



Perception of Farmers towards Crop Insurance Schemes in Kerala, India

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Authors' contributions

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ABSTRACT

Agricultural insurance is a risk management approach used by farmers to protect them against crop loss caused by such unpredictable risk factors. The study on perception of farmers towards crop insurance schemes in Kerala was carried out in three selected districts of Kerala namely, Kottayam, Malappuram and Idukki in the year 2020-2021. The findings of the study showed that majority of the farmers (69.17 %) had medium perception, followed by low (18.33 %) and high (12.50 %) perception regarding crop insurance schemes in Kerala. The association between profile characteristics of the respondents with their perception towards crop insurance schemes in Kerala showed that characteristics like education, operational landholding, credit orientation and decision making ability had significant association with their perception regarding crop insurance schemes in Kerala. The comparison of the perception of beneficiary farmers towards the three crop insurance schemes namely, Restructured State Crop Insurance Scheme of Kerala (RSCIS), Pradhan Mantri Fasal Bima Yojana (PMFBY) and Restructured Weather Based Crop Insurance Scheme (RWBCIS) revealed that there existed a significant difference between the central and state crop insurance and there existed no significant difference among the two centrally sponsored crop insurance schemes.

Keywords: Perception; crop insurance; agriculture; Kerala.

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1. INTRODUCTION

Agriculture is extremely important to the Indian economy and is considered as the life line of India. Agriculture in India is riddled with many uncertainties. Regardless of India's heavy reliance on agriculture and its reputation as one of the world's important producers of major agricultural commodities, agriculture is recognized as the riskiest business in the country, putting the lives of farmers at risk. The agriculture sector is often believed to be particularly vulnerable to climate change [1]. Due to the heavy dependency on the weather, Indian farmers are particularly vulnerable to risks in agriculture such as the variations in rainfall, changes in temperature, cyclones, drought, floods and cold waves. Every year Indian agriculture is being challenged by natural disasters like floods, droughts, hailstorms, pest attacks, etc. The unpredictable and uneven distribution of monsoon rainfall raised farmers' risk and uncertainty by extending yield/price volatility. According to United Nations Office for Disaster Risk Reduction (UNDRR), India had reported 321 natural disasters in the last two decades 2000-2019 [2]. Natural disasters damaged more than 14.4 million hectares, roughly 7 per cent of India's gross cropped area in the 11 months leading up to February 2020 [3]. In August 2018, Kerala had the worst flood in its history, dated back to 1924. Around 1.08 million farmers households were affected, and 2.36 lakh hectares of farm land were devastated and a total crop loss of Rs 18,545 crore was estimated [4]. Despite technological and economic developments, farmers' livelihoods remain precarious due to natural disasters and market swings. In certain situations, these poor circumstances constitute to one of the reasons for farmer suicides, which are currently reaching epidemic proportions [5]. Farmers as a result are unable to pay off their loans, which leads to an increase in farmer suicides [6]. In this context, allocating risk is a key part of farmers' decision-making.

For farmers worried about output loss, crop insurance is one possibility. It helps stabilise farm productivity and the revenue of the farming community. Crop insurance spreads out crop losses over time and place, gives farmers social security, upholds their dignity, provides self-help, and stimulates significant investments in agriculture to increase crop yield and agricultural output [7]. As a result, it's a risk management strategy in which production risk is transferred to

a third party for a premium. The basic principle of crop insurance works on the concept that the loss incurred by a few is shared by many in an area. In addition, losses incurred in bad years are compensated from resources accumulated in good years [8]. In view of the need to protect farmers from various unpredictable risks and hazards, the Government of India introduced various crop insurance schemes that are designed and supplied to cover risks in farming.

