



An assessment of Pradhan Mantri Fasal Bima Yojana in Karnataka

¹Jayashree Badakappanavar V, ²RV Gangshetty

¹Research Scholar, Department of Economics, Karnataka State Akkamahadevi Women's University, Vijayapura, Karnataka, India

²Professor, Department of Economics, Karnataka State Akkamahadevi Women's University, Vijayapura, Karnataka, India

Corresponding Author: Jayashree Badakappanavar V

Abstract

The official and most efficient way for farmers to reduce their agricultural risk is through crop insurance. The Indian government has implemented numerous crop insurance programs both before and after independence. This paper's main goal is to examine the Pradhan Mantri Fasal Bima Yojana's state- and season-level performance from 2019 to 2022. The effectiveness is evaluated from 2019 to 2022 in terms of the number of loanee farmers covered, the number of non-loanee farmers covered, the area insured, the amount insured, the premiums collected, the claims paid, and the number of farmers who benefited. Only a few States, like Madhya Pradesh, Rajasthan, Maharashtra, Karnataka, and Uttar Pradesh are benefiting from this program, according to a straightforward percentage analysis that was used. The study's findings show that although participation in the program has steadily increased, it is still far from meeting the goals that were established when it was first implemented. PMFBYS has been running in Karnataka for six years, from 2016 to 2022.

Keywords: PMFBY, agricultural risk, independence, loanee farmers

Introduction

Since gaining independence, the Indian government has implemented numerous insurance programs, but the first crop insurance was introduced in 1972 and covered both specified locations and crops. Then, a comprehensive crop insurance program that was linked to agricultural credit was introduced, followed by the national agriculture crop insurance program at the national level. However, there were many limitations, so modified national crop insurance was introduced that was weather-based, and a restructured weather-based crop insurance program was implemented. The PMFBY is currently in operation in India. The One Nation One Scheme was first established by the central government during the 2016 *Kharif* season. The scheme's functioning began on April 1st, 2016, with funding from the central government's budget for 2016–17 totaling 5500 crores of rupees. The Pradhan Mantri Fasal Bima Yojana has taken the position of both the National Agriculture Insurance Scheme (NAIS) and the Modified National Agriculture Insurance Scheme (MNAIS). This program's primary goal is to safeguard farmers' incomes, stabilize those incomes, and encourage them to embrace cutting-edge farming methods.

This plan includes all the crops for which historical yield

information is available and crop-cutting experiments can be performed. The rates of premium are 2% for *Kharif* crops, 1.5% for Rabi crops, and 5% for annual commercial and horticultural crops. The Central and State governments split the difference between the premium paid by farmers and the insurer's rate of premium evenly. The plan was carried out using an area-based methodology. Both loaned farmers and non-loaned farmers must follow the same rules. The claim's payment is electronically credited to the farmer's bank account. The main goal of this study is to analyze the performance of PMFBY in terms of the total number of farmers insured, the area insured, the amount insured, the premium paid by the farmers, the share of the state and federal governments in the premium that was paid, the number of claims that were approved and paid, and the overall number of farmers benefited.

Review of Literature

1. **Ranjan Kumar Ghosh (2018)** [7]: In his project "Performance Evaluation of Pradhan Mantri Fasal Bima Yojana (PMFBY)". This is illustrated by the implementation status of PMFBY in the country. It has also evaluated the performance of selected states. This work studied the barriers to the governance of PMFBY.

Gave some Suggestions that increasing the farmers' awareness regarding PMFBY is required. And benefits from the loss of crops due to natural disasters, village panchayats should be actively involved in spreading awareness to farmers about the scheme.

2. **Krishna Reddy K. (2020)** ^[4]: "Coverage of Crop Insurance Schemes with Special Reference to Pradhan Mantri Fasal Bima Yojana" This study highlights the significance of crop insurance and the need for it. The main requirements are for farmers to have access to the necessary inputs and for agricultural practices to be changed in a way that benefits their financial condition. When crops fail, insurance cover proves to be a crucial component of a comprehensive agricultural program intended to give farmers security. This research paper provides information on the area insured by crop across all insurance programs. and also tries to explore the types of crop insurance available in India, with a focus on the Pradhan Mantri Fasal Bima Yojana (PMFBY).
3. **Shivangi Sharma (2021)** ^[6]: "A Critical Appraisal of Pradhan Mantri Fasal Bima Yojana", In this study, she found that India's population of around 24 million people has been facing problems with nutritious food. Because India has several regional differences. Examples include natural disasters, human-made events, animal assaults, insect attacks, diseases, etc. So, all governments across the world have a concept known as "Group Insurance." As a result, in 2016, our Indian government launched the Pradhan Mantri Fasal Bima Yojana, which is its most ambitious initiative (PMFBY). The PMFBY is a recent significant plan, with the Government of India covering 95% to 98.5 percent of the premium. Last five years data shows that only 35% of farmers have already taken loans, and 80 percent were those who had taken loans from banks or government agencies.

