



Challenges in Goat Production Faced by Halal Goat Raisers in Region XII (SOCCSKSARGEN), Philippines

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ABSTRACT

This study was conducted to determine challenges in Halal goat production in SOCCSKSARGEN (Region XII). This region is one of the major producers of Halal goats in the country. Twelve (12) municipalities/cities: North Cotabato- Pigcawayan, Aleosan, Carmen and Kabacan; Sultan Kudarat-Columbio, Pres. Quirino, Tacurong, Isulan; South Cotabato- Tantangan, Tupi, Polomolok; and General Santos City) were the sampling sites. Purposive sampling was used in the survey. A total of 131 respondents were interviewed using a questionnaire. Based on the results of the interview, ten (10) challenges have been enumerated by the respondents. It includes disease, lack of vet services, shortage of land, inadequate pasture, predators, theft, poor breeds, no fences, shortage of water and labor intensive. Among these challenges, disease was the most common (65%) followed by lack of vet services (8%) and shortage of land, inadequate pasture and the presence of predators (5%). Common goat diseases encountered by the respondents include diarrhea (57%), cold (13%), cough (11%), bloat (8%) and parasitic infection (7%). Assessment of challenges in Halal goat raising provides necessary information to government institutions in order to formulate possible intervention and proper coordination between agricultural technicians and goat raisers.

Key words: Challenges, Goats, Halal raisers.

INTRODUCTION

Halal food and products are now gaining worldwide attention and have been part of international discussions due to its recognition as an alternative benchmark for food safety, hygiene and quality assurance (Ambali and Bakar, 2014). Nowadays, goat meat is among the imported and exported Halal commodity. Established Halal goat meat production facilities are commonly located in Islamic countries like Indonesia, Malaysia, Pakistan and Saudi Arabia (E-Halal Organization, 2010).

In the Philippines, Halal goat production is one of the enterprises that is becoming an economically feasible option, particularly in SOCCSKSARGEN (Region XII). In fact, the goat population in the region reaches 254,109 which accounts for 7.25% of the total population in the country as of 2005 (BAS, 2005). Although the per capita consumption is only 0.21 kg per year, Halal goats are commonly used by Muslims as a sacrifice in the observance of their faith especially during religious occasions such as Kanduli, Aqiqah, Ramadan, Eidl al-Fitr and Eidl al-adha which increase local demands for such commodity during these times. Currently, Halal goat production in the region is still starting wherein farmers have limited knowledge of its various aspects.

Halal goat research in the Philippines started in 2010 wherein protocols on Halal goat production and quality assurance system have been established. Also, basic considerations in Halal goat raising have been established which includes housing system, grazing management and health management. Conventional housing design for goats is acceptable in Halal goat raising. In terms of grazing

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management, Halal goats are only allowed to graze a clean pasture, free from anything considered unlawful with Muslim shepherd for at least 2 hours per day. Tethering and stall-feeding or full confinement are also allowed. Vaccination, deworming and vitamins are allowed as part of goat health management practices (PCAARRD, 2015). Aiming for sustainable Halal food security, there is a need to address some issues concerning Halal food production which include Halal goat industry.

Despite of these studies, various challenges to Halal goat production has not been assessed. The objective of this study is to determine challenges on goat production faced by Halal goat raisers. These challenges may be experienced by goat raisers in other regions and other countries as well. Halal goat production in the Philippines is still starting, thus, these challenges can hamper the increase and expansion of this industry affecting the lives of individuals which primarily depend on it. Assessment of these problems is important to look and develop possible interventions.

MATERIALS AND METHODS

Descriptive survey research design was used in this study to determine main challenges faced by Halal goat raisers in goat production in the three (3) province of Region XII in the Philippines. The study was conducted in selected areas of Region XII- Philippines. Twelve (12) municipalities/ cities: North Cotabato- Pigcawayan, Aleosan, Carmen and Kabacan (Fig 1); Sultan Kudarat- Columbio, Pres. Quirino, Tacurong City, Isulan (Fig 2); South Cotabato- Tانتangan, Tupi, Polomolok; and General Santos City (Fig 3) were the samplings sites.

