Constraints in adoption of crop insurance scheme (PMFBY) in Cuddalore District of Tamil Nadu

[1*]M. Arikrishnan and [2]S. Kalaiselvi

[1]Research Scholar, Annamalai University, Department of Economics, Faculty of Arts, Tamil Nadu, India, Annamalai Nagar - 608002 (India)
[2]Assistant Professor, Annamalai University, Department of Economics, Faculty of Arts, (Deputed to) Thiru Kolanjiappar Government Arts College, Virudhachalam, Tamil Nadu. - 606001
* Address for Correspondence : M. Arikrishnan, Research Scholar, Department of Economics, Faculty of Arts, Annamalai University, Annamalai Nagar, Tamil Nadu - 608002 (India)
Email: arikrishnan8@gmail.com

Abstract

Agriculture, along with its other industries, is without a doubt India's most vital source of revenue, particularly in the vast rural areas. It also makes a substantial contribution to GDP. Agriculture employs more than 58 percent of the population in this country. It supplies the bulk of wage products needed by non-agricultural sectors, as well as the majority of raw materials needed by the industrial sector. Droughts, floods, cyclones, storms, landslides, and earthquakes have all had a substantial impact on agricultural production and farm revenue in India. Crop insurance is one way for farmers to mitigate crop loss risk. Crop insurance is a financial mechanism that accounts for a wide range of crop output to offset the impact of agricultural revenue loss variables. Because paddy was the state's and Cuddalore district's principal crop, and it was also harmed by natural disasters including floods, droughts, torrential rains, and cyclones, this study looked into the "Constraints in Adoption of Crop Insurance Scheme." (PMFBY) in Cuddalore District of Tamil Nadu." The study's specific goal is to identify the barriers to crop insurance scheme adoption (PMFBY) and provide policy recommendations. The study concluded that after the establishment of the crop insurance system (PMFBY), there was increased delay in claims payment, which was one of the most common obstacles in the plan's adoption. As a result, to improve the performance of the insurance system, the majority of insured (80.41%) and non-insured (65.83%) farmers said that quick settlement of claims (before the start of the next season) is a more effective way. During the study period, the insured (53.75%) and non-insured (17.50%) farmers reported that the Kharif Season paddy II crop premium rate was higher than the Rabi Season

paddy crop premium rate. Reduced premium rates are another useful technique for reducing the obstacles in implementing the plan. Crop cutting experiments (CCEs) in the presence of villagers were suggested by 42.92 percent of insured farmers and 4.17 percent of non-insured farmers to increase yield loss accuracy. Farmers who are insured (18.75%) and uninsured (8.33%) have suggested that establishing a separate insurance cell will aid the program's progress. The need for the media to be aware of insurance schemes was mentioned by 33.75 percent of insured farmers and 29.17 percent of non-insured farmers. Proper guidance for employees and farmers was proposed by 39.17 percent of insured farmers and 32.50 percent of non-insured farmers. To increase the scheme's progress, approximately 59.17 percent of uninsured farmers and 14.58 percent of insured farmers require crop insurance program advertising.

Key words : Agriculture, Natural Disasters, Crop Insurance, Constraints, PMFBY.

Agriculture, along with its other sectors, is undeniably India's most important source of revenue, particularly in the vast rural areas. It also makes a substantial contribution to the GDP. Agriculture employs more than 58 percent of the population in this country. It supplies the bulk of wage products needed by non-agricultural sectors, as well as the majority of raw materials needed by the industrial sector.

Droughts, floods, cyclones, storms, landslides, and earthquakes all have a substantial impact on agricultural production and farm profitability in India. The vulnerability of agriculture to these disasters is worsened by epidemics and man-made disasters like fire, the sale of counterfeit seeds, fertilizers, and pesticides, price crashes, and so on. All of these disasters have a serious impact on farmers. in terms of missed productivity and farm income, and they are out of their hands. As agriculture becomes more commercialized, the extent of loss due to adverse circumstances expands.

Rainfall is critical to Indian agriculture, and it falls Especially during the monsoon season, which lasts around two and a half months. Natural disasters such as scarcity or drought, floods, cyclones, and other natural disasters can be triggered by aberrant monsoon activity. Drought threatens to varied degrees nearly two-thirds of agricultural land. Each year, catastrophic disasters destroy an average of 12 million hectares of agricultural land, drastically lowering yields and total agricultural production.

Crop insurance is one option for farmers to reduce the risk of crop loss. It is a method designed to assist farmers in dealing with revenue loss. Crop insurance protects farmers from yield fluctuations induced by natural phenomena over which they have no control, such as rainfall (drought or excess rainfall), flood, hail, other meteorological variables (temperature, sunlight, wind), pest infestation, and so on. Crop insurance is a financial method that accounts for a wide range of crop production variables to offset

the impact of agricultural revenue loss. As such, it is a risk management method in which production risk is transferred to a third party for a fee. It is a realistic choice for farmers as well as the government. Farmers obtain actuarially sound insurance with fast payments and little government administrative overhead. For the preparation of the manuscript, relevant literature[1-14] has been consulted.