Objectives of the study

- To Know the Concept of Crop Insurance and Performance of PMFBY in Karnataka.
- To analyze District-wise participation in the scheme and to explain the relationship between farmer premiums, claims paid, and farmer coverage.
- To Study the Issues and Challenges Pradhan Mantri Fasal Bima Yojana Scheme (PMFBYS) in Karnataka.

Methodology

Based on secondary data, the investigation was carried out. The Directorate of Economic Statistics, the Agriculture Insurance Company, and the Commissioner of Agriculture have all helped in gathering the data sources. Several articles are also considered as sources for the study. A time series of data from 2019 to 2022 is used in this investigation. The PMFBY's actual effects were considered. The data used in this investigation are quantitative. Five separate variables claim amount, farmer's share premium, the number of insured, total insured, and area insured were employed in the study.

Statement of the Problem: India is now experiencing a severe agricultural crisis. Debt, failed crops, low crop prices, and low returns compared to the cost of cultivation

have caused misery in the farming industry. Data from the National Crime Record Bureau shows that farmer suicides rose by 41.7% in 2015 over 2014. Farmer suicides have been linked to including debt, crop failure, and other problems related to farming. Climate change's increased frequency and intensity of unseasonal and extreme weather events are anticipated to make farmers' misery worse. In this situation, the Government has implemented many schemes to give financial assistance to farmers. In that sense, PMFBY is one of the popularized schemes. So, the researcher has chosen for their work An Assessment of Pradhan Mantri Fasal Bima Yojana in Karnataka.

Limitations

- This Study covered the PMFBY Crop Insurance Scheme only.
- In this study analyzed the performance of PMFBY in the Years 2019-2022.

Evolution of Pradhan Mantri Fasal Bima Yojana in India

Crop insurance in India has undergone significant changes and evolution over the years. It has been an essential aspect of agricultural policy to safeguard farmers against the risks associated with crop failures due to various factors like adverse weather conditions, pests, diseases, or other natural calamities. Let's explore the key milestones in the evolution of crop insurance in India:

Agricultural insurance company of India (AIC): The Indian government established the Agricultural Insurance Company of India (AIC) in 2002 as a specialized insurance provider for agriculture and related sectors. AIC played a vital role in promoting crop insurance and offering innovative insurance products tailored to the needs of farmers.

National agricultural insurance scheme (NAIS): As a centrally funded program to take the role of the previous Comprehensive Crop Insurance Scheme (CCIS), the NAIS was implemented in 1999. It provided yield-based insurance coverage to farmers for major crops in notified areas. Under this scheme, farmers paid a subsidized premium rate, and in case of yield loss, they received compensation based on pre-determined crop yield levels.

Modified national agricultural insurance scheme (MNAIS): Launched in 2010, the MNAIS aimed to improve the shortcomings of the NAIS by incorporating improved technology and offering better risk coverage to farmers. The scheme introduced the use of Weather Crop Insurance (WBCIS) and was implemented on a pilot basis in some states.

Pradhan Mantri Fasal Bima Yojana (PMFBY): In 2016, the PMFBY was launched, replacing the MNAIS and other existing schemes. It was a significant reform in crop insurance, aiming to provide comprehensive risk coverage to farmers. The scheme incorporated features like a single, low premium rate for farmers, reduced the burden of premiums, and increased the government's share in the premium subsidy.

Restructured weather-based crop insurance scheme (RWBCIS): This scheme was launched alongside PMFBY to complement the coverage of PMFBY. RWBCIS focused on localized weather-based triggers for insurance payouts rather than traditional yield-based assessments. This made insurance more relevant to regions with varying climatic conditions.

The evolution of crop insurance in India has been an ongoing process to address the needs and concerns of farmers while promoting sustainable agricultural practices and reducing financial risks in the sector. The government continues to make efforts to improve the effectiveness of crop insurance schemes and increase farmer participation.

