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Knowledge level of farmers about Pradhan mantri Fasal Bima Yojana scheme (PMFBY) in Cuddalore District of Tamilnadu

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Abstract

Indian agriculture is said to be 'gamble of monsoon.' Agriculture production and farm incomes in India are frequently affected by natural disasters such as droughts, floods, cyclones, storms, landslides, and earthquakes etc. Crop insurance is a risk management tool which provides farmers with a minimum amount of protection. Insurance is a transfer of risk from one entity to another, by paying a small amount of premium to avoid a huge loss in future.Crop insurance also aids in maintaining farm income stable by promoting technology, boosting investment, and increasing flow of credit to the agricultural sector.The study was conducted in Cuddalore district of Tamil Nadu state.About 40.84 per cent of the respondents had medium level of knowledge on PMFBY scheme.

Key words : Farmers, PMFBY, Cuddalore District.

Agriculture is an important sector of Indian economy. The share of agriculture and allied sector in total Gross Domestic Product (GDP) is 16.00 per cent in Indian economy. In India 54.60 per cent of population is engaged in agriculture and allied activities (Census 2011). Agriculture plays vital role in development of country. But Indian agriculture is characterized by risk bearing and uncertainty because of many factors like, lack of technology, lack of knowledge on risk mitigation, irrigation, weather condition, usage of seeds, fertilizers, pesticide, uncertainty in monsoon, lack of input supply facilities, non-availability of proper market facility, pest and diseases, the higher expenditure as compared to production, uncertain income in each year. Due to dependence on weather and biological uncertainties in managing crops, the agriculture production fluctuates in India and thus has direct impact on both the national income and the farmersor the cultivators[4].

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Agricultural insurance is a means of protecting the farmers against financial losses due to uncertainties that may arise from all unforeseen perils beyond their control. Unfortunately, agricultural insurance in the country has not made much headway even though the needs to protect farmers from agriculture variability have been a continuing concern of agriculture policy. Crop insurance is one method by which farmers can stabilize farm income and investment and guard against the disastrous effect of losses due to natural hazards or low market prices.

This new scheme has been introduced from kharif 2016 replacing NAIS and MNAIS and it has been implemented by AIC and 15 other insurance companies. Pradhan Mantri Fasal Bima Yojana aims to provide insurance coverage and financial support to the farmers in the event of failure of any of the notified crops because of natural calamities, pests, and diseases. Pradhan Mantri Fasal Bima Yojana has been piloted in the country since kharif season of 2016 (June 2016). It was implemented only in 14 states of India, which are most affected by weather calamities. States like Madhya Pradesh, Uttar Pradesh, Gujarat, Rajasthan, and Maharashtra etc. were in the list of the affected states. Pradhan Mantri Fasal Bima Yojana (PMFBY) operates on the concept of "Area Approach."

The present study is an ex-post-facto research design that was adopted as a strategy of investigation to obtain answer to the research questions.

Knowledge is a body of information possessed by an individual which is in accordance with the established facts. In the present study, knowledge denotes the farmers understanding about the PMFBY scheme. The knowledge level of the respondents with PMFBY scheme was measured by designing exclusively the knowledge test.

Regarding the scheme 31 statements were framed and the responses were elicited study on 2-point continuum *i.e.*, Known, and Unknown by assigning a score of 2 and 1 respectively.

The knowledge level of the respondents was calculated by using the formula followed by Karthiyaeeni[2].

The formula used for the calculation of knowledge index of each respondent was

Knowledge index = (K/P) * 100

Where,

K = Knowledge scores obtained by an individual respondent

P = Maximum possible scores for all items

The respondents were classified into three categories such as low, medium, and high using cumulative frequency.

The results of the allocation of respondents based on their level of knowledge about Pradhan Mantri Fasal Bima Yojana scheme were presented in Table-1.

The results in Table-1, shows that about 40.84 per cent of the respondents had medium level of knowledge followed by 33.33 per cent of the respondents had high level and 25.83 per cent of the respondents had low level of knowledge about Pradhan Mantri Fasal Bima Yojana scheme. This might be due to majority of the respondents had formal

Table-1. Distribution of respondents according to their overall knowledge level about Pradhan Mantri Fasal Bima Yojana scheme

(n=120)

S. no	Category	Number of respondents	Per cent
1.	Low	31	25.83
2.	Medium	49	40.84
3.	High	40	33.33
	Total	120	100.00

Table-2. Distribution of respondents according to their item wise knowledge level about the PMFBY scheme:

(n=120)

