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## Risk Management Determinants among Small Scale Poultry Raisers in Simara Island Philippines

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### ABSTRACT

Poultry farming is known widely all over the country, especially since it is considered a source of income for Filipino farmers. This study was a descriptive method to assess the practices of poultry farmers in eliminating risks. The socio-demographic profile of the respondents comprises 50% male and 50% female, with a total of one hundred respondents (100) age ranges from 51-60 years old, and 70% of them were married. Household size has 4-7 members, source of income of respondents were in the poultry industry; 95% of respondents have an average income of P5000-10000 monthly. 47% of the respondents are elementary level (84%), they engaged in farming for five years and above, and 83% of the respondents raised native chicken as their source of income. The following risks are agreed by most respondents to be different in poultry management; environmental risk, production risk, health risk, market risk and financial risk. Determinants are; disease outbreaks, poultry facilities, veterinary care, supply of electricity and water, inadequate knowledge of poultry raising, and high feed prices. This has been confirmed by most of the respondents; management and strategic intervention will be used to manage small poultry flocks. Such measures consist of improving the value of chicken products, sustaining poultry health and sanitation, promoting outstanding coordination and communication between those involved in poultry care, maintaining personal savings, investing in superior feeds, and establishing biosecurity.

**Keywords:** Financial risk, Intervention, Poultry farmers, Simara Island, Products, and Strategies.

### INTRODUCTION:

Raising poultry offers an economic contribution to the province and the entire nation. In almost 80% of rural households, it helps diversify income and provides food of the highest quality, power, fertilizer, and renewable asset. As a valuable source of protein in the diet, it also generates significant income-generating activities for the poultry farmer through sales of birds and eggs (Falculan, 2021). The industry faced numerous obstacles despite its contribution to food security,

the reduction of poverty, and economic growth, such as competition between food and feed, reliance on the importation of exotic breeds, drought, a disease outbreak, costly inputs, inadequate chicks, an inadequate market, and other similar issues (Abigail *et al.*, 2021).

### Poultry Risk Factor: Review of Literature

According to the Food and Agricultural Organization FAO, (2006) the poultry industry faces several issues, including rising feed and feed ingredient prices, avian

influenza and other dangerous diseases, floods, subpar production, fluctuating output prices, the global financial crisis, insufficient credit, and low levels of production specialization. Due to their concern over bankruptcy, entrepreneurs are hesitant to launch. According to Adeyemo and Onikoyi, (2012) the enterprise experienced numerous periods of price volatility, which led to a decline in the growth of the poultry industry as a result of farmers leaving the industry and consumers forced to pay steadily rising food prices (including those for chickens and eggs). Risk management is crucial because of the danger that risk and uncertainties pose, which includes significant financial loss, psychological upheaval, total business failure, etc.

Risk management is detrimental because of the risk and uncertainties, increased financial loss, psychological concern, and includes business failure, etc. According to Legesse and Drake, (2005) risk is the effect of an unfavorable outcome that results from natural or human action. According to Kahan, (2013) risks in livestock farming were categories: as institutional (change in policy at the local, national, and international levels); financial risk (loan and its cost); and personal/human (accidents, illness, civil unrest, and death). Production risks in livestock farming include drought, heavy rainfall, diseases, and pests. Marketing risks include supply/cost of inputs, demand for a product/price, and cost of production. The selection of a risk management approach continues to be heavily influenced by appropriate risk perception.

The rationale is that knowledge of the many current risk factors a farmer faces becomes the highlight in risk management. Farmers must become informed about risk and develop risk management skills to recognize issues and lessen their effects. Identification of farmers' risk perceptions is crucial to farm risk management. The farmer is a great respondent to understanding the nature, scope, and implications of the risks relevant to their agricultural operation. Farmers are also in charge of the duty of assessing the risk management techniques that are accessible. The farmer has to make the right choices to control the risks involved in the agricultural business.

## **MATERIALS AND METHODS:**

### **Description of the study area**

The study used the descriptive research to gather information about the risk management and determinants of farm outputs among small-scale poultry farmers in the Municipality of Corcuera, Romblon. As stated by Aquino, (2003) seeks to describe a systematic situation or area of interest factually and accurately. It covers 100 respondents composed of small-scale poultry farmers and owners in the Municipality of Corcuera, Romblon.

