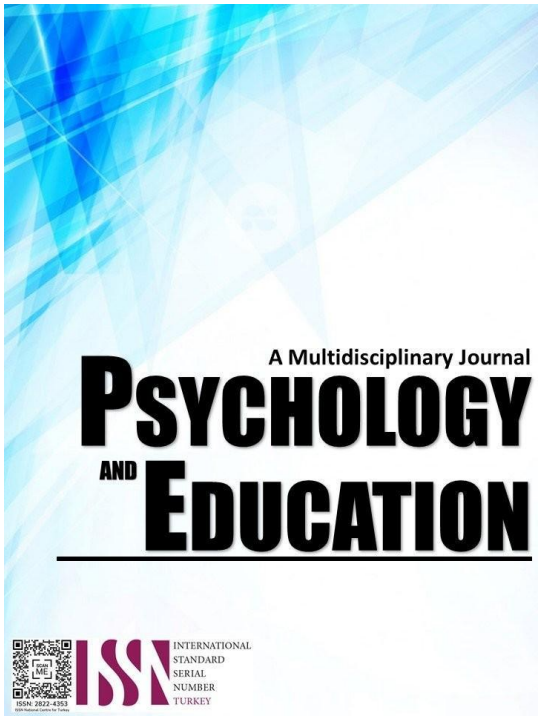
PRODUCTION PRACTICES AND MARKETABILITY OF CHICKEN LAYERS IN THE PROVINCE OF GUIMARAS



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Research Article

Production Practices and Marketability of Chicken Layers in the Province of Guimaras

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Abstract

This research determined the level of production practices and marketability of chicken layers in the province of Guimaras. It utilized the survey-correlational research design, and included 174 poultry workers in the province of Guimaras. This study was conducted during the second semester of the school year 2023-2024. Data were gathered through a researcher-made questionnaire validated by the experts. Data were analyzed and interpreted using SPSS Version 21 for Windows employing frequency, percentage, mean, T-test, ANOVA and Pearson's r. The findings revealed that the majority of the respondents were aged 31-40 years old, and the majority of them were males. Moreover, most of the respondents were high school level/graduate with 3 years and below of poultry farming experience earning 10,000 and below as their monthly income, rearing a backyard chicken layer and with 48 – 1000 heads of poultry scale. Generally, the level of production practices of chicken layer in the province of Guimaras was described as "often". The extent of marketability of chicken layer in the province of Guimaras was described "often". There was a significant difference in the level of production practices when grouped to poultry farming experience, monthly income, types of chicken layer farming and poultry scale while there was no variation on sex, age and educational background. There was a significant difference in the extent of marketability when grouped to age while there was no variation on sex, educational background, poultry farming experience, monthly income, types of chicken layer farming and poultry scale. There was a significant relationship between the level of production practices and extent of marketability of chicken layer in the province of Guimaras. Future research studies may be conducted to examine further production practices and marketability of chicken layers using wider scope of samples and inclusion of different or more variables.

Keywords: *production practices, marketability, chicken layers*

Introduction

Poultry farming has various contributions to the agricultural sector. Among which is the production of chicken layers which greatly contributes to the food security, income generation, and cultural considerations of resource-poor rural communities.

Moreover, animal husbandry plays a critical role for developing countries' socioeconomic position and poultry farming. The main reasons why rural communities with poor resources are keeping village hens include food security, extra income from cash production and religious cultural considerations. Small flocks of local free-range chickens are kept by the majority of households in developing countries, which are located in rural and peri-urban areas. However, most communities lack the poultry farming skills, training, and opportunities needed to effectively increase household chicken production (Mozi et al., 2013).

According to Kabir et al. (2015), Attia et al. (2022), and Ngongolo et al. (2019), chicken farming has made significant contributions to the provision of protein, the assurance of adequate food, employment opportunities, and salaries for populations with low resources.

According to Alders (2019) poultry farming significantly contributes to nourishment security whereas building up ladies as supporters to the socio-economic wealth of their families. Domestication of chickens through the introduction of new breeds is also attracting attention in rural and urban areas of Tanzania, particularly Dodoma.

