Preferences of Beef Cattle Breeders in Indonesia

Josua Sahala[1], Yusuf Leonard Henuk[2]*
[1]Faculty of Agriculture, Science, and Health. University of Timor
[2]Faculty of Agriculture, University of Nusa Lontar
Email: profesorhenuk@gmail.com

Abstrak

Penelitian ini bertujuan untuk mengetahui preferensi peternak terhadap jenis sapi potong di peternakan rakyat di Indonesia. Penelitian ini dilakukan di tiga kecamatan di Kabupaten Karanganyar, Provinsi Jawa Tengah, Indonesia. Metode penentuan lokasi penelitian menggunakan metode Location Quation (LQ). Materi yang digunakan adalah peternak sapi potong di lokasi penelitian terpilih. Dipilih tiga besar nilai LQ tertinggi yaitu Kecamatan Jenawi, Jatiyoso dan Mojogedang yang kemudian diambil dari dua desa dengan dua besar populasi sapi potong terbanyak. Peternak sapi potong sebagai responden dengan jumlah 80 orang dan penggunaan kuesioner agar memberikan informasi yang akurat. Metode yang digunakan adalah survei dengan pengamatan langsung di lapangan. Pengambilan sampel peternak dilakukan dengan metode purposive yaitu peternak yang memiliki minimal 2 ekor sapi dan telah memiliki pengalaman beternak lebih dari 1 tahun dipilih. Hasil penelitian menunjukkan bahwa umur peternak meliputi usia produktif 18-55 tahun (56,25%), Jumlah Anggota Keluarga berkisar 1-5 orang (93,75%), Pendidikan sebagian besar Sekolah Dasar (62,5%), Pekerjaan sebagai peternak (68,75%) dan Pengalaman Ternak sebagian besar di atas 15 tahun (90%). Preferensi peternak terhadap bangsa sapi potong meliputi sapi Simmental (52,5%), jenis kelamin sapi jantan (56,25%), umur sapi 1,5-3 tahun (52,5%), warna kulit putih keabu-abuan (48,75%) dan bobot badan besar berkisar di atas 400 kg (51,25%). Simpulan, preferensi peternak dapat memelihara sapi potongnya sebagai penggemukan dan pembibitan.

Kata kunci: Petani, Preferensi petani, Sapi potong, Jawa Tengah, Indonesia

Abstract

This study aims to determine the preferences of livestock breeders towards beef cattle breeds in community farms in Indonesia. This study was conducted in three districts in the Karanganyar Regency, Central Java Province, Indonesia. The method for determining the location of the study used the Location Quotient (LQ) method. The material used was beef cattle breeders at the selected research location. The top three highest LQ values were selected, namely the district of Jenawi, Jatiyoso and Mojogedang, which were then taken from two villages with the top two largest beef cattle populations. The beef cattle farmers as respondents with a total of 80 people and the use of questionnaires to provide accurate information. The method used was a survey with direct observation in the field. Sampling of farmers was carried out using the purposive method, namely farmers who had at least 2 cows and had more than 1 year of livestock farming experience were selected. The results of the study showed that the age of farmers included productive 18-55 years (56.25%), Number of Family Members ranged from 1-5 people (93.75%), Education was mostly in Elementary School (62.5%), Work as farmer (68.75%) and Livestock Experience was mostly above 15 years (90%). The preference of farmers for beef cattle breeds includes Simmental cattle (52.5%), male cattle gender (56.25%), cattle age 1.5-3 years (52.5%), grayish white skin color (48.75%) and large body weight ranging above 400 kg (51.25%). In conclusion, the preferences of farmers can raise their beef cattle as fattening and breeding.

Keywords: *Farmers, Farmer preferences, Beef cattle, Central Java, Indonesia*

INTRODUCTION

Beef cattle are the main source of meat production to meet the community's demand for protein source from meat in all over the world, including Indonesia. The types of breeds of beef cattle currently available on people's farms are very diverse, so the handling of beef cattle is also different. Farmers who are used to raising cattle with good management will be able to cultivate beef cattle optimally (Alif, 2017). Many studies have reported that farmer characteristics that can be reviewed are age, number of family members, education, occupation and farming experience. Another important thing that is the key to success in the beef cattle business is the breeder's preference for the breed of cattle, gender of the cattle, age of the cattle, skin colour and body weight of the cattle to be kept (Romjali, 2018). Therefore, this research aims to provide information regarding breeders' preferences for beef cattle breeds so that it can provide information for other breeders in increasing the production of beef cattle businesses in Karanganyer Regency, the Province of Central Java in Indonesia.