Objective of the study :

To determine the barriers to crop insurance adoption scheme (PMFBY) and given the Policy suggestions.

Design of the study :

Tamil Nadu has a big number of agriculture-dependent farmers (8 million) who produce 75 million tons of food grains from 3 million hectares of cultivable land; therefore, actions must be taken to improve the crop insurance scheme's performance. Because paddy is the principal crop in the state and the Cuddalore area, and it also suffers from unpredictable weather, this study has examined the crop. "Constraints in Adoption of Crop Insurance Scheme (PMFBY) in Cuddalore District of Tamil Nadu".

This study aimed at understanding the contribution of crop insurance scheme to risk reduction of farmers, awareness and its impact in the selected area. PMFBY was from kharif 2016 onwards in all the districts of Tamil Nadu except Chennai. There are 38 districts in Tamil Nadu in which one of the most vulnerable district are Cuddalore was selected to conduct the present study. And also, in this district is adversely impacted by natural disasters like floods, droughts, torrential rains and cyclones.

Among 13 blocks of Cuddalore district, Keerapalayam Block, Kumaratchi Block, Melbhuvanagiri Block and Parangipettai Block were selected as based on the enrollment of more number of Paddy farmers in PMFBY insurance Scheme. Paddy is the most important crop in this district. Kharif is the main crop cultivation season and most severely affected by natural calamities such as drought, pest and diseases, farmers raising Kharif crops were considered for this study.

Tools of Analysis :

Garrett Ranking Technique :

The respondents were asked to rank their banana production and marketing issues. These ranks were transformed into percentage positions in Garrett's ranking technique by applying the formula,

$$Percent\ position = \frac{100 \times (Rij - 0.5)}{Nj}$$

Where,

Rij = The jth individual's ranking of the ith attribute.

Nj = The number of qualities ranked by the jth person.

The projected percent positions were translated into scores using Garrett's table. Thus, the scores of individual respondents were summed for each factor, and the mean values were estimated. The resulting mean values Each of the attributes was arranged in decreasing order. The most important attribute was determined to be the one with the highest mean value, followed by the others in that order.

Table-1. Obstacles to Crop Insurance Scheme Adoption in the Study Area

(N = 240)

S. No.	Constraints	Mean Score	Rank
1	Tedious and time consuming procedures	37.89	III
2	Non-Availability of crop loan	5.18	VI
3	Inadequate estimation of crop yield loss	24.31	IV
4	Banks provide a limited amount of time for enrolling	11.07	V
5	Delayed settlement of claims	82.79	I
6	High premium rate	62.05	II

Table-2. Suggestion made by sample respondent to improve the Crop Insurance Scheme (PMFBY)

(N = 360)

S. No	Suggestion	Insured farmers		Non-insured farmers	
		Numbers	Percentage	Numbers	Percentage
1.	Quick settlement of claims	193	80.41	79	65.83
2.	Reduce premium rate	129	53.75	21	17.50
3.	CCE's in presence of villagers	103	42.92	5	4.17
4.	Creation of separate insurance cell	45	18.75	10	8.33
5.	They should give information regarding payment of claims	38	15.83	7	5.83
6.	Need of media to know about insurance programs	81	33.75	35	29.17
7.	Proper guidance to be given for staffs and farmers for its smooth operation	94	39.17	39	32.5
8.	Need of publicity about crop insurance programmes	35	14.58	71	59.17
9.	Regular Visits by insurance Officials to the fields of insured farmers	26	10.83	25	20.83

Constraints in adoption of crop insurance:

Farmers encounter a number of challenges while implementing the PMFBY in Cuddalore district was given in Table 1. To determine the barriers to crop insurance acceptance, the sample farmers were asked and based on their opinion, those reasons were ranked using the Garrett Technique.

According to Table-1, the vast majority of paddy farmers reported as a constraint in adoption of the scheme was delayed settlement of claims (mean score was 82.79) is ranked

first. The next most problem faced by farmers in adoption the insurance scheme was high premium rate (mean score was 62.05) ranks second. The other factors like tedious and time consuming procedures (37.89), inadequate estimation of crop yield loss (24.31), Banks provide a limited amount of time for enrolling. (11.07) ranks third, fourth and fifth, respectively. Non- Availability of crop loan had minor contribution of 5:18 mean score the last rank.

Suggestion to improve the crop insurance scheme (PMFBY) :

The proposals of insured and uninsured farmers for improving the existing crop insurance plan were collected, analysed and presented in the Table-2.

It could be concluded from the Table 2 that after implementation of crop insurance scheme (PMFBY) there was more delay in claims settlement is the most common difficulties in adoption of the scheme. Hence to boost the insurance scheme's performance that most of the insured (80.41 per cent), non-insured (65.83 per cent) farmers reported the quick settlement of claims (before starting of next season) is more effective method. The premium rate for Kharif Season Paddy crop is at the rate of 2 percent and for Rabi season Paddy at the rate of 1.5 percent. The insured (53.75 Non-insured farmers made up 17.50% of the total. during study period that Kharif Season paddy II crop premium rate was high compared with Rabi season paddy crop. So reduce the premium rate is another effective method to reduce the difficulties in adoption of the scheme.

