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Climate resilience of green gram growers

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Abstract

Climatic variability and unpredictability are expected to exacerbate the problem of food security by exerting pressure on agriculture. The study was conducted to assess the climate resilience of farmers one hundred eight farmers were selected by the simple random procedure. Data was collected by personal interview method. The results revealed that in categorization of farmers based on resilience indicators, around (47.41%) of farmers optimism category. Around (56.11%) of farmers preparedness contingency plan for climate change, (51.33%) farmers problem solving skills and 45.13 per cent of the farmers self-confidence category. While 49.13 per cent of farmers had climate resilience with respect to overall climate resilience.

Keywords: Climatic variability and unpredictability, Categorization, climate resilience

Introduction

Climatic variability and unpredictability are expected to exacerbate the problem of food security by exerting pressure on agriculture (Pathak *et al.*, 2019) ^[1]. Response of cropping system to far fluctuating climatic parameters can well define its degree of success under a given condition. The conventional farming practices to a great extent were a failure in this aspect. That made the farmers the regular victims of catastrophic impacts of climate aberrations. The paucity of technology options due in particular to varying agro-climatic situations and meager resources base of farmer were the major bottlenecks in small holder adaptation. Howden *et al.* (2007) ^[2] stated that climate change will be expressed via changes in variability at several temporal ranges, enhancing the capacity to manage climate risk is a core adaptation strategy which can be developed through climate knowledge of decision makers. The coping mechanisms and adaptive strategies of the farming community must be well developed. This study has undertaken with the objective to unveil Climate resilience of the green gram growers in various domains.

Materials and Methods

Resilience is the ability of a system to absorb shocks and recover as quickly as possible to normal conditions when external environment improves. Dharwad district was selected for the study. Based on experts opinion regarding climate change affected the major crop and considering major cultivated areas in the district Green gram, growers were considered keeping this four two taluks taken up for the study from each taluk 3 villages from each village 10 farmers, total of 60 farmers were selected by simple random method data was collected by personal interview method.

Results and discussion

The study observed that in categorization of farmers Table 1. Based on optimism resulted in 16.67 per cent farmers in low optimism category, 65 per cent of them in medium category, and 18.33 in high category. As well as optimism expressed by farmers 47.41 per cent. In preparedness for contingency plan for climate change 11.67 per cent of farmers are in low category of preparedness, 70.00 per cent in medium and 18.33 in high category of preparedness. About 56.11 per cent of preparedness for contingency crop plan for climate change. Only 6.67 per cent of farmers were in high problem solving skills group, while 66.67 per cent and 26.66 per cent were in medium and low categories, respectively. While 51.33 per cent of farmers problem solving skills category. Categorization of farmers based on their self-confidence resulted in 25 per cent of farmers in low self-confidence category, 68.33 per cent of them in medium category, and 6.67 in high category.

Self-confidence expressed by the farmers 45.13 per cent. Table 2. Overall climate resilience of the respondents category 15 per cent of farmers low climate resilience category, 66.67 per cent of them in medium category, and 18.33 in high category. While 49.17 per cent of respondents belongs to climate resilience group.

Table 1: Categorization of farmers group on resilience indicators

Sl. No	Statements	Respondents	
		F	%
Optimism			
	Low	10	16.67
	Medium	39	65.00
	High	11	18.33
	Index	47.41%	
Preparedness for contingency plan for climate change			
1	Low	7	11.67
2	Medium	42	70.00
3	High	11	18.33
4	Index	56.11%	
Problem solving skills			
1	Low	16	26.66
2	Medium	40	66.67
3	High	4	6.67
4	Index	51.33%	
Self confidence			
1	Low	15	25.00
2	Medium	41	68.33
3	High	4	6.67
4	Index	45.13%	

Table 2: Overall climate resilience of respondents

Climate resilience		
Category	f	%
Low	9	15.00
Medium	40	66.67
High	11	18.33
Index	49.17%	

Conclusion

Study reported that climate resilience among the 4 dimensions highest index was observed in case of preparedness to contingency plan followed by problem solving skills, optimism. While with respect to self-confidence is low as compared to other dimensions. However with respect to overall climate resiliency it is observed that (66.67%) of farmers found medium. While (18.33%) and (15.00%) high and low climate resiliency respectively. There is need to introduce and implement suitable climate smart agricultural practices in large scale.

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