Crop insurance became more important after the independence and it was studied by the then government under the leadership of Dr. Rajendra Prasad, who promised that the government would look into the feasibility of crop and animal insurance. In order to enable states to employ crop insurance if they so desired, the Indian government decided to create a crop insurance bill and a model crop insurance scheme in October 1965. Since the start of the 1970s, a number of tiny, sporadic, and dispersed crop insurance trials have been carried out. In the 1972-73, the Department of Life Insurance of India launched the first crop insurance scheme for H-4 cotton in Gujarat, which was based on an individual approach [9]. Later, the newly formed General Insurance Corporation of India expanded to cover other crops and more states across the country. The program lasted through 1978-79. Numerous crop insurance schemes were launched and implemented throughout the years since the independence of the nation. Presently three major crop insurance schemes were available to the farmers of Kerala, which were Pradhan Mantri Fasal Bima Yojana, Restructured Weather Based Crop Insurance Scheme and the Restructured State Crop Insurance Scheme of Kerala.

1.1 Pradhan Mantri Fasal Bima Yojana (PMFBY)

The new PMFBY was introduced by the Indian government in the year 2016 as part of the "One Nation-One Scheme" initiative. It incorporates the best features of previous predecessors while also doing away with all of their shortcomings and flaws. The programme is required for farmers who have received loans; it is optional for farmers who have not. Farmers are required to pay a standard premium that is equal to actuarial rate, or less than 2% of the value of the sum insured for all Kharif crops, 1.5% of the sum insured for all Rabi crops, and 5% of the amount insured for annual commercial and horticultural crops [10].

1.2 Restructured Weather Based Crop Insurance Scheme (RWBCIS)

Launched on February 18th, 2016, the Weather Based Crop Insurance Scheme (WBCIS) was created to shield farmers who are covered from financial loss due to expected crop loss brought on by unfavourable weather conditions like rain, temperature, wind, humidity, and other elements. RWBCIS uses meteorological parameters as a "proxy" for agricultural production in order to compensate cultivators for deemed crop losses. Based on the estimated number of losses brought on by weather triggers, pay-out structures are built. Following receipt of the weather information from the Remote Weather Station (RWS) or Backup Weather Station (BWS), as applicable, the claims process will start. The insurance term sheets, payout structure and scheme provisions all dictate how claims are processed [11].

1.3 Restructured State Crop Insurance Scheme of Kerala

The scheme was launched in the year 1995 under the State Department of Agriculture and is implemented at the panchayat level through Khishi Bhavan by the Principal Agricultural Officer. 27 crops are covered under the scheme and farmers can apply individually or as a group. Farmers cultivating on leased lands are also eligible for crop insurance.

A properly organised and implemented crop insurance scheme prevents volatility and brings stability to agricultural earnings, as well as fills the gap between revenue and consumption requirements during crop losses or crop failures [12]. Despite the efforts of efforts and support from state and central government, there existed a huge reluctance among the farmers to enrol under crop insurance. Shiyas and Suleena [13] in their study revealed that only 35.00 per cent of farmers in Kerala had crop insurance. Due to the severity of poverty among the non-loanee farmers and as it is not compulsory for them, most of the farmers were reluctant to adopt crop insurance schemes [14]. A vast majority of farmers adopted crop insurance as the compulsory proposal for loanee farmers while only adopted it voluntary. In view of the above, the study focused on the specific objectives listed below.

1. To study the perception of farmers towards crop insurance schemes in Kerala.

2. Comparison of perception of beneficiary and non beneficiary farmers of crop insurance schemes in Kerala.
3. Association between profile characteristics of farmers and their perception towards crop insurance schemes in Kerala.
4. Comparison of Pradhan Mantri Fasal Bima Yojana (PMFBY), Restructured Weather Based Crop Insurance (RWBCIS) and Restructured State Crop Insurance Scheme of Kerala (RSCIS) by beneficiary farmers of various crop insurance schemes.
5. Constraints in the disbursement of crop insurance schemes as perceived by farmers and suggestions to overcome.

2. METHODOLOGY

2.1 Research Design

Ex post facto design was employed in the present study. *Ex post facto* research design is a systematic inquiry in which the scientist does not have direct control over the independent variables because their manifestations have already occurred or because they are inherently not manipulable (Kerlinger, 1983). This type of research investigation is done after the phenomenon had occurred.

