBY) in Uttarakhand**

## 1. Execution in Uttarakhand

### Commencement Date & Financial Framework

The PMFBY has been operational in Uttarakhand since the Kharif season of 2016. Funding is equally distributed between the Center and the State, with each party responsible for 50% of the expenses, and the initiative is executed through 18 approved insurance companies. Department of Agriculture, Uttarakhand

### Notify Crops

Kharif: Rice and mandua are cultivated in all districts.

Rabi: Covers wheat statewide; lentil (masoor) in Pauri Garhwal and Pithoragarh.

## 2. Scope and Extent

### Comprehensive Farmer Coverage

Between 2016 and at least mid-2022, more than 1,246,000 farmers in Uttarakhand were covered by the PMFBY insurance scheme. During that period, claims totaling ₹410.01 crore were disbursed.

### Year-wise Trends (2019-20 to 2023-24)

Information from the Open Government Data (OGD) portal indicates the subsequent farmer enrollments:

Fiscal Year 2019-2020: 212,675

Fiscal Year 2020-2021: 170,812

2021-2022: 182,762

2022-2023: 282,068

Fiscal Year 2023-24: 226,809

## 3. Program Awareness and Outreach

### Marketing Initiatives

The state designated the first week of July 2022 as a "special promotion week," utilizing mobile advertising vans around districts to enhance awareness of PMFBY. Farmers may submit applications through banks, Common Service Centers (CSCs), or the official Pradhan Mantri Fasal Bima Yojna .

### Collaborative Partners for Implementation

SBI General Insurance and Agriculture Insurance Company of India (AIC) have served as the principal implementation agencies in Uttarakhand.

## 4. Context and National Framework

### Primary Aim of PMFBY

Launched in February 2016, PMFBY sought to supplant previous schemes (NAIS, MNAIS) to alleviate the premium burden on farmers, guarantee timely claim resolution, and offer broader crop and risk coverage.

### Principal Attributes

#### Attributes

The area-based insurance model utilizes the village or panchayat level as the Unit of Insurance, whereas individual evaluations are conducted for localized risks or post-harvest losses.

Enrollment for loanee farmers was compulsory until around 2020; thereafter, it has been entirely voluntary across the nation.

**In Uttarakhand, the PMFBY is administered by the Agriculture Department, whereas the WBCIS is managed by the Horticulture (Udyan) Department.**

### LITERATURE REVIEW

**Siwach et al. (2017)** stated that the state of Haryana, the current research emphasizes the development of all current crop insurance plans in the context of PMFBY at the national level. According to Mahto (2016), only 4% of the rabi crop and 11% of the riskier kharif crop holdings are currently covered by insurance. By the 12th Plan's terminal year (2016–17), NCIP aims to cover 50% of farmers. The MNAIS, WBCIS, and CPIS agricultural insurance plan segments have been improved by the Indian government. The key components of the PMFBY are described in the next section, along with the rules that must be followed in order to carry out the plan. The final section offers some useful recommendations to fulfill farmers' long-standing requests while critically analyzing some of the new insurance policy's inadequacies. Instead than using a one-size-fits-all approach, the government must invest more resources (money, labor, and time) to create insurance policies that are best suited to farmers based on the various agro-environmental regions.

**Cariappa et al .(2018)** examined that The Pradhan Mantri Fasal Bima Yojana (PMFBY), a new crop insurance program in the H-K region, was examined both financially and physically. According to the analysis, between kharif 2015 and kharif 2016 in Karnataka, the coverage of farmers under PMFBY grew by 8% while the area insured fell by 3.72%. Overall, PMFBY's performance in Karnataka during 2016–17 showed that the number of farmers insured increased by 77.20 percent, and the area insured increased by about 65 percent between 2015–16 and 2016–17. Additionally, from Kharif 2016 to Kharif 2017, there was a rise of about 41% in farmers insured and about 50% in area insured in Karnataka. In contrast, the H-K region saw a 5.84 percent decline in farmers covered and a 3.69 percent decline in area insured. In Karnataka and the H-K region, the overall claims to premium ratio was less than unity (0.99 and 0.64, respectively) during Kharif 2016, suggesting PMFBY was financially feasible. Overall, just 29% of Karnataka's net sown area was insured in 2016–17, despite PMFBY's better performance than in prior years. Therefore, in order to increase the effectiveness of PMFBY, it is advised to offer premium discounts for farmers' group coverage and to think about changing the state-level claims settlement process with a customer grievances cell, which would enroll more farmers in crop insurance.