Prior to sampling, meetings with the Provincial Agricultural Officer, Municipal Agricultural Officers (MAO), livestock technicians and Barangay Chairpersons of the different barangays with highest concentration of goats was done to discuss the rationale of the study. An on-farm assessment of resources include actual farm visitation and interview of goat raisers. A total of 131 respondents (Table 1) were interviewed using a survey questionnaire. Selection of goat raisers in each municipality was based on the

following criteria: a.) a believer of Islam b) with 5 to 24 breeder does; and c.) willingness of the farm owner to participate in the survey. These criteria were based on the drafted Philippine National Standard for Halal goat production. Descriptive statistics was used in this study including weighted mean, percentage, description and total mean.

RESULTS AND DISCUSSION

Socio-demographic characteristics of the goat raisers

The mean age of the respondents was 40 years old (range 22-80 years old). Most of the respondents stated that goat

Table 1: Respondents of the study.

Sampling Sites	No. of Respondents
Sultan Kudarat	
Isulan	6
Pres. Quirino	5
Columbio	9
Tacurong City	11
South Cotabato	
Tantangan	8
Tupi	9
Polomolok	8
North Cotabato	
Pigcawayan	12
Aleosan	21
Carmen	22
Kabacan	10
General Santos City	10
Total	131

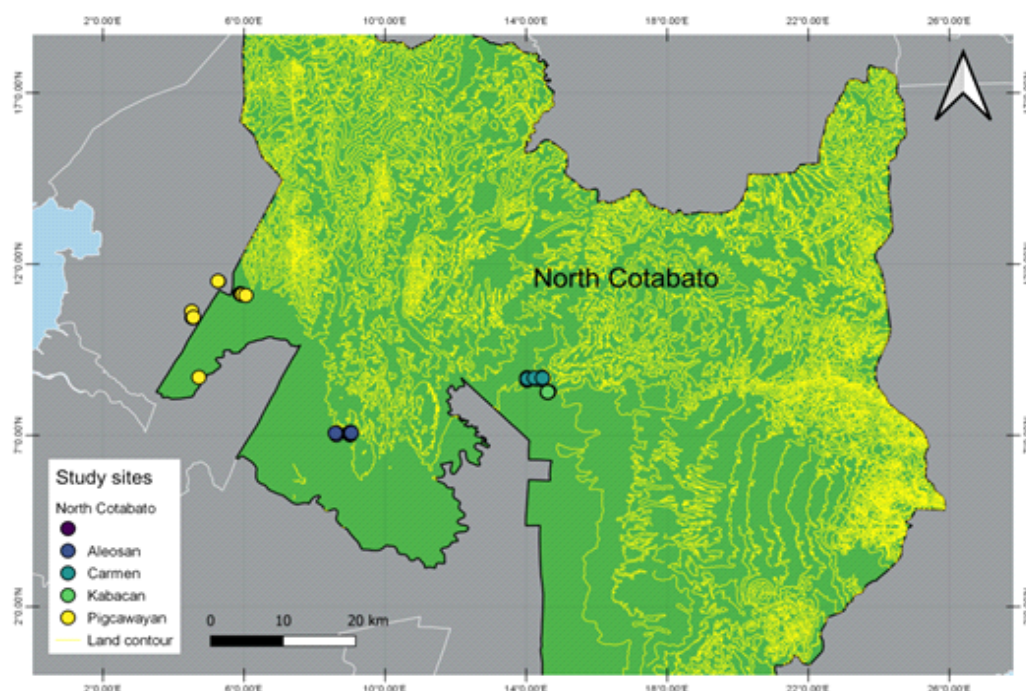


Fig 1: Location of sampling sites in North Cotabato.