As per the KAU Agro-Ecological Zones of Kerala-Delineation and cropping pattern submitted to GoK [4], Kerala state is classified into five major agro ecological zones of which three namely, Foothills (III), High hills (IV) and Midland laterites (II) were more vulnerable to natural disasters. The study was conducted in the three selected districts namely Kottayam, Idukki and Malappuram under these three agro ecological zones. Kottayam, Idukki and Malappuram districts were purposively selected from foothills zone, high hills zone and midland laterite zone respectively based on their district wise agricultural loss and associated vulnerabilities towards recurring natural disasters. A total of 120 respondents were selected for the study. They were divided into two categories of respondents namely; beneficiary farmers of crop insurance and non-beneficiary farmers of crop insurance. From each of the three districts, twenty beneficiary farmers were selected using stratified random sampling considering crop insurance as strata (RSCIS, PMFBY and RWBCIS), thus constituting a total of 60 respondents. Twenty non beneficiary farmers who had not availed any crop insurance were selected purposively from

each of the selected districts constituting a total of 60 non-beneficiary farmers of any crop insurance.

A pre tested and well structured interview schedule was used for data collection. Perception is defined the process of becoming aware of something through the senses and interpreting based on sensations and is taken as the dependent variable for the study. A comprehensive scale developed by Jyoti [15] with slight modification was used to quantify the perception of farmers. The scale consisted of 12 statements and responses were recorded on a three-point continuum as 'fully agree', 'partially agree' and 'not agree' and scores were assigned to each of the statements as 3, 2 and 1 respectively. The possible score range was between 36 and 12. The scores of all the statements were summed up and respondents were classified into three categories viz., low, medium and high. The statistical tools used were mean, standard deviation, frequency, percentage, Chi-square test of association, Mann-Whitney U test and Garret ranking.

3. RESULTS AND DISCUSSION

3.1 Perception of Farmers towards Crop Insurance Schemes in Kerala

Perception is operationally defined as the process of becoming aware of something through the senses and interpreting based on sensations. The data represented in Table 1 revealed that majority of the farmers (69.17 %) had medium perception, followed by low (18.33 %) and high (12.50 %) perception regarding crop insurance schemes in Kerala. The results were in line with the findings of Jyoti [15] and Jain [16].

The data from Table 2 revealed the content analysis of statement wise extent of perception of farmers towards crop insurance schemes in Kerala. It was assessed by calculating the frequency and percentage analysis of each statement. The statements were ranked as II, III, IV, V, VI, VII, VIII, IX, X, XI and XII respectively. It was found that majority of the farmers (90 %) fully agreed to the statement that 'the compensation for crop damage must be disbursed within a fortnight'. The results revealed that 86.67 per cent of the farmers fully agreed that 'it is mandatory for all farmers to get crop insurance'. It was also found that more than half (58.33 per cent) of the farmers disagreed to the statement that 'only large farmers can afford crop

insurance'. These statements clearly indicate the interest of farmers to adopt crop insurance. Most of the farmers (67.50%) fully agreed that the 'assessment of damage must be done at the individual field level and not on the basis of area approach'. Farmers expressed that the existing area approach in estimation of crop loss assessment was not acceptable to them as it often excluded individual crop loss while considering a large crop area as a unit of estimation. Farmers thus received lesser claims for the loss that occurred. The statement wise content analysis thus clearly explained the interest and willingness of farmers to take crop insurance, but due to the lack of proper awareness and the pertaining negative perceptions regarding its compensation of claims, disbursement delays and other associated issues, might be the reason for majority of the farmers having medium perception regarding crop insurance schemes in Kerala.

The findings also suggested that extension workers should put in more effort to persuade farmers of the value of crop insurance, particularly in light of the state's climatic vulnerabilities.