**Lakshmanan and Ashok (2019)** stated that With the motto "One Nation, One Scheme," the PMFBY Scheme was introduced. The study was carried out in the Tamil Nadu districts of Thiruvarur and Erode. Using a random selection technique, 180 farmers who used PMFBY were chosen. A pre-tested questionnaire was used to interview the respondents in order to determine the factors that influence crop insurance scheme adoption and service provider preference for scheme enrollment. The study found that the main factors affecting the adoption of PMFBY were financial security, a lack of opportunities for crop diversification, and the expectation of crop loss due to unfavorable weather conditions. Loanees and non-loanees farmers were more likely to enroll in the program through cooperative banks and village-level agents, respectively.

**Kumar et al. (2020)** stated that The majority of India's economy is based on agriculture since the country's other industries rely on the money generated by the farming industry. Therefore, it is essential to protect the agricultural industry against a variety of production hazards brought on by natural disasters and tragedies. Even if the State Government offers some assistance to impacted farmers via the Disaster Relief Fund, it is insufficient to compensate for crop losses. As a result, expanding insurance coverage for agricultural products and their production is imperative. Agricultural insurance programs enter the scene to assist farmers in managing agricultural risk in such a situation. Crop insurance is a financial tool that protects farmers against yield fluctuations and lessens the impact of agricultural revenue loss by accounting for a wide range of variables that impact crop yields.

**Tiwari et al. (2020)** stated that Indian farmers are neglected and have suffered from systemic neglect. Crop loss brought on by natural disasters and unfavorable weather puts farmers in a difficult predicament that might result in suicide and tremendous despair. The Pradhan Mantri Fasal Bima Yojana (PMFBY), a crop insurance program introduced in India by Mr. Narendra Modi in 2016, is described in this article. PMFBY has a skewed benefit pattern, delayed claim resolution, unfeasible subsidy mechanism, and inadequate governmental backing. It is advised to use a technology-enabled demand-driven strategy. Political affiliation and crop insurance should be separated. Farmers will benefit more from PMFBY's velocity, diversity, and verifiability than insurers, bureaucrats, and politicians.

**Meena et al. (2022)** implied that Launched in 2016, the Pradhan Mantri Fasal Bima Yojana is a sort of "One Nation-One scheme." PMFBY helps to stabilize the income of the insured farmers and offers a broad insurance coverage against crop failure. The goal of the current study was to determine the "Knowledge of Farmers about Pradhan Mantri Fasal Bima Yojana" in the Washim, Malegaon, and Risod talukas of the Washim districts from the Vidarbha region of Maharashtra state. A total of twelve villages were chosen, and ten non-loanee farmers from each village were purposefully chosen to make up a sample of 120 non-loanee respondents for the study. The key findings were that the majority of respondents (72.50%) had a medium degree of awareness of the Pradhan Mantri Fasal Bima Yojana, and the majority (65.83%) had a moderate attitude toward the program.

**Mulay and Biradar (2022)** studied to comprehend several aspects of India's crop protection policies, examine the Pradhan Mantri Fasal Bima Yojana (PMFBY) throughout time, and assess its effects on Indian farmers. A model was developed to assess the effectiveness of insurance features and policies on farmer coverage for the years 2018–2019 and 2019–2020 utilizing secondary data from numerous sources. The government's major crop insurance program, PMFBY, was introduced in 2016 with the goal of lessening agricultural hardship during monsoon fluctuations. In terms of the number of farmers covered by insurance, the area covered, the amount of money paid for claims, and the overall amount of money made by farmers, PMFBY's agricultural insurance coverage maintained low-slung relations. Under the PMFBY, the number of

beneficiaries and claim premium proportions were significantly average. Although the subsidies had little effect on farmers' insurance participation, the multiple regression analysis showed that farmers' premiums have a notable impact on the number of farmers insured,