S. no.	Statement	Number of respondents	Per cent
I.	**Objectives**		
1.	Crop insurance encourages farmers to adopt a new technology in paddy	80	66.67
2.	Crop insurance helps in maintaining the flow of agricultural credit	84	70.00
3.	Crop insurance helps to stabilizing the farm income during disaster period	98	81.67
	Mean		**72.78**
II.	**Farmers Coverage**		
1.	Crop insurance is compulsory to loanee farmers	84	70.00
2.	Crop insurance is voluntary to non-loanee famers	53	44.17
	Mean		**57.08**
III.	**Crop Coverage**		
1.	Notified crops for PMFBY scheme	77	64.17
2.	Paddy crop raised during Kharif and Rabi season is also eligible for crop insurance	65	54.17
	Mean		**59.17**
IV.	**Risk Coverage**		
1.	PMFBY scheme is one of the Risk management tools	84	70.00
2.	Crop insurance provides comprehensive risk insurance coverage against localized calamities	73	60.83
3.	Post-harvest losses coverage covered up to two weeks from harvest	108	90.00

4.	Settlement of claims up to 25% of sum insured amount paid for prevented sowing/ Pre sowing risk	58	48.33
5.	Standing crop damages due to drought, dry spells, flood, pest& diseases, fire/ lightning, storm/ hailstorm	110	91.67
	Mean		**72.16**
V.	**Insurance Unit**		
1.	PMFBY scheme operates based on Area approach	38	31.67
2.	Insurance unit will be village or the major growing unit	65	54.17
	Mean		**42.92**
VI.	**Sum Insured**		
1.	Sum insured limit for normal coverage to farmers is up	32	26.67
	to Scale of finance		
2.	Sum insured amount for paddy crop per acre	42	35.00
3.	Sum insured amount same for non-loanee and loanee farmer	42	35.00
	Mean		**32.22**
VII	**Premium**		
1.	Premium rate for Paddy crop in Kharif season is 2.0%	96	80.00
2.	Premium rate for Paddy crop in Rabi season is 1.5%	120	100.00
3.	Premium amount for paddy crop per acre	113	94.17
	Mean		**91.39**
VIII	**Premium Subsidy**		
1.	Premium subsidy to be shared by Central and State government is equal	60	50.00
	Mean		**50.00**
IX.	**Level of Indemnity**		
1.	Indemnity level is calculated based on block level	73	60.83
2.	Indemnity level calculated to the paddy crop is 70%, 80% and 90%	56	46.67
	Mean		**53.75**
X.	**Loss Assessment**		
1.	Mobile apps are used for reporting incidents of localized calamities	83	69.17
2.	Sowing certificate for the crop insurance is issued by agricultural officer of block	96	80.00
3.	Assessment for crop damage due to post-harvest losses and localized risks will be made on individual farm basis	46	38.33

	Mean		**62.50**
XI.	**Threshold Level**		
1.	Threshold yield is calculated by average yield of last seven years excluding two years of declared calamity if any, multiplied by the level of indemnity the area	48	40.00
	Mean		**40.00**
XII	**Crop Cutting Experiment**		
1.	Crop cutting experiment used to access actual yield data	64	53.33
2.	CCE is conducted by Department of Agriculture	116	96.67
3.	Ten CCE's is to be conducted in block level	109	90.83
	Mean		**80.27**
XIII	**Documents Required**		
1.	Documents required for getting crop insurance	116	96.67
	Mean		**96.67**
XIV	**Nodal Agency**		
1.	Nodal agencies involved in crop insurance scheme	73	60.83
	Mean		**60.83**

education and medium level of social participation which gives basic knowledge about the scheme. Farmers may not be sufficiently informed about the existence of schemes and how they can benefit from the scheme. The awareness programs and outreach efforts to educate farmers about the benefits and details of the scheme can contribute to a high level of knowledge. This finding is in line with the findings of Darshan *et al.,*[1] and Nagesha *et al.,*[3]. Table-2 indicates the distribution of respondents according to their iten wise knowledge level about the PMFBY scheme.

1. ***Objectives :***

The mean value of knowledge on objective was 72.78 per cent. About 66.67 per cent of the respondents had knowledge about crop insurance encourages farmers to adopt a new technology in paddy. Crop insurance helps in maintaining the flow of agricultural credit had 70.00 per cent. Crop insurance helps to stabilizing the farm income during disaster period had 81.67 per cent. This might be due to majority of the respondents had knowledge about the objectives of the PMFBY scheme.

II. ***Farmers Coverage :***

The mean value of knowledge on farmers coverage was found to be 57.08 per cent. Their knowledge level was found to be high on the crop insurance scheme was compulsory for loanee farmers of 70.00 per cent followed byvoluntary basis to non-loanee farmers of 44.17 per cent. This is might be due to lack of information on farmer's coverage.

III. ***Crop Coverage :***

The mean value of knowledge on crop

coverage was found to be 59.17 per cent. Their knowledge level on notified crops for crop insurance was found to be 64.17 per cent followed by kharif and rabi season is also eligible for crop insurancewas 54.17 per cent. This may be due to most of the farmers have cultivated paddy in the village, so they are unaware about the crop coverage.

