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## UNVEILING FARMERS' PERSPECTIVES: A COMPREHENSIVE EXAMINATION OF PRADHAN MANTRI FASAL BIMA YOJANA (PMFBY) IN TIRUCHIRAPPALLI DISTRICT OF TAMIL NADU

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### ABSTRACT

Agriculture's inherent uncertainties threaten farmers' income and food security. The government introduced Pradhan Mantri Fasal Bima Yojana (PMFBY) in 2016 to mitigate risks, aligning with the "One Nation-One Plan" initiative for farmers' protection. The current investigation aimed to gauge farmers' perceptions of the Pradhan Mantri Fasal Bima Yojana (PMFBY). Conducted in the year 2022-23, the study focused on deliberately chosen blocks namely Thuraiyur and Uppiliyapuram in Tiruchirappalli district of Tamil Nadu. Respondents, totaling 120, were chosen from three villages in each selected block using a proportionate random sampling method. A thoroughly designed interview schedule, formulated based on expert opinions and literature reviews, was employed for data collection. Subsequently, the acquired data underwent coding, quantification, classification, tabulation and analysis, employing frequency, percentage and mean score ranking techniques to derive meaningful insights. The study's results indicated that a significant proportion of farmers (70.83%) held medium level perception, while 20.00 per cent had low perception, and 9.17 per cent expressed high perception regarding the Pradhan Mantri Fasal Bima Yojana (PMFBY). The assessment revealed that statements such as the enhancement of individual farmers' knowledge and skills under PMFBY (Mean Score - 2.59) ranked highest, followed by its role in enhancing yields and crop protection (Mean Score - 2.58) and improving resource-poor farmers' access to better crop production (Mean Score - 2.48), which were ranked second and third, respectively. Crop insurance shields farmers from uncertainties like natural disasters. It is deemed essential for all types of farmers due to its significance.

**KEYWORDS:** Agriculture, Crop insurance, Pradhan Mantri Fasal Bima Yojana (PMFBY), Perception.

## **INTRODUCTION**

Despite concerted efforts towards industrialization in recent decades, agriculture continues to serve as the cornerstone of the Indian economy. Despite the rise of industry, agriculture remains the largest employer, contributing significantly with a 19.9% share in Gross Value Added (GVA) as of 2021-22, accompanied by a real GDP growth of 8.7% in the same period. Additionally, agriculture plays a pivotal role in international trade and economic strategies. However, the sector faces frequent challenges due to natural calamities such as droughts, floods, cyclones, storms, landslides and earthquakes, which often disrupt agricultural production and diminish farm incomes (Tankiwala et al., 2022). Crop insurance serves as a reliable tool offering protection to farmers in case of crop failure, effectively managing risks associated with both yield and price fluctuations. With a stable income ensured through crop insurance, farmers gain the ability to meet their financial obligations, including loan repayments, even in years when crops fail. This insurance shields farmers from losses incurred due to reduced crop yield falling below predetermined thresholds (Suneja, A., 2022).

The Government of India initiated the Pradhan Mantri Fasal Bima Yojana (PMFBY) on February 18, 2016, supplanting the National Agriculture Insurance Scheme (NAIS) and Modified National Agriculture Insurance Scheme (MNAIS). PMFBY stands as the world's largest crop insurance scheme by farmer participation, with an average of 5.5 crore applications annually, and ranks third globally in terms of premiums received. Its primary aim is to offer financial aid to farmers grappling with crop losses due to unexpected events, thereby stabilizing their income. Moreover, the scheme incentivizes farmers to embrace innovative and modern agricultural techniques, facilitating easier access to credit in the agricultural sector. Consequently, it contributes to food security, promotes crop diversification, enhances the growth and competitiveness of the agricultural industry, and safeguards farmers from production-related risks (Das et al., 2023). The scheme utilizes a streamlined and technology-driven approach, integrating remote sensing, smartphones, and satellite imagery to accelerate and improve the evaluation of crop losses with heightened accuracy. This feature sets it apart from other methods that rely on traditional assessment techniques. As a result, the initiative has bolstered India's financial framework and extended financial accessibility to millions of farmers (Kaur et al., 2021). Recognizing the significance of crop insurance, this study was undertaken to examine Farmers' Perception on the Pradhan Mantri Fasal Bima Yojana (PMFBY).

## **METHODOLOGY**

The current study utilized an ex post facto design. In ex post facto research design, the inquiry is systematic, yet the scientist lacks direct control over the independent variables as they have already occurred or are inherently unchangeable. This form of research is conducted after the phenomenon has taken place. The research was focused on the Tiruchirappalli district of Tamil Nadu, specifically targeting two blocks, Thuraiyur and Uppiliyapuram, which were purposively selected due to their

significant number of insured farmers under the Pradhan Mantri Fasal Bima Yojana. From these blocks, six villages were purposefully chosen based on the number of beneficiaries of PMFBY. The sample size for each selected village was determined using proportionate random sampling. After compiling a list of farmers, a total of 120 farmers were randomly selected using a simple random sampling method.

