

ASSOCIATION BETWEEN THE FACTORS AFFECTING AWARENESS LEVEL OF FARMERS ABOUT AGRICULTURE INSURANCE IN HARYANA

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ABSTRACT

Indian economy is known as agriculture based economy over worldwide. Agriculture is such a business that is almost depends on the nature. Thus, the income of the farmers suffers a lot due to the uncertainty in weather conditions such as excess or unseasonal rain, drought, variability in temperature, hailstorms, windstorms etc. Many times market risks also affect the economic condition of the farmers because of low prices of the agriculture produce and high costs of the agricultural inputs. Although, government is committed to overcome the risks faced by the farmers specially, the market risks through the Minimum Support Prices (MSP) and other risks are trying to reduce by introducing agriculture insurance schemes by the government. But, the main issue is to spread out these schemes to all the farmers, so that they can be benefitted from the implemented schemes. There may be various factors which are helpful or a hurdle in the awareness level of the farmers such as age, education, experience, income and category of farming. One or two factors mutually may play an important role in increasing or decreasing the awareness level of the farmers. The present study is an attempt to trace out the association between factors affecting the awareness level of farmers about agriculture insurance.

KEYWORDS: Agriculture, Awareness, Economy, Insurance, Risk, Schemes

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INTRODUCTION

The Green Revolution achieved a success for increased production of food grains due to the use of scientific agricultural techniques related to irrigation, sowing methods, high yielding varieties, fertilizers, etc. But with the increased cost of cultivation of crops the green revolution has also impact the society and economy of the country (Kumar *et al.*, 2015). As an important segment agriculture is continuing to grow and contributing to food security of the nation. But, most of the time the natural disasters like floods and droughts has an impact on the national agriculture productivity as well as on the lives of the persons associated with this occupation. So, there is an urgent need to mitigate the risks involved in agricultural activities (Sinha and Tripathi, 2014). Insurance is measured as an effective tool for reducing or eliminating risk, through which the losses suffered by a few are met from the contributions made by a group of homogeneous people. In respect to price, climatic, geological and biological shocks agriculture is a risky business.

To protect the insurer against the risks insured for is the basic objective of insurance (Banerjee and Bhattacharya, 2011). To stabilize the income of the farmers, encouraging farmers for adopting advanced technologies which can lead to better production and more competent use of resources, lessen the risk for credit agencies, which can result in an increased flow of credit to the farmers and to reduce bad effects resulting from crop losses caused by natural hazards, crop insurance is very helpful (Rambukwella *et al.*, 2007). Risk in agriculture has been increased due to natural hazards and weather events and it highlights the importance of a proficient risk management device for a farmer to survive in unfavorable conditions. Among many approaches which are used to manage the agriculture-related risks, insurance is considered as the most important instrument. Crop Insurance has been recognized as an essential risk management tool in agriculture which secures the economic state of farmers.

REVIEW OF LITERATURE

Jayathilaka and Abeynayake (2013) revealed that, the factors which influence positively the adoption of insurance are farmers satisfaction towards scheme, obtaining crop loans, social participation of farmers in organizations and their affordability to premium rate, whereas capacity to manage with own resource influence negatively. To increase the awareness among the farmers about crop insurance schemes, it is necessary to conduct extension programs to aware about the rules and regulations of the scheme among the participants and another essential point is that there should be a direct connection with farmers and the insurance company. To enhance satisfaction among farmers towards the crop insurance schemes and its reach to the farmers, the immediate supervision and assessment of crop damages and timely payments of indemnities are required. Sundar and Ramakrishnan (2013) founded that, farmers perceive that, crop insurance is suitable only for the large farmers with high income. So, the service providers have to introduce a new product, which concentrates on financing crop losses in affordable premium to small and marginal farmers. The farmers were sensitive to premium rate, loss assessment and delays in claim payments so the service providers have to focus on these important factors. It will really help the farmers to recover from bad agricultural years.

