Consumer’s preferences for sheep attributes for Eid al-Adha celebration in Yogyakarta, Indonesia

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Abstract. Sheep play an important role for Indonesian people, especially during Eid al-Adha celebration. There are several criteria in the selection of sheep as sacrificial animals. This study was aimed to observe consumer’s preferences for sheep attributes for Eid al-Adha celebration based on information gathered from roadside sheep traders. This study was conducted by using an in-depth interview and preferences ranking to 36 roadside sheep traders in Yogyakarta, Indonesia. The data were analysed descriptively. The results showed that the preferences for sheep criteria were body characteristics, body weight, body posture, age breed and other desirable criteria such as symmetrical testes, medium tail, intact earlobe and healthy hooves. Body characteristics favoured by consumers were horns, large body size, black ring eye pattern, teeth incisions, dense and nice hair, and white colour pattern of the body, respectively. It is concluded that the preferences for sheep attribute most demanded by consumers for Eid al-Adha celebration in Yogyakarta are body characteristics, wherein horned sheep are frequently requested criteria. Sheep price for Eid al-Adha is determined by religious and cultural criteria.

1. Introduction
Indonesia is a country where small ruminants play an important role in community life and religious celebration [1–2]. The Muslim family that has a high standard of living will have sheep or goat slaughtered in the Eid al-Adha celebration [3]. Sheep are widely used by Muslims to perform the sacrificial services in this period [4]. Besides, the sheep are also used in the other tradition of celebration for welcoming a new baby into a Muslim family (aqiqah) and salvation events [2–3].

At the period of Eid al-Adha, the number of livestock slaughtered and sold are higher to 127% and 182% when compared to an ordinary day, respectively [5–6]. Livestock was widely used by the people of Yogyakarta to sacrifice is sheep, wherein 2018 the number of livestock slaughtered as many as 10,289 heads of sheep, more than 7,478 heads of cattle and 2,388 heads of the goat [7]. The selection of sacrificial animals is a big part of the preparation for religious celebration, and also part of the ritual itself. The decision was shaped by three factors, namely livestock, buyers, and sellers [8].

The high demand for sacrificial goats and sheep is a great business opportunity. Their characteristics are prescribed sacrificial livestock led to a clear choice among consumers or providers.
that know and understand the purchase or supply of livestock [9]. Eid al-Adha period, in addition to the animal market as the main venue provider of sacrificial livestock, also found many roadside livestock traders who open a stall in the roadside, especially in areas far from the animal market. Until now, no more studies that discuss roadside livestock traders’ preferences related traits of sheep that are provided for them to sell. This study was conducted to observe the consumer’s preferences for characteristics or attributes of sheep for Eid al-Adha celebration based on information gathered from roadside sheep traders.

2. Material and methods
This research was conducted in Yogyakarta City, Sleman Regency, and Bantul Regency. In-depth interview using preference ranking was conducted in two weeks before the Eid al-Adha celebration (5 to 23 August 2018) to 36 roadside sheep traders. Sampling was done by purposive sampling method. The data taken includes roadside sheep traders’ preference for the sheep’s criteria and body characteristics demanded by their consumers.

The qualitative data were analysed descriptively. Ranking was used to determine the level of consumers’ preferences for sheep attributes for Eid al-Adha celebration. Rank was calculated with the formula adapted from [10] with some modifications. The smallest score of rank meant the most important preference and the highest score of rank meant the least important preference.

3. Results and discussion
Two weeks before the Eid al-Adha celebration, come people sell small ruminants at the roadside. Not all of them are primarily traders, but many only sell livestock during the Eid al-Adha period. Roadside sheep traders buy merchandise from a farmer or animal market about four weeks before the Eid al-Adha marketing period starts [6–11]. The sex of sheep for sacrificial usually in males so they offered male sheep or ram for sale during the Eid al-Adha period. Sheep sold by the roadside sheep traders are offered at varying prices [11]. The more sheep criteria demanded by consumers, then it is likely the price of sheep with these criteria will also be higher. Some of the considerations are widely demanded by the consumers based on information gathered from roadside sheep traders presented in Table 1.

