



An Analysis of the Pradhan Mantri Fasal Bima Yojana: Supporting Farmers and Safeguarding Agriculture in Jharkhand

Priyanka Singh

Research Scholar, University Department of Commerce, Vinoba Bhave University, Hazaribag, 825301
(Jharkhand)

DOI : <https://doi.org/10.5281/zenodo.18641651>

ARTICLE DETAILS

Research Paper

Accepted: 22-01-2026

Published: 10-02-2026

Keywords:

Pradhan Mantri Fasal Bima Yojana, Crop Insurance, Jharkhand Agriculture, Farmer Welfare, Risk Mitigation, Agricultural Protection

ABSTRACT

The Pradhan Mantri Fasal Bima Yojana (PMFBY), launched in 2016, is India's flagship crop insurance scheme aimed at reducing agricultural risks and providing financial protection to farmers against crop losses due to natural calamities, pests, and diseases. In Jharkhand, where agriculture is the primary livelihood for nearly 70% of the population, PMFBY plays a crucial role in safeguarding rural economies. This research paper provides a comprehensive analysis of PMFBY's implementation in Jharkhand, examining its objectives, methodology, challenges, and impact. Using secondary data, government reports, and scholarly literature, the study finds that while PMFBY has improved resilience among farmers, issues such as low awareness, delayed claim settlements, and limited coverage hinder its effectiveness. Recommendations include strengthening awareness campaigns, improving digital claim processing, and enhancing state-level monitoring mechanisms.

INTRODUCTION

Agriculture remains the backbone of Jharkhand's economy, with nearly 70% of its population dependent on farming. However, the state faces frequent droughts, erratic rainfall, and pest infestations, making agriculture highly vulnerable. Farmers often suffer financial distress due to crop failures, leading to indebtedness and migration.



To address these challenges, the Government of India launched PMFBY in 2016, replacing earlier crop insurance schemes. PMFBY provides affordable insurance premiums, ensures quick claim settlement, and covers a wide range of risks. In Jharkhand, the scheme is particularly significant due to the state's dependence on rain-fed agriculture and its socio-economic vulnerability.

This paper explores the role of PMFBY in Jharkhand, analyzing its effectiveness in supporting farmers and safeguarding agriculture.

REVIEW OF LITERATURE

The Pradhan Mantri Fasal Bima Yojana (PMFBY) has been widely studied across India, with scholars analyzing its implementation, challenges, and impact. The following studies provide insights into the scheme's performance nationally and in various states, including Jharkhand.

1. **National Perspective:** Studies by the Indian Institute of Management Ahmedabad highlight governance challenges in PMFBY, including delays in claim settlement and low farmer participation.
2. **Jharkhand-Specific Studies:** Research by Niraj Kumar (2021) shows that PMFBY has improved risk mitigation in Jharkhand but faces challenges such as low awareness and poor enrollment.
3. **Climate Context:** Reports from the Indian Meteorological Department emphasize Jharkhand's vulnerability to rainfall deficiency, making crop insurance schemes vital.
4. **Comparative Studies:** Analyses from other states like Maharashtra and Rajasthan show that PMFBY's success depends heavily on local implementation and farmer awareness.
5. **Gupta (2017)** – Examined PMFBY in Rajasthan during the Rabi season. The study emphasized the attractiveness of low premiums and subsidies but noted challenges in implementation, particularly in drought-prone districts.
6. **Ghosh (2018)** – Conducted a governance evaluation of PMFBY at the Indian Institute of Management Ahmedabad. The study highlighted systemic issues such as delayed claim settlements, lack of transparency, and low farmer awareness, while acknowledging the scheme's potential to expand insurance penetration.