On the basis of the analysis of literature, in the field of agricultural risk, it is difficult to evaluate and manage risks in agriculture. Agricultural enterprises have to cope with large numbers of uncertainties. Agricultural studies have to focus on estimating farmer risk preferences and provide models to understand how a farmer decides among a set of choices and which factors affect their decisions. The various studies focus on a limited set of risk sources from several measurable and non-measurable risk factors in agriculture. To effectively measure, the importance of different risk sources, decision-making process has to be given the enough attention (Girdziute, 2012). The awareness of level of farmers towards crop insurance schemes was very low. In order to increase the awareness level of farmers the government and the implementing agency should initiates awareness campaign. The farmers should be assured and provide proper guidance to them that crop insurance is a need in their life. It should not be an obligation by somebody else. Most of the farmers are not approaching the bank for loan due to the prevailing system i.e. compulsory crop insurance for those who availed loan from bank. So these practices should be discouraged (Karthik and Ramalingam, 2013).

RESEARCH METHODOLOGY

The present study is empirical in nature, which is totally based on primary data. A well structured questionnaire is developed for recording the data which was administered on the farmers randomly selected from all over in Haryana. Data obtained through well thought-out questionnaire was analyzed using simple statistical tools. The current paper has

reported the results of a survey of 567 farmers conducted to trace out their attitude and knowledge about different facets of crop insurance and its schemes to analyze the association between different factors affecting knowledge and awareness level of the farmers. The study concludes with various suggestions for increasing the awareness level of the farmers for ensuring better access of crop insurance.

RESULTS AND DISCUSSIONS

To investigate the association between the factors affecting the knowledge and awareness level of farmers about crop insurance and the related schemes, the sampled data is analyzed. The demographic characteristics of the sampled data includes that the highest number of the farmers belonged to the age group of 45-55 (26.5%) followed by the age group of 35-45 (25.9%) and 25-35 (24.5%). The age group of 18-25 has the lowest percentage of the farmers (6.5%). 16.6% farmers belonged to the age group of 55 and above. If we talk about the literacy level of the respondents, it was found that out of the total 567 respondents, 509 were the literate respondents and 58 were illiterate. The figures further indicate that, the maximum number of farmers was matric (35.0%) followed by below matric (29.7%) and senior secondary (19.4%). The minimum numbers of farmers was post-graduate (4.3%) among the total farmers. The percentage of graduate farmers was 11.6%. The large number of research studies pointed out a number of factors which influence the awareness level of farmers towards crop insurance. After giving critical thinking the study identified major factors such as literacy level, educational qualifications, age, and experience of farming and category of farming to trace the awareness level of farmers towards significance of crop insurance. The awareness level of the farmers was also affected by the association between these factors. It means at a point of time two factors may mutually affect the understanding and decision making power of the farmers such as education and age, income group and sources of major income, age and experience of farming etc. The proportions of responses sharing the agreement with statements were computed for all data set and also for different categories classified on the basis of above reference factors.

Indicators of Awareness

The success of the crop insurance schemes lies in increasing awareness amongst farmers about these schemes launched by the government. There is also an urgent need to educate the farmers about financial products to create awareness among them. To trace out the awareness among farmers we have taken the following indicators:

Table: 1 Indicators of Awareness

S. No.	Indicators	Awareness Level (%)
1.	Heard about crop insurance	59.6
2.	Knowledge your crops could be insured	54.7
3.	Relevance of crop insurance	54.0
4.	Knowledge about crop insurance schemes	15.3
5.	Availed crop insurance in past	30.9
6.	Availing any type of crop insurance at present	0.9
7.	Willingness to go for crop insurance	72.5
8.	Inclination to understand the key components of crop insurance scheme before going for it	61.4

The above table describes the indicators of awareness among farmers in Haryana. The data state that 59.6% farmers have an idea about crop insurance. Only 15.3% respondents know about the implementing crop insurance schemes in Haryana. It is very surprising that 30.9% farmers have availed crop insurance in the past but, 0.9% sampled farmers were availing at present. But the data also gives a positive sign of farmers' increasing consciousness towards

crop insurance. 72.5% respondents were ready to purchase crop insurance in future if they would offer. 61.4% farmers want to be aware of the necessary components of the schemes under their crops would be insured.