### **Sampling procedure**

Non-probability sampling is a method of selecting parts of a population in a non-random (i.e., subjective) method. Non-probability sampling is a quick, simple, and affordable method of collecting data because it doesn't call for an entire survey frame. This method was utilized in the study.

### **Data Collection**

The survey questionnaire will be the instrument used in gathering the data needed.

### **Construction of the Questionnaire**

The questionnaire used in this study is the product of reading. Instruments are organized and shown to the researchers' adviser, who went over each item. A modification might be established and ensure that each item would yield the information needed. The revisions will be made and incorporated, handed over to the adviser. After going through the questionnaire, the researchers were advised to prepare copies for validation.

### **Validation of the Questionnaire**

Consultation was conducted by an adviser and experts in the field of agriculture were undertaken to ensure that no item was similar or duplicated. The instrument was verified by some thesis experts for comments, suggestions, and recommendations.

### **Administration of the Questionnaire**

The instrument was handed to the respondent by the researcher. Retrieval of the questionnaire was conducted personally by the researcher. Scoring of response in the questionnaire was scored based on the Likert scale, with five as the highest score and one as the lowest score. An equivalent verbal interpretation has been conducted and analyzed.

**Data Analysis**

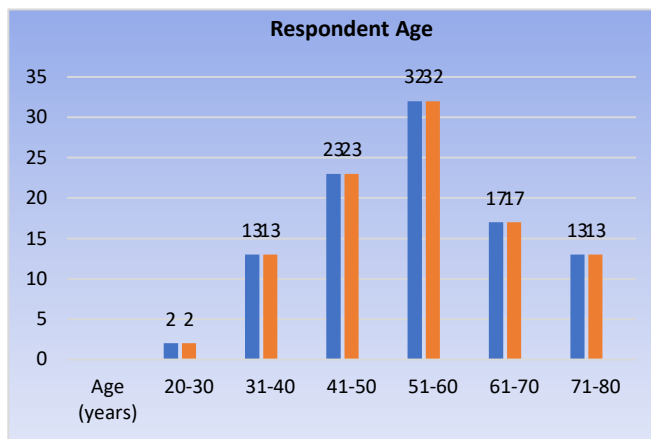
Quantitative data sets were analyzed using statistical analysis procedures of Statistical Package for Social Sciences (SPSS 2002).

**RESULTS AND DISCUSSION:**

**Respondents Socio-Demographic Profile**

**Age**

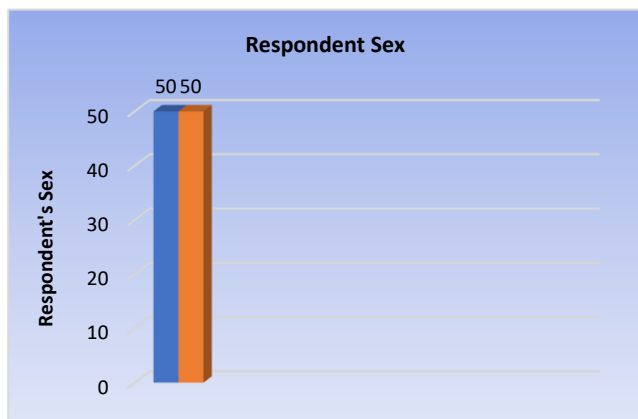
Poultry farmer means the age of the farmers was about 51years, which indicates that respondents were relatively in their middle age (Fig. 1).



**Fig. 1:** Age bracket of respondents.

**Respondent Sex**

The respondents requested to indicate their sexes on the questionnaire. A result of both males and females (about 50%) signifies that poultry farmers were not gender sensitive this resulted in both sexes engaged in poultry farming. A contradictory statement by Reyes, (2000) stated that married men/women experiencing some difficulties in their lives because of these difficulties tend to find some alternative to survive (Fig. 2).



**Fig. 2:** Respondents gender classification.

**Level of Education**

47 % respondents were elementary graduate on the level of education. Oladej, (2010) reported that maximum percentage of the poultry farmers (47%) had elementary school level education, followed by higher secondary level (28%) (Table 1).

