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The Role of Educational Factors in Adopting Agricultural Insurance to Reduce Risks by Livestock Owners (Case Study: Golestan Province)

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ABSTRACT

This study was conducted to examine the role of educational factors in adopting agricultural insurance to manage risks in livestock production units in Golestan Province of Iran. A questionnaire was developed and data collected from 380 operators of livestock units. Based on the results of mean score, the highest mean number refers to attending the educational classes and the lowest mean number refers to radio programs. The results of pearson coefficient show that there was relationship between perception of respondents and educational factors and capacity of livestock units.

Keywords: Livestock, Agricultural Insurance, Risk, Golestan, Educational factor, Iran.

INTRODUCTION

The province of Golestan due to its geographical location, its close proximity to central Asian countries and farming lands is very suitable for production of light and heavy livestock. Amini and others indicated that investment in production of livestock could contribute in the development of agriculture sector [1].

However the development of this industry faces risks that are different from risks in agriculture sector. To control this risk, there is need to identify factors that influence the adoption of agriculture insurance and examine its role in risk management [2].

Bard and Barry elaborate on following steps that a manager in production unit should take to manage the risk; identification and assessment of the risks, providing alternatives in combating

the risks, selecting the best option. One of the factors that help managers to make decision is to provide reliable information and knowledge about agricultural insurance [3].

In order to manage the risks, the farm operators should be empowered. Agricultural extension can play an important role in the process of empowering farmers.

Mark and others in a research about economic risks in industrial livestock unit reported that risk management in cattle feeding is very important, because of price fluctuation for animal feeds [4]. JakindaOtieno et al in a project about livestock insurance in Kenya indicated that livestock owners were more interested about insurance, when they realized their advantage of insurance [5].

Amini and others in a research about factors influencing on adoption of insurance to control risk among livestock owners reported that 78 percent of risks caused by diseases. The results also show that there was relationship between number of livestock and tendency of unit managers to adopt the insurance [1].

Kiani Rad and Yazdani referred to several risks in livestock production which comprised of production, price, market, infrastructure and policy making risks [6].

The paper examines the perception of livestock production managers about educational factors which influence the adoption of insurance in Golestan Province of Iran. The findings would also highlight the strategies which promote the adoption of insurance to combat the risk among livestock ownersfor policymakers to support sustainable forest management

MATERIALS AND METHODS

The methodology used in this study involved a combination of descriptive and quantitative research and included the use of correlation and descriptive analysis as data processing methods. The total population for this study was 380 livestock unit managers in GolestanProvincee. Data were collected through interview schedules.

A series of in-depth interviews were conducted with some experts in the department of livestock in the Ministry of Agriculture and faculty members of Islamic Azad University, Science and Research Branch to examine the validity of questionnaire. A questionnaire was developed based on these interviews and relevant literature.

A pilot study was conducted with 30 unit managers who had not been interviewed before the earlier exercise of determining the reliability of the questionnaire for the study. Computed Cronbach's Alpha score was 80.0%, which indicated that the questionnaire was highly reliable.

Dependent variable in the study included the role of insurance in reducing risks among livestock owners. The independent variables in this research study were educational factors, age, working experience and capacity of production units. For measurement of correlation between the independent variables and the dependent variable correlation coefficients have been utilized and include Pearson test of independence.

RESULTS

The results of descriptive statistics indicated that the 356 respondents were male and 24 were females with average age of 44 years old and average of working experience were 16.92 years old. The average number of livestock per unit 21 and 240 respondents indicated that animal husbandry was their main occupation. The descriptive results also show that 376 livestock units were operating as traditional and only four were industrial.

In order to finding the perception of respondents about their attitudes about the impact of natural risks in their livestock units, they were asked to express their views. Table 1 displays the respondents' means about the three statements. As can be seen the highest mean number refers to weather stress (mean= 4.45) and lowest mean number refers to thunderstorm (mean=1.80).

Table 1: Means of respondents' views about impact of natural risks on livestock production (1=Very Little; 5=Very Much).

Statement	Mean and Standard Deviation	
	Mean	**SD**
Weather Stress	4.45	0.65
Drought	4.11	0.81
Flood	3.01	1.2
Thunderstorm	1.84	0.91

Table 2 shows the means of respondents' views about the impact of economic risks on livestock production. As can be seen from this table, the highest mean refers to lack of financial resources to reimburse the loans (mean=4.90) and the lowest mean number refers to inability to provide collateral to receive the loan (mean=4.67).

Table2: Means of respondents' views about impact of economic risks on livestock production (1=Very Little; 5=Very Much).

Statement	Mean and Standard Deviation	
	Mean	**SD**
Lack of financial resources to reimburse the loans	4.90	1.56
Lack of guaranteed price for livestock production	4.73	0.50
Price fluctuation	4.72	0.47
Inability to provide collateral to receive the loan	4.67	1.79

The respondents were asked to indicate their opinion about factors that reduce the risk in their activities. The role of insurance was found out as the most important factor that reduces the risk and accepting the risk by livestock managers was the least important factor.

Table 3 displays the mean of respondents' perception about the role of educational factors in reducing risks by livestock managers. The highest mean number refers to attending the educational classes (mean=4.51) and the lowest mean number refers to radio programs (mean=2.19).

Table3: Means of respondents' views about impact of educational factors on reducing risks (1=Very Little; 5=Very Much).

Statement	Mean and Standard Deviation	
	Mean	**SD**
Educational classes	4.51	1.48
Workshops	4.18	1.19
Knowledge and experience of other managers	4.10	0.97
Advisory service by veterinarian and experts	3.87	0.96
TV programs	3.53	1.02
Printed materials	2.79	2.16
Radio Programs	2.19	1.56

Pearson coefficient was employed for measurement of relationships between the perception of respondents about role of insurance in reducing risks and independent variable. Table 4 displays the results which show that there was relationship between perception of respondents and educational factors and capacity of livestock units.

Table 4: Correlation measures between dependent and independent variables

Independent variables	Dependent variable	Livestock managers	
		R	Sig.
Educational factors	Risk reduction	0.14	0.005**
Age	Risk reduction	0.01	0.87
Working Experience	Risk reduction	0.05	0.26
Capacity of livestock units	Risk reduction	0.10	0.04*

$^{**}p<0.01$, $^{*}p<0.05$.

DISCUSSION AND CONCLUSION

The perception of respondents about the educational factors which help to adopt insurance in order to reduce the risk by livestock owners was discussed in this article. The findings reflect that weather stress as the most important natural risk and lack of financial resources to receive loans as the most important economic risk.

The results of this study also show that educational factors, in particular, educational classes would have impact on reducing risks by livestock owners. However, the mass media have not been successful in helping production units to reduce risk and informing them about benefits of insurance.

Based on the results of the relationship between dependent and independent variable, respondents indicated that there was relationship between the educational factors and the role of insurance in reducing risk by livestock managers. The result is consistent with Mark et al that educational factors affect the adoption of insurance [4].

The results indicate that there was not relationship between working experience and role of insurance in reducing risk by livestock managers. Tavernier and Onyango indicate that working experience did not affect the adoption of insurance [7].

Successful adoption of livestock insurance will also depend on participation of stakeholders in process of formulating and developing policies which enhance the empowerment of livestock owners. In this regard, authorities should explore ways to increase participation of the beneficiaries in planning and implementing livestock insurance.

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