



## Profile of Broiler Chicken Farmers and Supporting Resources in Kepulauan Yapen Regency, Papua Province

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**Abstract.** Efforts to realize chicken meat consumption have not been achieved. Broiler chicken production in Kepulauan Yapen was about 7,379 and it was not comparable to the human population of 112,676 people. The per capita consumption of chicken meat in Kepulauan Yapen is still far from the national consumption of broiler chicken meat. The research uses descriptive methods with case study techniques. Data taken includes gender, age, education level, business scale, number of family members, farming experience, main job, and marketing channel. Data was obtained from farmers using questionnaires and from various related agencies of the Kepulauan Yapen. The collected data was analyzed using Minitab version 17 to obtain the average and percentage of each data obtained. Results of research showed that the majority of farmers who raise broiler chickens are male (81.82%), aged 15-65 years (100%), have a diploma or above education (45.5%), the scale of business is micro (100%), the number of family members involved in raising broiler chickens is 4 – 6 (54.5%), the farming experience is less than 10 years (100%), the main occupation is others such as trading, hunting (45.45%) and the marketing channel is from farmers directly to consumers.

**Keywords:** Broiler, Chicken, Farmer, Kepulauan Yapen, Profile

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### INTRODUCTION

Nationally, in recent years there has been an increase in the population and consumption of broiler chicken meat in Indonesia. The broiler chicken population increased from 2.91 billion in 2020 to 3.10 billion in 2021. The average consumption of broiler chicken meat in household groups reached 6.048 kilograms (kg) per capita per year in 2021, an increase of 8.62% compared to 2020. However, Indonesian people's consumption of chicken meat is still below the world average, about 15.10 kg per capita.

In Kepulauan Yapen, efforts to realize chicken meat consumption have not been achieved. Broiler chicken production in 2021 was about 7,379 (Dinas Pertanian dan Pangan Provinsi Papua, 2022). Dinas Ketahanan Pangan Kabupaten Kepulauan Yapen (2023) reported that data on the average weekly availability of chicken meat in January 2023 was only 68,918 kg, this

number is certainly not comparable to the population of Kepulauan Yapen of 112,676 people (BPS Kepulauan Yapen, 2023). Based on the data above, the per capita consumption result is 0.61. The per capita consumption of chicken meat in Kepulauan Yapen is still far from the national consumption of broiler chicken meat. Therefore, it is necessary to conduct a study of the livestock profile in Kepulauan Yapen regency to find out the root of the problem of low meat consumption.

## **LITERATURE**

Broiler chickens are a type of superior breed of chicken resulting from cross-breeding, selection, and engineering from chicken breeds that have high productivity, especially meat production (Tamaluddin, 2014; Mulyantini, 2014). The advantage of broiler chickens is a very high growth rate so that they can be marketed/harvested when the chickens are 4-5 weeks old. The proportion of meat produced is much higher and relatively tender because broilers are harvested when they are still young. With technological developments, broilers can even reach a weight of between 1.3 – 1.6 kg within 35 days.

According to Umiarti (2020), broiler maintenance management consists of preparing the cage, inserting the day-old chicken (DOC), setting the brooder temperature, providing rations and drinking water, regulating ventilation for recording, maintaining broiler health, broiler harvest management, environmental conservation, and function. Several factors supporting the increase in broiler chicken farming business in Indonesia related to policy are (1) economic and social factors, (2) supporting industry development factors, and (3) broiler meat consumer preferences (Murtidjo, 1987).

The main goal of the broiler chicken farming business is high production with the lowest possible input. According to Ashari et al. (2012); Pakage et al. (2020); Sunarno et al. (2021) production factors that simultaneously have a significant effect on production efficiency are animal feed, breeds (DOC), medicines, labor, and operational costs. Meanwhile, the production factors of animal feed, chicken breeds (DOC), and labor have a partially positive and significant effect on the production efficiency of broiler chicken farming businesses, both in partnership and independent patterns.

