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Knowledge level of farmers towards Pradhan Mantri Fasal Bima Yojana (PMFBY) in Tripura

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Abstract

Pradhan Mantri Fasal Bima Yojana (PMFBY) is a scheme involving several stakeholders including state governments, financial institutions, insurance companies and farmers under the banner of "One Nation One Scheme" launched by Ministry of Agriculture and Farmers' Welfare, Govt. of India during 2016 to replace the National Agricultural Insurance Scheme by combining prime features and eliminating their drawbacks (www.pmfby.gov.in). The study was undertaken based on data collected from 160 randomly selected respondents comprising of beneficiaries and non beneficiaries of Pradhan Mantri Fasal Bima Yojana (PMFBY) in Tripura. Out of 8 districts, 80 beneficiaries and 80 non-beneficiaries from two districts, *viz.*, Gomati and South Tripura was purposively selected for the study. The study revealed that 68.80 per cent of beneficiaries had medium level of knowledge, followed by 16.30 per cent had low level and 15.00 per cent had high level of knowledge. Among non-beneficiaries, 57.50 per cent had medium level of knowledge, followed by 28.80 per cent with high and 13.80 per cent with low level of knowledge.

Keywords: Knowledge, PMFBY, beneficiary, Non beneficiary and Tripura

Introduction

Agriculture is the backbone of Indian economy. Our nation's progress is not possible without the agricultural development. The economic growth relies on achieving increased production. Indian agriculture is often hit by natural disasters such as droughts, floods, cyclones, hurricanes, landslides and earthquakes. The disasters that affect agriculture include disease outbreaks and human-caused disasters like fires, the distribution of false seeds, fertilizers, insecticides, and pesticides, as well as fluctuations in market prices. The Pradhan Mantri Fasal Bima Yojana (PMFBY) was launched under the banner of "One Nation-One Scheme" in the year 2016. It replaced the National Agricultural Insurance Scheme and the Modified National Agricultural Insurance Scheme by combining their prime features and eliminating their inherent drawbacks. It aims to reduce the burden of premiums on farmers and guarantee that crop insurance is quickly compensated for the entire protected amount. (https://pmfby.gov.in/guidelines). The objectives of the scheme are providing financial support to farmer's crop loss/damage arising out of unforeseen events; stabilizing the income of farmers to ensure their continuance in farming; encouraging farmers to adopt innovative and modern agricultural practices; ensuring flow of credit to the agriculture sector which will contribute to food security, crop diversification and enhancing growth and competitiveness of agriculture sector besides protecting farmers from production risks. (https://pmfby.gov.in/guidelines). The scheme involves several stakeholders including state governments, financial institutions, insurance companies and farmers, both loanee and non-loanee. It also envisages adoption of technology for integration of all stakeholders on the National Crop Insurance Portal for scheme administration and in capturing crop loss assessment etc. According to 2021-22 data, the PMFBY scheme insured a total area of 52,858.38 hectares in the state of Tripura, benefitting 339,911 farmers. Among the districts Gomati district recorded the highest participation with 30,113 farmers, followed by South Tripura with 27,392 farmers (https://pmfby.gov.in/adminStatistics/dashboard). Keeping these aspects in view, the present study was conceptualised and conducted with specific objective of analysis the relationship between the profile characteristics of farmer beneficiaries and their knowledge on PMFBY.

Research methodology

The study was conducted in two districts of Tripura state with ex-post facto research design. The district was chosen purposively based on having highest numbers of PMFBY beneficiaries. The districts of Gomati (30,113) and South Tripura (27,392) having highest number of beneficiaries out of 8 districts in Tripura (www.pmfby.gov.in). Under the two districts, two blocks (Amarpur and Hrishyamukh) were selected purposively based on the highest number of beneficiaries. Two villages under each block were selected purposively based on the highest number of beneficiaries. Data was collected from 40 randomly selected respondents

from each selected village, *i.e*., 20 beneficiaries and 20 non beneficiaries. Thus, the total sample was 160 respondents comprising 80 beneficiaries and 80 non beneficiaries. Knowledge level of respondents towards PMFBY was measured with the help of structured schedule consisting of 15 statements about the scheme. The responses were recorded as "YES" or "NO" with score of 1 and 0 respectively. The total score of the respondents were determined by summing up the scores of the response categories against each statement. The respondents were categorized based on their scores into the "Low", "Medium" and "High" categories. The socio personal characteristics, *viz*., age, education level, land holding, farming experience, cropping intensity, annual income, training exposure, possession of farm machineries, achievement motivation, innovativeness, mass media exposure, risk orientation, extension contacts and economic motivation of beneficiary and non beneficiary were also measured.

