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Farmers Perception Towards the Crop Insurance in Pudukkottai District

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Abstract
Crop insurance is a financial tool for reducing the impact of a loss in agricultural income by accounting for a wide range of factors that affect crop production. As such it is a risk management alternative where production risk is transferred to another party at a cost called premium. The weather based crop insurance uses weather parameters as proxy for crop yield in compensating the cultivators for deemed crop losses. It provides a good alternative both to farmers and government. Farmers get aviation insurance by making quick payments to the government at low administrative cost. Rain insurance is a specific form of weather insurance. Weather insurance is not yield insurance when there is crop insurance. Both situations, growers pass on the danger of yield to another party for the premium. The need for insurance for agriculture cannot be overstated in their current state a very risky economic activity because it is dependent the weather conditions. Therefore, designing and implementing an appropriate insurance plan for agribusiness is a very complex and challenging task.
Key Words: *Age, Education, Savings and Loan*

I. Introduction

Agriculture continues to be the important sector in the Tamil Nadu State economy as more than 56 percent of the people depend on agriculture and allied sectors for their livelihood. At national level, Tamil Nadu accounts for seven per cent of the population, four percentages of the land area, and three percent of the water resources.

The annual average rain fall at all India level is 1200 mm whereas the rainfall in Tamil Nadu is 930 mm. In this situation, the land and other natural resources are fully utilized in this State. The average land holding was 1.25 hectares (Ha) during 1976-77 and it is 0.83 hectares as per 2005-06 censuses which is lower than the all India average of 1.33 hectares. Thus, 91 percent farmers in Tamil Nadu are small and marginal farmers.

With these farmers, the Government of Tamil Nadu has aimed to attain high food grain production to meet the needs of increasing population and it is taking strenuous efforts to increase the production of food crops viz., paddy, millets and pulses. Steps have also been taken to increase oilseeds production and to increase area under sugarcane and cotton.

Further, the Government of Tamil Nadu has taken steps to increase the investment in agriculture, agri-based technologies, marketing development, planning approach etc., for bringing about substantial improvement in production in spite of seasonal vagaries like flood and drought. The farmers are encouraged to take up cultivation enthusiastically through compensation for the crop loss due to natural calamities, relief from indebtedness by waiver of crop loans and extending compensation through crop insurance besides providing credit at low interest rate and no interest for prompt payers.

II. Review of Literature

Raju and Ramesh Chand (2014) Risks of agricultural production were discussed. This paper examines the features and performance of the National Agricultural Insurance Scheme (NAIS) operating in the country. The study specified that mechanisms such as ‘contract farming’ and ‘future trading’ have been introduced and were expected to provide some risk cover against price fluctuations. From 1999-2000 through 2005-06 the NAIS covered 79.17 million farmers and 128.91 million hectares area. Total sum insured during kharif and rabi seasons together was Rs 75827 crore and the premium collected was Rs. 2333 crore.

Pandaraiah, Sashidhar (2015) revealed that the government’s role was restricted in advertising the risk mitigating strategies in agriculture. Short-term credit was distributed to small farmers by co-operative banks and medium term loans by commercial banks. It was suggested that there is a need to publicize the information

to small and medium farmers about crop insurance. Recommendation was made by the authors to encourage the private sectors to offer crop insurance to the farmers.

JayakumaraVaradan and Pramod Kumar (2015) examined the impact of crop insurance on rice farming in Tamil Nadu. Primary data were collected during rabi 2008-09 by using structured schedule on aspects such as socioeconomic characteristics of farmers, cropping pattern, access to loan and other sources of income and loss coping mechanism. The study compared insured and uninsured farmers and found that insured farmers were educated had high yield and longer farming experience and most of them were the members of social groups like self-help groups and farmers club. The study found that crop insurance increases the use of plant protection chemicals and fertilizers. The study concluded that nature of irrigation, education level, and access to loan; off farm income were the factors in adopting crop insurance.