Other studies have identified a number of issues such as markets, diseases, and predators that can limit chicken productivity. According to Ngongoro et al. (2019), some challenges in chicken production include predation, disease, and markets. Moreover, according to Ouma et al. (2023), parasitic infestation and maladies such as Newcastle malady, irresistible bursal malady, and coccidiosis are hindering the growth of Tanzania's poultry industry.

This study is underpinned by Robert Dorfman's (2023) production theory, which elucidates the principles governing a company's output and the utilization of resources such as labor, raw materials, and fixed capital. Additionally, the study draws upon the Dow Theory, developed by Charles Dow (1986), which delineates market trends into accumulation, public participation, and surplus phases. By applying Dow's Theory, researchers can analyze the role of poultry owners in marketability and understand the strategies and challenges they encounter at different market phases. Ultimately, the integration of production theory and Dow's theory of marketability provides a comprehensive framework for identifying effective practices in poultry farming and market engagement.

The goal of this study was to describe poultry farming for chicken layers in the province of Guimaras, as well as to generate empirical evidence about production practices and marketability. Furthermore, a correlational survey research design was used to highlight the problems and opportunities in Guimaras poultry farming, with a particular emphasis on economic and financial aspects.The pressing needs and demands of poultry product in the market of province of Guimaras served as the drive to the researcher, a poultry owner to further the study of production practices and marketability of chicken layer in the province of Guimaras.

Research Questions

The study aimed at determining the methods of production practices and marketability of chicken layers in the province of Guimaras. The following questions will be addressed by this research:

1. What is the level of production practices of the chicken layers in Guimaras as a whole and in terms of planning, control, and innovation?
2. What is the extent of marketability of chicken layers as a whole and in terms of price, quality, and customer needs?
3. Is there a significant difference in the level of the production practices of the respondents when grouped according to their sex, age, educational attainment, poultry farming experience, monthly income, types of layer chicken farming and poultry scale?
4. Is there a significant difference in the marketability when grouped according to factors such as sex, age, educational attainment, poultry farming experience, monthly income, types of layer chicken farming, and poultry scale?
5. Is there a significant relationship between production practices and the marketability of the chicken layers in the province of Guimaras.

Methodology

Research Design

This study employed a survey-correlational research design. Correlational research methodology utilizes written or oral surveys to quantify and analyze correlations between variables without the researcher altering or manipulating the variables (Madelaine, 2020). The co-relational research method serves two main purposes: elucidating linkages among elements and predicting anticipated outcomes (Oquendo, 2020).

The survey research design was used in investigating the level of production practices and the extent of marketability and socio-demographic profiles of the respondents. Also, it was used to investigate the differences in the respondent's production practices and marketability when grouped accordingly. In addition, the researcher utilized the correlation technique to determine the connection between the respondent's production techniques and marketability. The survey-correlational method was chosen for this study to assess production methods and marketability levels, as well as to identify variations and relationships between variables.

Respondents

The study included 174 out of 187 randomly selected poultry workers in the municipalities of Guimaras for the year 2023-2024. The total population of respondents was determined through the list provided by the Municipalities Agriculturist Office. The Slovin's formula was employed to determine the appropriate sample size, with a margin of error of 0.02. Proportional random sampling was utilized to determine the appropriate sample for each municipality, ensuring representation from all areas. Convenience sampling was used to select participants. A researcher-made questionnaire was utilized to gather data for the study.

Instrument

The questionnaire comprised three parts: socio-demographic characteristics, extent of production techniques, and extent of marketability. Each part contained items scored on a scale from 1 to 5, with corresponding qualitative descriptions. The questionnaire underwent validation by a panel of specialists and was pre-tested on 30 poultry workers. Validity and reliability were assessed through Cronbach's Alpha, with a reliability coefficient greater than or equal to 0.80 considered acceptable.

Data Analysis

The gathered data were organized and inputted into a main database. Statistical Package for Social Science Software (SPSS) was used for analysis. Statistical methods such as mean, frequency, percentage, t-test, ANOVA, and Pearson r were employed to evaluate and interpret the data.

