

Prospects for Development of Laying Chickens in Gunung Sari District, West Lombok Regency

Elita Maydasari
Universitas Nahdatul Watan

Article Info

Article history:

Received: 14 Oktober 2024

Publish: 1 November 2024

Keywords:

Prospects;

Risks and Laying

Hens.

Abstract

Based on the population of laying hens according to provinces in Indonesia, it shows that East Java surpasses the population of laying hens, followed by the provinces of Central Java and West Java, the island of Java surpasses the number of laying hen production because the demand for chicken eggs has increased because it is supported by the factor of the number of people who will consume eggs and processed products. eggs, therefore, West Nusa Tenggara also has prospects for developing egg-laying chicken production because it can be seen from the projected population and egg consumption which always increases every year. The risks faced by farmers are the large number of predators who prey on laying hens, chicken disease attacks, unpredictable weather due to changes in earth temperature causing many chickens to suddenly die, human resources who are less skilled in raising chickens, marketing risks, the market as a determinant of farmers' profits in producing eggs but uncertain market conditions make farmers experience losses, for example the arrival of competing eggs from outside the region such as Balinese and Javanese eggs which are larger in size with cheaper prices, making local eggs difficult in marketing and finally the financial factor, finance is an obstacle for farmers in promote livestock business.

*This is an open access article under the [Lisensi Creative Commons Atribusi-
BerbagiSerupa 4.0 Internasional](https://creativecommons.org/licenses/by-sa/4.0/)*



Corresponding Author:

Elita Maydasari

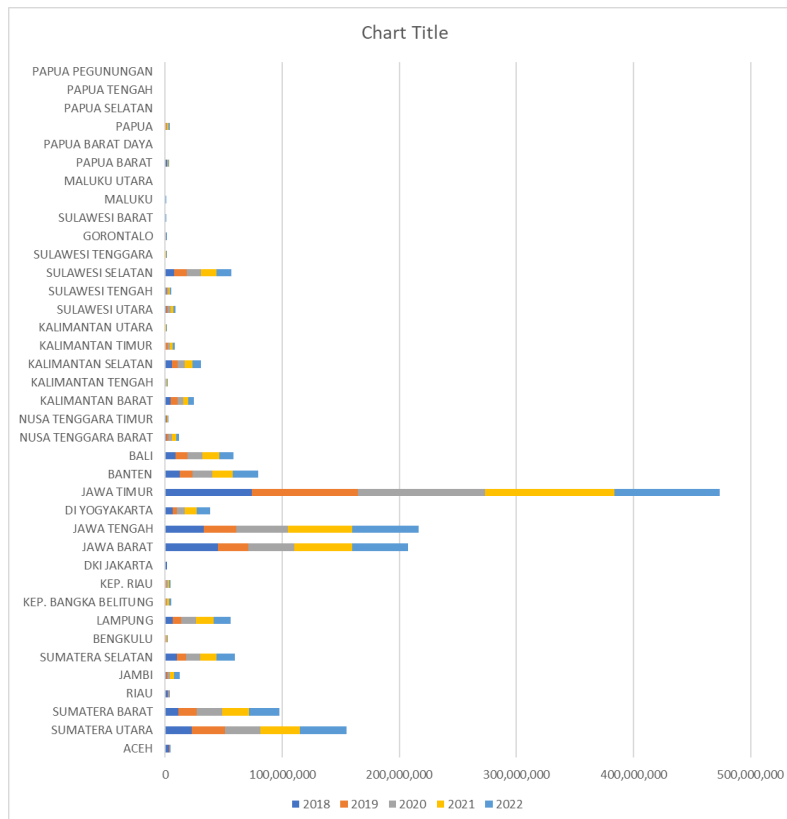
elita@gmail.com

Universitas Nahdatul Watan

1. INTRODUCTION

One of the most promising agricultural sub sectors in the future is the livestock sector, especially laying hens, which contribute to society both in terms of income, productivity and employment. In Indonesia, with the 4th largest population in the world 274,790,244 people in 2022 (Central Statistics Agency, 2022) With a large population requiring abundant and nutritious food sources to support the better quality of Indonesia's human resources, along with growing knowledge of the importance of animal sources of nutrition, the increasing level of consumption and processing of eggs means that the laying hen business has high prospects.