METHODS

This research was carried out in three sub-districts, Karanganyar Regency, Central Java Province, Indonesia. The method for determining research locations uses the Location Quotient (LQ) method to analyze the condition of an area, whether the area is a base or non-base sector. Beef cattle breeders as respondents with a total of 80 people and a questionnaire was used to provide accurate information. The characteristics of breeders that are variables in this research are age, number of family members, education, occupation, and farming experience. The preferences of beef cattle breeders include the type of beef cattle, gender of the cattle, age of the cattle, skin colour and body weight. Data collection was carried out by interview using a questionnaire. The data obtained was analyzed descriptively (Sahala et al., 2016).

RESULTS AND DISCUSSION

The main results of this study are presented in Table 1 and 2.

Table 1. Characteristic of Cattle Farmers in Karanganyar Regency, Province of Central Java, Indonesia

Characteristic	Total	Percentage (%)
Age (year)		
18-55	45	56,25
>55	35	43,75
Total	80	100

Characteristic	Total	Percentage (%)
Total Family Member		
1-5	75	93,75
5-10	5	6,25
>10	0	0
Total	80	100
Level of Education		
No Formal Education	1	1,25
Primary School	50	62,5
Junior High School	16	20
Senior High School	11	13,75
University	2	2,5
Total	80	100
Jobs		
Cattle Farmers	55	68,75
Non-Cattle Farmers	25	31,25
Total	80	100
Experiences of keeping cattle		
<5	1	1,25
6-15	7	8,75
>15 Years	72	90
Total	80	100

Age of Cattle Breeders

The results of the research show that the average age of beef cattle breeders in Karanganyar Regency, Central Java Province is 18-55 years (56.25%) and above 55 years (43.75%). This shows that there are 45 breeders of beef cattle breeders in Karanganyar Regency, Central Java Province, Indonesia, while there are 35 breeders who are not productive over 55 years of age. This shows that the breeder's physical abilities and mindset are still capable of carrying out cattle rearing activities starting from searching for forage, giving feed and water to the cattle and cleaning the pen. This is in line with the statement from Kusumastuti *et al.* (2023) that productive age can support innovation and development of cattle farming businesses.

Number of Family Members

The results of the research show that the number of family members owned by breeders is at most around 1-5 people (93.75%) with 75 breeders, the rest ranges from 5-10 people (6.25%) with 5 breeders and there are no family members of the breeders. whose number is above 10 people (Table 1). Almost all breeders have family members ranging from 1-5 people who will have an influence on the workforce for raising beef cattle. This is in accordance with the statement from Aditya *et al.* (2022) that families that have a large number of family members are due to having many children, in this case children who have

reached productive age have the ability to work in other sectors which contributes to the welfare of the family and also has an impact. to the number of cattle kept.

Education of Cattle Breeders

The results of the research show that the highest level of education among livestock breeders is elementary school (62.5%), while the education levels of breeders who have no school, junior high school, high school and college are 1.25%, 20%, 13.75% respectively. and 2.5%. A low level of farmer education will result in less than optimal business management. Farmers with low education will find it difficult to adapt to technological advances in maintenance systems and feed technology management. This in accordance with Makatita (2021), who reported that the higher the education obtained by breeders, the higher the attitude of breeders in using zootechnical sapta business in raising livestock.

Work of Cattle Breeders

The results of the research show that on average 55 breeders work as farmers (68.75%), and the remainder work other than farmers, namely civil servants, private sector, self-employed, traders and laborers (31.25%) with 25 breeders. According Dewi and Wahyuningsih (2023), work in the livestock sector requires good physical strength, mental abilities and adequate skills when compared to formal educational abilities.

Breeding Experience

The results of the research show that the majority of breeders have farming experience of more than 15 years (90%) as many as 72 breeders, the remainder have experience ranging from 6-15 years (8.75%) as many as 7 breeders, under 5 years (1.25%) as many 1 person (Table 1). Breeding experience will have a significant influence on the beef cattle business that is run, starting from the type of good feed, health care for cows and occasional cleanliness. According to Sahala *et al.* (2016), farming experience is closely related to decision making in the production process.

