Perception of laying hen breeders toward feed quality using local raw materials (case study in Sidenreng Rappang Regency)

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Abstract. The aim of the research was analyzed perception of laying hen breeders to the quality of feed using local raw materials. The research was conducted with a case study in Sidenreng Rappang District which represented central poultry of layer chicken in South Sulawesi. Data were analyzed by using a quantitative descriptive approach with a research variable description which have been specified. The results description of perception variable of every farmer will be obtained a quality factor picture of feed usage of feed by producing small-scale factory exist in District Sidenreng Rappang. The results indicated that the perception of farmers about the quality of available local standard feed materials according to the requirement of a farmers or get positive comments from layer farmers.

1. Introduction
Development of animal husbandry businesses by utilizing local resources that have comparative advantages so as to encourage the creation of more efficient and competitive animal husbandry businesses [1]. The breeding business of laying chickens is highly dependent on the availability of feed [2]. Feed plays the most important role, but in reality, the availability of feed is not accompanied by a feed price that is affordable for layer hens. Fluctuations in the price of feed raw materials force-feed producers or feed mills on a large scale to set varying prices, especially if the raw materials come from abroad.

Sidenreng Rappang Regency is the region development of layer farm agribusiness in South Sulawesi of various scale layer farm start from small scale, medium scale and large scale businesses with different characteristics. Along with the increasing population of layer in this region, there are also a number of small industries of feed mill with production quantities and prices were variation. Facing the problem of fluctuating feed prices so far, several breeders in the area are trying to reduce feed costs by producing feed made from local raw materials. The consequence is the possibility of differences in the quality of feed produced by large-scale feed mills. Based on the problem of differences in feed quality, the
The researcher aims to examine more deeply how farmers' perceptions of the quality of feed produced by small-scale factories that use local raw materials.

2. Method
This study examined how the farmers' perceptions of using layer hens were made from local raw material found in the area. The research was conducted using a survey method, namely research by taking a sample from a population and using a questionnaire as a primary data collection tool. Sidenreng Rappang Regency was chosen because it is a center for the production and development of laying breed chickens.

Sampling was done using a simple random sampling technique. Determination of the number of samples using the formula \((t-1)(r-1) \geq 15\) [3]. The total sample of layer breeders was 30 breeders. The research was designed using a quantitative descriptive approach by describing the research variables that have been determined. The results of describing the perception variable of each farmer illustrate the response received, especially from the feed quality factor of the use of feed produced by small-scale factories in Sidenreng Rappang regency. Data collection methods used were observation and direct interviews with respondents.

3. Results and discussion
The feed is the main source of nutrition for livestock. The main components of chicken feed are grains such as corn. Grains generally contain water, carbohydrates, protein including enzymes, fats, minerals, and vitamins. Other feed ingredients that are commonly used to compose rations are soybean meal, bone meal, bran, white polar, coconut meal, salt, vitamins, minerals, anthelmintics, growth promoters, and fish meal. The good feed contains nutrients that are by the needs of livestock, high palatability, appropriate additional feed, and is free from pathogenic microbial contamination [4].

Farmers understanding of the quality of feed is a consequence received by farmers when buying feed produced by feed factories made from local raw materials. The perceptions of laying breed chicken farmers regarding the quality of the feed made from local raw materials they use, the results are varied in terms of the variables studied in this case seen from the suitability of the feed with the production of eggs produced and the nutritional content of the feed. Measurement of the observation variable on the suitability of feed with egg production can be seen in table 1.

| Suitability of feed with egg production | Frequency (breeder) | Percentage (%) | Cumulative percent |
|----------------------------------------|---------------------|----------------|-------------------|
| Very Suitable                          | 6                   | 4.05           | 4.05              |
| Suitable                               | 89                  | 60.13          | 64.18             |
| Quite Appropriate                      | 44                  | 29.73          | 93.91             |
| Less Quite                             | 8                   | 5.41           | 99.32             |
| Not Quite                              | 1                   | 0.68           | 100.00            |
| Total                                  | 148                 | 100.00         |                   |

Table 1 indicated that most breeders gave responses regarding the feed currently used by the expected egg production results. Farmers who use small-scale factory-produced feed by the farmers' needs to produce eggs received positive responses.