Graph 1. Population of Laying Chicken Breeds According to Provinces
in Indonesia.



Source: BPS. Director General of Animal Husbandry and Animal

No	Year	Purebred Chickens	Free-range Chicken	Duck
1	2014	1.12	0.44	0.94
2	2015	1.44	2.17	2.53
3	2016	1.48	2.65	2.58
4	2017	2.43	3.12	1.45
5	2018	4.02	3.09	1.64
6	2019	7.09	7.04	4.02
7	2020	7.26	3.97	2.83
8	2021	7.26	3.97	2.83
9	2022	7.95	0.46	0.87
Amo unt		40.05	26.91	19.69

Health, Ministry of Agriculture 2023.

Based on the production data above, it can be explained that West Nusa Tenggara is ranked 18th out of 38 provinces. This data shows that NTB has potential in the livestock sector, especially egg-laying chickens. To see the prospects for laying hens, the data above really determines market opportunities in the future, not only that, increasing consumption of eggs and processed eggs has an effect on production numbers.

Table 2. Egg Consumption (per kg/cap/year 2014-2022)
<https://data.ntbprov.go.id/dataset/konsumsi-telur>.

Based on the data above, it shows that purebred chicken eggs have the potential to be better than free-range and duck eggs, judging from consumption from 2020 to 2022, consumption of purebred chickens outperforms the other 2 types of livestock. People love purebred chicken eggs to meet their animal protein needs because the price of purebred

chicken eggs is very affordable for people from both low and upper middle economic backgrounds.

Gunung Sari sub-district is one of the sub-districts in West Lombok Regency, which is located on the border with North Lombok Regency. and Mataram city, Gunung Sari sub-district. Most of the population works in the agricultural sector, one of which is the agricultural subsector, namely poultry farming. The data showing the number of laying hen breeders in Gunung Sari is as follows:

Table 3. Number of Poultry Farms by Village in Gunungsari District in 2018

No	Village	Broiler Chickens	Laying Breed Chickens	Free-range Chicken	Duck
1	Sela Teak	32700	-	9419	525
2	slit	5450	200	12373	3690
3	Others	4905	3500	8976	736
4	Kekeri	4360	50	8772	413
5	Hoarder	15260	-	12023	590
6	Heal	20383	-	9355	1404
7	Dopang	1635	-	9569	715
8	Taman Sari	16350	-	11042	796
9	Gunung Sari	2725	-	16851	748
10	Kekait	13080	-	14217	904
11	Mekar Sari	-	-	19782	766
12	Thunder Tiger	24525	-	19782	331
13	Sliding	-	-	9674	448
14	Ranjok	-	-	6846	286
15	High Hill	-	-	17960	353
16	Syringe	6540	-	10332	297
Tot al	Gunung Sari	147913	3750	196973	13002

<https://lombokbaratkab.bps.go.id> Gunung Sari in Figures 2022

2. RESEARCH METHOD

The research method is a series of activities in seeking the truth of a research study which begins with a thought that forms a problem formulation to give rise to an initial hypothesis, with the help and perception of previous research, so that the research can be processed and analyzed which ultimately forms a conclusion. (Syafriada 2022).

In this research, the observation method was used, where the researcher went directly to see the condition of the egg-laying chicken coop and then used direct interview techniques with chicken owners and questionnaires as a method of collecting data from respondents. This research uses a combination approach of qualitative and quantitative research to be used together in a research activity, so as to obtain data that is comprehensive, valid, realistic and objective (Sugiyono, 2018).

This research was located in Gunung Sari sub-district, West Lombok Regency, this location was deliberately chosen because many local people have started laying chicken farming businesses. The population in this study were laying hen breeders and the research sample used Snowball Sampling. This method was carried out in stages from small

numbers to large numbers. For example, the sample is determined to be 10, but if the sample meets the research criteria, the researcher will add more samples and so on (Syafrida, 2022).