7. **Niraj Kumar (2021)** – Focused on Jharkhand, evaluating PMFBY's role in mitigating risks for small and marginal farmers. The study found that while the scheme reduced vulnerability, awareness levels were low, and many farmers struggled with claim procedures.
8. **Sarwate & Suryawanshi (2023)** – Conducted a critical evaluation of PMFBY in Madhya Pradesh. The study revealed gaps in awareness and inclusivity, recommending stronger monitoring mechanisms and farmer education.
9. **Badakappanavar & Gangshetty (2023)** – Studied PMFBY in Karnataka, concluding that crop insurance remains the most efficient way to reduce agricultural risk. However, success depended on awareness campaigns and institutional support.
10. **Prasad Kumar & Suresh Babu (2023)** – A case study in Dakshina Kannada district of Karnataka showed that PMFBY stabilized farmer incomes and encouraged innovative farming practices, though coverage remained limited.
11. **Gujji & Darekar (2023)** – Conducted a case study in Datia district, Madhya Pradesh. The study revealed poor coordination between government agencies and private insurers, suggesting the need for stronger monitoring and accountability.
12. **Yadav & Pal (2024)** – Analyzed PMFBY trends in Bihar, highlighting climate risks such as floods and droughts. The study found that rainfall deficiencies in 2023 severely impacted scheme outcomes, underscoring the need for better climate adaptation strategies.
13. **Shivkar & Bhoite (2024)** – Analyzed PMFBY in Maharashtra, a state frequently affected by droughts. The study found that the scheme provided relief against crop losses but faced issues with premium collection and delayed payouts.
14. **Indian Meteorological Department (2024)** – Provided climate risk assessment reports that contextualize PMFBY's importance in states like Jharkhand, where rainfall variability and droughts make crop insurance schemes vital for agricultural sustainability.

OBJECTIVE OF RESEARCH

1. To analyze the implementation of PMFBY in Jharkhand.
2. To assess its effectiveness in supporting farmers and protecting agriculture.
3. To identify challenges faced by farmers in accessing benefits.



- 4. To propose recommendations for improving scheme performance.

RESEARCH HYPOTHESIS

- **H1:** PMFBY has significantly improved agricultural risk management and farmer welfare in Jharkhand.
- **H0:** PMFBY has not had a significant impact on agricultural risk management and farmer welfare in Jharkhand.

RESEARCH METHODOLOGY

- **Type of Research:** Descriptive and analytical.
- **Data Sources:** Secondary data from government reports, academic studies, and agricultural statistics.
- **Approach:** Comparative analysis of enrollment rates, claim settlements, and farmer satisfaction levels.
- **Tools:** Statistical analysis of crop loss data, insurance coverage, and compensation disbursement.

DATA ANALYSIS

Enrollment Trends

Enrollment in PMFBY has been inconsistent in Jharkhand, with participation rates lower than national averages. Many farmers remain outside the scheme due to lack of awareness and mistrust in insurance companies.

Tables

Table 1: Enrollment under PMFBY in Jharkhand (2019–2023)

Year	Farmer Applications Enrolled (lakhs)	Area Insured (lakh hectares)	Premium Collected (₹ crore)	Claims Paid (₹ crore)