| Percentage (%) | Score | Rank |
|----------------|-------|------|
| Yes | No |  |   |   |   |   |   |   |
| Body characteristics | 86.11 | 13.89 | 0.40 | 1 |
| Bodyweight | 44.44 | 55.56 | 0.21 | 2 |
| Posture | 41.67 | 58.33 | 0.19 | 3 |
| Age | 16.67 | 83.33 | 0.08 | 4 |
| Breed | 13.89 | 86.11 | 0.06 | 5 |
| Others | 11.11 | 88.89 | 0.05 | 6 |

Body characteristics were the first rank criteria most requested by consumers, followed by body weight, body posture, age, breed, and other criteria of sheep. Other desirable criteria referred to in this study were symmetrical testes, medium tail, intact earlobe and healthy hooves. The reasons that motivate the trader to sell display their goods on the roadside were as follows: 1) They had more chance to sell the sheep at a higher price because there was no standard; 2) The price was based on preferred characteristics, two sheep with the same weight could have different prices depended on the favoured traits. [9] reported that during the Eid al-Adha period, the horned sheep sale value is higher than no-horned sheep through the same bodyweight is even higher. Results of a research [12] conducted in the Karnataka state of India shows that market demand and body conformation is a major factor for the estimated price of livestock.
The authors also thank Universitas Gadjah Mada, Indonesia, for the support and thank all respondents.

Table 2. Consumers’ preferences for sheep body characteristics requested for Eid al-Adha celebration

|                          | Percentage (%) | Score | Rank |
|--------------------------|----------------|-------|------|
|                          | Yes            | No    |      |
| Horns                    | 69.44          | 30.56 | 0.31 | 1   |
| Large body size          | 63.89          | 36.11 | 0.28 | 2   |
| The black eye ring pattern | 41.67          | 58.33 | 0.19 | 3   |
| Incisors have changed    | 22.22          | 77.78 | 0.10 | 4   |
| Dense and nice hair      | 19.44          | 80.56 | 0.09 | 5   |
| White body-color         | 8.33           | 91.67 | 0.04 | 6   |

Roadside livestock traders in supplying sheep for sale were based on consumer’s demand as described above. The sheep characteristics were much in demand or chosen by the consumer according to the roadside sheep traders are presented in Table 2. It is seen that horned sheep was a favourable characteristic requested by consumers. It was influenced by the culture of the people in Yogyakarta that still maintain the tradition as well as some of the characteristics of livestock that have been mentioned in the Quran. Sheep with big size or weight was also much in demand. Urban community consumers usually only oriented to body size and weight, since they only concerned to the amount of meat produced. Somewhat different from the reports [9] in a study conducted in one of the suppliers and providers of goat and sheep sacrifices in West Java, Indonesia that consumers will consider the weight of the body (posture) and the price in advance than other characteristics, while individual consumers purchase livestock based on the budget that has been prepared.

Sheep with black eye-ring was often requested (third rank) by consumers, and this refers to the Java Thin-Tailed sheep breed. However, due to the limited supply of this breed, resulting the demand for sheep with a black eye-ring was less. Traders took an effort to groom the sheep and displayed the nice-looking sheep in the front to be easily visible. Another demand was, the sheep with white body colour. Consumers preferred white sheep with black foots, regardless the breed and body conformation. This result differs from the study by [13] that sheep breeds are the most important attribute that affects livestock traders’ determining the price of sheep. However, in contrast with the results of this study, where consumers were not much concerned with the breed of the sheep, yet the characteristics presented by the traders referred to particular breeds.

People have several motivation when select sacrificial animals for Eid Al-Adha, i.e. financial opportunity, dealing between sellers and buyers and religious pre-requisite, followed by cultural preferences [8]. The results of this study indicated that livestock price was determined by religious and cultural criteria. Targeting special consumer groups such as Muslims and seasons may be a viable part for improved farm income in the small ruminant sector [14]. Livestock demand tied to religious and cultures results in seasonal demand which may vary from one year to the next. It also results in distinct preferences for certain product characteristics. Farmers may want to consider this period because of their plan to the breeding season and marketing schedule [15–11]. For farmers to get better benefit from the higher prices during Eid al-Adha period, they have to plan their production and supply to match with the fluctuating but predictable partners (consumers) of demand [16].

4. Conclusion

It is concluded that the preferences for sheep attributes most demanded by consumers for Eid al-Adha celebration in Yogyakarta are body characteristics, wherein horned sheep are frequently requested criteria. Sheep price for Eid al-Adha is determined by religious and cultural criteria.

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