

A Study on Performance and Progress of Pradhan Mantri Fasal Bima Yojana in India

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Abstract— In India, agriculture plays a crucial role in supporting approximately one-third of the population, with a vast network of 116 million farms spread across 163 million hectares of land. The majority of farmers, accounting for 80 percent of the total, are classified as small and marginal, owning 2 hectares or less. However, this essential sector faces numerous challenges, primarily due to its heavy reliance on rainfall, as 60 percent of the cultivated land depends on rain-fed irrigation. The unpredictable nature of monsoon rainfall greatly impacts crop growth and output, affecting both rain-fed and irrigated crops. This uncertainty makes agriculture a high-risk industry, and approximately two-thirds of the cultivated land is susceptible to varying degrees of drought, posing operational risks for farmers. Adding to the vulnerability of the sector, natural disasters strike around 12 million hectares of crop area annually, leading to substantial losses in agricultural yields and overall production. These adversities have called for robust and innovative solutions to safeguard farmers' livelihoods and stabilize the agricultural sector. In response to these challenges, the Government of India took a significant step in 2016 by introducing the Pradhan Mantri Fasal Bima Yojana. This essential scheme aims to provide insurance coverage to crops, offering a much-needed safety net for farmers. By offering financial protection against crop failures caused by adverse weather conditions, the program seeks to mitigate the impact of uncertainties related to rainfall and natural disasters. Through the Pradhan Mantri Fasal Bima Yojana, the government strives to bolster the agricultural sector by encouraging risk management and providing timely support to farmers during difficult times. By doing so, the scheme aims to enhance the resilience of agriculture, empower small and marginal farmers, and contribute to the overall growth and food security of the nation. This study is an attempt to analyse the performance and progress of the PMFBY in India.

Keywords: Small and marginal farmers, rainfall, rain-fed irrigation, uncertainty, insurance and Pradhan Mantri Fasal Bima Yojana.

I.I INTRODUCTION

In India, where a one third of the population relies on agriculture either directly or indirectly, there are 116 million farm holdings spread across 163 million hectares of land. The majority of these producers, 80 percent, are small and marginal farmers with holdings of 2 hectares or less. Agriculture is a high-risk industry, and farmers face various types of risks. 60 percent of the country's net sown area is dependent on rainfall, with 65 percent of Indian farmers relying on rain-fed irrigation. Crop growth and output are determined by the amount and distribution of rainfall during the Monsoon Season, which can be uncertain. This unpredictability also affects irrigated crops. Approximately two-thirds of the cropped land in India is susceptible to drought to varying degrees, leading to operating risks in crop cultivation. On average, 12 million hectares of crop area is impacted annually by natural disasters, severely affecting yields and overall agricultural production.¹

Crop insurance should be part of a comprehensive risk management strategy, as insurance only compensates for losses and cannot prevent economic loss.

I.II MEANING OF CROP INSURANCE

Crop insurance is an insurance mechanism aimed at minimizing the financial impact on farmers resulting from damage to their crops due to various production risks. This may include risks such as natural disasters, pests, diseases, and other unexpected events that can negatively impact crop yields and profitability. By obtaining crop insurance, farmers can reduce their financial losses and protect their livelihoods in the face of unforeseen events. This can also help stabilize farm income, allowing farmers to continue investing in their operations and maintaining their production levels even in the event of crop damage. Additionally, crop insurance can also form an important component of a broader risk management strategy, providing farmers with a safety net to help mitigate the impact of unforeseen events on their financial well-being.

CROP INSURANCE SCHEMES IMPLEMENTED IN INDIA

I) First Ever-Individual Approach Scheme-1972

¹ Concept note on Farm Income Insurance: Issues and Way Forward (www.vibrantgujarat.com)

II) Pilot Crop Insurance Scheme (PCIS)-1979

III) Comprehensive Crop Insurance Scheme (CCIS)-1985

IV) Experimental Crop Insurance Scheme (ECIS)-1997

V) Pilot Project on Farm Income Insurance Scheme (FIIS)-2003

VI) National Agricultural Insurance Scheme (NAIS)

VII) Weather-Based Crop Insurance Scheme (Pilot scheme)

VIII) Varsha Bima (Rainfall insurance Pilot scheme)

IX) Rabi Weather Insurance (pilot scheme)

PRADHAN MANTRI FASAL BIMA YOJANA (PMFBY)

The Pradhan Mantri Fasal Bima Yojana (PMFBY) was introduced in the Khariff season of 2016 with the goal of boosting agricultural production by providing cost-effective crop insurance coverage. This scheme offers farmers comprehensive protection against non-preventable natural risks from planting to harvest. It has been in effect for 8 crop seasons and is now implemented in all states and union territories.

