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Empirical study on perception of crop insurance scheme among the farmer's children pursuing agricultural degree in Karnataka

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Abstract

Risks associated with farming include those related to weather, productivity, prices, government regulations, international markets, and other variables that affect farmers' earnings. In order to shield farms from production risk resulting from landslides, storms, frost, floods, cyclones, and droughts, the government has implemented crop insurance. However, crop insurance's effectiveness and acceptance are lacking. Therefore, it's important to comprehend how to enhance crop insurance's performance. Farmers have not been very active in purchasing insurance premiums, so it is necessary to look into the barriers to participating in the programme. The particular goals were to assess the barriers to obtaining insurance for crops in the research area and to characterise the socioeconomic characteristics of farmers. With the aid of a carefully designed questionnaire, primary data were gathered from 126 respondents who are the offspring of farmers pursuing degrees in agriculture from several agricultural universities in Karnataka. In order to determine the association between the respondents' level of awareness of insurance for crop shames and their involvement in farming activities, data were evaluated using a correlation statistical method. The study also aims to assess how respondents' awareness of crop protection is influenced by their family size, or more specifically, their family constitution (nuclear or joint family). The respondents had medium level of knowledge about Crop protection (69 (or nearly 55%) said they had no knowledge of crop insurance. Additionally, it is discovered that there is no discernible variation in the respondents' assessments of their level of crop insurance awareness among those with varying family constitutions. There is no discernible difference in the understanding and comprehension of crop protection schemes between respondents from joint families and nuclear families. According to the study, in order to encourage respondents to adopt a few villages while pursuing a degree in awareness-building as part of the curriculum, it is necessary to raise an elevated level of awareness about insurance for crops schemes by means of the course material in the first the semester of their admission.

Keywords: Agricultural degree; agricultural Universities; awareness; crop insurance; curriculum; family constitution; pursuing.

Introduction

India is a major exporter of numerous food grains, commodities, and agricultural goods also the number of outputs of agricultural degree graduates are been increasing from year after year, due to establishment of agricultural universities both (central and state public universities) around the country. Farmers in India play an important part in the country's economic growth, although they continue to suffer from poverty and hardship. Droughts, floods, cyclones, frost, storms, landslides, and other weather-related events regularly have an impact on agricultural productivity and farm revenues in India. Other factors that have a significant impact on productivity and farm profitability include disease outbreaks, fire, and market volatility. All of these circumstances are beyond the farmer's control. As agriculture becomes more commercialised, the amount of shock from negative outcomes grows, as does the need to safeguard farmers from output and revenue losses. Agricultural insurance is seen as a key technique for efficiently mitigating the risk to productivity and revenue caused by numerous natural and human-related calamity. Agriculture insurance is significant because it allows individuals to share their risks in an affordable manner. It allows farmers to recover swiftly from losses.

To cover potential future risks, some provision is required, and crop protection is the sole vehicle available to protect towards risk to production in agriculture. To meet this need, the Indian government experimented and introduced various crop insurance schemes, including the first Individual Approach Scheme (1972-1978), The Pilot Crop Insurance Scheme (1979-1984), Comprehensiveness Crop Insurance Scheme (1985-1999), The experimental Crop Insurance Scheme (1997-1998), The Pilot Scheme on Seed Crop Insurance, and National Agricultural Insurance Scheme (1999-2000 onwards). The National Agricultural Insurance Scheme (NAIS) is being implemented beginning with the Rabi 1999-2000 seasons. NAIS was designed as an extensive instrument to cover yield losses caused by natural non-preventable risks such as flood, inundation, landslides, drought, pest and disease, natural fire, lightning, storm, hailstorm, cyclone, and more, and it provides greater coverage for landowners (loanee and non-loanee),