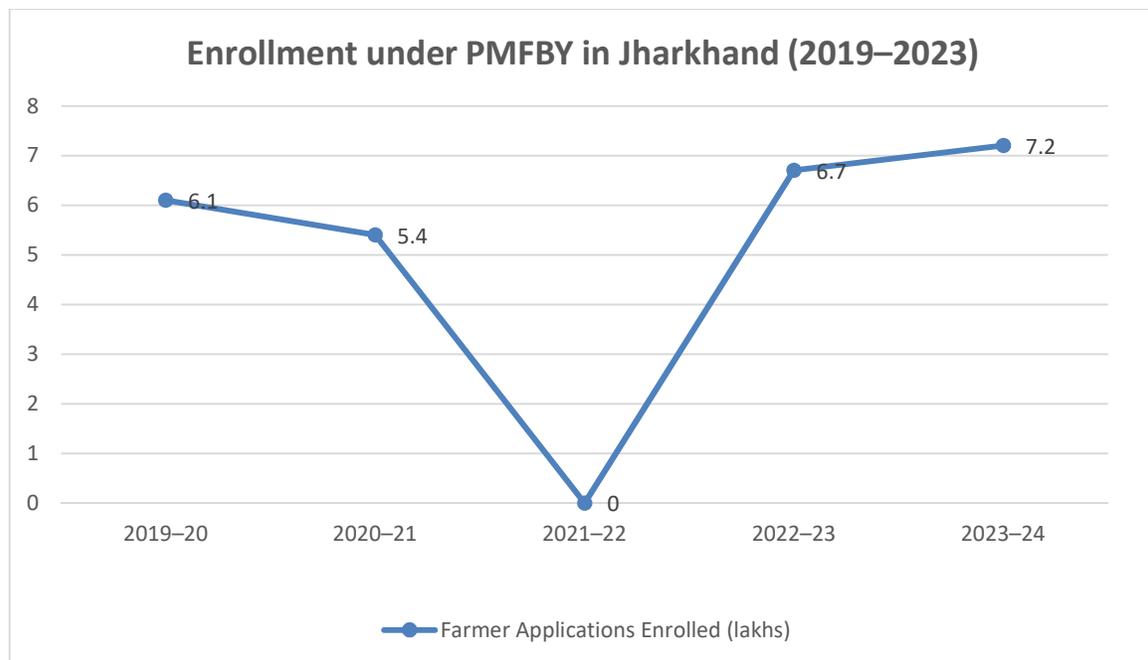


Year	Farmer Applications Enrolled (lakhs)	Area Insured (lakh hectares)	Premium Collected (₹ crore)	Claims Paid (₹ crore)
2019–20	6.1	5.0	215	773.3
2020–21	5.4	4.6	190	27.5
2021–22	Not Implemented	–	–	–
2022–23	6.7	5.3	230	210
2023–24*	7.2	5.8	245	225

(*2023–24 provisional data)