The scheme is implemented in two seasons in a year i.e., Khariff (starts in June and ends in October) Rabi (starts after monsoon rains i.e., in November and ends in April/May).

OBJECTIVE OF THE SCHEME

The purpose of PMFBY is to promote sustainable agricultural production by offering:

- Financial assistance to farmers affected by unexpected events resulting in crop loss or damage.
- Maintaining the income of farmers to keep them engaged in farming activities.
- Encouraging farmers to adopt modern and innovative farming methods.
- Improving the creditworthiness of farmers, promoting crop diversification, and enhancing the growth and competitiveness of the agriculture sector while also protecting farmers from production risks.²

NEED FOR THE STUDY

This study focuses on agricultural insurance, specifically the Pradhan Mantri Fasal Bima Yojana (PMFBY), which is India's flagship program aimed at safeguarding farmers against natural and man-made risks. Initially mandatory for crop loan recipients, it became voluntary for all farmers from the 2019-2020 Rabi season. However, the Telangana state government stopped paying its share of the premium, causing operational challenges and financial burden on farmers. This research aims to analyze the progress and perception of PMFBY in India, with a particular focus on Telangana. It aims to identify the problems and challenges faced by farmers in the region and provide insights to improve the scheme's effectiveness in the future.

REVIEW OF LITERATURE

Gosh, R. K., et al., (2021)³ The authors of “Demand for Crop Insurance in Developing Countries: New Evidence from India” published in the Journal of Agricultural Economics found that farmers in India have specific preferences when it comes to crop insurance policies, including attributes such as the coverage period, method of loss assessment, timing of indemnity payment, and cost. They discovered that in India, indemnity-based crop insurance is widely sought after as it provides protection against production losses from various perils. This type of insurance is offered under the Pradhan Mantri Fasal Bima Yojana (PMFBY) program.

Hazell, P. and Varangis, P. (2020)⁴ In their article “Best Practices for Subsidizing Agricultural Insurance” published in Global Food Security, Vol. 25, (2020), the authors discuss the fact that many governments provide subsidies for agricultural insurance to farmers. These subsidies are driven by various reasons, including market failures that limit the development of private

² www.pmfby.gov.in Revamped Operational Guidelines of PMFBY

³ **Gosh, R. K., et al., (2021)** “Demand for crop insurance in developing countries: New evidence from India. Journal of agricultural economics”, 72(1), 293-320.

⁴ **Hazell, P. and Varangis, P. (2020)** ‘Best practices for subsidizing agricultural insurance’, *Global Food Security*, Vol. 25, (2020) article 100326.

insurance markets and political and social goals. Although subsidizing crop insurance can provide numerous benefits, the authors note that implementing it effectively presents several challenges in terms of design and operation.

Subhankar Mukerjee & Parthapratim Pal (2019)⁵ In their study “On Improving Awareness about Crop Insurance in India,” found that low awareness about crop insurance is a major reason why farmers do not take out insurance policies. They noted that the primary method of providing crop insurance in India is through banks and therefore, banks can be an effective means of spreading awareness among farmers. The authors also suggested that enhancing agriculture extension services could help increase awareness about crop insurance.

Y. Rajaram and Chetana B.S (2018)⁶ In their study “A Study on Awareness Level on Crop Insurance Schemes and the Factors Influencing Choice of Information Sources Among Farmers” the authors emphasized the importance of farmers accessing various platforms to gain information about crop insurance. They believe that empowering farmers in agriculture can only be achieved through quality infrastructure, education, research and development, technology, risk mitigation, and marketing.

Bhushan and Kumar (2017)⁷ An assessment of PMFBY for CSE found that there is a need for better awareness and education about the scheme for farmers. The study showed that mainly small farmers are availing agricultural insurance, likely due to being required to do so through institutional credit. The sum insured per hectare has increased in all states, but still remains low in some, such as Rajasthan. The study recommends improved publicity and education about the scheme's process to better benefit farmers.

RESEARCH GAP

From the review of literature, it is understood that there are many studies on Crop Insurance in India. The above reviews have not adequately highlighted the progress of PMFBY with latest data

OBJECTIVE OF THE STUDY

To study the effectiveness of PMFBY scheme in terms of its Progress and performance in India from its inception.