Results and Discussion

The socio personal characteristics of the respondents are presented in Table 1 and the knowledge level of beneficiaries and non-beneficiaries towards PMFBY is presented in Table 2.

Table 1: Socio personal characteristics of the beneficiaries and non beneficiaries of PMFBY (n=160)

Sl. No.	Characteristic	Category	Beneficiaries (n1=80)		Non-Beneficiaries (n2=80)	
			F	%	F	%
1.	Age	Young age (35 years and below)	13	16.30	9	11.30
		Middle age (36 to 50 years)	19	23.80	39	48.80
		Old age (Above 50 years)	48	60.00	32	40.00
2.	Education	Illiterate	0	0	0	0
		Can read and write	0	0	0	0
		Primary school	5	6.30	7	8.80
		Middle school	18	22.50	16	20.00
		High school	34	42.50	32	40.00
		Higher Secondary	10	12.50	11	13.80
		Graduation and above	13	16.30	14	17.50
3.	Landholding	Marginal (<1 ha)	58	72.50	41	51.30
		Small (1.00 - 1.99 ha.)	15	18.80	34	42.50
		Semi-medium (2.00 - 3.99 ha.)	5	6.30	1	1.30
		Medium (4.00 - 9.99 ha.)	2	2.50	4	5.00
		Large (>10 ha.)	0	0	0	0
4.	Farming experience	Low (<10 years)	10	12.50	26	32.50
		Medium (11-20 years)	27	33.80	44	55.00
		High (>20 years)	43	53.80	10	12.50
5.	Cropping intensity	Low	15	18.80	19	23.80
		Medium	29	36.30	29	36.30
		High	36	45.00	32	40.00
		Mean	5.68		5.26	
		S.D.	3.19		3.27	
6.	Possession of farm machineries	Low	18	22.50	22	27.50
		Medium	46	57.50	35	43.80
		High	16	20	23	28.80
		Mean	2.76		2.63	
		S.D.	1.53		1.28	
7.	Annual Income	Low (<Rs.33,750)	0	0	3	3.80
		Medium (Rs.33,751-Rs.1,44,000)	23	28.80	30	37.50
		High (>Rs.1,44,000)	57	71.30	47	58.80
8.	Training exposure	No training	0	0	0	0
		One time	6	7.50	10	12.50
		Two times	22	27.50	22	31.30
		More than two times	52	65.00	45	56.30
9.	Achievement motivation	Low	9	11.30	13	16.30
		Medium	60	75.00	58	72.50
		High	11	13.80	9	11.30
		Mean	49.40		49.11	
		S.D.	3.63		3.50	
10.	Innovativeness	Low	10	12.50	21	26.30
		Medium	53	66.30	52	65.00
		High	17	21.30	7	8.80
		Mean	17.55		18.05	
		S.D.	1.90		2.10	
11.	Mass media exposure	Low	12	15.00	21	26.30
		Medium	56	70.00	45	56.30
		High	12	15.00	14	17.50

		Mean	15.91		15.30	
		S.D.	2.18		2.98	
12.	Risk orientation	Low	12	15.00	29	36.30
		Medium	59	73.80	41	51.30
		High	9	11.30	10	12.50
		Mean	10.88		10.28	
		S.D.	0.98		1.11	
13.	Extension contacts	Low	17	21.30	20	25.00
		Medium	47	58.80	44	55.00
		High	16	20.00	16	20.00
		Mean	8.52		9.22	
		S.D.	1.37		1.68	
14.	Economic motivation	Low	16	20	25	31.30
		Medium	51	63.80	46	57.50
		High	13	16.30	9	11.30
		Mean	25.21		24.05	
		S.D.	2.18		2.53	

Data presented in Table 2 shows that 68.80 per cent of the beneficiaries had medium level of knowledge, followed by 16.30 per cent had low level and 15.00 per cent had high level of knowledge of beneficiaries towards PMFBY. Among non-beneficiaries, 57.50 per cent had medium level followed by 28.80 per cent had high level and 13.80 per cent had low level of knowledge. It was found that beneficiaries had significantly higher level of knowledge compared to non-beneficiaries. This could be attributed to the fact that beneficiaries enrolled in the PMFBY were familiar with the features of the scheme, such as premium rates, notified crops, the commencement and closing dates of insurance applications, and the implementation of cropping-cutting experiments by insurance agents, bank officials, and other department officers. Conversely, non-beneficiaries had less knowledge compared to beneficiaries as they were not enrolled in the scheme and did not receive its benefits (Raghunandan, 2004), Hemanth, 2002) [7, 1], and Sasidhar, 2003) [8].