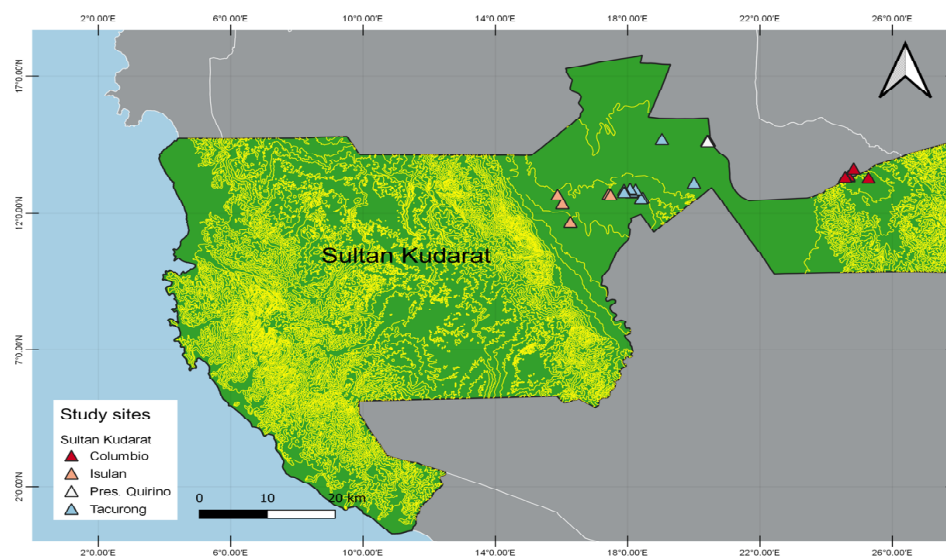


Fig 2: Location of sampling sites in Sultan Kudarat.

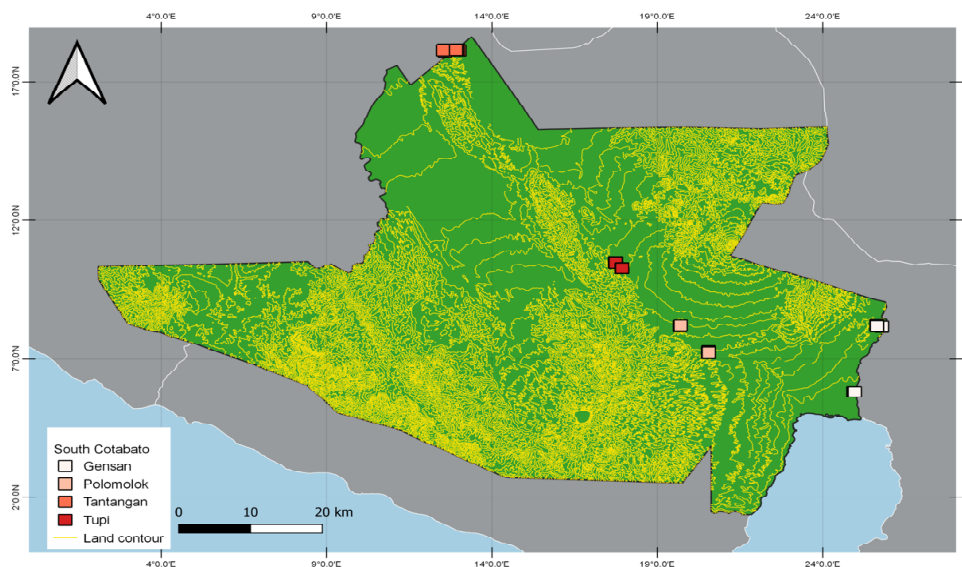


Fig 3: Location of sampling sites in South Cotabato and General Santos City (white).

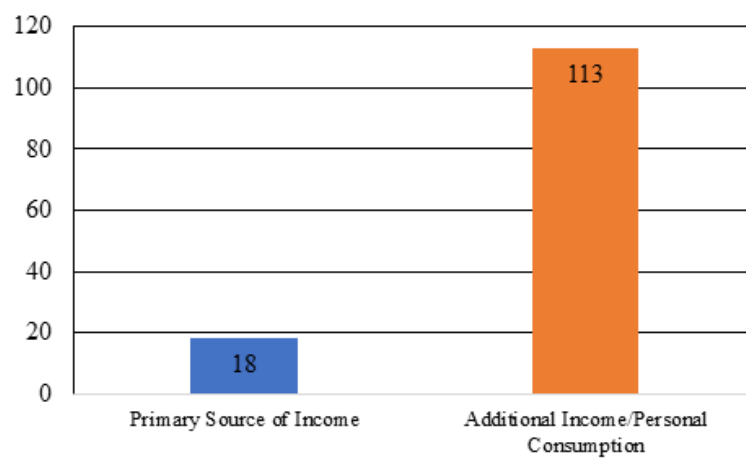


Fig 4: Reason for goat raising.