Ethical Considerations

Permission was obtained from Municipal Mayors to administer the questionnaire. Participants were assured of the confidentiality of their responses. Participants were informed of the study's purpose, confidentiality, and their right to decline participation or request study findings. Their responses were treated with respect to ethical standards and the Data Privacy Act of 2012. Surveys were distributed and collected to ensure a high response rate.

Results and Discussion

Level of Production Practices of Chicken Layers In the province of Guimaras

Data reveal that the level of production practices in the Guimaras province as a whole had a grand mean of 3.99 with a verbal interpretation of "often" which means that the production practices in the Municipality of Guimaras province exceeded the expectations as presented in table 1.

Table 1. *Level of production practices as a whole*

Components	*Mean*	*Verbal Interpretation*
Planning	4.333	Often
Control	4.234	Often
Innovation	3.430	Sometimes
Grand Mean	3.990	Often

It implies that planning and control established high level of connection and involvement among the two (2) of them. It can be said that the poultry workers had a positive performance towards production practices in chicken farming. They were highly established in their preparations specifically in their planning phase and controlling measures in their production practices of poultry farming. Meanwhile, one (1) indicator with verbal interpretation of "sometimes" meaning that condition of the statement is simply manifested on occasion but in an inconsistent manner. It means that poultry workers in the province of Guimaras have received adequate training on innovative poultry farming production practices, and they are inconsistent in their efforts to improve production. Furthermore, innovation was the lowest of the three (3) indicators, implying that chicken poultry farming in the province lacked the current poultry innovations used by other countries, which are extremely beneficial for the production of chicken layers.

Extent of Marketability of Chicken Layers as a Whole

Table 2 reveals that the extent of marketability as a whole had a grand mean of 4.008 with verbal interpretation of "often" which means that the marketability of chicken layer in the municipalities of Guimaras province manifested to some extent and in a consistent manner.

Table 2. *Extent of marketability of chicken layer in the province Guimaras*

Components	*Mean*	*Verbal Interpretation*
Price	4.008	Often
Quality	4.076	Often
Customer's Needs	3.939	Often
Grand Mean	4.008	Often

When all the 174 respondents were taken as a whole, Table 2 discloses that the grand mean of 4.008 revealed that price had a mean score of 4.008, quality had a mean score of 4.076, and customer's needs had a mean score of 4.008, all of the three indicators verbally interpreted as "often". It implies that they established excellent level of connection and involvement among the three (3) of them. It conveys that the marketability of chicken layers in the Guimaras province is recommended to all consumers and buyers due to their high market value. Chicken layers were reasonably priced and of high quality. Farm workers were able to meet their customers' needs and also knew how to market their farm chickens.

The Philippine Statistics Authority (2021) reported a consistent rise in total chicken egg output in the Philippines. Chicken egg production was calculated at more than 600,000 metric tons, showing a 3.9% growth compared to the previous year.583.23 million metric tons.

David (2013), financing and marketing are central to success or failure in poultry farming. Taneja et al., (2013) found that economical breeding and timely marketing are important success factors in poultry farming. According to Ramappa (2015), efficient husbandry is the basis for success in layer and broiler chicken farming. To successfully raise chickens, using locally available feed processed into a balanced diet and raising chickens in a backyard system. According to Atkala et al., (2014), a key success factor in layer and broiler chicken farming is the reduction of feed waste.

Differences in the Level of Production Practices and Some Variables

The study examined the differences in the level of production practices of poultry workers in the province of Guimaras based on various socio-demographic variables. Table 3 presents the significant values and probabilities associated with these differences.

Table 3. *Differences in the Level of Production Practices of Poultry Workers in the Province of Guimaras and Some Variables*

Socio-demographic Profile	*t/F Value*	*Significant Value*	*Probability*
Sex	0.980	0.369	ns
Age	2.419	0.068	ns
Educational Attainment	0.474	0.623	ns
Poultry Farming Experience	14.529	0.000	s
Monthly Income	9.281	0.000	s
Types of Layer Chicken Farming	3.541	0.031	s
Poultry Scale	5.591	0.004	s

The analysis revealed significant differences in the level of production practices when respondents were grouped according to poultry farming experience, monthly income, types of layer chicken farming, and poultry scale. However, no significant differences were observed based on sex, age, and educational attainment.