**Kumar and Shobana (2024)** found out that An important insurance program called the Pradhan Mantri Fasal Bima Yojana (PMFBY) was created to shield Indian farmers from crop failure and environmental risks. The program's impact on promoting agricultural development and improving farmers' welfare in Tamil Nadu is examined in this study. Using information from a thorough literature review and secondary data analysis, this study looks at important factors such policy execution, farmer participation, and the impact of insurance coverage on income stability. The findings show that PMFBY has improved financial stability for many farmers, but it still faces persistent challenges like low knowledge, ineffective bureaucracy, and uneven regional outreach. These results highlight the necessity of focused interventions to improve program efficacy and increase its advantages for the poorest farmers. This study contributes to the conversation on agricultural insurance in India by providing crucial information for the improvement and reform of farmer support programs.

**Jiragal et al. (2025)** concluded that Numerous threats to Indian agriculture jeopardize the livelihoods of farmers. In order to reduce these risks through crop insurance, the Pradhan Mantri Fasal Bima Yojana (PMFBY) was established. This study assesses how PMFBY affected farmers' food and financial security in Karnataka's Kolar area between 2021 and 2022. In five taluks, 200 farmers—150 beneficiaries and 50 non-beneficiaries—were polled. Certain measures were used to evaluate food and economic security. Results show that the livelihood security of PMFBY beneficiaries was marginally higher than that of non-beneficiaries. While non-beneficiaries depended more on the sufficiency of Public Distribution System (PDS) grains (mean: 4.48), beneficiaries emphasized year-round food access (mean: 4.63). Optimal resource utilization was the main factor linked to economic security (beneficiaries: 4.61; non-beneficiaries: 4.52). In total, 57% of recipients reported increased economic stability and 53.5% reported improved food security. The findings imply that PMFBY has a somewhat beneficial effect on farmer resilience. But issues like awareness gaps and delayed insurance payouts still exist. Increasing awareness, strengthening implementation, and streamlining claim processing could all improve the scheme's efficacy. To maximize PMFBY's contribution to sustainable agricultural livelihoods, ongoing assessment is crucial.

**Gupta et al. (2025)** stated that the foundation of the Indian economy is agriculture. The Indian government launched a number of programs in an effort to double farmers' earnings. Among these is the PMFBY, which was implemented in 2016 to protect farmers from a range of hazards and natural calamities. It also helps with risk management and gives farmers steady revenue. This study assesses PMFBY's financial and operational performance in Rajasthan's Jhalawar district between 2018 and 2023. Secondary data was gathered for this purpose from PMFBY's official government website (<https://pmfby.gov.in>). The results show that between 2018 and 2023, the program expanded widely throughout the Jhalawar area. The scheme's goals were most successfully attained in 2020 and 2021, but between 2022 and 2023, the growth rate declined. Based on the results, a number of suggestions were offered to improve farmers' PMFBY implementation.

## CONCLUSION

The results show that by providing prompt compensation for crop losses, PMFBY has been successful in lowering farmers' susceptibility to production risks, which in turn enhances their ability to reinvest in agriculture and maintain livelihoods. Transparency and efficiency in scheme execution have been enhanced by the subsidized premium structure and the use of technology, including remote sensing, GPS-enabled crop cutting experiments, and digital claim processing. Over time, these initiatives have contributed to a rise in farmer engagement and awareness.

According to the study's overall findings, PMFBY is a significant and forward-thinking program with great potential to stabilize farm incomes and advance agricultural sustainability. In order to optimize its efficacy, grievance redressal processes must be strengthened further, claim settlement timescales must be improved, innovative technology must be used more effectively, and farmer education campaigns must be ongoing. With these enhancements, PMFBY can develop into a crop insurance program that is more effective, inclusive, and focused on farmers, significantly boosting the agricultural industry of India in the long run.

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