Performance of PMFBY in Karnataka

When the agricultural sector attempts to be compared to other significant industrial and service sectors, it involves additional risk factors and suspicions. One of India's top states for food crop production is Karnataka. In all, Karnataka produces five zero two percent of the world's food grains. At a time when the effects of climate change are becoming more pronounced worldwide due to frequent shortages, uneven rainfall, an increase in the earth's temperature, droughts, etc. Crop insurance is crucial in helping farmers overcome these issues and prevent loss. The government implements some insurance programs, such as

the Pradhan Mantri Fasal Bima Yojana Scheme, through the Agriculture Insurance Company of India Limited in several Indian states with various insurance programs. The recently launched PMFBY plan offers broad insurance coverage against crop failure and helps to stabilize the income of insured farmers. Crop insurance's main goals are to safeguard farmers from financial loss and serve as a tool for risk management. Food crops can be viewed as a key instrument for other types of crop insurance in crop insurance. Paddy, green gram, wheat, maize, rice, millet, and pulses are examples of food crops.

Table 1: Total Number of *Kharif* Crop Insured Farmers in Karnataka (2019 to 2022)

Sl. No.	Year	Total no. of Insured Farmers (in lakh)
1.	2019-20	1314922
2.	2020-21	1067425
3.	2021-22	1244459

Source: GOK NIC Report 2019-22

Table- 1 shows the Performance of Karnataka State is good in the adaptation the of PMFBY Crop Insurance scheme. Total Number of *Kharif* Crop insured Farmers in Karnataka for the year 2019 to 2022, Total number of insured farmers in the year 2019-20 is 1314922, in the year 2020 to 21 is 1067425, and in 2021 to 22 is 1244459 farmers.

Table 2: District-wise Coverage of Farmers and Area Insured under Pradhan Mantri Fasal Bima Yojana in Karnataka *Kharif* (2019-20)

Sl. No.	District	No. of Proposals	Total Extent Insured (in Acre)	Total Sum Insured	Total amount of Premium paid
1.	Bagalkot	33265	128845-33	1938907111.80	45142133.08
2.	Ballari	21782	96727-33	2057187976.20	63945830.58
3.	Belagavi	29524	122643-35	2050114254.10	50926531.63
4.	Bengaluru Rural	6819	13368-26	231643049.80	4751860.79
5.	Bengaluru Urban	612	1080-33	17855083.60	405566.35
6.	Bidar	177400	509331-35	7147671282.00	142953537.29
7.	ChamarajNagar	37009	90042-39	1315307431.70	31895619.33
8.	Chikkaballapur	25521	63908-6	1260299606.80	26852087.34
9.	Chikkamagaluru	5909	14565-8	286913689.60	8782354.74
10.	Chitradurga	76422	296617-3	5555334985.60	130850529.13
11.	DakshinaKannada	265	435-37	5693382.00	113867.86
12.	Davangere	77410	273911-23	5361263104.60	115769134.65
13.	Dharwad	95060	408986-21	8719105146.90	306725364.06
14.	Gadag	73379	339827-15	5773556592.10	171154730.07
15.	Hasan	45149	81600-37	1524384728.20	42537299.16
16.	Haveri	139982	469057-23	10227284717.50	271213751.07
17.	Kalaburgi	81008	256572-36	4365638664.20	87665968.38
18.	Kodagu	2580	5436-19	81602653.40	1632054.28
19.	Kolar	22972	49845-15	832488960.50	19904152.14
20.	Koppal	70608	272204-27	4793637352.20	100987223.09
21.	Mandya	20627	35901-7	546757312.30	11222493.35
22.	Mysuru	2918	6693-27	148761096.00	4233803.12
23.	Raichur	16056	81142-18	2338185863.40	57667182.57
24.	Ramanagara	14001	27706-8	425377326.70	8508415.92
25.	Shivamogga	26157	66633-17	2007560076.80	40151205.32
26.	Tumakuru	75220	191876-34	3123195941.30	63302075.16
27.	Udupi	1409	2452-19	26235581.40	524711.46
28.	UttarKannada	48741	97722-5	2148275003.40	42965529.80
29.	Vijayapura	65099	315705-21	5335824771.00	110477854.44
30.	YADGIRI	22018	83586-4	1757482011.20	44538600.21
	Total	1314922	4404431-24	81403544756.30	2007801466.37

Source: GOK. Samrakshana Report 2019-20.

The above table shows that the total insurance coverage of all districts is 1314922 lakhs for 2019-2020 of *Kharif* crops, and coverage of the total area in Karnataka is 4404431-2

The totals. The total Insured amount is 81403544756.30 crore and the farmers' payable premium is 2007801466.37 lakh rupees.