This research uses primary and secondary data, primary data is obtained from observations, interviews and questionnaires, while secondary data is obtained from agency data such as central statistical agencies and the internet. The analytical method used to find prospects is to use trend analysis and to determine the source of risk for laying hens using descriptive analysis.

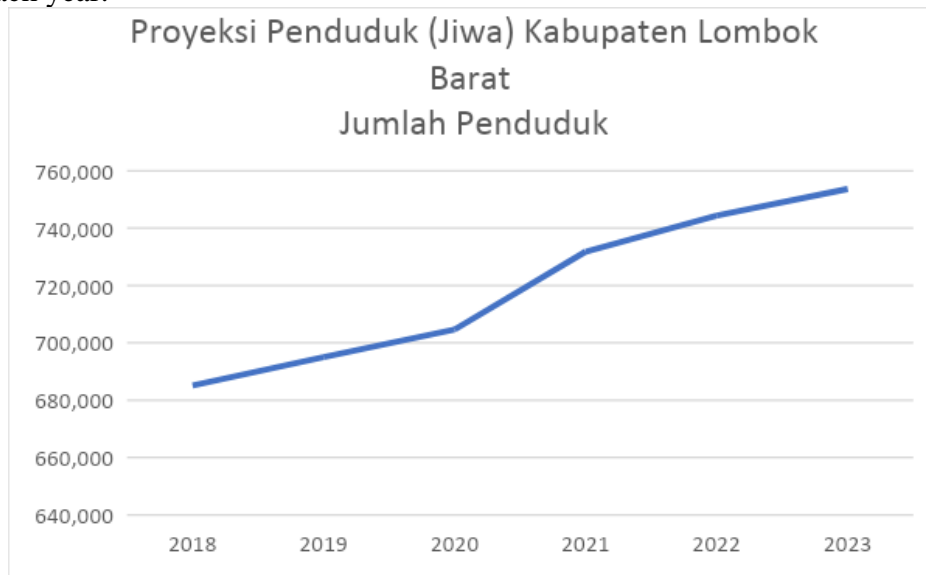
1. Trend analysis (position tendency) is an analysis technique to determine whether financial conditions tend to show upward or downward changes. In trend analysis, comparative analysis can be carried out using horizontal or dynamic analysis (Sri Wahanti Vol11 No2, September 2022, pp. 233-244). With the formula:

$$Y = a +$$

2. Descriptive analysis According to Sugiyono (2012), descriptive analysis techniques are one method in analyzing data with describe data that has been collected without drawing conclusions that apply to the general public.

3. RESULTS AND DISCUSSION

Graph 2. The population of West Lombok district from 2018-2023 shows a significant increase, where in 2018 it was 685,161 and in 2023 it was 753,641 residents. From the population projection data above, it influences the number of requests and consumption of eggs each year.



<https://lombokbaratkab.bps.go.id/indicator/12/87/1/proyeksi-penduduk.html>

Table 4. Data on Laying Chicken Farmers

No	Breeder Name	Age	Tail	Land Ownership	Number of Cages
1.	Rudi Nasri	37	1000	Rent	1
2.	Rian	35	1000	Rent	1
3.	Will	60	100	Mick Personal	1
4.	Khadijah	50	1000	Rent	1

5.	Your Ariska	30	1000	Rent	1
6.	Bind	45	600	Private property	1
7.	Degree	40	700	Rent	1
8.	Dani	30	900	Rent	1
9.	maaz	35	200	Private property	1
10.					

Source. Primary Data Processed 2024.

The minimum number of chickens cultivated by chicken farmers is 200 chickens and the maximum number is 1000 chickens, the stage drum type is 1.5 meters high and far from residential areas, transportation facilities and sources are still relatively good. Chicken drums in Gunung Sari sub-district use open, multi-tiered drums so that air circulation inside the drum can be well controlled. The costs incurred to make drums for laying hens average around Rp. 150,000,000 with the price of chicken seeds per head being 8,500/head.

