Characteristics of duck farmers moving from Pinrang regency to Sidrap regency, Indonesia

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Abstract. This study aimed to determine the characteristics of duck farmers who move from Pinrang regency to Sidrap regency. This study was conducted from January to March 2017 in Pinrang regency and Sidrap regency, South Sulawesi, Indonesia. The study population was all the farmers who maintained post-harvest ducks, a totally 412 breeders. The population in this study was all duck farmers. The number of samples used in this study was 80 respondents. The data used is quantitative which the data in the form of numbers or figures related to the current study. The data was primary and secondary data, both of them were quantitative and qualitative. Data analysis was frequency distribution. The results showed that the characteristics of duck breeders moving from Pinrang to Sidrap, i.e. more men than women, productive age, the education level of respondents was elementary school or even uneducated, the general experience of farmers was 9–12 year.

1. Introduction
Duck farming was once at the start maintained in a semi-intensive manner, but with the problem of adjustments in feed expenditures and the availability of meals the community started out to shift to substantial or traditional maintenance. One of the major sources of substitute for duck feed is crop residues or residual grains scattered all through the rice harvesting process.

Feed constraints are one of the factors that motivate duck farmers trying to locate feed replacement. To meet duck feed, farmers do graze on the post-harvest paddy field, even though they have to move from their district. This technique is often called nomadic renovation.

Nomadic elevating of ducks is the protection of the ducks to carried out by transferring them to the areas that have agriculturally achievable by the post-harvest rice paddy. Nomadic is moving from one area to another. The businesses of animals rely on what nature presents [1].

The purpose of raising ducks nomadically is additionally explained by [2], which is to meet the consumption wishes of duck feed. By this way, the farmers think that their incomes were greater by getting free animal feed. The feeds are one of the concerns of contemporary maintenance. Around 70% of the whole cost, feed is the biggest price component in duck farming. Displacement is completed with the motive to meet the needs of livestock consumption. The maintenance of ducks in Pinrang is nevertheless accomplished traditionally. But there are additionally some farmers in the region who also preserve nomadic. Areas that are regularly the vacation spot of farm animal's movements are Sidrap and Polmas as nicely as countless different areas that have the potential for
lowland rice farming. The elimination of cattle is carried out with the aid of following post-harvest rice farming.

2. Materials and methods
This research was conducted from January 2017 to March 2017 in Pinrang regency and Sidrap regency, South Sulawesi, Indonesia. Locations have been chosen deliberately (purposive sampling) to consist of areas of a nomadic duck rising. Previously, all the farmers who maintained post-harvest duck are 412 breeders in Pinrang and Sidrap regency, respectively. The populace in the current study were all duck farmers. The number of samples was 80 respondents. Data used was quantitative records, which are statistics in the structure of numbers or figures. Facts used were primary data and secondary data, each quantitative and qualitative, respectively. The evaluation of statistics was frequency distribution.

3. Results and discussion
3.1. Characteristic of respondents
The characteristics of respondents in the maintenance of moving ducks included: gender, age, education, and experience [3–5].

3.1.1. Gender. Gender can affect the productivity of breeders’ work, with the physical differences between men and women will have an impact on the work done. Classification of respondents by gender in Pinrang is dominated by men as presented in table 1.

| No | Gender | Amount (Person) | Percentage (%) |
|----|--------|----------------|----------------|
| 1  | Men    | 51             | 63.75          |
| 2  | Women  | 29             | 36.25          |
| Total |       | 80             | 100.00         |

Table 1 showed that there were more men (63.75%) than women (36.25%) in raising ducks. In raising ducks, the farmers have a very high risk, especially at night. Sometimes their livestock is stolen. Therefore, raising ducks are mostly done by men with the highest percentage at 63.75. Concerning the age of livestock farmers moving ducks, the opinion of the [3] and [5] conscience of family involvement including husband and wife working together in the farm business.

3.1.2. Age. One of the factors influence a person in business is age. Classification of respondents by age was presented in table 2.

| No | Age   | Amount (Person) | Percentage (%) |
|----|-------|----------------|----------------|
| 1  | 28–32 | 19             | 23.75          |
| 2  | 33–37 | 14             | 17.50          |
| 3  | 38–42 | 17             | 21.25          |
| 4  | 43–47 | 14             | 17.50          |
| 5  | 48–52 | 12             | 15.00          |
| 6  | 53–56 | 4              | 5.00           |
| Total |       | 80             | 100.00         |
Table 2 showed that most of the duck farmers moving in aged 28–32 years were 19 people (23.75%). Only 4 people (5%) aged 53–56 is in the business of moving duck cattle small. However, all the duck farmers moving are still within the productive age limit, i.e. 15–64 years. This showed that existing duck breeders in Pinrang have the potential to develop duck businesses. One factor as a benchmark in accepting innovations is the productive age level. However, this is not following the reality that occurred in duck breeders. Duck farmers moving do not get special attention from the agency which resulting in the duck breeding system is still traditional in Pinrang.