Table: 2 Ages, Education and Awareness Level towards Crop Insurance among Farmers

Education	Age	Awareness Level (Mean)
Below metric	18-25	3.89
	25-35	2.75
	35-45	2.39
	45-55	2.35
	55 and above	2.17
Matric	18-25	1.04
	25-35	2.30
	35-45	2.59
	45-55	2.86
	55 and above	1.86
Senior secondary	18-25	2.82
	25-35	2.62
	35-45	3.28
	45-55	3.47
	55 and above	4.07
Graduate	18-25	2.80
	25-35	3.98
	35-45	6.31
	45-55	5.42
	55 and above	6.78
Post-graduate	18-25	-
	25-35	5.12
	35-45	7.28
	45-55	3.40
	55 and above	6.78

Table: 2 shows that, how education and age of respondents affect the awareness level of respondents at the same time. Below metric but young farmers with the age group of 18-25 had the highest awareness level (3.89) followed by the age group of 25-35 (2.75). The farmers who were 55 years old and above, but below metric were least aware about crop insurance. It means education plays a major role in creating awareness among the respondents. It is clearly observed from the table that the respondents with metric qualification under the age group of above 55 was highly aware group with the mean of 2.86 followed by 45-55 (2.59) and 25-35 (2.30). The youngest farmers were less aware than mature farmers, thus maturity affects the awareness level. But if we see the educational level then, it is concluded that education does matter a lot. The respondents who were senior secondary passed and in the age group of 55 and above were the most aware group (4.07), followed by the group of 45-55 (3.47), 35-45 (3.28) and 18-25 (2.82). At the same educational level the age group of 25-35 was least aware group. Experience of farming was the reason for that. The graduate farmers under the age group of 55 and above had the highest awareness level with the mean of 6.78 followed by 35-45 (6.31), 45-55 (5.42) and 25-35 (3.98). The young graduate farmers were the least aware group. It can be concluded that education was the main factor that affects awareness level but maturity level of respondents cannot be ignored. If we see the post-graduate farmers, the age group of 35-45 was the most aware group 7.28 followed by 55 and above (6.78), 25-35 (5.12) and 45-55 (3.40). The age group of 18-25 was not post graduate at this stage of their age or may be the reason that it was not involved

in farming activities after completion of their post-graduation.

Table 3: Sources of Major Income, Income Group of Farmers and Awareness Level of Farmers towards Crop Insurance

Sources	Income	Awareness Level (Mean)
Agriculture	Up to 1 lac	1.79
	1-2 lacs	2.60
	2-3 lacs	3.45
	3-4 lacs	3.32
	4-5 lacs	3.75
	Above 5 lacs	4.12
Livestock	Up to 1 lac	1.45
	1-2 lacs	1.31
	2-3 lacs	2.62
	3-4 lacs	1.31
	4-5 lacs	0.82
	Above 5 lacs	-
Both (agriculture and livestock)	Up to 1 lac	2.01
	1-2 lacs	3.18
	2-3 lacs	3.16
	3-4 lacs	3.22
	4-5 lacs	2.79
	Above 5 lacs	5.20
Non-agriculture	Up to 1 lac	1.12
	1-2 lacs	5.17
	2-3 lacs	-
	3-4 lacs	-
	4-5 lacs	-
	Above 5 lacs	-
Agriculture + Non-agriculture	Up to 1 lac	2.15
	1-2 lacs	3.57
	2-3 lacs	5.35
	3-4 lacs	4.18
	4-5 lacs	2.54
	Above 5 lacs	5.87
All of these	Up to 1 lac	4.55
	1-2 lacs	3.76
	2-3 lacs	5.17
	3-4 lacs	5.30
	4-5 lacs	4.85
	Above 5 lacs	5.17

Table: 3, elaborates the sources of major income, income group of farmers and their awareness level about crop insurance. The data showed that the farmers whose source of major income was only agriculture and with the income of above 5 lacs had the maximum level of awareness (4.12), followed by the income of 4-5 lacs (3.75), 2-3 lacs (3.45) and 3-4 lacs (3.32). With this source of major income the farmers with income up to 1 lac were least aware. The respondents with the income up to 1 lac and having agriculture, as the source of major income were illiterate or less educated. So, these respondents were not so aware, about the benefit and scheme related to crop insurance. Livestock as the source of major income, the highest income group respondents (above 5 lacs) were not even aware about crop insurance because, they were totally dependants on livestock keeping. With this source of major income the highly conscious group was 2-3 lacs (2.62) followed by up to 1 lac (1.45) and 1-2 and 3-4 lacs (1.31). The respondents were also engaged in farming activities with livestock as main occupation because livestock keeping, also depended on agricultural activities.