Pradeepika (2017) Agriculture is undoubtedly risky, and the risk of a bad year encourages farmers to invest in high-yielding activities. By building a recession, agricultural insurance can help improve farmers' productivity and provide food security. Therefore the Government of India has implemented a new Agricultural Insurance Scheme the Pradhan Mantri Fasal Bima Yojana (PMFBY) is the new crop insurance scheme launched by Central Government. PMFBY will replace the existing two schemes National Agricultural Insurance Scheme as well as modified NAIS which have had some inherent drawbacks. Pradhan Mantri Fasal Bima Yojana implemented in every state of India, with association with the respective State Governments. The present study is an attempt to understand the various issues and strategies related to the implementation of Pradhan Mantra Fasal Bima Yojana in the state of Haryana. The study concludes with suggestions that educating rural people about insurance as a concept and a material for the effective implementation of this new crop insurance scheme is a strong need of the hour.

Tapas Kumar Parida (2017) he studied rainfall insurance plans and its operational methods such as eligibility criteria, premium payment, benefit system and payment and technical issues. It explored the hypothesis that the low prevalence of rain fed insurance was linked to a situation where prospective buyers could not relate the product to their regular exposure. This study underscores the inconsistency of the comparison between the longitudinal actual village data and reference meteorological data (Zonal Level 3) used to calculate strikes, evacuations and payments to farmers in six villages in the SAT Arctic (SAT) region. It has identified several challenges in its ability to offset risk among farmers.

Therefore, there is a need to reconsider the policy of insurance policy in terms of performance. The study argued that with continued government support, the effort to improve the effectiveness of this initiative would involve more public-private partnerships in the process for greater transparency and design.

Uvaneswaran and Mohanapriya (2018) Agriculture is considered as the backbone of the Indian economy. To protect farmers from the dangers of agriculture, the government has launched a number of schemes such as the National Agricultural Program and meteorological code based crop insurance schemes. Due to the risk of loss in agriculture, farmers attempt suicide, sell assets or confiscate assets by banks and financial institutions for loans obtained by farmers. This is due to the lack of awareness among farmers about risk management techniques. The study was conducted among 150 farmers in Erode district to assess the views of farmers on various facts of crop insurance schemes.

III. Scope of the Study

The present study is significant for potential beneficiaries from those villages which have not much awareness of crop insurance scheme. It will also be helpful to small and marginal farmers to protect their interest in crop against natural calamities and getting benefits under this scheme. It will also assist the insurers, bankers and policy makers for policy prescription and policy intervention. The present study is also confined to coverage of National Agricultural Insurance Scheme of Agricultural Insurance Company (AIC) of India, a specialized insurer of the General Insurance Company according to the IRDA.

The topical scope of this study is limited to examine the growth and performance of National Agricultural Insurance Scheme from Rabi 2018-2019 to 2020-2021; awareness and attitude of farmers towards crop insurance schemes and their satisfaction levels. The scope of the study has also been restricted to cover the farmers of Pudukkottai District only.

Statement of the Problem

Agriculture is the dominant sector in throughout many developing countries. It has a sigficant impact on GDP and is still the primary source of employment. Agricultural products are also an important export item in many countries. Productivity gains in agriculture are necessary for self-sustaining economic development in most developing countries. Despite the importance of agriculture, the various initiatives taken for its development have often failed to deliver full benefits.

Low levels of income, low capital-labour ratios and the general precariousness of agricultural production characterize this sector in developing economies. There is often a dichotomy between the urban and rural sectors of the economy, not only in terms of technology but more importantly, in terms of access to services like transportation, medical/educational facilities, credit/insurance services. Agriculture has always been a risky business. Unlike the industrial sector it is subject to the vagaries of the nature.

Uncertainty of crop yield is thus one of the basic risks, which every farmer has to face, more or less, in all the developing countries. In most of these countries the overwhelming majorities of farmers are poor and have extremely limited means and resources and are, therefore, unable to bear the risks of crop failure. The food production required to be enhanced to provide food and nutritional security to the growing population. In order to retain the farmers especially the younger generation to take up agriculture as a profession, the income from the farm holdings required to be increased considerably.

