



Review on Sheep Production in Ethiopia

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Abstract: Agriculture is the main stay of Ethiopian economy for many centuries back and now. Animal husbandry as the part of Ethiopian agriculture remains the most important sector the economy of the country. With shoat production is also common across the land of the country, Ethiopia is known as one of the countries with the largest small ruminant population in Africa. Sheep are the second most important species of livestock and been reared mainly by smallholder farmers. The review has addressed two specific objectives (Opportunities and challenges) of sheep production in Ethiopia. Accordingly *suitability of the area for sheep production, the use of sheep as important cash source by farmers, increased demand for sheep meat in local and foreign markets, government's commitment and support to increase export sheep product to foreign market and low cost of sheep production are among opportunities of sheep production in the Ethiopia.* On the other hand, shortage of capital or lack of credit on required time, occurrence of disease, Feed shortage and quality problem, quantity shortage and improper feeding of sheep, shortage of grazing land, drought, labor shortage, water shortage and loss of sheep by predators, awareness problem and poor husbandry system are found been challenges of sheep production in the country. To alleviate or reduce the effects of these constraints or challenges of sheep production in Ethiopia efforts should be made.

Key words: Sheep, Sheep production, challenges, opportunities, Ethiopia



1. INTRODUCTION

1.1. BACKGROUND

Ethiopia is believed to have the largest livestock population in Africa. This livestock sector has been contributing considerable portion to the economy of the country, and still promising to rally round the economic development of the country (CSA, 2018). The Ethiopian agriculture employs more than 80% of the population (Duguma et al., 2012).

Livestock also plays an important role in providing export commodities, such as live animals, hides, and skins to earn foreign exchanges to the country (CSA, 2018).

In livestock production, shoat production takes major stake in Ethiopia. Ethiopia is one of the countries with the largest small ruminant population in Africa (CSA, 2014). Ethiopia has about 31.30 million sheep and 32.74 million goats are estimated to be found in the country (CSA, 2018). Sheep are the second most important species of livestock in Ethiopia (CSA, 2015). In Ethiopia, sheep are reared mainly by smallholder farmers and graze in small flocks on communal open natural pastures (CSA, 2009).

1.2. Statement of problem

Despite Ethiopia is endowed with huge number of livestock, contribution of the livestock sub-sector to the economy and foreign currency earnings in particular is very low (Negassa et al., 2011). This is because of socio economic and technical limitations like inadequate feed quality and quantity, diseases, poor genetic potentials, inadequate livestock production policies, and poor management and (Gizaw et al., 2013).

There are different problems affecting sheep production in many regions of Ethiopia. Sheep diseases, feed shortage and lack of adequate veterinary service are the main constraints which decrease sheep productivity and farmers income. The same study has found that water shortage, Predators, Shortage of capital and Marketing Problem (remote market places) to be among factors affecting sheep production in Ethiopia (Yenesew et al., 2013).

1.3. Objective of the review

1.3.1. General Objective

The general objective of the review is assessing sheep production in Ethiopia



1.3.2. Specific objectives

The specific objectives of the review were:

- ✓ Assessing Opportunities of Sheep production in Ethiopia
- ✓ Identifying Challenges of Sheep production in Ethiopia

1.4. Significance of the Review

This review will serve as guidance for other researchers, whom may undertake tasks especially research on the similar area. It will also identify problems in the country, Ethiopia in Sheep production and help the actors to focus on problems as one of the intervention for enhancing Sheep producers so that it become input for the industry and use from the sector. Further it will provide information to who want to invest in Ethiopian agriculture especially production of sheep.

2. LITERATURE REVIEW

2.1. Constraints of sheep Production

It is fact that Sheep production is challenged by so many constraints across Ethiopia with different variation in the regions of the country. The major constraints of sheep production are drought, Housing and occurrence of disease that affect sheep production and productivity. Feed shortage is also one of the constraints of sheep production that may happen due to drought. The most nutritious vegetation is soon eaten and the animals must then eat vegetation that they would normally reject. Feed quality and the amount of feed eaten then diminish the nutrient intake of the animals or fall below their maintenance. This means that lambs do not grow and ewe does not get pregnant. Animal losses weight as they use up their body reserve and as body weight decrease, maintenance requirement are lowered leads production decrease due to decrease maturity rate, extended lactation and large calving interval and absence of twin birth (Tesfaye, 2008).

Feed quality, quantity shortage and improper feeding of sheep in farmer level has an impact on production and productivity of sheep. It is also indicated that in Ethiopia, feed problem is the main cause for poor performance and low productivity of small ruminants (Tolera, 2007).



Inadequate feed and nutrition, diseases prevalence, poor breeding stock, inadequate livestock production policies with respect to credit, extension and marketing have been stated as the major constraints affecting livestock performance. All species of animals and all sexes except small ones graze and browse together in communal grazing lands and range lands. In this type of herding young animals usually are less competitive and get lesser amount of feed compared to the larger animals, and hence are more vulnerable to the effects of feed shortage and malnutrition. Sheep and goat are forced to graze on feeds with higher fiber and lesser digestibility. Supplementing small ruminants with industrial byproducts such as bran and oil seed cakes is not common. Mortalities due to feed shortage and malnutrition are common especially during the late dry seasons (March to June). Another problem of production clearly observed from this study is that mortality rate before weaning reaches about 33.5% (Zealelem et al, 2012).