agriculture (all food and oilseed crops, as well as annual horticultural/commercial crops), and risk commitment has been replaced by The Pradhan Mantri Fasal Bima Yojna, since in 2016. As a result, an effort is made to analyse farmers' awareness of crop insurance systems. Agricultural growth is a requirement for national prosperity. People rely on it as their primary source of income. The goal is to give farmers with protection from damage and financial help in the event that any of the reported crops fail due to natural disasters, pests, or illnesses. The crops that are insured vary from region to state. The aforementioned crops have insurance at the block and gram panchayat levels. Farmers benefit greatly from crop insurance plans, which provide them with financial stability. Farmers in India are committing suicide due to low output, lower income, and large agricultural loans. They live a difficult life despite providing a nice life for others by meeting their most desired need in the shape of agricultural goods. Crop insurance has become increasingly important as a result of the widespread damage caused by insect infestations, crop diseases, and weather extremes.

Review of Literature

(Seeta Prabhu & Ramachandran, 1986) [18] The study finds that Nigerian farmers' involvement with agricultural insurance schemes is largely determined by age, farm size, level of education, and credit availability, with delayed compensation payout posing a major obstacle. (Mishra, 1994) [13] The Gujarat Integrated Crop Insurance Scheme (CCIS) has greatly improved the financial situation of small-scale agricultural producers in Orissa, Gujarat, and Tamil Nadu by boosting loans per borrower. (Kalavakonda & Mahul, 2003) [7] The study found that age, the size of the farm, education level, and access to financing are important variables influencing Nigerian farmers' involvement in agricultural insurance programs, with delayed compensation pay-out being a significant obstacle.(Raju & Chand, 2008) [16] The report investigates the National Agricultural Security System's effectiveness from 1999 to 2006, indicating that it covers 9-15% of agricultural communities and proposing a "Homogeneous area Approach" to improve efficacy. (Bhende, 2013) [3] The research investigation on agricultural insurance in Karnataka found inadequate coverage and spread of GIC, recommending redefining homogenous regions, including horticultural crops, and conducting a promotion of awareness for non-borrowers.

(Singh & Agrawal, 2020) [20] The study assesses India's agricultural insurance policies, revealing that farmers frequently face difficulties in obtaining insurance due to illiteracy and inadequate assistance payments. (Rao, 2020) [17] The study evaluates farmers' attitudes and understanding of North Karnataka's Crop Security Scheme, indicating that it does not provide enough risk coverage for the Kharif and Rabi phases. (Subedi & Kattel, 2021) [22] Researchers investigated Nepalese farmers' attitudes toward obtaining cow insurance and discovered that a lack of knowledge about the advantages deterred them. Risk protection insurance has been identified as a rewarding aspect, and awareness campaigns and loans for agriculture should be adopted. (Kumari et al., 2021) [8] The study looks at farmers' impressions of the Pradhan Mantri Fasal Bima Yojana in the Salem area, with an emphasis on crop insurance as a mechanism for protecting against natural calamities and financial losses, hence minimizing crop losses. (Hani et al., 2022) [6] A research in Tumkur, Karnataka, examined the Pradhan Mantri Fasal Bima Yojana's restrictions in assisting growers in Karnataka's central dry zone amid natural disasters that cause crop loss. (Nagesha et al., 2022) [14] The Pradhan Mantri Fasal Bima Yojna, introduced in 2016, sought to improve crop insurance plans, with farmers' opinions having a big impact on their acceptance from 2020 to 2021.

(Sona & Muniraju, 2018) [21] A survey found that 38% of Karnataka growers are only marginally conscious of crop insurance, highlighting its critical role in sustaining agricultural stability in the face of natural calamities and climate change. (Mbonane, 2018) [11] The researcher exposes farmers' preferred crop insurance terms, emphasizing the necessity of understanding their preferences in order to improve insurance plans and safeguard agricultural livelihoods. (Oguz & Diyanah, 2021) [15] According to researchers in Konya Province's Altinekin District, 86% of agricultural producers are aware of crop insurance, 56% think it is important, and 61% believe government help is inefficient. (Meena et al., 2022) [12] Researchers conducted a study of farmers' understanding and perceptions of PMFBY, insurance for crops, and crop losses, and discovered favourable sentiments and a readiness to publicize losses. (ALABI et al., 2023) [2] According to research, 51% of Nigerian maize producers are considered, whereas 21% are risk-averse. Opinions are influenced by age, gender, and education. Extension professionals may help farmers manage agricultural risks by providing weather information, crop insurance, and loans.