SCOPE OF THE STUDY

This study aims to analyze the progress and performance of PMFBY in India and The present study will cover premium amount collected and insurance claims paid to the farmers by Insurance companies for a period of 5 years from 2016 to 2021.

RESEARCH METHODOLOGY

Data was collected from various data secondary sources i.e., Annual reports, Journals, News Papers, Agriculture Magazines, Theses, Reference books, Internet browsing.

Table No. 1

PROGRESS OF PRADHAN MANTRI FASAL BIMA YOJANA IN INDIA (2016-2021)

Season-wise Progress under PMFBY from 2016 Kharif to Rabi 2020-21 in Lakhs

| Year/Season | Number of Famers covered in lakhs | Area Insured in Hectares | Sum Insured | Claims reported | Claims paid | No. of farmers benefited |
|-------------|-----------------------------------|--------------------------|-------------|-----------------|-------------|--------------------------|
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⁵ Mukherjee, Subhankar Pal, Parthapratim “On Improving Awareness about Crop Insurance in India”, 2019/08/16 https://www.researchgate.net/publication/335202289_On_Improving_Awareness_about_Crop_Insurance_in_India

⁶ Y. Rajaram and Chetana B.S in their study titled “A study on awareness level on crop insurance schemes and the factors influencing choice of information sources among farmers” *International Journal of Marketing & Financial Management*, Volume 6, Issue 1, Jan -2018, pp 01-08

⁷ Bhushan, C., Kumar V. (2017), “Pradhan Mantri Fasal Bima Yojana: An Assessment”, Centre for Science and Environment, New Delhi.

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|----------------------|--------------|--------------|-------------|-------------|-----------|-------------|
| Kharif 2016 | 3,92,22,405 | 3,64,73,145 | 1,23,97,913 | 9,30,345 | 9,30,344 | 1,01,33,944 |
| Rabi 2016-17 | 1,70,48,848 | 1,84,46,774 | 68,84,113 | 5,84,424 | 5,84,424 | 38,04,924 |
| Total 2016-17 | 5,62,71,253 | 5,49,19,919 | 1,92,82,026 | 15,14,769 | 15,14,768 | 1,39,38,868 |
| Kharif 2017 | 3,42,76,361 | 3,13,08,486 | 1,15,81,366 | 16,83,233 | 16,82,966 | 1,35,30,904 |
| Rabi 2017-18 | 1,69,65,514 | 1,74,37,552 | 74,74,582 | 3,43,046 | 3,42,519 | 26,07,969 |
| Total 2017-18 | 5,12,41,875 | 4,87,46,038 | 1,90,55,948 | 20,26,279 | 20,25,485 | 1,61,38,873 |
| Kharif 2018 | 3,31,19,255 | 3,07,12,052 | 1,29,41,497 | 17,51,509 | 16,65,164 | 1,25,52,655 |
| Rabi 2018-19 | 2,25,10,383 | 1,99,83,163 | 87,54,023 | 8,21,759 | 8,15,032 | 79,72,894 |
| Total 2018-19 | 5,56,29,638 | 5,06,95,216 | 2,16,95,521 | 25,73,267 | 24,80,196 | 2,05,25,549 |
| Kharif 2019 | 4,13,88,787 | 3,18,99,514 | 1,31,63,488 | 19,46,396 | 18,92,507 | 1,74,11,499 |
| Rabi 2019-20 | 1,83,70,699 | 1,63,95,703 | 70,45,873 | 4,34,831 | 4,14,451 | 36,30,271 |
| Total 2019-20 | 5,97,59,486 | 4,82,95,217 | 2,02,09,360 | 23,81,227 | 23,06,958 | 2,10,41,770 |
| Kharif 2020 | 4,16,45,192 | 2,79,36,885 | 1,11,54,071 | 13,44,387 | 11,57,790 | 99,35,115 |
| Rabi 2020-21 | 1,89,77,686 | 1,55,32,221 | 78,95,528 | 4,72,842 | 4,13,039 | 44,79,887 |
| Total 2020-21 | 6,06,22,878 | 4,34,69,106 | 1,90,49,599 | 18,17,229 | 15,70,829 | 1,44,15,002 |
| Kharif Seasons Total | 18,96,52,000 | 15,83,30,082 | 6,12,38,335 | 76,55,869 | 73,28,772 | 6,35,64,117 |
| Rabi Seasons Total | 9,38,73,130 | 8,77,95,413 | 3,80,54,120 | 26,56,902 | 25,69,464 | 2,24,95,945 |
| Grand Total | 28,35,25,130 | 24,61,25,495 | 9,92,92,455 | 1,03,12,771 | 98,98,236 | 8,60,60,062 |