The respondents whose sources of major income were agriculture and livestock (both), the large income group was highly concerned for crop insurance (5.20) followed by 3-4 lacs (3.22), 1-2 lacs (3.18) and 2-3 lacs (3.16). The least aware group was with the income up to 1 lac with awareness mean (2.01). The farmers with non-agriculture as a source of major income only small income groups, up to 1 lac and 1-2 lacs were aware. With all the sources of major income, almost all the income groups were aware about crop insurance and its schemes but the highest awareness groups were 3-4 lacs (5.30), followed by 2-3 lacs and above 5 lacs (5.17)

Table 4: Source of Major Income, Category of Farming and Awareness Level of Farmers Towards Crop Insurance

Sources	Category	Awareness (Mean)
Agriculture	Marginal farmers	0.93
	Small farmers	2.18
	Large farmers	3.35
	Landless farmers	0.02
Livestock	Marginal farmers	1.26
	Small farmers	2.35
	Large farmers	0.50
	Landless farmers	1.50
Both (agriculture and livestock)	Marginal farmers	2.28
	Small farmers	2.97
	Large farmers	3.45
	Landless farmers	1.59
Non-Agriculture	Marginal farmers	2.13
	Small farmers	-
	Large farmers	-
	Landless farmers	-
Agriculture and Non-agriculture	Marginal farmers	0.90
	Small farmers	4.37
	Large farmers	5.31
	Landless farmers	-
All of these	Marginal farmers	3.96
	Small farmers	4.16
	Large farmers	6.07
	Landless farmers	-

The figures given in the table-4 explain the sources of major income with different farming categories and the awareness level of the farmers. Large farmers having only agriculture as the source of major income were highly concerned about crop insurance (3.35), followed by small farmers (2.18) and marginal farmers (0.93). Landless farmers were not so conscious about crop insurance. The respondents who totally depended on livestock for their major income, small farmers were more aware (2.35) than the large farmers (0.50). The reason was that large farmers were involved in only livestock. Even, marginal and landless farmers were also more aware than the large farmers. The farmers who were engaged in agriculture and livestock, large farmers were more aware (3.45) followed by small farmers (2.97) and marginal farmers (2.28). The landless farmers were least aware. The data also stated that the respondents who earned major income from non-agriculture sources, except the marginal farmers, all categories were not aware about the crop insurance. The farmers with the sources of major income (from all sources of income), large farmers were highly aware than small and marginal farmers.

Table: 5 Ages, Experience and Awareness Level of Farmers towards Crop Insurance

Experience	Age	Awareness Level (Mean)
0-5 years	18-25	1.91
	25-35	2.21
	35-45	1.67
	45-55	0.02
	55 and above	-
5-10 years	18-25	3.12
	25-35	2.80
	35-45	2.84
	45-55	-
	55 and above	-
10-15 years	18-25	2.60
	25-35	3.65
	35-45	1.77
	45-55	1.74
	55 and above	-
Above 15 years	18-25	2.31
	25-35	2.30
	35-45	3.61
	45-55	2.98
	55 and above	2.42

The above table reveals that with the passage of time maturity also increased but with the maturity, there were so many factors which affected the awareness level of farmers. It can be clearly seen from the data that the farmers having experience of 0-5 years, but were under the age group of 25-35 were more concerned towards crop insurance (2.21) followed by the age group of 18-25 (1.91) and 35-45 (1.67). The farmers more than 55 years old were not even aware about the crop insurance. The reason for that might be the low educational qualification or lack of availability of sources of information around them. Almost same was in case of farmers having experience of 5-10 years. The younger farmers were more aware than the oldest. If we see the respondents having experience of 10-15 years and above 15 years the age groups of 25-35 and 35-45 were most aware groups, respectively. Thus it could be concluded that with the age and experience, education and maturity also affected the awareness level of the farmers.