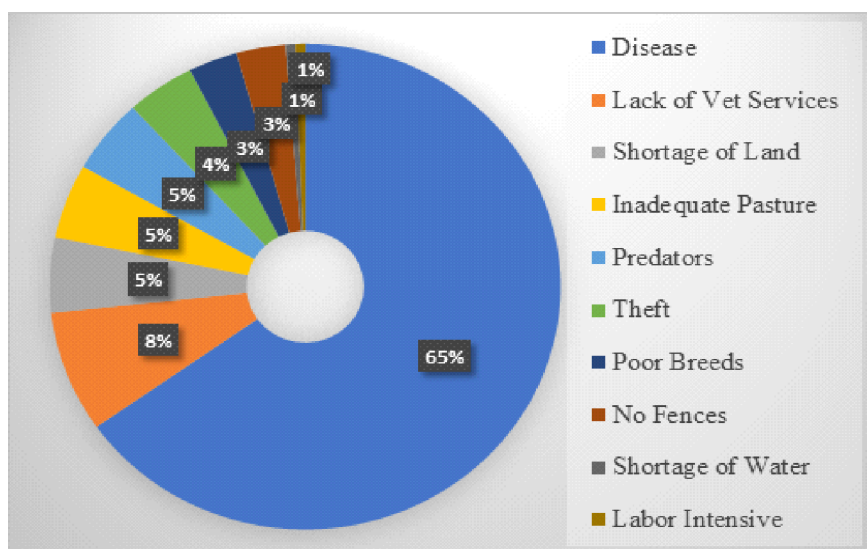


Fig 5: Main challenges in Halal goat raising in Region XII.

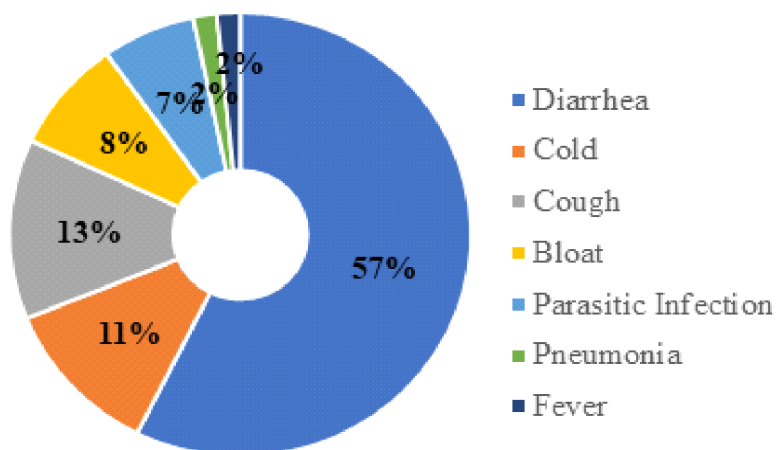


Fig 6: Common diseases of goats recorded from the interview.

raising was for additional income and personal consumption (113) and only few (18) of them stated that goat raising was their only source of livelihood (Fig 4). Aside from goat raising, respondents were farmers (corn and rice), local government employees, barangay council employees, store owners and plantation caretakers. Most of them are farmers which is in agreement in the study of Kumar *et al.* (2018). These goat raisers also stated that they sell their goats for emergency and school expenses. They also used goats during religious observance and special occasions like Kanduli, Aqiqah, Ramadan, Eidl al-Fitr and Eidl al-adha. These events also increase the demand for goats as stated by most respondents.

Challenges in halal goat raising

There were 10 challenges on Halal goat raising as stated by the respondents (Fig 5). In these challenges, disease was the most common (65%) followed by lack of veterinary services (8%) and, shortage of land, inadequate pasture and the presence of predators (5%). Common goat diseases

encountered by the respondents include diarrhea (57%), cold (13%), cough (11%), bloat (8%) and parasitic infection (7%) (Fig 6). According to the respondents, diarrhea, cold and cough were common during rainy season. Diarrhea and bloat were also attributed to the consumption and overconsumption of some forages like *Gmelina arborea*, *Chromolaena odorata* and *Manihot esculenta*. Parasitic infection was common in areas wherein raisers tethered or released their goats early in the morning.