The number of producing eggs does not fall apart from the quality of animal feed. Based on previous studies, there was no real difference between the price of food according to Indonesia National Standard and that of Indonesia national standard, but there was a real difference between the Hen Day Production (HDP) of eggs for layer farms that use a feed a small scale feed mill local row material [1].

Farmers must successfully manage various factors that have an impact on the development and growth of chickens to achieve productivity, especially the feed factor. The nutritional value of the feed required for laying hens to produce must be considered. Perceptions of the nutritional value of feed currently used by breeders to meet nutritional needs can be seen in table 2.
Table 2. Frequency distribution of feed nutritional value.

| Feed Nutritional Value | Frequency (breeder) | Percentage (%) | Cumulative percent |
|------------------------|---------------------|----------------|-------------------|
| Very complete          | 2                   | 1.35           | 1.35              |
| Complete               | 65                  | 37.16          | 38.51             |
| Quite complete         | 55                  | 44.59          | 83.10             |
| Less complete          | 25                  | 16.22          | 99.32             |
| Not complete           | 1                   | 0.68           | 100               |
| Total                  | 148                 | 100.00         |                   |

Table 2 showed that most of the respondents considered the feed nutrition produced by small-scale factories that farmers used to have a fairly complete nutritional value for feed, especially protein content, crude fiber, and metabolic energy. In general, breeders understand the importance of the nutritional value of feed for their livestock needs, but there were still many breeders who did not know the content of small-scale factory production that they used so far. Information on the nutritional value of laying hens' feed that was needed such as moisture content, crude protein, crude fiber, fat, ash, calcium, phosphorus, and metabolic energy. The nutritional content of the feed was very necessary for adjusting the needs of livestock. Information on feed content in laying hens was crude protein, crude fiber, and energy (metabolic energy). Information regarding calcium (Ca) and phosphorus (P) content was very useful as well as the amino acid content of protein feed ingredients (if possible), so it was necessary to carry out analysis in the laboratory. The results of the analysis of the nutritional content of feed have been widely reported. Differences in nutritional content can occur due to differences in production areas, whether there was adulteration, storage time and storage conditions, and the process in producing feed ingredients [5].

The farmer and assessed that using feed produced by small-scale factory feeds was able to meet the nutritional needs of their livestock, because laying hens need balanced nutrients and amino acids to produce. The company's ability to meet customer needs was strongly influenced by the level of quality provided by the company to customers which includes product quality, price, and on-time delivery. This was in line with the opinion which states that quality affects the company in four ways, namely: cost and market share, company reputation, product responsibility, and international implications. Improved quality can increase market share and save costs which ultimately affect profitability. The company's reputation follows the reputation for quality that it produces. The company has responsibility for all consequences of using goods. International implications in the technological era, quality needs to be considered from an operational and international perspective. Effective corporate competition in the global economy must meet the desired quality and price of the product [6].

The nutritional standards of chicken rations in Indonesia were still using the recommendations of [7, 8] light egg laying type with energy and protein amounting to 2,600–3,100 Kcal/kg and protein ration 18–24%, metabolic energy and protein 2,900 kcal/kg and 18% protein. The attributes considered most important by consumers in poultry feed products were; nutritional content of the feed (protein), ease of access as price, feed durability, and technical services. The high crude fiber content in feed could reduce ration consumption in poultry and caused impaired nutrient absorption [9].

Increasing the productivity of chickens gave hope to breeders to get an increase in income from selling eggs and a decrease in the level of losses due to the death of chickens because the chickens being raised were more resistant to disease as a result of the fulfillment of nutritional content. Improving the quality of feed and improving management determined business efficiency [10]. The portion of the provision of appropriate and efficient rations was expected to spur the optimal productivity of livestock by increasing the efficiency value of nutrient use by livestock. However, economic factors and feed quality did not affect farmer satisfaction. Meanwhile, social factors affected the satisfaction of breeders who use small-scale factory-produced feed made from local raw materials [11]. Several factors that affect customer satisfaction included product and service features, customer emotions, attributions of
product success or failure, perceptions of fairness, and fairness (equity and fairness), other customers, family, and colleagues [12].

4. Conclusion
Based on the results and discussion, it can be concluded that the farmers' perceptions of the quality of feed with local raw materials were positive.

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