Table 5. Total Fixed Costs for Production of Laying Chickens

Input	Cost
Drum making	IDR 100,000,000
Chicken seeds/1000 heads	IDR 85,000,000
Rent land	IDR 3,000,000
Amount	IDR 188,000,000

Data source: Primary Data Processed 2024

Table 6. Total Production Costs/Month for 1000 Chickens

Input/month	Cost
corn 1725 kg	10,350,000
bran 735 kg	2,600,000
Factory feed 24 sacks	12,357,500
top mix 20 packs	290,000
traf 1018 sheets	509,000
vaccine + stimulant	808,000
rope	49,000
Operational	285,000
laborer	10,000

employee salary	1,200,000
Amount	28,458,500

Data source: Primary Data Processed in May 2024

Table 7. Number of chicken egg production/month for 1000 chickens

Eggs/tra	Average price IDR
810 boys	46,000
	37.303.000

Data source: Processed Primary data 2024

1. Linear Trend Analysis

Analyzing population data is a method for finding out the population in the next 3 years, as a consideration for determining the number of eggs needed in the community. To find out the population forecast value for 2024-2026, you need to solve it as follows:

$$Y=a+bx$$

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
	B	Std. Error			
I (Constant)	667322.400	4813.524		138.635	.000
T	14788.457	1235.999	.986	11.965	.000

Dependent Variable: POPULATION

Table.8 Population Projection Data for West Lombok Regency

Projection of Population Data for West Lombok Regency	
Year	Total Population
2018	685.161
2019	694.985
2020	704.586
2021	731.810
2022	744.309
2023	753.641
2024	770.841
2025	785.630
2026	800.418

Source: Secondary Data Processed 2024.

Judging from table 8, the population projection for West Lombok Regency experiencing a growth rate of 16% per year shows that the population of West Lombok Regency has a trend or is increasing every year so that the need for food containing animal protein, especially eggs, is easily accessible and the price is still relatively cheap. Attraction in society, especially West Lombok. Therefore, the

amount of egg production must also be increased so that the community's need for eggs is met.

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	-.633	.685		-.924	.386
T	1.017	.122	.953	8.347	.000

a. Dependent Variable: Ayam Ras

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	1.987	1.495		1.329	.225
T	.201	.266	.275	.756	.475

b. Dependent Variable: Free-range Chicken

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.880	.794		2.368	.05
T	.062	.141	.163	.436	.67

c. Dependent Variable: Itik

Table. 9 Prospective data on consumption of eggs from purebred chickens, free range and ducks

No	Year	Purebred Chickens	Free-range Chicken	Duck
1	2014	1.12	0.44	0.94
2	2015	1.44	2.17	2.53
3	2016	1.48	2.65	2.58
4	2017	2.43	3.12	1.45
5	2018	4.02	3.09	1.64
6	2019	7.09	7.04	4.02
7	2020	7.26	3.97	2.83
8	2021	7.26	3.97	2.83
9	2022	7.95	0.46	0.87
10	2023	9.53	1.98	1.88
11	2024	10.55	1.98	1.88
12	2025	11.57	1,98	1.88
13	2026	12.58	2.00	1.88
Amount		84.28	32.87	27.21

Source: Secondary Data Processed 2024.

Judging from table 9, it can be explained that only laying hens have the prospect of annual consumption compared to free-range chicken eggs and duck eggs. This is because the availability of purebred chicken eggs is easy for the public to obtain compared to other chicken eggs. Apart from that, purebred chicken eggs can be processed into processed food in the form of cakes and side dishes and in all kinds

of processed foods, purebred eggs are a favorite choice for the people of West Lombok and West Nusa Tenggara.

2. Sources of risks faced by laying hen farmers

Risk is an uncertain event. When it occurs, it will have a positive or negative effect on one or more organizational goals. Risk is actually something that creates the opportunity for an event and all its unpleasant consequences. Risk is basically defined as a multidimensional concept about the possibility of dangerous events and uncertainties that affect organizational goals (Kheradmand, 2020).