IV. *Risk coverage :*

The mean value of knowledge on risk coverage was found to be 72.16 per cent. Their knowledge level on risk management tool was 70.00 per cent, comprehensive risk insurance coverage against localized calamities was 60.83 per cent,post-harvest losses coverage covered up to two weeks from harvest was 90.00 per cent, settlement of claims up to 25% of sum insured amount paid for prevented sowing/ pre sowing risk was 48.33 per cent, standing crop damages due to drought, dry spells, flood, pest and diseases, fire/ lightning, storm/ hailstorm was 91.67 per cent.The knowledge level is high on standing crop damage due to floods because farmers were belong to the flood prone area.

V. *Insurance Unit :*

The mean value of knowledge level on Insurance unit was found to be 42.92 per cent. The knowledge level of the scheme operates based on area approach was found to be31.67 per cent followed by Insurance unit will be village or the major growing unit was 54.17 per cent. This might be due to medium level of social participation and extension agency contact of the respondents.

VI. *Sum Insured :*

The mean value of knowledge on Sum insured was found to be 32.22 per cent. The knowledge level on sum insured limit for normal coverage to farmers is up to scale of finance was 26.67 per cent, sum insured amount for paddy crop per acre was 35.00 per cent, sum insured amount same for non-loanee and loanee famers was 35.00 per cent. This might be due to lack of complete information on sum insured amount for various level of coverage.

VII. *Premium :*

The mean value of knowledge level on premium was found to be 91.39 per cent. The knowledge level on premium rate for paddy crop in kharif season is 2.0% was found to be 80.00 per cent, premium rate for paddy crop in rabi season is 1.5% was found to be 100.00 per cent and premium amount for paddy crop per acre was found to be 94.17 per cent. This might be due toawareness on premium through the television, newspaper, leaflets, and other online sources was high.

VIII. *Premium Subsidy :*

The mean value of knowledge level on premium subsidy was found to be 50.00 per cent. The knowledge level on premium subsidy was found to be 50.00 per cent. This might be due to awareness on premium subsidy through the television and newspaper was high.

IX. *Level of Indemnity :*

The mean value of knowledge level on level of indemnity was found to be 53.75 per cent. The knowledge level on indemnity level calculation based on village level was found to be 60.83 per cent followed by 46.67 per cent of the respondents had knowledge on indemnity level calculated to the paddy

crop. This might be due to difficulty in understanding the calculating method used by the officials.

X. *Loss assessment :*

The mean value of knowledge level on loss assessment was found to be 62.50 per cent. 69.17 per centof the respondents had knowledge on mobile apps usage followed by 80.00 per cent had knowledge on sowing certificate and assessment procedure for crop damage due to post-harvest losses and localized risks was found to be 38.33 per cent. Majority of the respondents had high knowledge on sowing certificate is issued by agriculture officer of block due to medium level of extension agency contact.

XI. *Threshold yield :*

The mean value of knowledge level on threshold yield was found to be 40.00 per cent. The knowledge level on threshold yield calculation was found to be 40.00 per cent. This may be due to difficulty in understanding the calculation method.

XII. *Crop cutting experiment :*

The mean value of knowledge level on crop cutting experiment was found to be 80.27 per cent. The knowledge level on crop cutting experiment used to access actual yieldwas found to be 53.33 per cent, responsible agency for conducting CCE was found to be 96.67 per cent, and number of CCE conducted in village level was found to be 90.83 per cent. Majority of the respondents had high knowledge on responsible agency for conducting CCE due to frequent contact with extension agency.

XIII. *Documents required :*

Important documents required by the farmer while availing crop insurance are Aadhar card, Chitta, bank passbook, registration form, proposal form. The mean value of knowledge level on documents required was found to be 96.67 per cent. Majority (96.67 per cent) of the respondents had knowledge on documents required for getting crop insurance. This may be due to majority of respondents had formal education, farmers experience in credit access and crop insurance.

XIV. *Nodal agency :*

This is the point of contact for farmers to avail crop insurance especially District central cooperative bank, primary agricultural cooperative society, nationalized banks, and commercial bank branch located in the villages/town/taluk/district. The mean value of knowledge level on nodal agency was found to be 60.83 per cent. The knowledge on nodal agency involved in crop insurance scheme was found to be 60.83 per cent. The respondents had more knowledge about nodal agency because of their regular contact with financial institution for availing crop loan.

About 40.84 per cent of the respondents had medium level of knowledge on Pradhan Mantri Fasal Bima Yojana scheme.Results of this study indicates that half of the respondents had medium level of knowledge regarding PMFBY scheme. Hence, to enhance their knowledge level, there is a need to establish single window system by department of agriculture and crop insurance provider companies to provide the knowledge regarding PMFBY scheme to the farmers. This will help

to get easy access of the information about PMFBY.

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