## **METHOD**

Data collection was carried out in the Kepulauan Yapen Regency, Angkaisera, Yawakukat, Anotauri, and Kosiwo Districts (map presented in Figure 1). The research uses descriptive methods with case study techniques, as a case is the profile of animal husbandry in

Kepulauan Yapen Regency. Data taken includes gender, age, education level, business scale, number of family members, farming experience, main job, and marketing channel. Data was obtained from farmers using questionnaires and from various related agencies such as the Central Statistics Agency of the Kepulauan Yapen and the Agriculture Service Office of the Kepulauan Yapen.

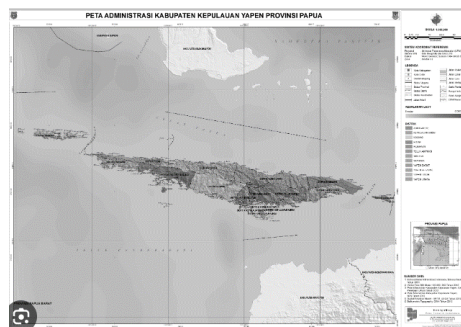
The research location was determined purposively based on the same inter-district livestock rearing system, namely broiler chicken rearing carried out in an open house system. The sampling technique is purposive sampling. The collected data was analyzed using Minitab version 17 to obtain the average and percentage of each data obtained.

## DISCUSSION

Kepulauan Yapen Regency, Serui as capital, is one of the regencies in Papua Province. The Kepulauan Yapen is a coastal area with an altitude of 3-10 m above sea level, except for the East Yapen district which is 500 meters above sea level, and Ampimoi Bay which is 50 meters above sea level. Astronomically, the Kepulauan Yapen are located at 134°56'21.708" and 137°4.2'20.592" East Longitude and -2°2.4'8.424" and -1°23.4'19.548" South Latitude. The area of Kepulauan Yapen is 2,432.49 km<sup>2</sup> and the waters are 4,713.16 km<sup>2</sup> or around 2.25% of the area of Papua Province.

### Climate and Weather Conditions

According to the Serui Meteorological and Geophysical Station Records, in 2020 the minimum air temperature in Kepulauan Yapen was 21.8<sup>0</sup> Celsius and the maximum air temperature was 33.8<sup>0</sup> Celsius with an average air humidity of between 80% to 84%. The average air pressure is between 1007 to 1009.3 mb. Meanwhile, the wind speed is between 2-3.1 knots. During 2020, the number of rainy days was between 11-21 days per month with the most rainy days in October to December. The highest rainfall was in December, namely 261.08 mm.



Sumber: <https://www.google.com/search?q=peta+kabupate+kepulauan+yapen>

**Population**

The population of Kepulauan Yapen in 2022 is 116,107. This number has increased from the previous year where in 2021 there were only 114,210 and in 2020 there were 112,676. The number of people according to gender in Kepulauan Yapen in 2020, 2021, and 2022 can be seen in Table 1.

**Table 1. The population of Kepulauan Yapen by Gender in 2020, 2021, and 2022**

Gender	Year		
	2020	2021	2022
Male	58,496	58,496	60,090
Female	54,180	54,180	56,017
Total	112,676	114,210	116,107

Source : BPS of Kepulauan Yapen regency 2023

In 2022 in Kepulauan Yapen 73,323 residents were active workers in economic activities (labor force). The Labor Force Participation Rate (LFPR) describes the number of the labor force for every 100 working-age population (15+). LFPR Kepulauan Yapen in 2022 was 68.36%, while the open unemployment rate in 2021 was 3.60%,

Based on the population, the number of people aged 0 – 14 years is 41,344, the number of people aged 16 - 65 is 69,142, and the number of people aged over 66 years is 5,259. The data shows that the productive age is much higher in Kepulauan Yapen.

