

**“Analysis of Farmers’ Awareness towards Crop Insurance: A special  
reference to southern dry zone in Karnataka”**

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**Abstract**

Crop insurance is one of the best alternatives to manage crop loss incurred by the farmers due to weather risk and yield risk. It helps to stabilize the farm production and income of the farming community. Crop insurance is very important for the country like India, where the majority of people depend on agriculture for their livelihood. Indian government initially started the Crop insurance in 1972 and since then 10 crop insurance schemes have been implemented in the country. The present study is going to assess the awareness level of farmers in southern dry zone of Karnataka towards the crop insurance product. The study reveals that there is lack of awareness among less educated group and non loanee farmers. Therefore there is a need to create awareness among the farmers.

**Key Words:** Agriculture, Crop Insurance, awareness level, demographic factors.

**Introduction**

India is a developing country where majority of the people depend on agriculture for their livelihood. Indian agriculture is playing a vital role in socio-economic development of the country through contributing significantly towards Gross Domestic product and providing food security to the country. By 2032 India’s population would increase to 153 crores, demanding 337 million tons of food grains and 361 million tons of vegetables as compared to 257 tons of food grains and 182 million tons of vegetables in 2017-18 (W.G. Report of Niti aayog 2018). On the other hand, Indian agriculture is exposed to various risks which is affecting food production as well as income of the farmers. Therefore, Government of India has given more importance to the development of the agriculture and initiated various measures including crop insurance.

Crop insurance in India was conceptualized as far back as 1920 in Mysore state. J.S. Chakravarthi of Mysore State proposed Agricultural insurance to protect the farmers from severe drought, based on the rainfall approach (Vyash and Singh 2006) but the idea was not realized.

Later, General Insurance section of Life insurance Corporation of India has introduced the crop insurance in 1972.

Karnataka is one of the largest states with 190.5 lakh hectares of land with more drought prone area after Rajasthan. Majority of the people depend on agriculture in Karnataka. Therefore, the State Government concentrated more on protecting the farmers and taken various measures to protect the farmers on par with the Central Government. The state has participated in all crop insurance schemes introduced since 1972. In India, The state has shown keen interest in implementing the new schemes named Pradhan Mantri Fasal Bima Yojana and Restructured Weather Based Crop Insurance Scheme which were implemented in 2016 by Central Government.

### **Review of Literature**

Several studies are carried out in the field of crop insurance. Few studies are approximately relating the current study are enlisted below.

**Goudappa et.al., (2012)** conducted study in the Hyderabad-Karnataka region with special reference to Gulbarga, Koppal and Raichur districts to analyze the perception of farmers about crop insurance scheme and found that majority i.e., 80 percent of the respondents are not aware of NAIS. Farmers who are aware about the scheme were not aware about the information such as enrolment procedures, implementing agencies, etc and they are insuring the crops because of compulsion from the bank. The farmers are not satisfied with compensation amount, payment of claims, time duration for enrolment etc. Finally, the authors suggested the Government to open a separate wing for crop insurance in the department of agriculture to implement the crop insurance and to appoint crop insurance agent like LIC agent to provide doorstep services to illiterate farmer to attract and motivate them to enroll for crop insurance schemes

**Sundar and Ramakrishnan (2013)** analyzed the perception of farmers about crop insurance and their willingness to pay for crop insurance in Kunichampet village of Pondicherry district considering 140 respondents and found that majority of the respondents are not aware of the scheme, and those who are aware about the scheme are enrolled to crop insurance while taking crop loans. Majority of the farmers expressed that crop insurance is suitable to large

farmers and shown negative signs to consider crop insurance as risk mitigating tool. Therefore, the concerned agencies especially the bank which is most trusted by the farmers has to create awareness about crop insurance and the government should plan for a suitable distribution channel for crop insurance to make crop insurance available to every farmer of the country.

**Geetha and Thirumoorthy (2018)** conducted the study in Erode and Namakkal District of Tamilnadu to analyze the farmers' awareness level about crop insurance scheme through 100 farmers sample and found that majority of the respondents are aware about the crop insurance, but they don't have knowledge about risk coverage as well as loss assessment method. Farmers came to know about crop insurance from friends and relatives that shows that the banks and other concerned agencies not given importance for creating awareness among farmers. Therefore the author suggested to create more awareness about crop insurance.

**Duhan and Dhingra (2018)** assessed the knowledge about crop insurance schemes in Haryana and found that age and education play an important role in relation with awareness of scheme. Respondents who are aged and educated have more awareness compared to younger and less educated people in the sample area. To conclude, the author stated that majority of farmers are aware about the crop insurance scheme, but they are not enrolled due to lack of knowledge about the benefits of the schemes.

**Sona and Muniraju (2018)** evaluated perception and awareness level of crop insurance among farmers of Kodagu district of Karnataka and reveal that majority of the farmers are not aware about the crop insurance and those who are enrolled as part of crop loan in financial institution are also not aware about the crop insurance scheme. On the other hand those who are aware and enrolled are not satisfied with crop insurance due to delay in payments of claims. Therefore, the authors suggested that bank and other concerned agencies to participate actively in creating awareness among the farmer and to speed up the settlement of claims.