Table 3: District Wise Crops Covered under PMFBY Scheme in Karnataka *Kharif* (2021-22)

Sl. No.	Crop	No. of Proposals	Total Extent Insured (in Acre)	Total Sum Insured	Total amount of Premium paid
1.	Black Gram (urd bean)	22474	36108-37	391448923.60	7828950.96
2.	Cabbage	108	175-32	4480969.50	224048.86
3.	COTTON	54050	152808-24	3049803461.40	152490323.77
4.	Cowpea/Alasande	4416	6962-36	73268582.40	1465369.00
5.	Green Gram (Moong Bean/ Moong)	137918	455148-7	5334549588.20	106691030.38
6.	GROUNDNUT	121739	458557-32	8531506626.60	170630112.41
7.	Horse Gram/Kulthi	1402	2787-26	20307380.40	406147.03
8.	Maize (Makka)	202610	593412-34	12187387586.90	243747756.58
9.	Navane	1588	3587-7	38997082.80	779942.99
10.	Onion	24626	57131-32	1640042146.50	8200127.88
11.	PADDY	124064	316575-9	8884786838.90	177695714.53
12.	Pearl Millet/ Bajra	23894	59247-29	710042318.80	14200848.76
13.	Pigeon pea (red gram/tur)	187231	575450-26	9330552071.80	186611044.78
14.	Potato	930	1569-30	47839254.50	2391962.98
15.	RAGI	14581	27324-22	423151568.00	8463027.03
16.	Red Chillies	13493	35549-32	1043026716.00	52142101.47
17.	Saave	134	256-16	2801314.80	56026.43
18.	Save	1409	2998-31	32756305.50	655127.34
19.	Sesame (Gingelly/Til)/Sesamum	8436	15545-37	157080407.50	3141608.15
20.	Sorghum (Jowar/Great Millet)	7784	17027-36	234581212.00	4691630.06
21.	Soybean (bhat)	96803	218528-36	3007030314.40	60140675.08
22.	SUNFLOWER	14989	48832-33	709273716.90	14185475.56
23.	Tomato	2185	3563-29	169993643.80	8499682.19
24.	Turmeric	561	1165-22	61920836.60	3096043.95
	Total	1067425	3090319-15	56086628867.80	1302236778.17

Source: GOK. Samrakshana Portal Report 2021-22

The above table shows PMFBY Scheme covers all food crops (cereals and pulses), oilseeds, and horticultural crops. The insurance applies to all farmers, including sharecroppers and Loanee and non-loanee farmers.

Issues in the Implementation of Pradhan Mantri Fasal Bhima Yojana (PMFBY) Scheme in Karnataka

The Pradhan Mantri Fasal Bima Yojana (PMFBY) is an Indian crop insurance program designed to give farmers financial assistance if their crops fail due to natural disasters, pests, or illnesses. That since then, there could have been modifications or upgrades. The following are some typical problems with the application of PMFBY:

- **Delayed Settlements of Claims:** After the crop loss, farmers have complained that their insurance claims have been delayed. Farmers who depend on prompt payments may suffer financially as a result of delays.
- **Low Enrollment and Awareness:** Low enrolment may result from farmers' lack of knowledge of the PMFBY's advantages. Many farmers might not be aware of the program or might think it is difficult to register.
- **Insufficient Coverage:** It's possible that the scheme's coverage won't be enough to cover all of the farmers' losses. This could occur as a result of problems with the estimation of crop loss and the calculation of compensation amounts.
- **Premium Calculation Problems:** The premium prices can differ among areas and crops and may not necessarily represent the real risk. This may result in differences in the financial burden that farmers in various regions bear.
- **Challenges in Crop Loss Assessment:** To calculate the compensation amount, accurate crop loss estimation is essential. The accuracy of loss assessment techniques has, however, been questioned, which may cause disagreements and unhappiness among farmers.
- **Fraud and Malpractices:** There have been allegations of dishonest actions, such as exaggerating agricultural losses, working together with insurance brokers, and fixing claim settlement prices. This might damage the plan's credibility and efficacy.
- **Administrative and Operational Challenges:** The seamless execution of the plan may be hampered by difficulties with the administrative and operational components of implementation, such as data administration, stakeholder collaboration, and monitoring.
- **Limited Risk Coverage:** There might be gaps in protection if the program does not address all risk factors experienced by farmers. For instance, the coverage might not extend to specific meteorological occurrences or insect outbreaks.
- **Complicated Claim Settlement Process:** Farmers may find the claim settlement procedure challenging and may struggle to provide the necessary paperwork and support for their claims.
- **Inadequate Support for Small and Marginal Farmers:** Due to several factors including low levels of

literacy, a lack of finances, and a lack of knowledge, small and marginal farmers, who make up a sizable section of the agricultural community, may have difficulty enrolling in and taking advantage of the program.