90 percent of the farmers In Tamil Nadu are from the small and marginal sector and their working reserve is 56 percent of the total area. So the small and marginal farmers play a key role in overall development in agriculture and the adoption of scientific technologies by these farmers needs focused attention. In many countries the State provides aid or relief to the agricultural sector in the event of a natural catastrophe as a matter of Public Policy. In some countries this is done on an ad hoc basis while in others there are formal arrangements and even legislation for this purpose. Agricultural insurance is a more efficient instrument and an effective institutionalized mechanism for dealing with the problem. Agricultural insurance is one method by which farmers can stabilize farm income and investment and guard against disastrous effect of losses due to natural hazards or low market prices.

Crop insurance not only stabilizes the farm income but also helps the farmers to initiate production activity after a bad agricultural year. The Government of India has introduced the innovative schemes on crop insurance but these schemes have failed to meet the expected results due to the low policy implications, awareness of farmers' lack of awareness, and unsatisfied performance of implementing agencies.

National Agriculture insurance scheme has been introduced by Government of India from Rabi season 1999-2000. But it also failed to influence the farmers as well as work effectively.

Objectives of the Study

The present study is undertaken with the following specific objectives.

1. To assess the level of awareness of farmers about Crop Insurance Schemes and analyze the relationship between the socio-economic characteristics of farmers and their awareness levels.
2. To examine the satisfaction features of the Agricultural Insurance Schemes in the study area.

Hypotheses of the Study

1. There is no significant difference in the different prompted groups of respondents on challenges faced.
2. There is no significant difference in the factors motivated to invest on crop insurance among factors groups of respondents.
3. There is no significant difference in the investment among the respondents.

Sampling

This study is undertaken by making a survey of Pudukkottai district, Iluppur Taluk, Viralimalai Block has 85 villages. Among them 15 villages are selected for the lottery method. Thus totally 15 villages are selected from representing about 10% of the population in each village. The following villages are selected from the Iluppur Taluk of Viralimalai Block.

Table No. 1
Gender Wise Distribution of the Respondents

Sl. No	Gender	Respondents	Percentage
1	Male	510	85.0
2	Female	90	15.0
Total		**600**	**100.0**

Source: Primary

Gender wise distribution of the respondents from the above table no.1shows that among the total respondents 15% are female, whereas the rest 85% are males. Gender distribution of the respondents concluded that majority (85%) of the study respondents are males.

Table No. 2
Age Wise Distribution of the Respondents

Sl. No	Age	Respondents	Percentage
1	Below 30	90	15.0
2	31-40	162	27.0
3	41-50	252	42.0
4	Above 51	96	16.0
Total		**600**	**100.0**

Source: Primary

Age wise distribution of the respondents from the above table no.2 explains that among the total respondents 42% belong to 41-50 years, followed by 27% belongs to 31-40 years. Age distribution of the respondents concluded that most (42%) of the study respondents belongs to 41-50 years of age group.

Table No. 3
Education of the Respondents

Sl. No	Education	Respondents	Percentage
1	Illiterate	36	6.0
2	Up to 12^{th}	144	24.0
3	Graduate	246	41.0
4	Post graduate	138	23.0
5	Others	36	6.0
Total		**600**	**100.0**

Source: Primary

Education of the respondents from the above table no. 3 indicates that among the total respondents, 41% are graduates, followed by 24% are studied up to 12^{th}. Education of the respondents concluded that most (41%) of the study respondents are Graduates.

Table No. 4
Marital Status of the Respondents

Sl. No	Marital Status	Respondents	Percentage
1	Unmarried	90	15.0
2	Married	480	80.0
3	Divorced	12	2.0
4	Widow	18	3.0
Total		**600**	**100.0**

Source: Primary

Marital status from the above table no. 4 reveals that among the total respondents, 80% of the respondents are married, followed by 15% are unmarried. Marital status concluded that majority (80%) of the study respondents are married.

Table No. 5
Community of the Respondents

Sl. No	Community	Respondents	Percentage
1	SC	126	21.0
2	ST	12	2.0
3	BC	258	43.0
4	MBC	204	34.0
Total		**600**	**100.0**

Source: Primary

Community of the respondents from the above table no. 5 from that among the total respondents, 43% of the respondents belongs to backward community, followed by 34% belongs to most backward community. Community of the respondents concluded that most (43%) of the respondents belongs to backward community.