There was no significant difference in the level of production practices between male and female respondents. Both genders exhibited similar production strategies for chicken layers, indicating that sex did not influence production techniques.

This finding is consistent with previous research, which suggests that chicken production is an economic activity that involves both males and females. Women, in particular, play a significant role in chicken farming, with studies showing their active participation and benefits from this activity. Therefore, the absence of sex differences in chicken layer rearing suggests that it is an inclusive activity accessible to both genders.

No significant difference in production practices was observed across different age groups. Regardless of age, respondents exhibited consistent production practices, indicating that age did not influence their approach to chicken farming.

This suggests that both younger and older respondents were equally engaged in adopting innovative farming practices, leading to consistent production practices across age groups. The findings imply that older respondents are equally motivated to improve their farming techniques, reflecting a commitment to adapting to innovative practices similar to younger counterparts.

There was no significant difference in production practices based on educational attainment. Respondents' level of education did not affect their production techniques, indicating that educational background had little influence on farming practices.

This implies that respondents, regardless of educational attainment, demonstrated consistent production practices. The findings suggest that practical experience and on-the-job training may play a more significant role in shaping production techniques than formal education in this context.

A significant difference in production practices was observed based on poultry farming experience. Respondents with varying levels of experience exhibited different production practices, with those with more experience demonstrating higher levels of production techniques.

This suggests that practical experience in poultry farming contributes to the development of advanced production practices. Experienced poultry workers may have gained insights and skills over time, enabling them to implement more efficient and effective farming techniques.

Significant differences in production practices were found based on monthly income. Respondents with higher incomes exhibited higher levels of production techniques compared to those with lower incomes.

This implies that financial resources play a role in shaping production practices, with higher income providing opportunities for investment in advanced farming techniques and resources. Lower-income respondents may face constraints that limit their ability to adopt innovative practices, leading to differences in production techniques.

Significant differences in production practices were observed across different types of layer chicken farming. Respondents engaged in backyard chicken layer farming exhibited different production practices compared to those involved in commercial or cage-free growing types.

This suggests that the specific requirements and constraints of each farming type influence production techniques. Different production methods may be tailored to the specific needs and conditions of each farming type, leading to variations in production practices.

A significant difference in production practices was found based on poultry scale. Respondents operating larger poultry scales demonstrated different production practices compared to those with smaller scales.

This implies that the scale of poultry operations influences production techniques, with larger-scale operations requiring more sophisticated and efficient farming practices. Differences in scale may affect resource allocation, management strategies, and overall production efficiency, leading to variations in production practices.

Differences in the Extent of Marketability of Chicken Layers and Some Variables

The analysis investigated the extent of marketability of respondents in the province of Guimaras based on various socio-demographic variables. Table 4 presents the significant values and probabilities associated with these differences.

The analysis revealed a significant difference in the extent of marketability of respondents when grouped according to age, while other socio-demographic variables such as sex, educational attainment, poultry farming experience, monthly income, types of layer chicken farming, and poultry scale were found to be insignificant.

There was no significant difference in the extent of marketability between male and female respondents. Regardless of gender, respondents' marketability of chicken layers remained consistent, indicating that sex did not influence marketability. This suggests that the market for chicken layers in Guimaras province is not affected by gender considerations. As long as customer needs are met, both male and female respondents can effectively participate in the market for chicken layers.

A significant difference in the extent of marketability was observed across different age groups. Respondents aged 31 to 40 exhibited a larger market for chicken layer products compared to other age groups.