3.1.3. Education. The greatly determines the success of the farmers in conducting their business is education, i.e. formal education by the respondents. Formal education does affect performance and thinking ability, such as skill technical to achieve optimal levels of production. The higher a person's education level, the higher his ability to achieve livestock technology. Grouping respondents by education level was presented in table 3.

| No | Education                           | Amount (Person) | Percentage (%) |
|----|------------------------------------|----------------|----------------|
| 1  | Not completed in elementary school | 16             | 20.00          |
| 2  | Elementary school                  | 37             | 46.25          |
| 3  | Middle school                      | 27             | 33.75          |
|    | Total                              | 80             | 100.00         |

Table 3 showed that most of the duck farmers moving had graduated from elementary school with 37 people (46.25%) and ungraduated with 16 people (20%), respectively. This shown that raising duck moving is one of the efforts could do by the farmers even though the average education is still limited. Limited education and ungraduated are not the factors cause the business to still traditionally.

The majority of duck farmers moving are still poorly educated because they still think that the livestock business does not need higher education even though education can support decision making. Education has an important role in influencing one's mindset, especially in terms of decision making and management regulators in managing a business.

3.1.4. Experience. Experience is measured by how long a duck farmer moves his business. Work experience is one of the important factors to support the livestock business. The longer a person does business, the more knowledge, and skills he got. The length of breeding is one of the factors that can determine the success of a business of raising laying ducks with a system of raising ducks on a moving basis. The longer the breeders carry out the system of raising ducklings, the more skill will be in done in the business. Breeding time is an important factor that must be owned by a breeder in increasing productivity and workability in laying duck rearing systems. The condition of the respondents based on the experience of breeding can be seen in table 4.

| No | Experience (years) | Amount (person) | Percentage (%) |
|----|--------------------|----------------|----------------|
| 1  | 5–8                | 16             | 20.00          |
| 2  | 9–12               | 21             | 26.25          |
| 3  | 13–16              | 20             | 25.00          |
| 4  | 17–20              | 13             | 16.25          |
| 5  | 21–25              | 10             | 12.50          |
|    | Total              | 80             | 100.00         |

Table 4 showed that the experience of duck farmers moved from 5 years to 25 years. Most of the breeders had 9–12 years and 13–16 years of experience, i.e. 21 people (26.5%) and 20 people (25%), respectively. The high experience of breeding showed that the maintenance of duck farmer moves has
a long time ago be done and the main business of farmers. Farmers who have long enough experience of breeding generally have more knowledge than breeders who have just made an effort to care for laying ducks for shifting maintenance systems. This is following the opinion [6], that the more experienced, the more lessons are obtained in that field.

3.2. Livestock ducks moving system

Maintenance of a duck moving system is also commonly known as nomadic. This is a system of maintenance for laying ducks by moving them from one place to another. The goal is to find a place that has a lot of grazing available feed in harvested paddy fields. Farmers will feed the livestock in paddy fields that have already been harvested and if the area enters the rice-planting season, the farmer will move the ducklings to another area.

Duck farmers in the nomadic maintenance system after purchasing the day-old duck (DOD), then create a cage made of nets which are located not far away from their home or which may be placed under the dome of the house. DOD is maintained by farmers until it is ready for grazing the ducks in paddy fields. The equipment used is a feeder and drinking place for DOD. At the age of 20–30 days, the laying duck begins grazing in the fields to meet its feeding needs.

For duck maintenance conducted in a paddy field a cage or umbaran (free range, in Bahasa) as a shelter is created. Umbaran functions as a non-permanent cage that can be moved at any time. Inside there are several basins used as drinking places for the laying duck. In the morning around 6 a.m., livestock farmers of duck expend umbaran for grazing so the livestock can search for their feed. In the afternoon around 5 p.m., livestock farmers of duck re-enter the umbaran. After the ducks are collected, farmers will be checking the number. Insufficient numbers of duck are caused by predators or ducks joined to another flock.

The duck egg collection is done on a time-release or while ducks are grazing. The eggs are collected using a bucket and then cleaned and stored in an egg crate. The eggs are collected and stored in a dangau occupied by farmers. When it is time to be sold, the farmers brought the duck eggs directly to the market. Dangau is a resting place for farmers who live far from their livestock. A dangau is equipped with cookware to meet the feeding needs for on-site maintenance. As for farmers who come from the area, they usually only come to the site during the morning and afternoon. In the morning the farmer takes ducklings out of the cage (umbaran) and in the afternoon, puts them back in.

4. Conclusion

The results showed that the characteristics of duck farmers moved from Pinrang Regency to Sidrap Regency, where most of the duck farmers were male; aged between 28–56 years (included in the productive age category); the level of education was still low, the highest was graduating from junior high, and some even did not complete primary school; experience of breeding ranged from 5–25 years, but mostly had 9–12 years’ experience. Breeders do the movement of ducks to meet the needs of duck feed from the remnants of rice scattered after harvest.

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