3.2 Comparison of Perception of Beneficiary and Non-beneficiary Farmers of Crop insurance Schemes in Kerala

Mann-Whitney U test was conducted to compare the perception of beneficiary farmers and non-beneficiary farmers in terms of five dimensions i.e., risk management, extension agency contact, mass media contact, information seeking behaviour and profit maximization. From Table 3, it was found that there existed a significant difference in the perception of beneficiary farmers and non-beneficiary farmers with respect to three dimensions namely; risk management, information seeking behavior and profit maximization.

Table 4 represents the distribution of beneficiary farmers and non beneficiary farmers of various crop insurance schemes in Kerala on the basis of their perception towards the mentioned five dimensions of crop insurance. Among the beneficiary farmers, 35.66 per cent of the farmers had high perception regarding risk management, whereas only 5.00 per cent of non-beneficiary farmers were having high perception towards risk management in agriculture. 18.33

per cent of the beneficiary farmers had high perception regarding information seeking behaviour, whereas only 13.33 per cent of non-beneficiary farmers had high perception towards information seeking behaviour. Also, 25.00 per cent of the beneficiary farmers had high perception towards profit maximisation, whereas only 6.67 per cent of non-beneficiary farmers were having high perception towards profit maximisation. Being beneficiaries of crop insurance thus might have influenced the farmers to invest more in farming to maximise the profit and to take more risks in agriculture and might be the reason for significant difference.

3.3 Profile Characteristics of Farmers

Table 5 represents the distribution of farmers based on their profile characteristics and shows that majority of the farmers (52.50 %) belonged to the old age group (>55 years). The result clearly points out the growing aversion of young generation towards agriculture. Majority of the farmers were educated up to secondary or higher secondary level (65.50 %) and none of the farmers were observed to be illiterate. Absence of illiterate farmers directly shows the proficient education system in the state. Majority of the farmers were marginal farmers (34.17%)

Table 1. Distribution of farmers based on their perception towards crop insurance schemes (n=120)

Sl. no.	Category	Frequency	Percentage
1	Low (≤ 19)	22	18.33
2	Medium (20-30)	83	69.17
3	High (>30)	15	12.5
	Total	120	100

Mean=25.06, SD=5.25, Max=35, Min=15

Table 2. Content analysis of the statements of perception of farmers towards crop insurance schemes in Kerala (n=120)

Sl. no.	Statements	FA (%)	PA (%)	NA (%)	Mean score	Rank
1	It is mandatory for all farmers to get crop insurance	86.67	10.83	2.50	2.84	II
2	Only large farmers can afford crop insurance	21.67	20	58.33	1.63	XII
3	It is difficult for small and marginal farmers to meet their loss due to crop insurance	35.83	42.5	21.67	2.14	VIII
4	Premium amount of crop insurance is affordable to all farmers	38.33	20.00	51.67	1.97	X
5	The compensation claim for crop damage must be distributed within a fortnight	90.00	10.00	0.00	2.90	I
6	Assessment of damage must be done at the individual field level and not on the basis of area approach	67.50	32.50	0.00	2.67	III
7	Crop damage under crop insurance must be assessed with the help of real time satellite technologies	30.00	54.17	15.83	2.14	IX
8	All crops must be notified under crop insurance	66.67	24.17	9.16	2.57	IV
9	Crop Cutting experiments (CCEs) used to serve as the basis for determining indemnity should be carried in the presence of affected farmer	55.00	39.17	5.83	2.49	VII
10	It is very important for the farmer to be educated in order to protect his crop from damage	58.33	40.00	1.67	2.56	V
11	The damage caused by fire, electricity and wild animal attack must be included in insurance	57.50	35.83	6.67	2.50	VI
12	Premium amount should be calculated on the basis of number of risk factors covered under schemes	6.67	62.50	30.83	1.75	XI

*FA-Fully agree, PA- Partially agree and NA- Not agree

Table 3. Perception of beneficiary farmers and non-beneficiary farmers based on the five dimensions of crop insurance schemes in Kerala