Table 4. *Differences in the Level of Production Practices of Poultry Workers in the Province of Guimaras and Some Variables*

Socio-demographic Profile	*t/F Value*	*Significant Value*	*Probability*
Sex	0.695	0.519	ns
Age	4.473	0.005	s
Educational Attainment	2.698	0.070	ns
Poultry Farming Experience	1.901	0.131	ns
Monthly Income	0.574	0.633	ns
Types of Layer Chicken Farming	2.624	0.075	ns
Poultry Scale	2.333	0.100	ns

This implies that the preferences and demands of customers may vary across different age demographics. Younger respondents may represent a significant market segment for chicken layer products, while older respondents may be less effective in addressing customer needs due to factors such as physical limitations or evolving market trends.

Educational attainment did not significantly influence the extent of marketability. Regardless of educational background, respondents exhibited similar levels of marketability for chicken layers.

This suggests that marketability of chicken layers is not contingent upon the educational level of poultry workers. The marketability of chicken layers is primarily determined by factors such as product quality, pricing, and customer preferences, rather than educational qualifications.

Poultry farming experience did not significantly impact the extent of marketability. Respondents with varying levels of experience demonstrated similar levels of marketability for chicken layers.

This implies that previous poultry farming experience is not a prerequisite for effectively marketing chicken products. Success in the market is determined by factors such as product presentation, pricing strategies, and meeting customer preferences, rather than past experience in poultry farming.

Monthly income did not significantly affect the extent of marketability. Regardless of income level, respondents exhibited similar levels of marketability for chicken layers. This suggests that the marketability of chicken layers is not influenced by the financial resources of poultry workers. Market success is determined by factors such as product quality, pricing strategies, and customer preferences, rather than the income levels of poultry workers.

The type of layer chicken farming did not significantly impact the extent of marketability. Regardless of the farming type, respondents exhibited similar levels of marketability for chicken layers.

This implies that marketability is not contingent upon the specific type of chicken layer farming. As long as customer preferences for chicken layers are met, the farming method is not a significant factor in determining market success.

Poultry scale did not significantly influence the extent of marketability. Regardless of the scale of poultry operations, respondents exhibited similar levels of marketability for chicken layers.

This suggests that the size of poultry operations does not necessarily correlate with market success for chicken layers. Factors such as product quality, pricing strategies, and meeting customer preferences play a more significant role in determining marketability than the scale of poultry operations.

Relationship between the Level of Production Practices and Extent of Marketability in the Province of Guimaras

The study revealed that there was high relationship between the level of production practices and the marketability of chicken layers of the respondents with Pearson-r value equal to 0.358.

This relationship was significant because the p-value of 0.040 was less than 0.05 alpha. Therefore, the null hypothesis which states that there is no significant relationship between the level of respondents' production practices and the marketability of chicken layers in the province of Guimaras is rejected. This means that the respondents' production practices vary with marketability of chicken layers.

Table 5. *Relationship between the Production Practices and Marketability of Chicken Layers in the Province of Guimaras*

Variables	*N*	*Pearson- r value*	*p-value*	*Probability*
Level of Production Practices	174	0.358	0.040	significant
Extent of Marketability of Chicken Layers	174			

p-value < 0.05 = significant

The result implies that production practices of chicken layer in the province of Guimaras are significantly related to the marketability of chicken layer. This means that the higher the production practices of poultry workers in the province of Guimaras is, the higher the marketability of chicken layers in the market. This means that, poultry worker's production practices were related to the poultry worker's marketability. The best the production practices of poultry workers in their poultry farms, the higher the marketability of chicken layers. The finding demonstrates high connection between the level of production practices and marketability. The result revealed that when the poultry workers have innovate best production practices in terms of planning, control and innovation, it can reinforce chicken layer's marketability in terms of price, quality and customer's needs.

Conclusion

Based on the findings of the study, the following conclusions are:

Poultry workers in the province of Guimaras exceeded the expectations and demonstrated certain quality in a consistent manner, in their production practices.

Poultry workers in the province of Guimaras exceeded the expectations and demonstrated certain quality in a consistent manner, in their marketability.

The poultry farming experience, monthly income, types of layer chicken farming and poultry scale in the province of Guimaras creates a variation in their production practices.

The age of the poultry workers in the province of Guimaras creates variation in their marketability.

The production practices and marketability of chicken layer in the province of Guimaras are significantly related.

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