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## FARMERS' PERCEPTION AND AWARENESS ABOUT CROP INSURANCE IN TAMILNADU – A DESCRIPTIVE ANALYSIS

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### ABSTRACT

Agriculture is considered to be the back bone of the Indian economy. Government has launched several schemes like National Agricultural Scheme and Weather Index Based crop insurance schemes for protecting the farmers against risks in agriculture. Due to the risk of loss in agriculture the farmers are making suicide attempts, selling their properties or the properties are seized by the Bank and financial institutions for the loan availed by the farmers. This is due to lack of awareness about the risk management techniques among the farmers. The research was conducted among the 150 farmers of Erode District to assess the farmer's perception about the various facts of crop insurance schemes.

**Keywords:** Crop, Farmers, insurance, Government, Wealth Index, Risk..

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### Introduction

Agriculture is a risky occupation subject to vary according to nature like flood, drought and cyclone. It contributes 24 % to the GDP and any disturbance in its production has a multiplier effect on the economy of a country like India. Insurance serves as instrument to manage the risk of the farmers. Crop insurance helps in stabilization of farm production and income of the farming community. This aids in optimal allocation of resources in the production process. The Indian Government has been concerned about the growing risk in agriculture, which culminates in unfortunate phenomenon of farmers' suicides, as happened in Maharashtra. In the face of uncertainty and risk in agriculture, various schemes have been evolved over time in different countries to protect farmers; these include guaranteed prices, subsidized credit, and crop insurance, which are of immediate concern in the short-run.

Crop insurance is recognized to be a basic instrument for maintaining income stability in farm, through advanced technology, motivating investment, and increasing credit flow in the agricultural sector. Crop insurance contributes to self-reliance and self respect among farmers, since in cases of crop loss they can claim compensation as a matter of right. Thus, it cushions the shock of crop loss by assuring farmers' protection against natural hazards beyond their control. The central and state governments in India have instituted several crop insurance schemes as safety measure in recent years. Realizing the importance of crop insurance as a tool for managing risk and uncertainties in agriculture, the present paper has examined the farmers' awareness about crop insurance and perception about various risks involved in agriculture.

**Objectives**

1. To assess the farmers awareness level towards crop insurance scheme.
2. To analysis the risk relief measures undertaken by the farmers.
3. To provide suggestions to improve awareness among farmers for crop insurance program.

**Review of Literature**

Crop insurance has been one of the most reliable and longest running programs for stabilization and risk management for farmers in many countries. This is true in some parts of North America, where crop insurance became more common and commercially available around 1960. Multi-peril crop insurance, the most popular type of crop insurance, usually insures farmers against yield losses from natural causes such as weather (e.g. drought, excessive moisture, wind, snow, and frost), insects, and disease. A properly designed and implemented crop insurance programme will protect the numerous vulnerable small and marginal farmers from hardship, bring in stability in the farm incomes and increase the farm production (Bhende 2002).

The farmer is likely to allocate resources in profit maximizing way if he is sure that he will be compensated when his income is catastrophically low for reasons beyond his control. A farmer may grow more profitable crops even though they are risky. Similarly, farmer may adopt improved but uncertain technology when he is assured of compensation in case of failure (Hazell 1992). This will increase value added from agriculture, and income of the farm family. Bhende (2005) found that income of the farm households from semi-arid tropics engaged predominantly in rain-fed farming was positively associated with the level of risk. Hence, the availability of formal instrument for diffusion of risk like crop insurance will facilitate farmers to adopt risky but remunerative technology and farm activities, resulting in increased income. It is observed that insured households invest more on agricultural inputs leading to higher output and income per unit of land. Interestingly, percentage increase in output and income is more for small farms. Based on 1991 data, CCIS was found to contribute 23, 15, and 29 per cent increase in income of insured farmers in Gujarat, Orissa and Tamil Nadu, respectively (Mishra 1996)

**Methodology**

The study was conducted in Erode District and covers areas like Bhavani, Anthiyur, Sivagiri and Arachalur by interviewing 150 farmers. The farmers are selected based on the convenience. The sampled farmers were from the categories of marginal to large farms cultivating all important crops in one or two seasons under various agro- ecological situations, such as tank irrigation, groundwater irrigation, canal irrigation and rainfed farming. Data were collected during the month of October to December 2013. The responses were collected from two different classes of farmers like landlord and tenant. The statistical techniques like Simple percentage, Chi-square test and Henry Garrate Ranking technique was adopted to assess the real usage of crop insurance by the farmers.