Based on the results, ten (10) interlinked technical, socioeconomic and institutional bottlenecks in Halal goat raising were noted which includes disease, lack of vet services, shortage of land, inadequate pasture, predators, theft, poor breeds, no fences, shortage of water and labor intensive. This result is in congruent to the results of goat production research in the tropics (Beruk and Tafesse, 2000; Fisseha *et al.* 2010; Assen and Akilu, 2012; Enwelu *et al.* 2015). According to Tesfaye (2009), disease together with funding, labor and theft are the most pertinent constraints for goat production in Ethiopia. In the study of Fikru and

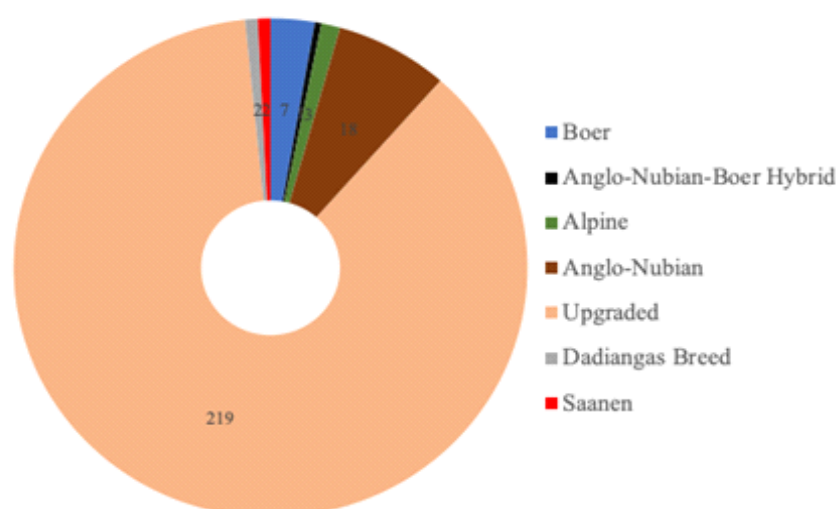


Fig 7: Breeds of goats raised by Halal goat farmers in Region XII.

Gebeyew (2015), disease and parasitic infections were overriding problems in both sheep and goat production. The emergence of disease, as the most common constraint, can be attributed to the location of farm where goats are reared. Based on generated maps, most of the goat farms are in low-lying areas and run-off catch basin from surrounding hills. These sites are prone to flooding and development of waterlogged portions. Flooding and waterlogged conditions are known to enhance the prevalence of disease. Munckhof *et al.* (2001) and Musa *et al.* (2015) observed that flooding and waterlogging condition facilitates the increase of infections to both animals and humans. In addition, flooding had also been found to be an independent risk factor for exposure to infectious pathogens (Chung *et al.* 2007; Su *et al.* 2007). Internal parasites of goats were also common in wet vegetation which can trigger parasitic problems (Villaroel, 2003; Das *et al.* 2018). Although indirect, waterlogging conditions hampers the access of goats to forages especially those species adapted to these areas.

A considerable number of goat raisers stated that it is seldom that they are visited by a veterinarian or livestock inspector. Due to this, various disease interventions were administered solely by raisers. Visitation and consultation can be possible upon schedule and goat raisers need to visit MAO and City Vet Office.

It is interesting that lack of veterinary services is a challenge on Halal goat raising. The presence of veterinarians and technicians that are capable in identifying diseases and administering preventive measures and solutions are important component of goat production in any region (Gwaze *et al.* 2009). However, services of these skilled workers are not always available especially in rural areas which is also supported in this study. Nuepane *et al.* (2018) stated that, more often than not, goat raisers depend upon consultation of unauthorized technician or colleague and usually bear losses of goat herd in the absence of agricultural technicians and veterinarians. In addition, coordination between technicians and raisers is very weak

and services is not usually extended in less accessible areas. In small ruminant production in Africa, particularly goats, vaccination is possible upon goat raisers' request. Some farmers do purchase medicine and inject animals themselves (Ademosum, 1994). Lack of veterinary services is also considered as a hindrance in the adoption of recommended scientific health technologies in goat raising. Tibbo (2000) recorded that 40% of the goat raisers consider the absence of door step availability of veterinary services as most serious input to adopt health technologies.