CONCLUSIONS

The data state that 59.6% farmers have an idea about crop insurance. Only 15.3% respondents know about the implementing crop insurance schemes in Haryana. It is very surprising that 30.9% farmers have availed crop insurance in the past but, 0.9% sampled farmers were availing at present. But the data also gives a positive sign of farmers’ increasing consciousness towards crop insurance. 72.5% respondents were ready to purchase crop insurance in future if they would offer. 61.4% farmers want to know about the necessary components of the schemes under their crops would be insured. The mature respondents with the age of 55 and above were not so much educated and that’s why they were not so aware about crop insurance. It has been observed that with the increase in the education, awareness levels of farmers were also increasing. Education and awareness level were highly correlated. As well as education is the main factor, which affects awareness level but maturity level of respondents could not be ignored. The respondents who earned major income from non-agriculture sources, except the marginal farmers, all categories were not aware about the crop insurance. The farmers with the sources of major income (agriculture, livestock, non- agriculture), large farmers were highly aware than small and marginal farmers. The reason may be other sources of income, education and maturity level of respondents.

With the education, experience also matters a lot in increasing awareness. The age and experience increase, maturity also increases among the farmers. So, the mature and experienced farmers were more aware than young and less experience farmers. But with all these factors education also does matter. Education raises the awareness level of the farmers. Finally, it has been concluded that the success of the crop insurance schemes launched by the government lies in increasing awareness amongst farmers about these schemes. There is also an urgent need to educate the farmers about financial products to create awareness among them.

REFERENCES

1. Banerjee, D. and Bhattacharya, U. (2011). *Innovations in agricultural insurance in India: Retrospect and Prospect. Indian Journal of Agricultural Economics.* **66(3)**: 457-471.
2. Girdziute, L. (2012). *Risks in agriculture and opportunities of their integrated evaluation, Social and Behavioral Sciences.* **62**: 783-790.
3. Jayathilaka, D. P. D. M. and Abeynayake, R. (2013). *Assessing farmers' perception, awareness and influential factors to purchase a crop insurance tool for risk management, Proceedings of 12th Agricultural Research Symposium.* 394-398.
4. Anju Duhan, *Farmer's Perceptions Towards Crop Insurance, IMPACT: International Journal of Research in Applied, Natural and Social Sciences (IMPACT: IJRANSS), Volume 5, Issue 8, August 2017, pp. 1-6*
5. Karthik, T. T. and Ramalingam, L. P. (2013). *Farmers' awareness about crop insurance schemes: An analytical study. International Journal of Research in Commerce and Management.* **4(8)**: 66-72.
6. Kumar, V., Kumar, S. and Sharma, K. (2015). *Socio-economic and political implications of the Green Revolution in Haryana. International Journal of Enhanced Research in Educational Development.* **3(3)**: 17-24.
7. Rambukwella, R.N.K., Vidanapathirana, R.P., and Somarathne, T.G. (2007). *Evaluation of crop insurance scheme in Sri Lanka. Hector Kobbakaduwa Agrarian Research and Training Institute (HARTI), Colombo.*
8. Sinha, S. and Tripathi, N. K. (2014). *Assessment of crop insurance international practices, policies and technologies as risk mitigation tools in India and Thailand. International Journal of Advanced Research.* **2(9)**: 769-789.
9. S. Menaka et al., *A Comparative Study on the Performance of Modified National Agricultural Insurance Scheme with Reference to Loanee, Non- Loanee and Non-Insured Farmers in Sivagangai District of Tamil Nadu, International Journal of Agricultural Science and Research (IJASR), Volume 6, Issue 3, May-June 2016, pp. 137-146*
10. Sundar, I. J. and. Ramakrishnan, L. (2013). *A study on farmers' awareness, perception and willing to join and pay for crop insurance. International Journal of Business and Management Invention.* **2(1)**: 48-54.