Perception is the process of understanding based on past experiences. It is the process of interpretation based on sensation. There is a strong relationship between beliefs, values, norms and farmer's perception. For the study purpose effort has been made to investigate the farmer's views regarding PMFBY. For measuring this variable, statements on three- point continuum scale developed by Shinde (2018) was followed. The interview schedule that was prepared underwent pre-testing, involving 5 percent of the sample size in an area outside the designated sample area, before proceeding with the interviews.

Agree, undecided and disagree perception data were coded on a three- point continuum with scores of 3, 2 and 1 respectively. The respondents are categorized into three groups based on their range of scores: low, medium and high. A respondent's overall perception score was computed by adding the scores he/she received for each statement.

<b>S.No.</b>	<b>Categories</b>	<b>Range of scores</b>	<b>Score</b>
1.	Low	Less than 29	1
2.	Medium	From 29 to 44	2
3.	High	More than 44	3

## **FINDINGS AND DISCUSSION**

### **Perception of the beneficiaries regarding PMFBY**

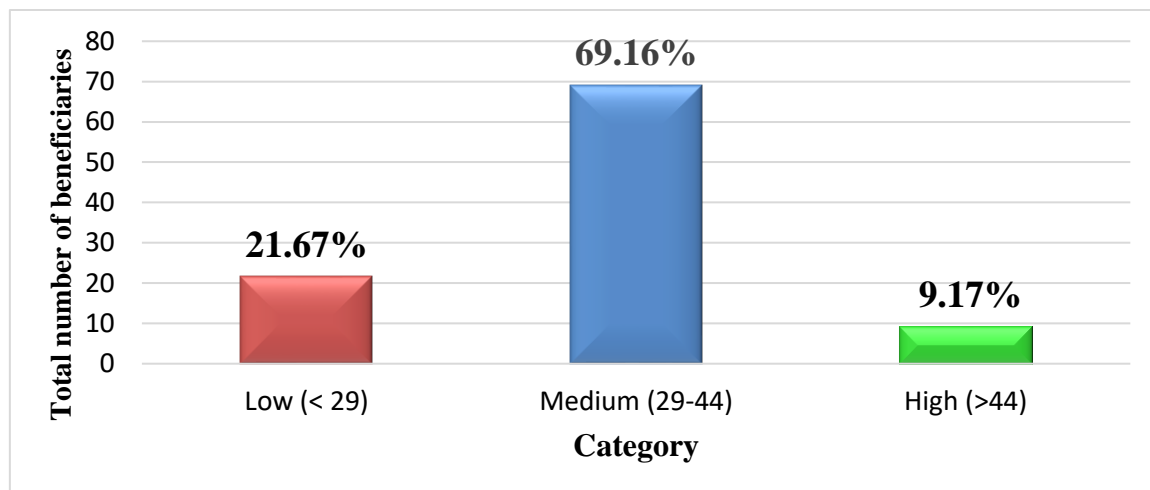
Perception is the organisation, categorization and processing of all sensory data in order to characterise and understand the information or scenario that is being presented. The findings were given in the Table 1 and figure 1.

**Table 1. Distribution of the beneficiaries according to their overall Perception regarding PMFBY (n=120)**

S.No.	Category	Frequency	Per cent
1.	Low	26	21.67
2.	Medium	83	69.16
3.	High	11	9.17
<b>Total</b>		<b>120</b>	<b>100.00</b>

From the Table 1 it was seen that nearly three-fourths of the beneficiaries (69.16%) had a medium level of perception towards the PMFBY, whereas 21.67 per cent and 9.17 per cent of the beneficiaries had low and high levels, respectively. Farmers' perceptions of the PMFBY scheme were positive, and respondents thought the initiative was helpful to them, therefore most beneficiaries (78.33%) had a medium to high level perception. The above findings were in line with the findings of Suresh and Sreedaya (2022).

(n=120)



**Figure 1. Distribution of the beneficiaries according to their overall Perception regarding PMFBY**

The specificity of perception (statement-wise) of PMFBY was analysed and shown in Table 2.

**Table 2. Distribution of the beneficiaries according to their Perception regarding PMFBY**

**(n=120)**

S.No.	Statements	Perception			Mean score	Rank
		Agree	Un decided	Disagree		
1.	PMFBY encourages the farmers to get more yields and protects crop from damage	82 (68.33%)	26 (21.67%)	12 (10.00%)	2.58	II
2.	PMFBY crop insurance is partial towards some farmers of the region	27 (22.50%)	60 (50.00%)	33 (27.50%)	1.95	XVI
3.	Individual farmer's knowledge, skills and capacity to experiment would increase with PMFBY	87 (72.50%)	17 (14.17%)	16 (13.33%)	2.59	I
4.	PMFBY increase resource poor farmer's access to improved crop production	77 (64.17%)	24 (20.00%)	19 (15.83%)	2.48	III
5.	It is not possible to follow the procedures of crop insurance	47 (39.17%)	51 (42.50%)	22 (18.33%)	2.21	XI
6.	The scheme deals with risks associated with weather fluctuations are imperative for alleviating the distress caused to the farmers	73 (60.83%)	30 (25.00%)	17 (14.17%)	2.47	IV
7.	The scheme provides prompt and easy settlement of claims	57 (47.50%)	39 (32.50%)	24 (20.00%)	2.28	VIII
8.	The scheme helps in changing the attitude of youths of rural community to practice farming enthusiastically	67 (55.83%)	32 (26.67%)	21 (17.50%)	2.38	V