**Transportation Access, Area Height, and Distance to Regency Capital**

Access from the Regency capital to the District capital as a place for conducting research can be accessed by road with paved roads, either by car or motorbike. The distance between several districts as a place for research to the capital of Kepulauan Yapen can be seen in Table 2,

**Table 2. Distance of several research site districts to the capital of Kepulauan Yapen**

District	Height (mapl)	Distance to District Capital
Angkaisera	55	6 mil
Yawakukat	10	4 mil
Anotaurei	3	1 mil
Kosiwo	5	8 mil

Source: BPS of Kepulauan Yapen regency 2023

### Type and Number of Livestock

The types and number of livestock in Kepulauan Yapen in 2022 can be seen in Table 3.

**Table 3. Number of Livestock by Type in Kepulauan Yapen**

Type of livestock	Total
Beef cattle	1,074
Goats	725
Pigs	5,426
Local chickens	56,442
Ducks	1,172
Broiler	30,000
Layer	5,000

Source: BPS of Kepulauan Yapen regency 2023

### Educational

There are some educational facilities in Kepulauan Yapen namely elementary school, junior high school, senior high school/vocation, and university. (Table 4).

**Table 4. Educational Facilities in Kepulauan Yapen in 2022**

Educational facilities	Total
Elementary school	104
Junior high school	30
Senior high school	13
Vocation	5
University	2

Source : BPS of Kepulauan Yapen regency 2023

### Characteristics of Broiler Chicken Farmers

Based on the study farmers who raise the broiler in Kepulauan Yapen have characteristics as presented in Table 5.

**Table 5. Characteristics of broiler farmers (N=11)**

Variables	Number of people	Percentage (%)
Gender		
• Male	9	81.82
• Female	2	18.18
Age (years)		
• < 15	0	0
• 15 – 65	11	100.0
• > 65	0	0

Education		
• Elementary school	1	9.1
• Junior high school	2	18.2
• Senior high school	3	27.3
• Diploma and above	5	45.5
Scale of business		
• Micro (<5,000 chickens)	11	100.0
• Small (>5,000 chickens)	0	0.0
Number of family members		
• 1 – 3	1	9.1
• 4 – 6	6	54.5
• 7 – 9	2	18.2
• 10 – 12	2	18.2
Farming experience (years)		
• <10	11	100.0
• 10 - 15	0	0
• >15	0	0
Main Jobs		
• Breeders	1	9.09
• Farmers	3	27.27
• Government employee	1	9.09
• Private sectors	1	9.09
• Others	5	45.45
Marketing Channel		
• Scheme I	0	0.00
• Scheme II	0	0.00
• Scheme III	11	100.00

Broiler chicken farmers in Kepulauan Yapen are dominated by males (81.82%). Business actors with different genders are related to the ability to carry out their business (Yuniartini, 2013). These findings were as results of Iyai and Randa (2011) who stated that gender plays a prominent role in small-scale pig keeping, men played more prominent roles as pig farmer managers than women (>50%). Another finding by Iyai and Saragih (2015) confirmed that males of Arfak tribes in a coastal area of Manokwari were more prominent in the pre-production and production process of raising pigs.

The farmer's age is one indicator of measuring a person's physical abilities. Someone younger tends to have stronger physical abilities than someone older. The farmer's age can influence productivity because it is closely related to workability and mindset in determining the form and management patterns applied in the business.

Table 5 shows that in general the age of broiler farmers in Kepulauan Yapen is in the productive age category, namely in the range of 15 to 64 years. It means that most of the farmers are of productive age, According to Otampi et al. (2017), the productive age is the age in the range of 15-64 years, while the non-productive age is the age of 65 years and above. Productive age is very important because mature age has an excellent impact on the development of capture power and mindset so that the knowledge obtained by farmers is improved (Prawira et al., 2015; Sumiati, 2011; Mekuriaw and Asmare, 2014). This condition allows them to easily accept technological innovations related to their work.