Need and Scope of the Study

There has been little attention paid to determining if there is a need for crop protection or why farmers choose it, with the majority of attention being into analysing the availability and adoption of crop insurance. Additionally, this study aims to encourage policymakers to take into account crop insurance support programmes, as knowing the demand for crop insurance would help insurance companies tailor their offerings to meet the needs of farmers. Understanding the demand for crop insurance among farmers and figuring out the best ways to shield farmers from agricultural hazards and the consequences of poor risk management techniques and also to involving the students pursuing agricultural degree to promote the importance of crop insurance. The study provides the insight understanding the awareness level and the influences of family constitution of the students pursing agricultural degree, who are been the children of farmers. The Indian government has been actively pushing insurance for crops through a number of delivery mechanisms. However, it is believed that outreach remains lower than projected. Previous study has found that agriculture insurance is not as helpful in mitigating farm hazards. However, crop insurance should be promoted since it helps farmers manage agricultural risk. The most significant problem facing insurance providers is a lack of understanding, which they must overcome in order to adopt various approach to reach the farmers.

According to the studies, crop insurance is only connected to the location and farmers' knowledge. It is critical to

educate farmers on the value of crop insurance, which can safeguard them from natural disasters and maintain their financial security. However, in order to increase its acceptance, the drivers of distribution strategy must be addressed. The easy availability of finance is critical for increasing the advertising and uptake of insurance products.
The study provides the scope for further research and advancement in the field for the benefit of the farmers. The reason be opted for enhanced technic and models in achieving the enumerated objective/s of each study in this area. In order to encourage and increase awareness among the farmers towards crop insurance, villages has to be adopted by a group of student as a part of project while pursuing an agricultural degree as part of the curriculum, and also it is necessary to raise an elevated level of awareness about insurance for crops schemes by means of the course material in the first the semester of their admission.

Objective of the Study

With reference to crop insurance scheme in India and its perception among the farmer's children pursuing agricultural degree with a size of a family constitution, which effect the involvement in agricultural activity and revenue knowledge, the present study aims at achieving the following objectives,

1. To evaluate the knowledge of crop insurance scheme among the farmer's children pursuing agricultural degree.
2. To evaluate the impact of size of the family constitution towards the perception of crop insurance scheme among the farmer's children pursuing agricultural degree.

Materials and Methodology

The study employs the questionnaire method; primary data was gathered from farmers' children pursuing agriculture degrees (undergraduates and postgraduates) at several Agricultural Public Universities in the Bangalore area and Shivamogga Districts of Karnataka, while secondary data was gathered from related journals, magazines, and textbooks.
The study population consists of farmers' children who are pursuing agricultural degrees at various agricultural colleges. The convenience sample approach was used to pick 126 students for the current study. Generally, thirty to thirty-four percent of students at chosen colleges are farmer's children from various parts of India.
A well-structured questionnaire was utilised to obtain data from respondents. The study was carried out in November and December of 2023. The current study is mostly based on primary data. The data was analysed using percentage analysis, and the objectives were tested using a correlation study of cumulative information to evaluate and determine the link among the sizes of the farmer's family constitution effect on the student pursuing agricultural degree.