### **Research Gap**

Based on the literature review, it was found that numbers of studies are carried out in the field of crop insurance concentrating on analyzing the awareness level of farmer towards crop insurance. However, no study has been carried out in the southern dry zone of Karnataka.

Therefore, there arises a need to study on analyzing the awareness level of crop insurance in southern dry of Karnataka.

### **Statement of the Problem**

Since the introduction of crop insurance the government is frequently changing the models of crop insurance and introduced 10 models but none was reached to more number of farmers. Therefore, there is a need to study the awareness level of farmers and to know how demographic factors influencing the level of awareness of crop insurance.

### **Objectives of the Study**

1. To understand the concept of crop insurance in India
2. To study the level of awareness towards crop insurance in sample area

### **Hypothesis for the Study**

**H<sub>0</sub>:** There is no significant association between farmer's demographic factors and their awareness of crop insurance schemes

**H<sub>1</sub>:** There is a significant association between farmer's demographic factors and their awareness of crop insurance schemes

### **Research Methodology**

The present study is based on primary data. The data was collected through well structured questionnaire from farmers of southern dry zone of Karnataka. The data was based on the research objectives and the statistical package for social science (SPSS) was used for statistical analysis.

**Sample design:** the present study used the convenient sampling technique to collect primary data. The sample size for the study is 1250.

### **Analysis and Interpretation**

The present study considered only Gender, Age, Educational Qualification, Family Income, Farming Experience and Loanee Status of the farmers to know the association of demographic factors with awareness level towards crop insurance.

**Gender and Awareness of Crop Insurance Schemes**

Ho: There is no significant association between gender of the farmers and their awareness of crop insurance schemes.

**Table – 01: Gender-wise Awareness of Crop Insurance Schemes**

Gender		Awareness of Crop Insurance Schemes		Total
		Aware	Unaware	
Male	No. of Farmers	745	130	<b>875</b>
	Percent	85.1	14.9	<b>100</b>
Female	No. of Farmers	266	109	<b>375</b>
	Percent	70.9	29.1	<b>100</b>
<b><math>\chi^2 = 34.274^{**}</math>; df = 1; T.V = 6.64</b>				
<b>Source: Primary data</b>				

It is observed from the above table that the calculated value of  $\chi^2$  between gender of the farmers and their awareness is 34.274 which is greater than the table value 6.64 at one percent significant level. Therefore, null hypothesis is rejected. It is reported that there is a significant association between gender of the farmers and their awareness of crop insurance schemes.

**Age – group and Awareness of Crop Insurance Schemes**

Ho: There is no significant association between age group of the farmers and their awareness of crop insurance schemes.

**Table – 02: Age group-wise Awareness of Crop Insurance Schemes**

Age group (in years)		Awareness of Crop Insurance Schemes		Total
		Aware	Unaware	
Upto 25	No. of Farmers	66	70	<b>136</b>
	Percent	48.5	51.5	<b>100</b>
26-40	No. of Farmers	628	110	<b>738</b>
	Percent	85.1	14.9	<b>100</b>
41-50	No. of Farmers	229	59	<b>288</b>
	Percent	79.5%	20.5%	<b>100</b>
Above 50	No. of Farmers	88	0	<b>88</b>
	Percent	100	0	<b>100</b>
<b><math>\chi^2 = 121.668^{**}</math>; df = 3; T.V = 11.35</b>				
<b>Source: Primary data</b>				

The above table shows that the calculated value of  $\chi^2$  between age group of the farmers and their awareness is 121.688 which is greater than the table value 11.35 at one percent significant level. Hence, null hypothesis is rejected and it is concluded that there is a significant association between age group of the farmers and their awareness of crop insurance schemes.

### **Educational Qualification and Awareness of Crop Insurance Schemes**

Ho: There is no significant association between educational qualification of the farmers and their awareness of crop insurance schemes.

**Table – 03: Education-wise Awareness of Crop Insurance Schemes**

<b>Educational Qualification</b>		<b>Awareness of Crop Insurance Schemes</b>		<b>Total</b>
		<b>Aware</b>	<b>Unaware</b>	
Illiterate	No. of Farmers	112	66	<b>178</b>
	Percent	62.9	37.1	<b>100.0%</b>
Primary level	No. of Farmers	383	148	<b>531</b>
	Percent	72.1	27.9	<b>100</b>
Secondary level	No. of Farmers	398	25	<b>423</b>
	Percent	94.1	5.9	<b>100</b>
PUC and equalent	No. of Farmers	61	0	<b>61</b>
	Percent	100	0	<b>100</b>
Graduation and Above	No. of Farmers	57	0	<b>57</b>
	Percent	100	0	<b>100</b>
<b><math>\chi^2 = 139.050^{**}</math>; df = 4; T.V = 13.23</b>				
<b>Source: Primary data</b>				

The above table shows that the calculated value of  $\chi^2$  between educational qualification of the farmers and their awareness is 139.050 which is greater than the table value 13.23 at one percent significant level. So, null hypothesis is rejected and it is reported that there is a significant association between educational qualification of the farmers and their awareness of crop insurance schemes.