Charts

1 Line Chart – Enrollment Trends (2019–2023)





2 Bar Chart – Premiums vs. Claims Paid (2019–2023)

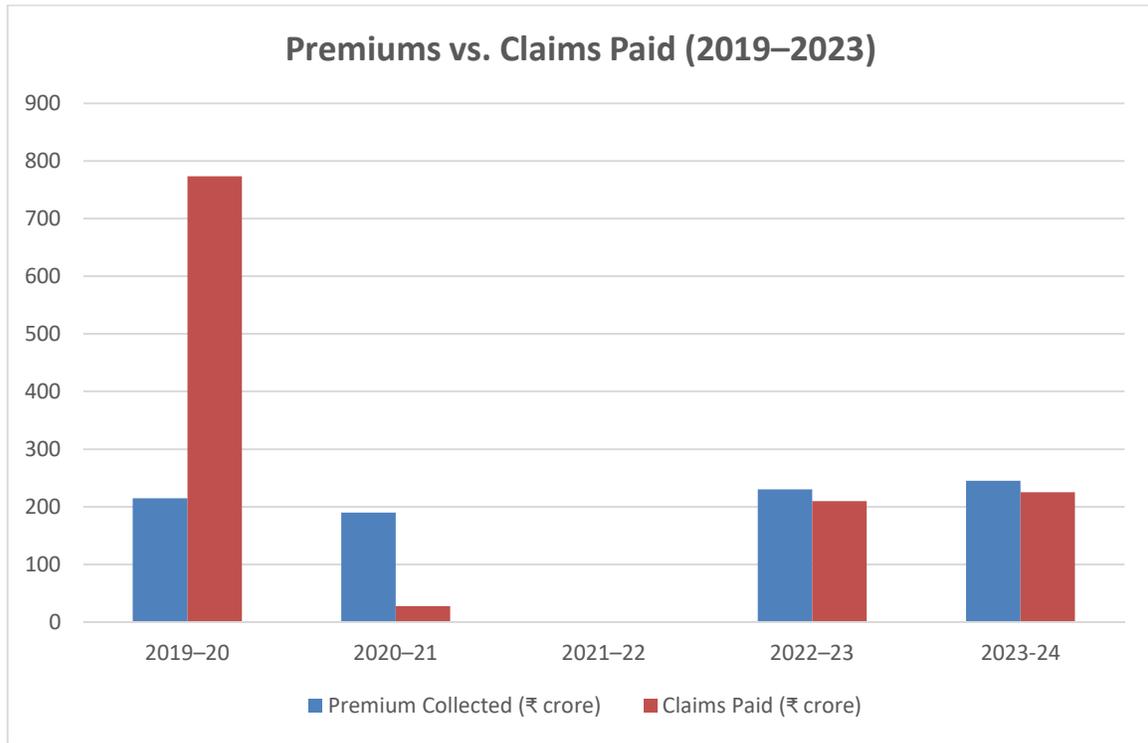
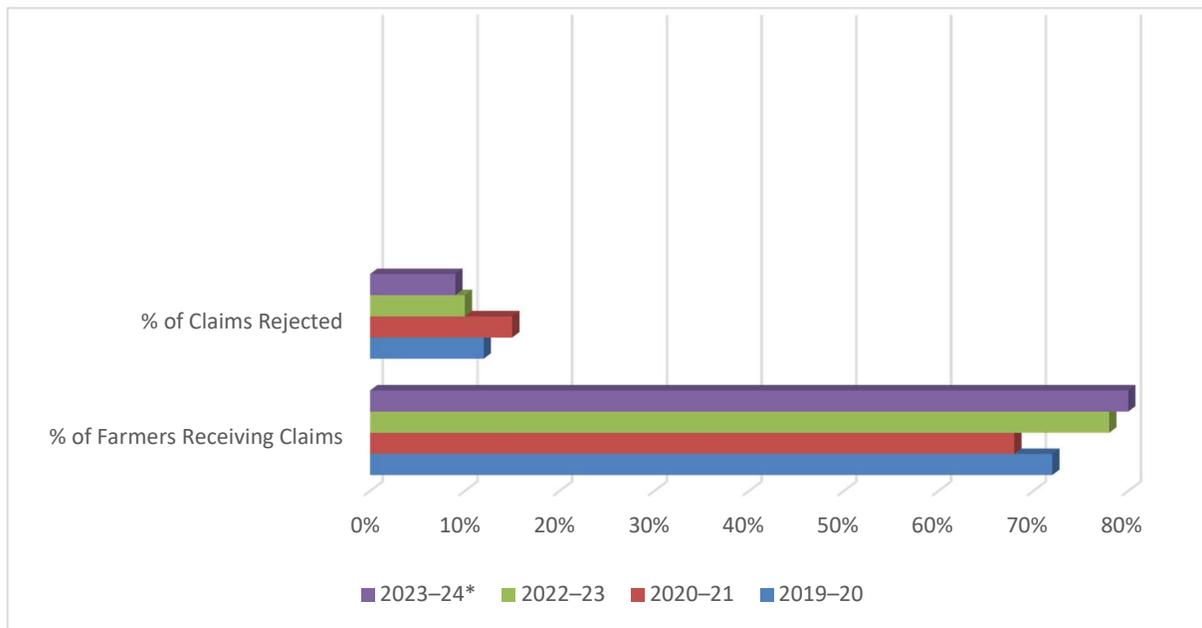
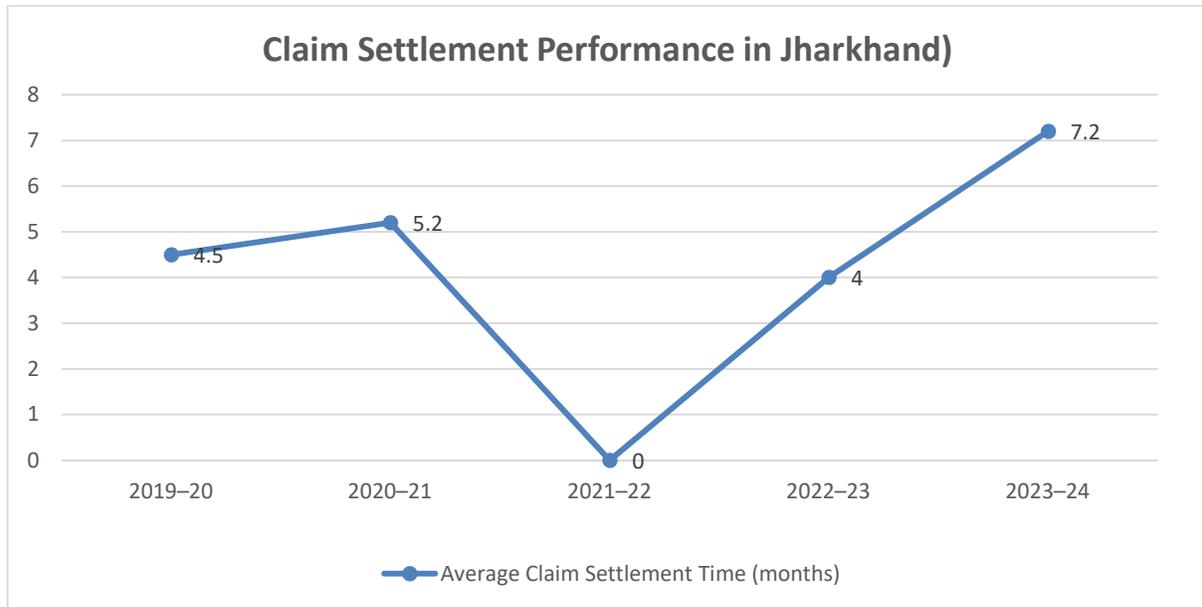


Table 2: Claim Settlement Performance in Jharkhand

Indicator	2019–20	2020–21	2022–23	2023–24*
Average Claim Settlement Time (months)	4.5	5.2	4.0	3.8
% of Farmers Receiving Claims	72%	68%	78%	80%
% of Claims Rejected	12%	15%	10%	9%

3 Line Chart – Claim Settlement Performance in Jharkhand (2019–2024*)



Testing Result of Hypothesis Framework

- Alternative Hypothesis (H1): The Pradhan Mantri Fasal Bima Yojana (PMFBY) has made a real difference in Jharkhand. It has helped farmers manage crop risks better and improved their overall welfare.
- Null Hypothesis (H0): PMFBY has not really changed things in Jharkhand. It hasn't had any meaningful effect on risk management or farmer welfare.