Results/Analysis

The following tables illustrate crop insurance scheme knowledge among farmer's children pursuing an agricultural degree. They include information on a number on family, background in education, crop loss experiences, and degree of crop protection scheme awareness.
The data has been collected for the study from the respondents through we structured questionnaire and the data has been analysed by using correlation and chi - square test to find the significance of the objectives of the study, in reference to the data collected and analysed it can be concluded for the better understanding of the students involvement in the agricultural activates and creating awareness among the peer members, family members, family groups, etc.,

Table 1: Showing the size of the family members

Particulars	Up to 3	4 to 5	Above 5	Grand Total
Joint Family	0	4	34	38
Nuclear Family	24	56	8	88
Grand Total	24	60	42	126

Source 1 Primary data, author calculation

The results presented in ***Table 1*** represents the numbers of family members in each family constitution, out of 126 nuclear family represents up to 88 (about 70%) and with a maximum of 04 to 05 members in a family. Whereas joint family are consent out of 38 joint families 34 families (about 89.47%) of the families have more than 5 members, as per chi - square test has no signification relating to the numbers of members of the family and the awareness about the crop insurance schemes.

Table 2: Showing the Highest Education qualification of Family member

Qualification	Joint Family	Nuclear Family	Grand Total
Below 10th standard	8	24	32
10th Standard	11	14	25
PUC	6	11	17
Graduate	6	38	43
Post Graduate and above	7	1	8
Grand Total	38	88	126

Source 2 Primary data, author calculation

The data shown in ***Table 1*** and ***Table 2*** indicate that when the chi-square test was used to determine the relationship between personal characteristics like education, family size, and farming experience and the level of awareness towards the crop insurance variable, there was no significant association. The individuals who participated are either pursuing an under-graduation or post-graduation in agricultural degree, and their ages range from 18 to 23.
The respondents may not have participated in family farming operations with other family members, but they still received an education, which could be the explanation. From the study shows that out of 126 respondents both joint and nuclear families highest education qualification of the family members with a degree and pre-university is 68 (about 54%), thus the education qualification of family members have no signification in creating the awareness among the children of the farmer's pursuing agricultural degree, hence they developed the no favourable attitude towards the crop insurance schemes.

Table 3: Showing the awareness of the respondents towards the crop insurance schemes

Family Type	No	Yes	Grand Total
Joint Family	7	31	38
Nuclear Family	7	81	88
Grand Total	14	112	126

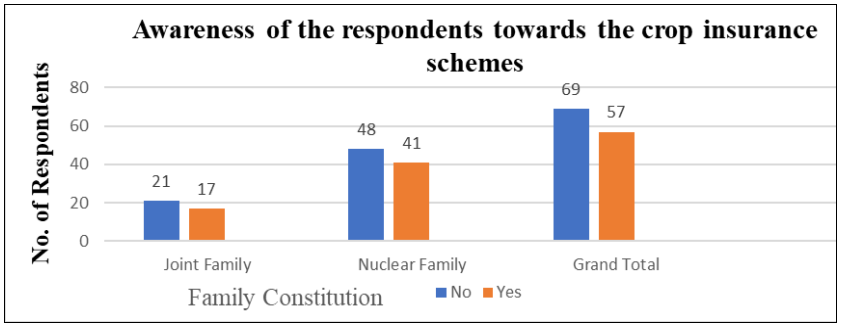
Source 3 Primary data, author calculation

Table 3 demonstrated that the majority of farmers, regardless of family constitution, had suffered cross loss over the previous three years. Of the 126 respondents, approximately 88.89% had suffered crop loss as a result of pests, droughts, floods, changes in market prices, etc., and felt that the crop insurance programme was specifically made for affluent farmers because it came with a high premium that poor and marginalised farmers could not afford.