### **Family Income and Awareness of Crop Insurance Schemes**

Ho: There is no significant association between family income of the farmers and their awareness of crop insurance schemes.

**Table – 04: Family Income and Awareness of Crop Insurance Schemes**

Family income (Rs. per annum)		Awareness of Crop Insurance Schemes		Total
		Aware	Unaware	
Upto 1,00,000	No. of Farmers	287	130	<b>417</b>
	Percent	68.8	31.2	<b>100</b>
1,00,001 – 3,00,000	No. of Farmers	309	33	<b>342</b>
	Percent	90.4	9.6	<b>100</b>
3,00,001 – 5,00,000	No. of Farmers	220	70	<b>290</b>
	Percent	75.9	24.1	<b>100</b>
Above 5,00,000	No. of Farmers	195	6	<b>201</b>
	Percent	97	3	<b>100</b>
<b><math>\chi^2 = 97.584^{**}</math>; df = 3; T.V = 11.35</b>				
<b>Source: Primary data</b>				

The above table reveals that the calculated value of  $\chi^2$  between family income of the farmers and their awareness is 97.584 which is greater than the table value 11.35 at one percent significant level. So, null hypothesis is rejected and it says that there is a significant association between family income of the farmers and their awareness of crop insurance schemes.

**Farming experience and Awareness of Crop Insurance Schemes**

Ho: There is no significant association between farming experience of the farmers and their awareness of crop insurance schemes.

**Table – 05: Farming Experience and Awareness of Crop Insurance Schemes**

Farming Experience		Awareness of Crop Insurance Schemes		Total
		Aware	Unaware	
Upto 5 years	No. of Farmers	219	99	<b>318</b>
	Percent	68.9%	31.1%	<b>100.0%</b>
6 to 10 years	No. of Farmers	592	76	<b>668</b>
	Percent	88.6%	11.4%	<b>100.0%</b>
11 to 15 years	No. of Farmers	176	31	<b>207</b>
	Percent	85.0%	15.0%	<b>100.0%</b>
More than 15years	No. of Farmers	24	33	<b>57</b>
	Percent	42.1%	57.9%	<b>100.0%</b>
<b><math>\chi^2 = 113.283^{**}</math>; df = 3; T.V = 11.35</b>				
<b>Source: Primary data</b>				

Table 05 shows that the calculated value of  $\chi^2$  between farming experience of the farmers and their awareness is 113.283 which is greater than the table value 11.35 at one percent significant level. So, null hypothesis is rejected and it indicates that there is a significant association between farming experience of the farmers and their awareness of crop insurance schemes.

### **Loanee Status of Farmers and Awareness of Crop Insurance Schemes**

Ho: There is no significant association towards awareness of crop insurance schemes between loanee and non-loanee farmers.

**Table – 06: Loanee Status of Farmers and Awareness of Crop Insurance Schemes**

Status		Awareness of Crop Insurance Schemes		Total
		Aware	Unaware	
Loanee farmer	No. of Farmers	889	0	<b>889</b>
	Percent	100.0%	0.0%	<b>100.0%</b>
Non-Loanee farmer	No. of Farmers	122	239	<b>361</b>
	Percent	33.8%	66.2%	<b>100.0%</b>
<b><math>\chi^2 = 727.698^{**}</math>; df = 1; T.V = 6.64</b>				
<b>Source: Primary data</b>				

It is observed from the Table 06 that the calculated value of  $\chi^2$  between status of farmers and their awareness is 727.698 which is greater than the table value 6.64 at one percent significant level. Therefore, null hypothesis is rejected. It is reported that there is a significant association towards awareness of crop insurance schemes between loanee and non-loanee farmers.

### **Major Findings of the study**

1. From the study it is found that there is a significant association between demographic factors namely gender, age group, educational qualification, family income, farming experience, current loanee status of the farmers and their awareness of crop insurance schemes.
2. Majority i.e., 80 percent of the farmers are aware about the crop insurance
3. Awareness level among illiterate farmers is low compared to educated farmers.
4. High income group farmers have more awareness compared to low income group

5. Farmers who have more experience in farming have more knowledge compared to less experienced farmers
6. Majority i.e., 66 percent of non loanee farmers are not aware of the crop insurance where as 100 percent of the loanee farmers have awareness about crop insurance.

### **Conclusion**

Agriculture is playing vital role in India through providing employment for more than of the people of the country as well as providing raw material for the major industries. On other hand agriculture has severiously affected due weather and yield risk which affecting the productivity that in turns affecting the farmers as well as economy. To protect the farmers from crop loss the Government of India has introduced the crop insurance. Since 1972 the government has introduced around 10 crop insurance schemes, but none was completely reached to all the farmers due to lack of awareness of crop insurance among targeted group. To conclude non loanee farmers and illiterate people who are the majority in the field of agriculture has a very low level of awareness about crop insurance ,therefore there is a need create awareness among those targeted group of people to protect them from the crop loss.

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