Challenges Faced by Farmers in the Implementation of the PMFBY Scheme in Karnataka

The challenges faced by farmers in the implementation of the Pradhan Mantri Fasal Bima Yojana (PMFBY) in Karnataka may include.

- **Low Awareness and Understanding:** Farmers may lack awareness and understanding of the PMFBY scheme. This can result in low participation and enrollment as farmers may not fully comprehend the benefits of the scheme.
- **Complex Enrollment Process:** The process of enrolling in the PMFBY scheme may be perceived as complex by farmers. Complicated paperwork or requirements for documentation can deter farmers from participating.
- **Delayed Premium Payment:** Farmers may face challenges in paying the premium on time. Delays in premium payment could result in lapses in coverage, leaving farmers unprotected in case of crop loss.
- **Delayed Claim Settlements:** One of the common issues nationwide is the delay in claim settlements. Farmers may face difficulties in receiving compensation promptly after the crop loss event, affecting their financial stability.
- **Issues in Crop Loss Assessment:** The accurate assessment of crop losses is crucial for fair compensation. However, challenges in accurately assessing the extent of crop damage may lead to disputes and delays in claim processing.
- **Regional Disparities:** There might be regional disparities in the implementation of the scheme. Certain areas may face challenges that are specific to their agro-climatic conditions or local agricultural practices.
- **Inadequate Coverage for All Crops:** The scheme may not cover all crops cultivated by farmers, leaving certain crops without insurance protection. This can be a significant limitation for farmers who rely on a diverse range of crops.
- **Lack of Support for Organic Farming:** Farmers practicing organic farming may find it challenging to get coverage or face limitations in compensation, as the scheme may not adequately address the specific challenges and risks associated with organic cultivation.
- **Communication Barriers:** Communication gaps between the authorities, insurance agents, and farmers can lead to misunderstandings and hinder the effective implementation of the PMFBY scheme.
- **Limited Support for Marginal and Small Farmers:** Small and marginal farmers may face difficulties in accessing and benefiting from the scheme due to factors such as literacy levels, lack of resources, and limited outreach efforts.
- **Lack of Weather Stations and Technology Infrastructure:** The effectiveness of weather-based insurance relies on accurate weather data. Insufficient weather stations and technological infrastructure can

affect the reliability of the data used for assessing crop losses.

Key Findings of this Study

- Conduct robust awareness programs to educate farmers about the PMFBY scheme, its benefits, and the enrollment process. This includes using various communication channels such as workshops, training sessions, and multimedia platforms.
- Simplify the enrollment procedures to make it more farmer-friendly. Minimize paperwork and ensure that the process is easily understandable, even for those with limited literacy.
- Implement mechanisms to ensure that farmers can pay their premiums on time. Timely premium payment is essential for continuous coverage and prompt claim settlements.
- Improve the efficiency of the claim settlement process to ensure that farmers receive compensation promptly after the occurrence of a crop loss event. Minimize bureaucratic hurdles and expedite the verification and approval processes.
- Invest in technology, such as satellite imaging and remote sensing, to enhance the accuracy of crop loss assessments. This can lead to more reliable data for determining compensation amounts.
- Consider customizing premium rates based on the specific risk profiles of different regions and crops. This can help ensure that premiums are reflective of the actual risks faced by farmers.
- Continuously review and expand the list of crops covered under the PMFBY to provide a comprehensive safety net for farmers cultivating a wide variety of crops.
- Implement targeted measures to reach out to and support marginal and small farmers, who often face more significant challenges in accessing and benefiting from insurance schemes.

Conclusion

As was said at the beginning of this article, the government of Karnataka has made it a priority to reduce the impact of agricultural losses resulting from natural disasters, especially losses brought on by drought. An efficient system of crop insurance is a crucial component of a plan to protect farmers from income losses, finance agricultural production inputs for the following planting season, and increase the penetration of agricultural loans for investment to increase agricultural productivity. Karnataka too provides a difficult environment for the implementation of a crop insurance program. It is challenging to extend the reach of a program to all farmers, especially those who are most at risk of experiencing extreme poverty in the case of a catastrophic yield loss due to the huge and increasing number of small and marginal holdings. Frequent droughts make crop insurance more important while also making it more challenging to create a system that is both financially sustainable for the government and inexpensive for farmers. Therefore, the Karnataka government should specifically consider how crop insurance and disaster relief programs could be organized to operate better together if it is thinking about how to reduce the effect of catastrophes while

supporting improvements in the crop insurance plan. For dealing with extremely rare but catastrophic occurrences, crop insurance may be less successful than disaster aid, and it may be most useful when used in conjunction with other existing risk management tools.

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