From Wolayita zone of Southern Nations, Nationalities and Peoples Regional State the major constraints in sheep production were found to be feed shortage and grazing land shortage, disease, drought, labor shortage, water shortage and loss of sheep by predators (Admasu et al, 2017).

Diseases and parasites especially Ovine Pasturelosis, Ovine Pleuropneumonia, Fasciolosis and Menge mites are mentioned as major contributors to high mortality before weaning. The most common diseases noted from the description of symptoms of diseases in all surveyed areas are Ovine Pasturelosis, Ovine Pleuropneumonia, and dysentery, skin diseases like scabies, internal parasites such as Haemonchus, Hydatid cyst and Fasciola. The most common external parasites were Menge mites, ticks, fleas and lice (Zealelem et al, 2012).

The findings of this study indicated that the major common diseases encountered in various flocks in order of significance were pasteurellosis, Pneumonia and internal parasites which hamper performance of sheep. The most serious constraint hindering sheep production in the study area is lack of capital with an index value of 0.149. According to the sheep producers, another most devastating phenomenon that curtails sheep productivity is land shortage with an index value of 0.148. Feed scarcity and untimely credit access were the third and fourth constraints with index values of 0.143 and 0.128 respectively (Feleke et al, 2015).



In Atsibi-wonberta, Wukro-kilteawlaelo, Ofla and Degua-Tembien districts the most common diseases noted from the description of symptoms of diseases in all surveyed areas are Ovine Pasturelosis, anthrax, Ovine Pleuropneumonia, Bloat, Coenuruses and Cowdriosis, Enteritis, skin diseases like scabies internal parasites such as Haemonchus, Hydatid cyst and Fasciola. The most common external parasites were Menge mites, ticks, fleas and lice. As indicated in the same study the reasons for death of sheep in the study area were drought, disease, predators, and accident. Recurrent drought, disease and predators were ranked as first, second and third most important reasons of mortality in the last 12 months with an index value of 0.49, 0.44 and 0.05, respectively (Mulata, 2013).

Sheep disease and parasites were the other main constraints for sheep productions. Especially Anthrax, Sheep and Got pox, PPR are major contributors to high mortality of sheep in the study area. The most common parasites were tick and fleas. Rational medicine are generally used to cure the animal but sometimes they causes serious problem due to higher dose and lack of knowledge about the disease type. The same sources indicated that disease lower the productivity of animals and it may occurs during feed shortage period and poor management of sheep. Feed shortage may predispose the animals to low disease resistance due to distance, awareness and cost of veterinary service, farmers are lack in get veterinary treatment for their animals (Tesfaye, 2009).

Lack of mating Management is also among challenges in Sheep production and productivity. It has been found that the average age of ewe lamb at first mating is 9-14 months. From the study of Zelalem and others in Northern Ethiopia about 71.4% respondents revealed that mating occurs all year round usually in the field while grazing. Uncontrolled breeding due to random mating, with the ram grazing together with the ewes, leads to early breeding of females resulting in low conception rate, low birth weight and poor survival rates. Mating within close relatives, especially sire daughter and ewe-offspring-could lead to inbreeding, which might have resulted in increased mortality (Zealelem et al, 2012).

The other issue related to the market is the infrastructure and the communication system. Farmers usually take their animals for sell to small local markets which are only active once a week. Information on market price, supply, grades and standards are lacking. The available information system favors consumers and is not favoring improvement on production in terms of quality and quantity. Farmers are extremely devoid of any market information of the major



market outlets that makes them open to price fixing by intermediate traders and diminishing their bargain power. The market structure and infrastructure itself has considerable negative effect on sheep marketing and quality of production. Problems such as seasonality of market demand, rough roads, long distance trekking before slaughter and lack of feeding, watering and resting structures through the course of trekking contribute to the poor body condition and poor meat quality on animals. Pre-slaughter conditions are mentioned to affect the animal welfare and the overall meat quality. Animals are exposed to several factors during the transportation to the market. Congestion in limited space, frequent fluctuation of temperature, traveling for long distances, trekking, lirage facilities, road quality are among the various stressing factors (Zealelem et al, 2012).

The other critical issue is the market and availability of credit schemes. Though there is a well-developed micro financing system throughout the region that reaches each household in the rural, farmers are not utilizing the opportunity effectively. Farmers use the credit scheme mostly for purchase of improved seeds and fertilizer during the major rainy season. Only 6.3 % of the farmers utilized the credit scheme to purchase sheep and goat to generate income through trading fattened sheep and goat. Landless and jobless youth farmers rather prefer to involve in other businesses such as construction, metal and woodwork, etc and seek loan for these businesses (Zealelem et al, 2012).