**Henry Garratt Ranking technique**

This technique was used to evaluate the risk aversion management used by the farmers in the various taluk of Erode District. In this technique, the farmers were asked to rank the given methods of risk aversion according to the magnitude of the risk management. The orders of merit given by the respondents were converted into ranks using the following formula.

$$\text{Percentage Postion} = 100(\text{Rij} - 0.5)$$

$$\text{Nj}$$



Where,

$R_{ij}$  = Rank for  $i$ th item  $j$ th individual

$N_j$  = Number of items ranked by  $j$ th individual

The percentage position of each rank thus obtained was converted into scores by referring to the table given by Henry Garrett. Then for each factor the scores of individual respondents were added together and divided by the total number of respondents for whom the scores were added. These mean scores for all the factors were arranged in the order of their ranks and inferences were drawn.

## Data Analysis and Interpretation

### 1. Simple Percentage Analysis

**Table 1.1 Socio-economic Characteristics of Sample Farmers**

Soci-Economic Characteristics	Classification	No of farmers	Percentage
Age	Below 20 Years	35	23
	20-40 Years	51	34
	40-60 Years	42	28
	Above 60 Years	22	15
Education Qualification	Primary Level	38	25
	Higher Secondary Level	32	21
	Graduate and above	21	14
	Illiterate	59	39
Income Level	Less than Rs 25000	62	41
	Rs 25001 to Rs 50000	32	21
	Rs 50001 to Rs 75000	15	10
	Rs 75001 to Rs 100000	32	21
	Greater than Rs 100000	9	6
Family-size category	1-2	25	17
	3-4	32	21
	5-6	45	30
	7-8	33	22
	>8	15	10
Earning members in a family	1-2	35	23
	3-4	24	16
	5-6	41	27
	7-8	22	15
	>8	28	19
Life Insurance Policy	Yes	94	63
	No	56	37
Vehicle Insurance Policy	Yes	87	58
	No	63	42
No of Acres	0-1	32	21
	1.1-2	19	13
	2.01-4	39	26
	4.01-6	34	23
	>6	26	17

From the above table 1.1, it is pinpointed that the majority (34%) of the farmers are between 20-40 years of age, most of the farmers (39%) are Illiterate. The greater part of the farmers are earning less



than Rs 25000 per annum further the most of the farmers family size is 5-6 members and 63% of the farmers and 58% of the farmers have taken up life insurance policy and vehicle insurance policy.

**Table 1.2 Awareness level of Crop Insurance among farmers**

Particulars	No of farmers	Percentage
Aware	67	45
Not aware	83	55
<b>Total</b>	<b>150</b>	<b>100</b>

The awareness among farmers about crop insurance and risk management measures implemented by the government was very low. Awareness was more among marginal farmers about 45 %.

**Table 1.3 Crop Insurance taken by the farmers**

Particulars	No of farmers	Percentage
Insured	55	82
Not-Insured	12	18
<b>Total</b>	<b>67</b>	<b>100</b>

It shows that below 50% of the farmers are aware to take crop insurance. Out of 150 farmers, 67 farmers have taken crop insurance schemes in the survey area.

**Table 1.4 Source of Information about the Insurance**

Particulars	No of farmers	Percentage
Media	63	42
Government departments	23	15
Neighbours and fellow farmers	30	20
Agricultural universities and research institutes	22	15
NGOs	12	8
<b>Total</b>	<b>150</b>	<b>100</b>

It is clear from the above table 1. 4 that the majority (42%) of the farmers uses media like Newspaper, Radio, Television to aware about the crop insurance.

**Table 1.5 Credit flow among the farmers**

Particulars		No of farmers	Percentage
Yes	Short term loan	39	26
	Medium term loan	34	23
	Long term loan	29	19
No		48	32
<b>Total</b>		<b>150</b>	<b>100</b>

Table 1.5 depicts the credit facilities utilized by the selected farmers. It was found that majority(26%) avail short-term loan, 23 % of medium term loans were obtained by the farmers and 19% of the farmers avail long term loan.

**Table 1.6 Types of Farm risks faced by the framers**

Types of risk	No of farmers	Percentage
Drought	47	31
Flood (canal Irrigation)	7	5
Non-availability of workers	32	21
Lack in usage of technology	21	14
Pests	43	29
<b>Total</b>	<b>150</b>	<b>100</b>

Natural calamities affect the farmers in Tamil Nadu. In that case 31% of the farmers faces drought and only 5% of the farmers are affected by flood in the canal irrigation.