Table No. 6
Religion of the Respondents

Sl. No	Religion	Respondents	Percentage
1	Hindu	534	89.0
2	Christian	42	7.0
3	Muslim	24	4.0
Total		**600**	**100.0**

Source: Primary

Religion of the respondents from the above table no. 6 states that among the total respondents, 89% belongs to Hindu religion followed by 7% belongs to Christian religion. Thus it is concluded that majority (89%) of the study respondents belongs to Hindu religion.

Table No. 7
Area of Living by the Respondents

Sl. No	Area of Living	Respondents	Percentage
1	Rural	318	53.0
2	Urban	66	11.0
3	Semi Urban	216	36.0
Total		**600**	**100.0**

Source: Primary

Area of living by the respondents from the above table no. 7 illustrates that among the total respondents, 53% of the respondents belong to rural area, followed by 36% belongs to semi urban area. Area of living by the respondents concluded that majority (53%) of the study respondents belongs to rural area of living.

Table No. 8
Total Land Holdings

Sl. No	Land Holdings	Respondents	Percentage
1	Less than 5 acres	294	49.0
2	5-10 acres	222	37.0
3	10 & above acres	84	14.0
Total		**600**	**100.0**

Source: Primary

Total land holding from the above table no. 8 pointed that among the total respondents, 49% of the respondents have less than 5 acres of land holdings, followed by 37% have 5-10 acres land holdings. Total land holding concluded that most (49%) of the study respondents have less than 5 acres of land holdings.

Insurance Service Providers

Garret Rank Technique:

This technique was used to rank the reasons for preferring particular organic food store by the respondents. In this method, the respondents were asked to give ranks according to the magnitude of the reasons. The order of merit given by the respondents were converted into % position by using the formula

$$\text{Percentage position} = \sum_{i=1}^{\sum} 100*(Rij- 0.5)/ Nj \quad j=1$$

Where, Rjj = Rank given for i th factor by j th individual

Nj = Number of factors ranked by j th individual

The percentage position of each rank thus obtained is converted into scores by referring to the Table given by Henry Garrett. Then for each factor the scores of individual respondents are added together divided by the total number of respondents for whom scores were added. These mean scores for all the factors are arranged in the descending order, ranks are given and most important problems are identified.

Table No. 9
Insurance Service Provider

Sl. No	Insurance Service Provider	Score		Rank
		Total	Mean	
1	Rural agent	29700	49.50	2
2	Commercial bank	37500	62.50	1
3	Co-operative society	29550	49.25	3
4	Government	23250	38.75	4

Source: Computed data

Insurance service provider from the above that among the four insurance service providers, the 'Commercial bank' has secured higher mean score and stood at top, followed by the 'Rural agents' has secured next higher score and stood at second, the 'Co-operative society' has secured next higher mean score and stood at third, and finally 'Government' has secured least mean score and stood at last.

Table No. 10
Do You Save

Sl. No	Save	Respondents	Percentage
1	Yes	576	96.0
2	No	24	4.0
Total		**600**	**100.0**

Source: Primary

Do you save from the above table no. 10 indicates that 96% of the respondents save, whereas the rest 4% did not save. Do you save concluded that majority (96%) of the respondents save.

Table No. 11
Summary Statistics of Savings

Sector	Min Val	Max Val	Mean	Std. deviation	Coefficient of variation
Bank	1000	2000	1473.08	308.03	20.91
Post office	500	7500	794.79	993.42	124.99
Chit funds	1000	1500	1250.00	252.11	20.17
SHG	200	350	247.12	54.16	21.92
Insurance	500	1500	1168.75	340.38	29.12

1. Bank:

The value in Rs.1000's ranges to 2000, with the mean 1473.08, SD 308.03 and a coefficient of variation 20.91

2. Post office:

The value in Rs.000's ranges from 500 to 7500, with the mean 794.79, SD 993.42 and a coefficient of variation 124.99.

3. Chit funds:

The value in Rs.000's ranges from 1000 to 1500, with the mean 1250.00, SD 252.11 and a coefficient of variation 20.17

4. SHG:

The value in Rs.000's ranges from 200 to 350, with the mean 247.12, SD 54.16 and a coefficient of variation 21.92.