About 42.92 Crop cutting experiments

(CCEs) in the presence of villagers were suggested by 4% of insured farmers and 4.17 % of non-covered farmers. to improve the accuracy of yield loss. Suggestion made by insured (18.75 per cent) farmers, non-insured (8.33 per cent) farmers that creation of separate insurance cell will help better progress of the programme. Need of media to know about insurance programs was suggested by 33.75 % of insured and 29.17 % of uninsured the non-insured farmers.

Proper guidance to be given for staffs and farmers for its smooth operation was suggested by 39.17 % of insured farmers and 32.5% of uninsured farmers. Approximately 59.17 percent of uninsured farmers and 14.58 percent of insured farmers require insurance. publicity about crop insurance programmes to improve the scheme progress.

The study concluded that after implementation of crop insurance scheme (PMFBY) there was more delay in claims settlement is the most common difficulties in adoption of the scheme. Hence to boost the insurance scheme's performance that most of the insured (80.41 per cent), non-insured (65.83 per cent) farmers reported the quick settlement of claims (before starting of next season) is more effective method. The insured (53.75 per cent) and (17.50 per cent) non-insured farmers reported during study period that Kharif Season paddy II crop premium rate was high compared with Rabi season paddy crop. So, reduce the premium rate is another effective method to reduce the difficulties in adoption of the scheme. About 42.92 Crop cutting experiments (CCEs) in the presence of villagers were suggested by 4% of insured farmers and 4.17 % of non-covered farmers. to improve the

accuracy of yield loss. Suggestion made by insured (18.75 per cent) farmers, non-insured (8.33 per cent) farmers that creation of separate insurance cell will help better progress of the programme. Need of media to know about insurance programs was suggested by 33.75 % of insured and 29.17% of the population non-insured farmers. Proper guidance to be given for staffs and farmers for its smooth operation was suggested by 39.17 % of insured and 32.50 % of uninsured -insured farmers. About 59.17 % of uninsured and 14.58 % of insured farmers need of publicity about crop insurance programmes to improve the scheme progress.

References :

1. Asha Priyanka Paulraj and Nandakumar Easwaran, (2020). *Current Journal of Applied Science and Technology, 39*(34): pp 66-77.

2. Azhagesan., R. (2018). "An Economic Study of crop insurance (PMFBY) on Paddy farming in Thiruvannamalai District of Tamil Nadu", Unpublished M.Sc., (Agricultural Economics) thesis, Department of Agricultural Economics, Faculty of Agriculture, Annamalai University, Chidambaram.

3. Bharati, RC, NK Azad, KM Singh, S Chakraborti, Naresh Chandra And SP Singh., (2014). *Journal of Agrisearch 1*(2): pp 102-107.

4. Bhaskar Gujji and Ashwini Darekar., (2018). *International Journal of Management, Technology And Engineering, 8*(11): pp 1878-1886.

5. Bryan, E., D. Temesgen, G.A. Gbetibouo, and C. Ringler, (2009). *Environmental Science and policy*, *12*(4): pp 413-426.

6. Jamanal, S.K., K.V. Natikar, and M.P. Potdar, (2019). *Journal of Education, Society and Behavioural Science, 32*(3): pp 1-5.

7. Jayakumara Varadan, R., and Pramod Kumar., (2012). "Impact of Crop Insurance on Rice Farming in Tamil Nadu". *Agricultural Economics Research Review, 25*(2): pp 291-298.

8. Karthick, V., A. Anbarassan and C. Cinthia Fernandaz, (2017). *Journal of Extension Education, 29*(1): pp 5780-5786.

9. Lakshmanan, P., and K.R. Ashok, (2019). *International Journal of Multidisciplinary Research and Development, 6*(2): pp 114-116.

10. Mani, K., M. Chandrasekaran, and S. Selvanayaki (2012). *Agricultural Economics Research Review, 25*(2): pp 279-290.

11. Prasad., Dakeshwar, (2018), "Assessment of the Pradhan Mantri Fasal Bima Yojana (PMFBY) with reference to satisfaction among the Rice Growers in Mahasamund District of Chhattisgarh", Unpublished M.Sc., (Agricultural Extension) thesis, Department of Agricultural Extension, Indira Gandhi Krishi Vishwavidyalaya Raipur, Chhattisgarh.

12. Seema Rathee and Ankita Gupta., (2020). *International Journal of Applied Research 6*(6): pp 269-271.

13. Uvaneswaran, S.M., and T. Mohanapriya, (2014). *Intercontinental Journal of Marketing Research Review, 2*(3): pp 15-22.

14. Rathore, Vandana, (2017), The performance of PMFBY and other crop insurance models in India, *International Journal of Advanced Research and Development, 2*(5): 602-607.