The level of education is expected to help the community in the efforts to increase the production of broilers. It has an impact on the management of the livestock business. Table 5 shows that the education level of farmers is very diverse and the majority (45,5%) of them are those who have attained a diploma or above. Luanmase et al. (2011) stated that the level of education reflects a person's ability to accept and cope with innovations. The higher the education level, the easier it will be for a person to receive new information related to the livestock business.

The business scale of broiler chicken in Kepulauan Yapen is all classified as micro scale with the number of farmers being 11 people (100%). The number of family members is one of the economic factors that must be considered in determining income to meet their needs (Sumbayak, 2006). The greater the number of family members, the greater the burden of life that a farmer must bear. In general, raising broiler chickens in Kepulauan Yapen uses labor from family members themselves, therefore more family members involved in raising broiler chickens will increase livestock production. Dewanti and Sihombing (2012); Tumion et al, (2017) stated that if the majority of the workforce used in business comes from outside the family, this will result in a decrease in profits.

Long-life business broiler chicken is the length of time a farmer has spent running a business. The longer the time a farmer has, the wiser the farmer will be in making decisions. A person will gain farming experience based on the length of time he has been involved in a livestock business. Breeding experience is an important factor a farmer must have in deciding all the policies that will be implemented in his business. Broiler chicken farmers in Kepulauan Yapen who have been in business for less than 10 years are 11 (100.0%). The results of this research are under research by Iyai et al. (2020) that farming experience of <10 years was found in farmers in the Fakfak district.

36.36% of the people of the Kepulauan Yapen work as breeders and farmers. According to Soeharsono et al. (2010), people living in rural areas mostly rely on off-farm income from agriculture supported by the livestock sub-sector. However, 54.54% of off-farm income in Kepulauan Yapen is from the private sector and others (traders, hunters, etc). Raising broiler chickens is only used as a side business for savings and sudden needs, such as to finance schools, health costs, building houses, and others, The results of this study follow Widi (2015) who stated that the livestock business is not a major business but a side business or family savings that can be cashed at any time, However, livestock farming greatly contributes to farmers' income in rural areas.

Marketing is an inseparable part of all business activities, as is the case with activities in the broiler farming business. The marketing channel for broiler chickens consists of several schemes. Scheme I consists of breeders, collectors, retailers, and consumers; Scheme II consists of breeders, retailers, and consumers; and Scheme III consists of farmers and consumers. Most of the marketing carried out by broiler farmers in Kepulauan Yapen is using scheme III, namely from farmers directly to consumers. This shows that broiler chicken breeders in Kepulauan Yapen are efficient in marketing their products as Nasir and Zubaidah (2022) stated that more efficient marketing channels are channels with a shorter marketing chain, a smaller marketing margin, and a larger farmer's share as well as a smaller marketing efficiency value.

## CONCLUSION

1. Kepulauan Yapen Regency, Serui as capital, is one of the regencies in Papua Province. The temperature is about 21.8<sup>0</sup>C to 33.8<sup>0</sup>C and the humidity is about 80% to 84%. The number of rainy days was between 11 to 21 days per month. The population is 116,107. From the Regency capital to the District capital can be accessed either by car or motorbike. There are some types of livestock such as beef cattle, goats, local chickens, pigs, ducks, broilers, and layers. There are some educational facilities in Kepulauan Yapen namely elementary school, junior high school, senior high school/vocation, and university.
2. In Kepulauan Yapen, the majority of farmers who raise broiler chickens are male (81.82%), aged 15-65 years (100%), have a diploma or above education (45.5%), scale of business is micro (100%), the number of family members involved in raising broiler chickens is 4 – 6 (54.5%), the farming experience is less than 10 years (100%), the main occupation is others such as trading, hunting (45.45%) and the marketing channel is from farmers directly to consumers.

### **Acknowledgments**

We thanked all people informants, and staff for collecting and sharing data including information. Statisticians from the University of Papua were grateful for consulting the statistical analysis. We also thanked all blind reviewers for improving this manuscript to be readable and understandable.

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