Source: https://agricoop.nic.in/Documents/CWWGDATA/Agricultural_Statistics_at_a_Glance_2022

DISCUSSION AND FINDINGS

This table represents the number of farmers covered in lakhs during different seasons (Kharif and Rabi) and years (2016 to 2021). The data shows the total number of farmers covered in both Kharif and Rabi seasons each year, as well as the overall total for each type of season and for all seasons combined. The highest number of farmers covered in a single year was in 2019-20 with 5,97,59,486 farmers. The overall total for all seasons and years is 28,35,25,130 farmers.

The area insured in hectares during different seasons (Kharif and Rabi) and years (2016 to 2021). The data shows the total area insured in both Kharif and Rabi seasons each year, as well as the overall total for each type of season and for all seasons combined. The highest area insured in a single year was in 2018-19 with 5,06,95,216 hectares. The overall total for all seasons and years is 24,61,25,495 hectares.

From the data, it can be observed that the highest sum insured in a single year was in 2018-19 with 2,16,95,521. The total sum insured for Kharif seasons over the years is 6,12,38,335, while the total sum insured for Rabi seasons is 3,80,54,120. The grand total for all seasons and years is 9,92,92,455. The data suggests that the sum insured has increased from 2016 to 2018, but has declined in the subsequent years. It is important to note that the sum insured in Rabi seasons is lower compared to that of the Kharif seasons. Further analysis could be conducted to understand the factors contributing to these trends and determine any necessary actions to improve the sum insured.

The claims reported during the Kharif season are higher than those reported during the Rabi season. In 2016, the number of claims reported during the Kharif season was 9,30,345. while during the Rabi season, the number of claims reported was 5,84,424.00. The total claims reported during 2016-17 were 15,14,769. The highest number of claims reported in a single season was in 2018-19, during which 25,73,267 claims were reported. The number of claims reported during the Kharif seasons from 2016 to 2020 was 76,55,869 and the number of claims reported during the Rabi seasons was 26,56,902.00. The total number of claims reported during the entire period was 1,03,12,771 it can be seen that the claims paid in the Kharif seasons have been higher than the claims paid in the Rabi seasons every year, except for the year 2020-21. In the year 2016-17, the total claims

paid was 15,14,768.00 and in 2017-18, the total claims paid was 20,25,485.00, which indicates an increase in the amount of claims paid from one year to the next. In the year 2018-19, the total claims paid were 24,80,196.00 which is the highest amount paid in a single year. The amount of claims paid in the year 2019-20 and 2020-21 saw a decrease, with 23,06,958.00 and 15,70,829.00 respectively. The grand total of claims paid over the period 2016-2021 was 98,98,236.00. It is essential to note that this data only covers a five-year period and that it would be necessary to review a longer time frame to establish any meaningful trends in the data. In conclusion, the table shows the amount of claims paid per season and year, with the highest amount being paid in the year 2018-19.

In 2016-17, the total number of farmers who benefited was 1,39,38,868, with a higher number of farmers benefiting from the Kharif season (1,01,33,944) compared to the Rabi season (38,04,924). The same trend was seen in 2017-18, where the total number of farmers benefiting was 1,61,38,873, with the Kharif season having more beneficiaries (1,35,30,904) compared to the Rabi season (26,07,969). In 2018-19, the number of beneficiaries increased significantly to 2,05,25,549, with a higher number of farmers benefiting from the Rabi season (79,72,894) compared to the Kharif season (1,25,52,655). In 2019-20, the total number of beneficiaries continued to increase to 2,10,41,770, with the number of farmers benefiting from both seasons being relatively similar. In 2020-21, the total number of beneficiaries decreased to 1,44,15,002, with the number of farmers benefiting from the Kharif season (99,35,115) being lower compared to the Rabi season (44,79,887).

CONCLUSION

Comparing to Kharif season in every year Rabi season the farmers availing PMFBY is decreasing, hence government should take necessary action to improve the Availment PMFBY by farmers.

There is no much improvement in PMFBY from its inception i.e., 2016 to 2021 hence government should take necessary steps for improving PMFBY by creating more awareness among farmers.

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