5. Insurance:

The value in Rs.000's ranges from 500 to 1500, with the mean 1168.75, SD 340.38 and a coefficient of variation 29.12

Table No. 12
Do You Have Loan

Sl. No	Aware	Respondents	Percentage
1	Yes	366	61.0
2	No	234	39.0
Total		**600**	**100.0**

Source: Primary

Do you have loaned from the above table no. 5.55 from that the 61% of the respondents have loan, whereas the rest 39% have no loan. Do you have loan concluded that majority (61%) of the respondents have loan.

Table No. 13
Summary Statistics of Loans

Sector	Min Val	Max Val	Mean	Std. deviation	Coefficient of variation
Bank	5000	15000	7666.67	3108.52	40.55
Money lender	3000	5000	3950.00	728.94	18.45
Friends & Relatives	1000	10000	6669.23	2534.57	38.00
Co-operative society	5000	10000	8000.00	2074.10	25.93
SHG	5000	15000	10728.97	3410.78	31.79

1. Bank:

The value in Rs. 000's ranges from 5000 to 15000, with the mean 7666.67, SD 3108.52 and a coefficient of variation 40.55

2. Money lender:

The value in Rs.000's ranges from 3000 to 5000, with the mean 3950.00, SD 728.94 and a coefficient of variation 18.45.

3. Friends & Relatives:

The value in Rs.000's ranges from 1000 to 10000, with the mean 6669.23, SD 2534.57 and a coefficient of variation 38.00.

4. Co-operative society:

The value in Rs.000's ranges from 5000 to 10000, with the mean 8000.00, SD 2074.10 and a coefficient of variation 25.93.

5. SHG:

The value in Rs.000's ranges from 1211.93 to 1543.74, with the mean 10728.97, SD 3410.78 and a coefficient of variation 31.79.

Table No. 14
Factors While Taking the Policy

Sl. No	Factors	Score		Rank
		Total	Mean	
1	Additional benefits	28320	47.20	3
2	Lesser premium	42000	70.00	2
3	Crop coverage	54000	90.00	1
4	Investment Safety	14520	24.20	4

Source: Computed data

Factors while taking the policy from the above that among the four factors, the 'Crop coverage' has secured higher mean score and stood at top, followed by the source 'Lesser premium' has secured next higher score and stood at second, the source 'Additional benefits' has secured next higher mean score and stood at third, and finally 'Investment Safety' has secured least mean score and stood at last.

The following table gives the summary statistics such as min. value, max. Value, mean, and std. deviation of score among the respondents.

Findings of the Study

- Among the (85%) of the study respondents are males.
- Majority of the (42%) of the study respondents belongs to 41-50 years of age group.
- Over all the (41%) of the study respondents are Graduates.
- It is clear that (80%) of the study respondents are married.
- Mostly (43%) of the study respondents belongs to backward community.
- Nearly (89%) of the study respondents belongs to Hindu religion.
- Mostly (53%) of the study respondents belongs to Rural area of living.
- The study shows that the (49%) of the study respondents have less than 5 acres of land holdings.

Suggestions of the Study

1. Formulation and implementation of risk reduction strategies.
2. Investing in R&D on insurance product design in collaboration with private insurance service providers.

3. Government needs to regulate the rationale and basis of determination of what constitutes economic damage and what is the adequate compensation for a given range of economic damage.
4. In India, the premiums are already reasonable as government offers huge subsidy and the burden on premium subsidy to the government will lessen in due course of time with the increase in penetration.

IV. Conclusion

Findings revealed that, the respondents had the low level of crops covered crops covered in the in crop insurance scheme and loan availed from bank. It was found that maximum respondents had low level of benefits availed. It was revealed that majority of respondents were showing the medium level in perception about crop insurance scheme. These findings were similar to findings of Dhobale (2010); Tejankar (2011) and Pulliken (2001). Findings of relational analysis revealed that education, subsidiary occupation, extension contacts, social participation, benefits availed, crops covered in crop insurance were positively and significantly correlated with perception and age, annual income, farming experience, source of information were negatively but significantly correlated with perception except land holding and loan availed from bank which were non- significantly related with perception.

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