9.	The use of technology for money transfer may restrict farmers to go for crop insurance	41 (34.17%)	64 (53.33%)	15 (12.50%)	2.22	X
10.	The scheme is an improvement over previous crop insurance scheme	68 (56.67%)	25 (20.83%)	27 (22.50%)	2.34	VI
11.	The settlement of claims through use of technology reduces the delay in claim compensation and enhances the level of transparency	37 (30.83%)	65 (54.17%)	18 (15.00%)	2.16	XII
12.	The low premium aspect is likely to attract many farmers to enroll thereby covering a wide population	31 (25.83%)	57 (47.50%)	32 (26.67%)	1.99	XIV
13.	Farmers feel secure and safe due to the added feature that the insurance scheme covers post-harvest losses	59 (49.17%)	37 (30.83%)	24 (20.00%)	2.29	VII
14.	The scheme is not of much benefit as in most of the agricultural lands, crop damage occurs due to the destruction caused by wild animals which is not addressed in the risk of crop damage	43 (35.83%)	64 (53.33%)	13 (10.84%)	2.25	IX
15.	There is lacking in the scheme as the scheme does not cover the problems of the farmers	29 (24.17%)	63 (52.50%)	28 (23.33%)	2.01	XIII
16.	The scheme helps the farmers to take risks in farming and adopt new farming methods with the crop insurance scheme	59 (49.17%)	37 (30.83%)	24 (20.00%)	2.29	VII

17.	The scheme enables farmers to readjust their production strategies and thus improve the economic performance	35 (29.17%)	47 (39.16%)	38 (31.67%)	1.98	XV
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The table 2 shows that the statement, Individual farmer’s knowledge, skills and capacity to experiment would increase with PMFBY was ranked as I (MS - 2.59). The statements, PMFBY encourages the farmers to get more yields and protects crop from damage and it increases resource poor farmer’s access to improved crop production were ranked as II (MS – 2.58) and III (MS – 2.48) respectively. The scheme deals with risks associated with weather fluctuations are imperative for alleviating the distress caused to the farmers was ranked as IV (MS – 2.47) and the scheme helps in changing the attitude of youths of rural community to practice farming enthusiastically was ranked as V (MS – 2.38). Following statements are PMFBY scheme is an improvement over previous crop insurance scheme (MS – 2.34), Farmers feel secure and safe due to the added feature that the insurance scheme covers post-harvest losses and the scheme helps them to take risks in farming and adopt new farming methods with the crop insurance scheme (MS – 2.29), shared the same position (VII). The scheme provides prompt and easy settlement of claims (MS – 2.28), the scheme is not of much benefit as in most of the agricultural lands, crop damage occurs due to the destruction caused by wild animals which is not addressed in the risk of cop damage (MS – 2.25), the use of technology for money transfer may restrict farmers to go for crop insurance (MS – 2.22), it is not possible to follow the procedures of crop insurance (MS- 2.21), the settlement of claims through use of technology reduces the delay in claim compensation and enhances the level of transparency (MS – 2.16 ), there is lacking in the scheme as the scheme does not cover the problems of the farmers (MS- 2.01), the low premium aspect is likely to attract many farmers to enroll thereby covering a wide population (MS- 1.99), the scheme enables farmers to readjust their production strategies and thus improve the economic performance (MS – 1.98) and PMFBY crop insurance is partial towards some farmers of the region (MS – 1.95) were ranked accordingly. It is possible to draw the conclusion that farmers are asking the government to notify all the crops under PMFBY because they have an opinion towards the programme.

## CONCLUSION

In conclusion, weather conditions are beyond farmers' control, making crop insurance an essential tool for managing crop production risks. It is imperative for the government to take the lead in providing subsidies to both small-scale and large-scale farmers, proportionate to their income levels. The effectiveness of crop insurance hinges on farmers' perceptions of its benefits, which shape their overall attitude towards the scheme. The study identified factors such as knowledge and skill enhancement under PMFBY, as well as its role in increasing yields and improving resource-poor farmers' access to

better crop production, as influencing farmers' perceptions of the scheme. While there may be other factors at play, the study did not explore them comprehensively, indicating a need for further research. Additionally, for farmers to have a positive perception towards crop insurance, they must trust that the insurance terms are fair and have confidence in timely claims settlement.

### COMPETING INTERESTS

Authors have declared that no competing interests exist.

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