**Table 1:** Educational level of respondents.

Educational Attainment	Freq	%
Elem Level	6	6
Elem Graduate	47	47
High School Level	15	15
High School Graduate	28	28
College Graduate	4	4
<b>Total</b>	<b>100</b>	<b>100</b>

**Household Size**

Majority (4-7 members) had the number on the family with fifty two percent (52%) which is considered as medium to large size family (Table 2).

**Table 2:** Respondents household size.

Household Size		
4 - below	42	42
4-7	52	52
8-11	6	6
<b>Total</b>	<b>100</b>	<b>100</b>

**Source of Income**

Majority of poultry farmer’s source of income (76%) was poultry farming; this was followed with other source coming from agriculture production (24%). This only shows that majority of poultry farmers (776%) adopted poultry farming as primary occupation. The finding of Babu, (2013) reported that native chicken farming was primary occupation (Table 3).

**Table 3:** Respondents source of income.

Source of Income		
Poultry Farming	76	76
Others	24	24
<b>Total</b>	<b>100</b>	<b>100</b>

**Monthly Income**

Respondent’s monthly income ranges from P5000-P10000 with a frequency of 95 and obtained a percentage of 95%. This indicate that most of the respondents have the monthly income of P5,000-P10,000 from poultry production (Table 4).

**Table 4:** Respondents monthly income.

Monthly Income		
5000 – 10000	95	95
11000 – 15000	4	4
16000 – 20000	1	1
<b>Total</b>	<b>100</b>	<b>100</b>

**Years of poultry farming**

In terms of years of poultry farming, 5 years above got 84 which is the highest frequency with a percentage of 85% while 3-4 years got the lowest frequency of 2 and a percentage of 2. This means that most of the respondents were having their poultry farming for 5 years and above in the municipality (**Table 5**).

**Table 5:** Respondents involvement in poultry raising.

Years involved in raising		
1 and below	5	5
1 To 2	9	9
3 To 4	2	2
5 and Above	84	84
<b>Total</b>	<b>100</b>	<b>100</b>

**Risk determinants**

Financial risks and loss of capital got a weighted of 3.98, inadequate management obtained a weighted mean of 3.91, and debt loans got a weighted mean of 3.89. This was supported by the study of Doward *et al.* (2007) that using debt to fund agribusiness investments, crop seasonality, and unlimited savings exposes a company or business to financial or liquidity risk. Movement in stock prices with a weighted mean of 3.74 to which the respondents agreed. High initial investment obtained the lowest weighted mean of 2.15, and the respondent responded neutrally. The overall average in the financial risks was 3.53 where, the respondents agreed. This implied that this risk should be acknowledged by the poultry owner or those planning to have this kind of business should consider their financial stability (**Table 6**).

**Table 6:** Financial risk experienced by respondents.

1. Financial Risk		
Loss of Capital	3.98	A
Inadequate Management	3.91	A
Movement in Stock Prices	3.74	A
High Initial Investment	2.15	N
Debt Loan	3.89	A
<b>Mean</b>	<b>3.53</b>	<b>A</b>

Risk in management (**Table 7**) small-scale poultry in terms of environmental; climate change obtained the highest weighted mean of 3.98, noise got a weighted mean of 3.96, poor quality water with a weighted of 3.94, and use patterns and chemical pollution both obtained a weighted mean of 3.93 in which the respondents agreed. These environmental risks gathered total average weighted mean of 3.95. According to Akinbile *et al.* (2013) which identified vaccination failures and lack of water & feed as the top three climate-related risks facing poultry farmers. The study also shows a positive correlation between farmers' risk perceptions of climate change and management strategies adopted.