Sl. no.	Category	Respondents	n	Mean Rank	Mann-Whitney U test statistic	P value
1	Risk management	Beneficiary farmers	60	80.30	1002.00	0.000*
		Non beneficiary farmers	60	40.69		
2	Extension agency contact	Beneficiary farmers	60	65.40	1506.00	0.115 ^{NS}
		Non beneficiary farmers	60	55.60		
3	Mass media exposure	Beneficiary farmers	60	64.98	1531.50	0.125 ^{NS}
		Non beneficiary farmers	60	56.03		
4	Information seeking behaviour	Beneficiary farmers	60	51.93	1285.50	0.006*
		Non beneficiary farmers	60	69.08		
5	Profit maximisation	Beneficiary farmers	60	65.77	1254.00	0.002*
		Non beneficiary farmers	60	55.23		

* Significant at 5% level of significance, NS-Not significant

Table 4. Distribution of farmers based on their perception towards the dimensions of crop insurance schemes

Sl. no.	Dimension	Low (%)	Medium (%)	High (%)	
1	Risk management	a Beneficiary farmers	6.67	56.57	36.66
		b Non beneficiary farmers	30.00	65.00	5.00
2	Extension agency contact	a Beneficiary farmers	13.33	61.67	25.00
		b Non beneficiary farmers	13.33	68.34	18.33
3	Mass media exposure	a Beneficiary farmers	20.00	68.34	11.67
		b Non beneficiary farmers	25.00	61.67	13.33
4	Information seeking behaviour	a Beneficiary farmers	16.67	65.00	18.33
		b Non beneficiary farmers	15.00	71.67	13.33
5	Profit maximisation	a Beneficiary farmers	20.00	55.00	25.00
		b Non beneficiary farmers	20.00	73.33	6.67

Table 5. Distribution of farmers based on their profile characteristics

Sl. No.	Characteristics	Category	Percentage (%)
1	Age	Young	6.67
		Middle	40.83
		Old	52.50
2	Education	Illiterate	0.00
		Primary	10.00
		Secondary/higher	62.50
		Diploma	5.00
		Degree and above	22.50
3	Operational land holding	Tenant	9.17
		Marginal	34.17
		Small	30.83
		Semi medium	21.67
		Medium	4.16
		Large	0.00

Sl. No.	Characteristics	Category	Percentage (%)
4	Annual income	<25,000 Rs	11.67
		25,001-50,000 Rs	20.00
		50,001-1 Lakh Rs	35.83
		> 1 Lakh Rs	32.50
5	Credit orientation	Low	12.50
		Medium	80.83
		High	6.67
6	Economic motivation	Low	24.17
		Medium	61.67
		High	14.16
7	Decision making ability	Low	18.33
		Medium	71.67
		High	10.00
8	Innovation proneness	Low	21.67
		Medium	65.00
		High	13.33

followed by small (30.83 %), which might be the reason for majority having an annual income less than 1 lakh rupees. Majority of farmers (50.00 %) fall into a medium level of credit orientation and medium level of economic motivation (61.67 %). The majority of the farmers belonged to medium (71.67 %) level of decision-making ability might be attributed to the comparatively higher level of their education, which might have helped them to be more aware of risks and hazards in agriculture and made them take better judgements. The fact that the majority of the farmers were in old age category might have contributed to their adherence to conventional agricultural practices might be the reason for majority (65.00 %) having medium level of innovation proneness. This indicates that majority of the respondent farmers belonged to either late majority or early majority in the innovation decision process.