Table 2: Knowledge level of beneficiaries and non-beneficiaries towards PMFBY (n=160)

Category	Beneficiaries (n1=80)		Non- beneficiaries (n2=80)	
	F	%	F	%
Low	13	16.30	11	13.80
Medium	55	68.80	46	57.50
High	12	15.00	23	28.80
Total	80	100	80	100
	Mean = 8.03 S.D.= 2.39		Mean = 3.32 S.D. = 2.30	
Z value = 12.818**				

Data presented in Table 2 shows that education level had positive and significant association at 1 per cent level with knowledge level of beneficiaries and non beneficiaries, whereas, land holding had at 5 per cent level of significance with knowledge level of non-beneficiaries. The Table also shows that training exposure, mass media exposure and extension contact had positive and significant association at 1 per cent level with knowledge level of beneficiaries, but mass media exposure and extension contact had positive and significant association at 1 per cent level and training exposure had significant level at 5 per cent with knowledge level of non beneficiaries. It is also observed that achievement motivation, risk orientation and economic motivation had positive and significant association at 1 per cent level with knowledge level of beneficiaries, whereas, achievement motivation and innovativeness had positive and significant association at 1 per cent level with knowledge level of non beneficiaries.

Table 2: Relationship between socio personal characteristics of respondents with their knowledge level towards PMFBY (n=120)

Sl. No.	Independent Variables	Beneficiaries (n1=80)		Non-beneficiaries (n2=80)	
		r-value	p-value	r-value	p-value
1	Age	0.131^{NS}	0.246	0.137^{NS}	0.226
2	Education level	0.323**	0.003	0.532**	0.000
3	Land holding	0.200^{NS}	0.076	0.257*	0.021
4	Farming experience	0.173^{NS}	0.126	0.043^{NS}	0.704
5	Cropping intensity	0.186^{NS}	0.099	0.026^{NS}	0.816
6	Annual income	0.134^{NS}	0.236	0.083^{NS}	0.463
7	Training Exposure	0.377**	0.001	0.273*	0.014
8	Possession of farm machineries	0.205^{NS}	0.068	0.206^{NS}	0.066
9	Achievement motivation	0.583**	0.000	0.438**	0.000
10	Innovativeness	0.159^{NS}	0.158	0.352**	0.001
11	Mass media Exposure	0.408**	0.000	0.633**	0.000
12	Risk orientation	0.305**	0.006	0.146^{NS}	0.198
13	Extension contacts	0.452**	0.000	0.312**	0.005
14	Economic motivation	0.482**	0.000	0.171^{NS}	0.128

Conclusion

It may be concluded that that farmers have only moderate level of knowledge towards PMFBY. This knowledge gap hinders their participation and effective use of the insurance, emphasizing the need for better awareness and education efforts among farmers. The role of Crop Cutting Experiments (CCEs) is crucial in the context of PMFBY. Therefore, it is recommended to inform the farmers through comprehensive publicity in mass media such as TV, radio, and newspapers, etc (Jyoti, 2018) [2]. The current PMFBY only covers crops for which past yield data is available. This not only limits the number of crops covered under PMFBY, but also has the potential to discourage farmers from growing new crops or varieties for which there is no available data. It is recommended that PMFBY offers coverage for new crops, perhaps at a slightly higher premium. This will enable farmers to make informed

decisions about which crops to cultivate each season while maintaining flexibility (Nagesh, 2019) [6]. It is important to allocate a separate budget for promoting the scheme on a larger scale. This could involve organizing seminars, meetings, and other events to raise awareness about the PMFBY and encourage non-loan farmers to enrol in it. To enhance the knowledge level of beneficiaries and non-beneficiaries from medium to high, more quality training programme need to be conducted by specialist to give more details and highlight the benefits of recommended scheme. The organization should develop guidelines to provide timely support for their economic, social, psychological, and physical security. It is important for extension personnel to communicate these issues to the officials of the state government and insurance companies so that they can organize more awareness programs (Tanwar et. al., 2019) [9]. To overcome the constraints, to give timely payment of insurance amount and there should be make one financial institution in each village while guide assist the scheme and also create separate PMFBY cell at Block/Taluk level. Further, it is necessary to promote PMFBY beneficiary associations that could guide new subscribers through the scheme and facilitate quicker insurance claim execution for needy farmers from concerned departments.

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