**Table 7:** Environmental risks experienced by respondents.

2. Environmental Risk		
Poor Water Quality	3.94	A
Land Use Patterns	3.93	A
Noise	3.96	A
Chemical Pollution	3.93	A
Climate Change	3.98	A
<b>Mean</b>	<b>3.95</b>	<b>A</b>

Health risk management is considered as major factor in poultry industry. The respondents agreed on the following health risks like disease-causing microbes with a weighted of 3.97, lack of access to health care got 3.88 nutritional deficiencies and impacted crop 3.87, foodborne illness 3.85, and infectious diseases from the poultry obtained a weighted mean of 3.54. In terms of health risks, the total average weighted was 3.82 and the respondents agreed. This implied that this type of risk was encountered by the respondents and they were aware about the health of their poultry as well as its effects to the health of themselves and this was supported by the study of Attian (2005) indicated that the primary threats to poultry immunity, health, and production will continue such as consumer confidence, product quality and safety, product diversity, disease outbreaks, and relapses. In a similar way, one of the hazard management methods for small-scale poultry is production risk (**Table 8**).

**Ways how to manage/overcome risks**

Ways how the small-scale poultry farmers managed the risk when poultry diseases outbreak. As seen in the table, respondents strongly agreed in order to manage

well the poultry must be clean and disinfected which obtained a weighted mean of 4.30.

**Table 8:** Health, production and market risks experienced by respondents.

Health Risk		
Disease-Causing Microbes	3.97	A
Lack of Access to Health Care	3.88	A
Infectious Diseases from The Poultry	3.54	A
Foodborne Illness	3.85	A
Nutritional Deficiencies and Impacted Crop	3.87	A
<b>Mean</b>	<b>3.82</b>	<b>A</b>
Production Risk		
Outbreak of Disease	3.93	A
Poor Poultry Meat Quality	3.90	A
Drug and Vaccine Failure	3.85	A
Unpredictable Poultry Output	3.82	A
Heat Stress and Flooding	3.81	A
<b>Mean</b>	<b>3.86</b>	<b>A</b>
Market Risk		
Market Instability and Poor Sales	3.95	A
High Cost of Commercial Ration	3.88	A
High Fluctuations in Selling Prices	3.82	A
Non-Availability of Government Policies	3.59	A
High Diseases Incidences	3.41	A
<b>Mean</b>	<b>3.73</b>	<b>A</b>

Respondents agreed on the others ways on how to managed the poultry such as; increased bird resistance through immunization procedures got a weighted mean of 4.15, providing a nutritious diet and plenty of water which got a weighted of 4.00, separating multiage of poultry birds, proper sanitation and isolation of sick poultry which both obtained a weighted mean of 3.99. Another procedure in identifying and treating sick poultry got a weighted mean of 3.98, vaccination with a weighted mean of 3.97, medication got 3.85. Adeyonu, (2021) recommended that farmers should use financial planning and preventative measures to lessen the effects of various risks. Last but not least, the respondents agreed that they remembered the chicken meal item with a weighted mean of 3.60. The average weighted mean was 3.98, indicating that respondents generally agreed with the methods for managing poultry when an individual is at risk. This suggested that the respondents have strategies in place

for how to effectively handle risks when they presented themselves. The study by Effiong *et al.* (2014) came to this conclusion. According to the report, critical management techniques for poultry farmers include loosening pens and giving medications and immunizations on time (**Table 9**).

**Table 9:** Different ways to overcome risks.

Topics/variables	WM	DI
Vaccination	3.97	A
Identifying and Treating Sick Poultry	3.98	A
Separating Multiage of Poultry Birds	3.99	A
Proper Sanitation	3.99	A
Medication	3.85	A
Isolation of Sick Poultry	3.99	A
Providing a Nutritious Diet and Plenty of Water	4.00	A
Poultry Must Be Clean and Disinfected	4.30	SA
Increased Bird Resistance Through Immunization procedures	4.15	A
Recalling Chicken Food Items	3.60	A
<b>Mean</b>	<b>3.98</b>	<b>A</b>

**CONCLUSION AND RECOMMENDATIONS:**

Most respondents agreed on the different risk’s management in the Municipality of Corcuera, Romblon, such as environmental r, production, health, market, and financial risks. Some determinants were categorized as the outbreak of disease, poultry facilities, veterinary care, supply of electricity and water, inadequate knowledge of poultry husbandry, and high price of feed. Most of the respondents agreed that these interventions and strategies was done in managing the small-scale poultry properly in Corcuera, Romblon promote the quality of poultry products, maintaining poultry health and sanitation, having strong communication and coordination between all those involved in poultry.

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**CONFLICTS OF INTEREST:**

Author declares there is no potential interest of conflict.



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