Table 2. Preferences of Cattle Farmer on Cattle in Karanganyar Regency, Province of Central Java, Indonesia

Description	Total Cattle Farmers	Percentage (%)
Type of cattle		
PO	31	38,75
Simmental	42	52,5
Limousin	3	3,75
Bali	0	0
Simpo	4	5
Total	80	100

Description	Total Cattle Farmers	Percentage (%)
Sex of Cattle		
Male	45	56,25
Female	35	43,75
Total	80	100
Age of Cattle (year)		
< 1,5	38	47,5
1,5–3	42	52,5
>3	0	0
Total	80	100
Skin Color		
Grayish White	39	48,75
Golden Brownish Yellow	37	46,25
Golden red	4	5
Black	0	0
Total	80	100
Body Weight (kg) Small		
Small (<250kg)	15	18,75
Medium (250-400kg)	24	30
Large (>400 Kg)	41	51,25
Total	80	100

Type of Cattle

The results of this research (Table 2) show that the breeders' preference for the type of cattle that they prefer is mostly simmental cattle, as many as 42 breeders (52.5%) while the remaining PO cattle are 31 breeders (38.75%), Simpo and Limousin cattle are also kept. However, the number of cattle is small, namely Simpo cattle as many as 4 breeders (5%), Limousin cattle as many as 3 breeders (3.75%) and none of the breeders give preference to Bali cattle. The types of cattle in people's farms vary. but according to Pangaribuan et al. (2019), the criteria for selecting cattle based on origin, price, age and weight and size that are suitable for rearing by breeders are simmental cattle, limousin and PO.

Sex of Cattle

The results of the research showed that the breeders' preference for the gender of the cow was mostly for male cattle, as many as 45 breeders (56.25%) while for female cattle, there were 35 breeders (43.75%). The bulls kept by breeders usually come from animal markets and from calves from mother cows that have given birth. Male cattle in rearing are much more profitable when sold because the price is quite expensive, while female cattle are kept by breeders to obtain calves from artificial insemination or natural mating. Female cattle are usually used for breeding purposes while male cattle are used for fattening beef cattle. Bulls that are suitable for fattening are SimPO bulls (Sahala *et*

al., 2016), PO bulls (Rusdiana *et al*., 2016), Simmental cows (Alif, 2017) while female cattle are suitable for use in business. breeding, namely Parent PO Cows (Romjali, 2018).

Cattle Age

The results of the research showed that breeders predominantly kept beef cattle aged 1.5 years -3 years, as many as 42 breeders (52.5%). The remaining respondents, 38 breeders (47.5) preferred cattle aged under 1.5 years, while none of the breeders preferred cattle aged more than 3 years to be kept. Farmers know the age of cattle through ear numbering carried out by the livestock service in Karanganyar Regency. This makes it easier for farmers to buy male feeder cattle to be kept in fattening businesses and female calves as broodstock. According to Ningsih *et al*.(2017), the age of the cow significantly influences the selling price.

Skin Color

The results of the research showed that 39 breeders (48.75%) most liked the grayish white color of cow skin. The remaining breeders preferred golden brown cattle as many as 37 breeders (46.25%) and golden red cows as many as 4 breeders (5%). None of the breeders chose black cattle. This is because people think that grayish white cows, golden brown cows and golden cows are more attractive to the naked eye, clean for consumption, and less complicated to maintain, while black cows are considered dirty and there is less interest in buying them. by the community at the animal market in Karanganyar Regency. Black cattle are not suitable for keeping at the research location, not only because of the lack of demand from the community but also because of the difficulty of adapting cattle to quite hot environmental conditions. Suitable cattle to be kept at the research location are grayish white cattle, golden brown cattle and golden red cattle (Dhita *et al*., 2017).

Cattle Body Weight

Table 2 shows that breeders' preferences for cattle body weight are dominated by cattle with large body weights ranging above 400 kg, as many as 41 breeders (51.25%). The remainder with body weights of medium cattle ranging from 250–400 kg were 24 breeders (30%) and body weights of small cattle under 250 kg were 15 breeders (18.75%). According to Pratama *et al*. (2018), cattle that have a large, long, dense and compact body shape are suitable for keeping in areas that are relatively not hot. Breeders prefer to keep Simmental, PO and SimPO cattle because they are given good quality feed and the daily weight growth is quite good.

Conclusions

The characteristics seen in this study include the age of the breeder, including productive, 18-55 years (56.25%), the number of family members ranges from 1-5 people (93.75%), the highest level of education is elementary school (62.5%), Occupationas a farmer (68.75%) and farming experience are mostly over 15 years (90%). Breeders' preferences for beef cattle breeds include simmental cattle (52.5%), gender of bulls (56.25%), cow age 1.5 years - 3 years (52.5%), skin color grayish white (48.75%) and large body weights ranged above 400 kg (51.25%). Cattle breeder characteristics need to be improved and breeder preferencescanbe used as a reference in raising beef cattle for use as fattening and breeding.

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