The sources of risk faced by laying hen farmers in Gunung Sari sub-district, West Lombok district are as follows:

1. Production Risk

Operational risk is a risk of loss caused by internal processes not running, so production and operational risks are part of operational risk (andi hafidah). Production risks experienced by farmers

Sources from weather, disease, predators, cage conditions, cleanliness of food and drink places. From the results of research in the field, the sources of production risk faced by farmers are:

a. Illness

Diseases in laying hens are one of the sources of risk for breeders in egg production, usually the diseases they commonly face are cannibalism, bird flu and lime stool.

b. Weather

Changing weather conditions, especially currently cold weather conditions, affect the immune system of chickens, which causes high chicken death rates.

c. Predator

Predators are a threat to chicken farmers in Gunung Sari sub-district because the location of the drums is in a plantation area so there are many predatory animals that prey on chickens, such as snakes and civets.

d. Human Resources

Trained, honest human resources greatly influence the productivity of laying hens, moreover workers who are trained or experienced in caring for chickens, have the ability to face the risk of disease and can handle the weather well. According to interviews with respondents, the risks faced by the workforce are usually in terms of workers being less honest in obtaining production quantities, this is due to a lack of supervision from the drum owner.

2. Marketing Risks and Egg Prices

The market determines farmers' profits in producing eggs, but uncertain market conditions cause farmers to experience losses, for example the arrival of competing eggs from outside the region, such as Balinese and Javanese eggs, which are larger in size and cheaper in price, making local eggs difficult to market. Apart from the market price of chicken feed which experiences price fluctuations, the price of chicken feed ranges from 516,000-516,250/bag. The price of feed which experiences fluctuations affects the price of eggs in the market.

3. Financial Risk.

Capital is one of the obstacles in developing a laying chicken farming business, because laying hens require a large amount of capital, in this research I found that farmers experienced a lack of capital or money to replace outdated infrastructure in the drums such as chicken racks, heaters, etc.

4. CONCLUSION

1. The development of laying hens has good prospects in the future, seen from the population of West Lombok district which is experiencing an increase of 16 percent per year. This population growth has a big influence on the demand for food, especially animal protein in the form of eggs, which also increases every year. This is what makes it feasible for breeders to develop laying hens to increase the production of purebred eggs in the West Lombok area.
2. Risks cannot be separated from laying hen breeders. The risks commonly faced by breeders are instability in the price of chicken feed and egg prices in the community which are influenced by the arrival of eggs from outside the region. Apart from that, the risks faced by breeders are a lack of knowledge to deal with predators that eat chickens and a lack of capital resources for breeders to advance their egg-laying chicken farming business.

5. SUGGESTION

1. The suggestion from this research is that the government, especially the NTB provincial government, is firmer in stabilizing the price of chicken feed and the price of chicken eggs so that farmers do not experience losses. Apart from that, the government also makes it easier for farmers to apply for credit to develop their livestock businesses.
2. The community must also participate in improving livestock businesses and the welfare of breeders, especially local breeders, by buying local chicken eggs rather than buying eggs that come from outside the region, in addition to advancing the economy of local breeders. Local breed chicken eggs are fresher than eggs from outside the region.

6. BIBLIOGRAPHY

- BPS. 2023. Dirjen Peternakan dan Kesehatan Hewan Kementan.
Badan Pusat Statistik, 2022. Penduduk Indonesia.
Data Konsumsi Telur 2023. <https://data.ntbprov.go.id/dataset/konsumsi-telur>.
Gunung Sari Dalam Angka 2022 <https://lombokbaratkab.bps.go.id> Proyeksi
Penduduk, 2024.
<https://lombokbaratkab.bps.go.id/indicator/12/87/1/proyeksi-penduduk.html>
Sugiyono, 2012 Metodologi Penelitian kualitatif dan kuantitatif
Sri Wahyuti. 2021. Analisis Trend Pada Analisis Keuangan Pada Perusahaan.
Jurnal Ekonomika
Syafriada. Metodologi Penelitian. KBM Indonesia. 2022