Shortage of land and inadequate pasture were primarily attributed to the expansion of agricultural lands for economically important crops like rice, corn and oil palm. These problems were encountered by goat raisers during planting season and also emerged considering the fact that several respondents do not have personal lands where they can place their goats. Based on the results of the interview and field observation, the most common forage species utilized by Halal goat raisers include carabao grass (*Paspalum conjugatum* Bergius), walis-walis (*Sida acuta* Burm.f.), napier (*Pennisetum purpureum* Schum.), paragrass (*Brachiaria mutica* (Forssk.) Stapf.), ipil-ipil (*Leucaena leucocephala* (Lam.) de Wit) and paragis [*Eleusine indica* (L.) Gaertn.]. Most of the respondents do not plant improved and domesticated forage species and rely on open vegetated areas. These common species of forages were also observed in the study of Salvaña *et al.* (2019) and Navarra *et al.* (2019).

Kumar and Pant (2003) noted that goats were generally reared in rain fed areas by landless or resource poor farmers whose average agricultural holding was either very less or not sufficient to devote for cultivation of crops. However, there should be available lands either for grazing or sources of forages. There have been forage shortage problems recorded in some areas of the tropical region. One main reason was deforestation due to expansion of agricultural lands (Mancilla-Leyton *et al.* 2012). Planting economically important crops was another way of most goat raisers to

generate income. Goats, in free grazing system, could encroach farmlands causing damage to crops like corn and rice. However, integration of livestock and crop production was also possible wherein goats can be reared under fruit trees like coconuts, mango etc. (FFTC, 1998).

Respondents also pointed out that the presence of predators, like dogs and snakes, was a challenge in goat raising especially for those practicing free grazing and tethering. A total of 6 death cases caused by these predators were recorded in South Cotabato.

Theft was also considered a main challenge in the region. Goat raisers from Columbio, Pres. Quirino, Isulan and General Santos have experienced losses due to thieves. Also, these events were not reported to agricultural technicians.

Goat houses and fences protect goats from possible predators like snakes and dogs. However, most of the goat raisers tethered or placed their animals in open vegetated areas with no protection from predators. The presence of predators was also enumerated by Maass *et al.* (2012) as one of the challenges for small holder livestock production in Congo.

Three percent (3%) of the respondents stated that poor breeds and the absence of fences were challenges in Halal goat raising. There were 7 breeds of goats identified which includes Boer, Anglo Nubian-Boer Hybrid, Alpine, Anglo-Nubian, Anglo Nubian Hybrid, Upgraded, Dadiangas Breed and Saanen. As shown in Fig 7, most of Halal goat raisers have upgraded goats (219) followed by Anglo-Nubian (18). According to municipal livestock inspectors and veterinarians, upgraded goats were those native individuals infused with exotic breed. Some of the respondents stated that their goats were native, however, authorities verified that these were upgraded goats upon observation of size and other physical features. Dadiangas breed (2) and Saanen (2) were the least breeds raised by Halal goat farmers.

Shortage of water and labor intensive were the least challenges (1%) according to the respondents. There is water supply in all sampling sites and water is provided daily specifically in the afternoon. Most of them also stated that goat raising requires less labor since goats were tethered or released in a rangeland in the morning and fetched in the afternoon.

CONCLUSION

Disease was the most common challenge in Halal goat production in SOCCSKSARGEN (Region XII). There is a need to enhance disease surveillance system in the region and to capacitate Halal goat raisers to address disease problems. Shortage of land and inadequate pasture can be addressed through the utilization of open unused lands and introduction of improved and domesticated species of forages. Addressing these challenges is important to help Halal goat raisers improve production not only in the region but in the country as well.

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