Table 4: Showing the family experience of crop loss in past 3 years

Family Type	No	Yes	Grand Total
Joint Family	21	17	38
Nuclear Family	48	41	88
Grand Total	69	57	126

Source 4 Primary data, author calculation



Source 5 Primary data, author calculation

Fig 1: Awareness of the respondents towards the crop insurance schemes

Table 4 presents the data about the respondents' awareness of belonging to a different family constitution. When asked if they were familiar with the characteristics, workings, and advantages of crop insurance plans, as well as the various schemes designed to help farmers offset crop loss, 57 (or nearly 45%) of the 126 respondents said they were, indicating that they had some knowledge of crop insurance plans, while 69 (or nearly 55%) said they had no knowledge of crop insurance. Additionally, it is discovered that there is no discernible variation in the respondents' assessments of their level of crop insurance awareness among those with varying family constitutions. There is no discernible difference in the understanding and comprehension of crop protection schemes between respondents from joint families and nuclear families. Of the 38 respondents, 17 (almost 45%) and 41 (almost 46%) of the 88 respondents positively responded to the question about crop insurance schemes.

Discussion

Based on the aforementioned observations, it was discovered that a significant number of respondents were unaware of crop insurance programmes or the existence of crop insurance. The study also revealed that there is a very slight variation in respondents' assessments of respondents' awareness between nuclear and joint families, which are the two sorts of family constitutions. Nonetheless, student education is necessary to raise awareness because, of the 126 respondents, 112 families (or roughly 88.89%) reported experiencing agricultural loss in the previous three years as a result of pests, droughts, floods, or other natural disasters. The family that suffered a crop loss is not ready to choose crop insurance because of the high premium costs and drawn-out claim settlement process. From the research conducted, it can be seen that farmers with smaller land holdings believe crop insurance is useless since they plant less crops.

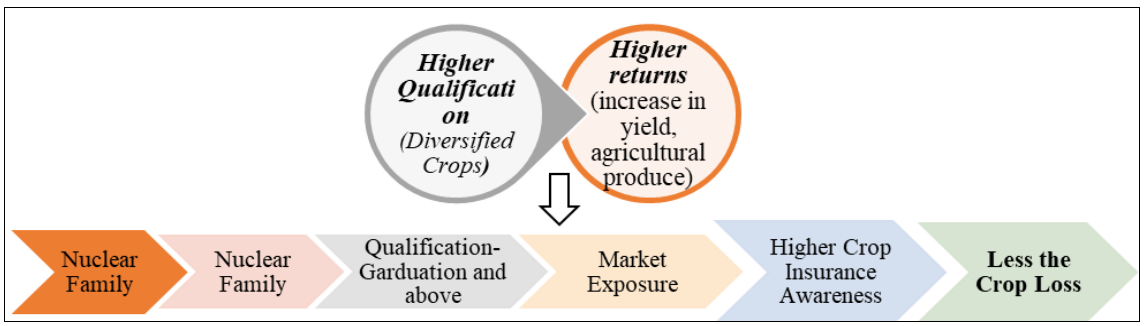


Fig 2: Authors model design, Awareness

Conclusion

The study's findings demonstrated that respondents who were members of farmers' nuclear and combined families had a poor degree of crop insurance awareness. The study area's crops have been severely damaged by floods as well as variations in rainfall every year, putting farmers at great

risk from catastrophic hazards. According to data, the percentage of joint and nuclear households that have experienced crop loss in the last three years is over 88.89%. Despite this, farmers were hesitant to purchase crop protection because they saw it as an additional expense rather than a way to offset losses brought on by natural disasters. In a similar vein, the analysis's findings indicate that the only farmers with a high level of knowledge and comprehension of crop insurance were those who had previously benefited from bank loans for agricultural purposes. Regretfully, the data analysis indicates that farmers have a lower education level than pre-university, and it's possible that the current respondents are first-generation agricultural graduates. While banks are doing their part to educate farmers about crop insurance policies and procedures, this opportunity is only available to farmers who use bank loans or agricultural credit; farmers who do not use bank credit are not able to take advantage of this facility's benefits. It is therefore the duty of policy makers and agricultural universities to engage their students in peer groups at the university level and farmer peer groups in adopted villages. A group of students can adopt a village to raise perception about crop insurance schemes, which can then be included into the curriculum and promoted through print and electronic media. Additionally, special educational programmes can be created to teach growers about crop coverage and its products.

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