From the study that was undertaken back in 2012 in Horro district of Oromia regional state a lot of constraints have been identified as challenging to Sheep production. These include: Shortage of veterinary drugs supply – that has created due to reluctance or absence of functioning system to authorize personnel for the management of budget allocated by the Oromia Livestock Agency when someone transferred or left the position, Lack of transportation facilities for technicians to provide mobile health services, Lack of skilled technicians and facilities to address the health problems in the area, Lack of flexibility in the credit system and the inconvenience of having group collateral, Misuse or use of credit money for unintended purposes, Feed shortage, High incidence of liver fluke and lice infestation, Lack of training on improved sheep production and management, Low bargaining power of producers and limited access to market information, Lack of vertical linkage of sheep producers with other actors in the value chain, Weak horizontal linkages among sheep farmers(Duguma et al, 2012).



2.2. Opportunities of sheep Production in Ethiopia

Despite there were many constraints that affect sheep production in the study area, there were also a couple of opportunities to improve sheep production such as presence of good breed, government intervention, credit and market access, presence of NGOs, road and infrastructure and favorable agro-ecology. From the study, as indicated in Table 4, favorable agro-ecology was the primary opportunity with an index value of 0.313. The second opportunity of sheep production is presence of adaptable local breed with an index value of 0.236 and market access and government intervention were ranked as third and fourth opportunities with index values of 0.207 and 0.129 respectively (Feleke et al, 2015).

There are a lot of opportunities in business of agriculture like in Sheep production in Ethiopia. Eyob has identified the following opportunities of sheep value chain when studied sheep value chain in Adama district. These include: Suitability of the area for sheep production, the use of sheep as important cash source by farmers in the area, increased demand for sheep meat in local and foreign markets, improved road infrastructure connecting to different organization and establishment of Livestock Development and Health Agency (Eyob, 2018).

Other researchers found that an increasing trend of demand for live sheep and sheep meat, Possibility of scaling up community-based sheep breeding program, Market access and the district is good for sheep production, government's commitment and support to increase export of meat (Duguma et al., 2012).

According to findings from Goma (Jimma Zone) it is made clear that small ruminants (Sheep) have high turnover rate , easy to be managed by children and women are advantages to be integrated with crop production. The area receives enough amount of rainfall can be used to develop various types of grasses, legumes and browses through different production strategies. Landless youth and farmers, retired people and other members of society can be engaged in fattening activities that make them benefited as result of high market demand and higher prices for Sheep could be also opportunities in Sheep production everywhere. Additionally High demand of the small ruminants in the local market as a result of population increase, urbanization, and increase in income (even within a district) can be considered as an opportunity for the small ruminant producers. It is evident that there was high consumption of meat during crop (coffee) harvest and less volume of animal were taken out of Goma. The need for young males is also opportunity for the producers. Nowadays, many abattoirs flourish in



the country; so agents and assemblers purchase small ruminant even at farm gate (Belete, 2009).

3. CONCLUSION AND RECOMMENDATION

3.1. CONCLUSION

Because of shortage of capital, lack of credit on required time, occurrence of disease, Feed shortage and quality, quantity shortage and improper feeding of sheep, grazing land shortage, drought, labor shortage, water shortage and loss of sheep by predators, awareness problem and poor husbandry system, sheep producing households in particular have not been sufficiently benefited from the sheep production in Ethiopia. Despite there are factors challenging Sheep production in Ethiopia, the sector is still attractive with having a lot of attracting factors. That means with all constraints and challenges currently facing the sheep production; there are still encouraging opportunities and potentials to boost production and quality of sheep production. There are a lot of opportunities in Sheep production across many regions of Ethiopia. Suitability of the area for sheep production, the use of sheep as important cash source by farmers in the area, increased demand for sheep meat in local and foreign markets, government's commitment and support to increase export and sheep enterprises been relatively of low cost are among major attracting factors to sheep production in the Ethiopia.

3.2. RECOMMENDATION

As the review has identified many challenges in the business of sheep production in Ethiopia, efforts should be made to alleviate the main constraints those hindered sheep production in Ethiopia. Accordingly the following recommendations are drawn.

- ✓ Government and NGOS should provide better access of credit to minimize capital shortage
- ✓ Improving genetic potential of sheep or training should be provided for sheep producers to focus on economically important species of sheep.
- ✓ Expanding improved forage species to overcome the scarcity of feed which will be encountered during dry seasons.
- ✓ There should be forage promotion program to expand improved forage availability.
- ✓ To improve the productivity of sheep in Ethiopia, there must be introduction of improved forages.



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- ✓ Extension services are expected to train sheep producers in improving forage establishment program to alleviate or reduce extent of feed shortage, developing water sources (ground water and pond) to reduce long travel of sheep for searching water.
 - ✓ As predators are also concerned Sheppard/sheep owners should give attention to sheep in field.
 - ✓ Animal health service centers should be extended by government
 - ✓ Farmers and Government should provide improved feed to sheep.

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