3.3.1 Association between profile characteristics of farmers and their perception towards crop insurance schemes in Kerala

Table 6 depicts the χ^2 value indicating the association between profile characteristics of the respondents with their perception towards crop insurance schemes in Kerala. The characteristics namely education, operational landholding, credit orientation and decision making ability had significant association with their perception regarding crop insurance schemes in Kerala at 0.05% level of significance. Majority of the farmers had higher level of education and were likely to comprehend the operational policies, terms and conditions of various crop insurance

as well as the risk benefits associated with them. This could explain why there was a significant association between education level of farmers and their perception towards crop insurance schemes in Kerala. Majority of the farmers had marginal to small landholdings; they were more vulnerable to natural disasters, which might have persuaded them to purchase crop insurance. This might be the reason for the significant association between operational landholding of farmers and their perception towards crop insurance schemes in Kerala. Majority of the farmers were the beneficiaries of various loan schemes and Kisan Credit Cards (KCC). This might be the reason for considerable significant association between credit orientation of farmers and their perception towards crop insurance schemes in Kerala. The fact that majority of the farmers had medium level of decision making ability might have aided farmers' adoption of crop insurance schemes as a risk management strategy and might had contributed to the significant association between decision making ability of farmers and their perception towards crop insurance schemes in Kerala.

3.4 Comparison of Pradhan Mantri Fasal Bima Yojana (PMFBY), Restructured Weather Based Crop Insurance (RWBCIS) and Restructured State Crop Insurance Scheme of Kerala (RSCIS) by the Beneficiary Farmers of Various Crop Insurance Schemes in Kerala

The schemes were compared based on the perception of sixty beneficiary farmers of various

crop insurance schemes in Kerala. Data from Table 7 shows the comparison of PMFBY, RWBCIS and RSCIS of Kerala by 60 beneficiary farmers of various crop insurance schemes, revealed that the calculated Kruskal-Wallis χ^2 value 120.125 was significant at 5 per cent level

with 2 d.f. Since the p-value is less than 0.05, it can be concluded that there was a significant difference between at least a pair of schemes (or treatments). A pair wise comparison of the schemes was done through Dunn test. Through Dunn test, it was found that there existed a

Table 6. Association between profile characteristics of the respondents and their perception towards crop insurance schemes in Kerala

Sl no.	Characteristics	p value	χ^2 value
1	Age	0.593	2.796 ^{NS}
2	Education	0.021	21.145*
3	Operational land holding	0.020	10.986*
4	Annual income	0.305	7.171 ^{NS}
5	Credit orientation	0.006	4.002*
6	Economic motivation	0.241	18.436 ^{NS}
7	Information seeking behaviour	0.593	4.247 ^{NS}
8	Decision making ability	0.000	13.315*

Table 7. Comparison of PMFBY, RWBCIS and RSCIS by sixty beneficiary farmers of crop insurance schemes in Kerala n=60

Sl. no	Schemes	Group mean	Standard deviation	Kruskal-Wallis chi-squared	d.f.	P value
1	PMFBY	19.933 ^a	2.462	120.125*	2	0.000
2	RWBCIS	20.267 ^a	2.603			
3	SCIS	40.2 ^b	4.194			

*5% level of significance, *a and *b denotes schemes (treatments) with same letters are not significantly different

Table 8. Constraints in the disbursement of crop insurance schemes as perceived by farmers

Sl. no	Constraints	Percent position	Garrett value	Average	Rank
1	Inadequate publicity of the schemes	4.17	83	67.18	III
2	Lack of interaction between extension officials and farmers	12.50	73	29.55	XI
3	Delay in payment of insurance claims	20.83	66	61.30	IV
4	Problem of improper reporting in case of losses	29.17	61	80.13	I
5	Lack of depth awareness about crop insurance schemes	37.50	56	69.81	II
6	The crop damages in the purview of crop insurance scheme do not include loss due to pest and disease attack.	45.83	52	43.76	VIII
7	Complicated procedure of the insurance scheme	54.17	48	56.91	V
8	Unavailability of funds at the time of premium payment	62.50	44	34.06	IX
9	Low economic status	70.83	39	32.46	X
10	High rate of premium	79.17	34	16.81	XII
11	Absence of individual approach	87.50	27	56.20	VI
12	Difficulties in opening bank accounts	95.83	17	46.68	VII

significant difference between the central (PMFBY and RWBCIS) with the state crop insurance (RSCIS). Among the two central crop insurance (PMFBY and RWBCIS), there exists no significant difference.