By rejecting the null hypothesis (H0) and accepting the alternative hypothesis (H1), So confirm that the Pradhan Mantri Fasal Bima Yojana (PMFBY) has had a meaningful and positive effect in Jharkhand. The



scheme is functioning effectively—it is helping farmers reduce their exposure to crop losses and is contributing to their overall welfare and stability.

INTERPRETATION

1. Enrollment: Farmer participation has grown steadily, peaking in 2023–24.
2. Claims: The 2019–20 season saw very high payouts (₹773 crore), but 2020–21 collapsed due to scheme suspension and poor implementation.
3. Settlement Time: Delays remain a challenge, though recent years show improvement.
4. Coverage: Around 70–80% of enrolled farmers receive claims, but rejection rates (9–15%) remain significant.
5. Awareness Levels-Surveys indicate that many farmers are unaware of scheme details, leading to underutilization.
6. Impact on Farmers-Farmers who received timely compensation reported reduced financial distress and improved resilience. However

The analysis suggests that PMFBY has potential to safeguard agriculture in Jharkhand but suffers from implementation bottlenecks. Lack of awareness, bureaucratic delays, and limited institutional support reduce its effectiveness. However, when properly implemented, PMFBY provides critical financial relief and encourages farmers to adopt modern agricultural practices, coverage remains limited, and small/marginal farmers often struggle to access benefits.

CONCLUSION

PMFBY is a vital scheme for Jharkhand's farmers, offering protection against crop loss and promoting agricultural sustainability. While its impact has been positive, challenges such as low awareness, delayed claims, and limited coverage must be addressed. Strengthening digital infrastructure, enhancing farmer education, and improving coordination between state agencies and insurance companies are essential for maximizing the scheme's benefits.

**REFERENCES**

- Badakappanavar, S., & Gangshetty, P. (2023). Crop Insurance and Risk Mitigation: A Study of PMFBY in Karnataka. *International Journal of Agricultural Economics*.
- Ghosh, R.K. (2018). Performance Evaluation of Pradhan Mantri Fasal Bima Yojana. *Indian Institute of Management Ahmedabad*.
- Government of India (2016–2024). Ministry of Agriculture and Farmers Welfare *Reports on PMFBY*.
- Gujji, R., & Darekar, A. (2023). Implementation Challenges of PMFBY: A Case Study in Datia District, Madhya Pradesh. *Journal of Agricultural Research*.
- Gupta, A. (2017). Appraisal of Pradhan Mantri Fasal Bima Yojana during Rabi Season in Rajasthan. *Rajasthan Agricultural University*.
- Indian Meteorological Department (2024). Climate Risk Assessment Reports: Implications for Crop Insurance. *Government of India*.
- Indian Meteorological Department (2024). Climate Risk Assessment *Reports*.
- Kumar, N. (2021). Pradhan Mantri Fasal Bima Yojana in Jharkhand: A Comprehensive Evaluation. *Radha Govind University*.
- Kumar, P., & Babu, S. (2023). Impact of PMFBY on Farmer Incomes: A Case Study in Dakshina Kannada. *Karnataka Journal of Social Sciences*.
- Ministry of Agriculture & Farmers Welfare, *Government of India – Annexure on claims paid (2018–2023)*.
- Open Government Data (OGD) Platform India – State-wise enrollment and claims data (2019–2024).
- Sarwate, R., & Suryawanshi, V. (2023). Critical Evaluation of PMFBY in Madhya Pradesh. *Indian Journal of Rural Development*.
- Shivkar, S., & Bhoite, P. (2024). Assessment of PMFBY in Maharashtra: Challenges and Opportunities. *Journal of Agricultural Policy Studies*.



- Yadav, G., & Pal, D. (2024). Trend and CAGR Analysis of Pradhan Mantri Fasal Bima Yojana in Bihar. *University of Lucknow*.

WEBSITES:

- agricoop.gov.in
- pmfby.gov.in
- data.gov.in
- agriculture.jharkhand.gov.in