**Table 1.7 Insurance details of the farmers**

Crops	No of farmers	Percentage	Area(ha)
Paddy	21	31	4
Groundnut	14	21	1.5
Rice fallow pulse	15	22	2.75
Sugarcane	17	25	3
<b>Total</b>	<b>67</b>	<b>100</b>	

Farmers insured mainly their paddy crops (38%) because it is more vulnerable to floods, cyclones and drought. Other crops, they didn't show any interest to avail insurance.

**Table 1.8 Satisfaction levels of the farmers regarding the present insurance schemes**

Satisfaction level	No of farmers	Percentage
Highly satisfied	10	15
Satisfied	8	12
Neutral	11	16
Dissatisfied	20	30
Highly dissatisfied	18	27
<b>Total</b>	<b>67</b>	<b>100</b>

Majority (30%) of the farmers is dissatisfied about the crop insurance schemes and 27 % are highly dissatisfied. Further the small portions (15%) of the farmers are highly satisfied about the crop insurance schemes.

## 2. Chi-square Analysis

Ho: No significant relationship between educational qualification and perception of farmers about risk reduction.



H1: Significant relationship between educational qualification and perception of farmers about risk reduction.

**Table 2.1 Educational Qualification and Perception of farmers about risk reduction**

Perception Educational Qualification	Providing crop/livestock insurance	Providing relief fund at disaster times	Providing technology, input, credit, etc.	Total
Primary Level	14	8	16	38
Higher Secondary Level	13	9	10	32
Graduate and above	8	6	7	21
Illiterate	33	13	13	59
<b>Total</b>	<b>68</b>	<b>36</b>	<b>46</b>	<b>150</b>

Significant Level: 99%

Degrees of freedom: 6

Calculated Value: 0.63576159

Table Value: 0.872

Result: Null hypothesis is accepted since calculated value is less than the table value. Hence it is concluded that there is no significant relationship between educational qualification and perception of farmers about risk reduction.

### 3. Garette Ranking Technique

**Table 3.1 Techniques of risk management adopted by the farmers**

Particulars	Garette Weighted score	Rank
Sale of assets	471	IV
Borrowed from friends and relatives	595	I
Bank loan	560	II
Moneylenders	498	III
Government relief	465	V
Agricultural insurance	395	VII
Cooperative banks	455	VI

The risk relief measures undertaken by the farmers were analyzed and presented in Table 3.1. The farmers revealed that self-supporting relief measures like sale of assets, hypothecation of assets and jewels and borrowing from friends and relatives as short term loans are highly preferred risk relief measures.



**Findings**

From the above research it is observed that:

- ✓ Limited numbers of farmers are aware about the crop insurance.
- ✓ Paddy crops only insured by the farmers in the study area.
- ✓ The major risk in farming are the drought and non-availability of workers
- ✓ Crop insured farmers are dissatisfied from the existing insurance schemes.
- ✓ In order to bear the risk of loss the farmers are borrowing loans from their friends & relatives or selling their properties.

**Suggestions**

- Awareness for the crop insurance can be created by service providers through SMS, hoardings, television and radios.
- National Institute of Agriculture Extension Management is clarifying doubts of the farmers in their local language which shall also inform about the crop insurance to those farmers who were calling to them.
- For cultivating pulses, government is providing seeds, fertilizers and taking back the pulses at the market price. Similarly the government can extend the scheme to other crops like groundnut, paddy, sugar cane, etc.
- Weather based Crop Insurance Scheme implemented by Agricultural Insurance Company of India Ltd is available for only certain Districts like Dharmapuri. Perambalur, Ariyalur, Salem, Virudhunagar which can be extended to Erode district.

**Conclusion**

Agriculture is affected by the natural calamities like drought, flood, etc., which forms the major risk for the farmers. Theoretically the crop insurance stabilizes the farmer's income during the loss period. But in real practice it doesn't act as an instrument during the period of loss. In the mind set of the farmers the crop insurance is best suited for large scale farmers because the premium is not afford to the small & medium farmers further the extent of coverage is very low. The major role in creating the awareness among farmers is played the Bank officials but they didn't take active participation in explaining the benefits of crop insurance. Hence the benefits of the crop insurance should reach all types of farmers and change the perception of the farmers about the cultivation and its risk aversion.

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