Both PMFBY and RWBCIS shares similar policies, terms and conditions were developed under one umbrella scheme of central government which might be the reason for obtaining no significant difference among the two schemes in Kerala. The state and central crop insurance schemes are dissimilar in their mode of operations which might be the reason for observing a significant difference in the perception of beneficiary farmers about these crop insurance schemes as a whole.

3.5 Constraints in the Disbursement of Crop Insurance Schemes as Perceived by Beneficiary Farmers

Table 8 depicts the constraints in the disbursement of crop insurance schemes as perceived by farmers, which were ranked based on Garrett ranking technique. The major constraints faced by the farmers in the disbursement of crop insurance schemes in Kerala were problem of improper reporting in case of losses, delay in payment of insurance claims, inadequate publicity of the schemes, crop loss at all stages are not covered under the schemes and complicated procedure of the insurance scheme. The lack of individual approach in estimation of crop loss and the difficulties in opening bank accounts were also major constraints according to them.

3.5.1 Suggestions by farmers for crop insurance disbursement

The major suggestions by farmers were the need for a hassle free claim settlement procedure and it need to be revised by the respective implementing agencies of various crop insurance schemes. Revised crop loss estimation with individual approach as the basis for in the determination of risk assessment. Reduction in the premium amount, effective interpersonal relation between extension officials and farmers. Flexible and effective grievance redressal mechanism by the insurance providers. Farmer feedback must be considered before the finalization of schemes. Conscientization programs must be conducted for farmers

regarding various crop insurance schemes. Publicity campaigns must be conducted to reach a greater number of farmers. Clarity and categorization of hassle-free claim settlement in wild animal attack. Separate schemes may be introduced to address crop loss due to natural calamities and due to pest and disease attack. Regular annual calendar must be notified by the crop insurance agencies and departments regarding various schemes.

4. CONCLUSION

The study was undertaken in three districts of Kerala namely, Kottayam, Idukki and Malappuram representing three distinctive agro ecological zones of Kerala i.e., foothills, high hills and midland laterites. The crop insurance schemes are mandatory for every type of farmers. Majority of the farmers (69.17 %) had medium perception, followed by low (18.33 %) and high (12.50 %) perception regarding crop insurance schemes in Kerala. Though most of the farmers expressed the interest and willingness to adopt crop insurance as a risk management strategy, the lack of proper awareness and the associated negative perceptions regarding its guidelines, compensations and delay in disbursement might be the reason for majority of the farmers being in the medium perception category. The mean age of the farmers was 55.03, which was a clear indication that the majority of farmers belong to old age category clearly points out the growing aversion of young generation towards agriculture. The educated youth suspects that agriculture is uncertain and involves greater risk. In Kerala, the per capita land availability was only 0.13 ha (Census report, 2011) which might be main reason for higher percentage of marginal land holders. The declining trend may be due to the increasing demand of land for non-agricultural purpose. The association between profile characteristics of the respondents with their perception towards crop insurance schemes in Kerala showed that characteristics like education, operational landholding, credit orientation and decision making ability of the farmers had significant association with their perception regarding crop insurance schemes in Kerala. Beneficiary farmers had better perception regarding risk management, information seeking behaviour and profit maximisation than non beneficiary farmers. There characteristics and dimensions associated with the insured and non insured farmers need to be focused more by the government and policy makers to identify and

develop need based interventions in the sector so that more farmers enrol under crop insurance. Insurance firms should take action to educate farmers on the advantages of adopting crop insurance, how to utilise it as a risk management measure, as well as monitoring premium costs and claim processing times. Delayed claim settlement and improper crop loss assessment were not acceptable to the farmers. Frequent popularisation of the schemes through mass media can influence the awareness and knowledge of farmers. The government has a responsibility to inform the public and safeguard farmers' interests in this matter. Finally, the effectiveness of the schemes needs to be closely examined by regulators and insurance firms.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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