

Sheep Production and Marketing System in North Gondar Zone of Amhara Region, Ethiopia

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Abstract: The study was conducted in Gondar town from February to May, 2015 with the objective to assess sheep production and marketing system in Gondar town. Four representative kebeles (kebele 18, kebele 20, kebele 15 and kebele 16) were selected by simple random sampling technique out of the selected kebeles, 30 sheep producers were selected purposively. The study was carried out through informal and formal surveys. The purpose of sheep production by producer in the study area was for cash income (43.3%), home slaughter (26.67%), cash income and meat (23.33%) and manure (6.67%). Producers on average had 4 heads of sheep (n = 30) per household. The main feed sources for sheep in the area were natural pasture (60%) and crop residue (40%). In addition, most producers supplement salt (20%), food left over (16.67%), nuge cake (16.67%), dashen brewery by-product (10%) and 10% atella (a local beer residue). There was feed shortage problem both during the dry and rainy seasons in the study area. Producers' sold sheep at time of Easter, New Year and Christmas and during shortage of income. Sheep from the same village and neighboring woreds entered into the town for marketing. The main sheep production constraints were grazing land and feed shortage (40%), sheep disease (26.67), labor shortage (16.67), market problem (10%) and lack of extension service (6.67%). Therefore, from the present study it can be conclude that grazing land and feed shortage is the main constraints of sheep production and small traders, butchers, restaurants and consumers are the main stakeholders of sheep market in the area.

Key words: Constraints • Gondar • Market • Sheep Production

INTRODUCTION

Ethiopia has a large livestock resource than most countries in Africa and more than 80% of the human population depends on agriculture for their livelihoods (Azage, 2005) and usually keep livestock as pastoralists and in mixed crop livestock systems. The agricultural sector contributes 41.4% of the Gross Domestic Product of the country (World Bank, 2004). There are about 26.1 million and 21.7 million sheep and goats population heads in the Ethiopia respectively [1]. According to the report of Gondar Zone ARDO (2008) cattle population of the area was 2, 407,544, sheep population 11,673, goat 5154, poultry 24,194 and Equines 6,485. Small ruminants are important components of the livestock subsector and are sources of cash income and play a vital role as sources of meat, milk and wool for smallholder keepers in different farming systems and agro-ecological zones of the country [2]. They are also sources of foreign currency [3].

Moreover, due to their high fertility, short generation interval, adaptation in harsh environment and their ability to produce in limited feed resource they are considered as investment and insurance [4]. Efforts geared towards improving sheep production in Ethiopia have to be made through developing situation specific development interventions. The feasibility of cropping and the type of crops to be produced depend on climatic and biotic factors. The extent of cropping and the type of crop, in turn, determine the quantity, quality and distribution of animal feed resources throughout the year. On the other hand, the feed resource base and disease challenge determine the animal production system of the area (Adugna and Aster, 2007).

Unlike the large potential of small ruminants in the country their productivity is low. There are various factors that contribute for low productivity: health constraints, feed shortage both in Quality and quantity, poor feeding and health management (Tsedeke, 2007;

Getahun, 2008)[5]. Other contributing factors also include low genetic potential; policy issues (Zinash *et al.*, 2001) market and institutional problems and problem of credit facilities and others (Berhanu *et al.*, 2006). Although various research and development activities have been carried out in the past, no significant increase in productivity was achieved. Therefore, improvement programs are necessary to increase productivity and sustainable development of small ruminants in different farming systems of the country in innovative approach so as to meet the demands of the human population. However, in order to improve the production systems and set a policy there was not documented information on sheep production and marketing system in Gondar town. Therefore, this study was conducted with the objective to assess sheep production and marketing system in Gondar town.

MATERIAL AND METHODS

Description of the Study Area: The study was conducted from February to May, 2015 in Gondar town which was found in Amhara Regional State in north west Ethiopia. The Gondar town was located at 739 Km from Addis Ababa at an elevation of 2,220 m a.s.l. The city has a latitude and longitude of 12°36'N 37°28'E and 12.6°N 37.467°E respectively. Rain fall varies from 880-1172mm with the average annual temperature of 20.3°C. Human population of the town was 206,987 and administrative area 40.27km². The area was characterized by two seasons, the wet season from June to September and dry season from October to May [6-23].

Sampling Methods and Data Collection

Sampling Techniques: Based on geographical placement of the town the study was conducted using formal as well as informal survey methods and Kebles was selected by using simple random sampling technique. On the next stage, house holders were selected by using purposive sampling technique.

Sampling Procedure and Data Collection: The study was conducted by using the primary and secondary source of data collection. Method of relevant information was collected by preparing questionnaire and conduct with randomly select 30 sheep owner producer from Gondar town. The questionnaire was designed, pre-tested and modified before the commencement of the actual administration to check its clarity to respondents and appropriateness of the question.



Fig. 1: Map of the study area

Statistical Analysis: The data on Feeding sources, Marketing, sheep production system and constraints were organized, summarized and analyzed using Excel.

RESULTS AND DISCUSSION

Characteristics' of the Respondent: General information of the sheep producers in Gondar town are indicated on Table 1. From the total of (N=30) respondents majority of the sheep owning households were male headed (93.3%) while only small proportions (6.6%) were headed by females. The educational level of the respondents in the study area was also different those include illiterate (23.3%), read and write level (26.7%), elementary school (13.3%), secondary school (13.3%), above secondary (10%), spiritual level (6.7%) and others no response (6.7%) look the table below.

Table 1: General information of the sheep producers in Gondar town

| Gender | N | Percentage (%) |
|-------------------|----|----------------|
| Male | 28 | 93.4 |
| Female | 2 | 6.6 |
| Age | | |
| 15-30 | 12 | 40 |
| 31-40 | 12 | 40 |
| 41-50 | 4 | 13.3 |
| 51-60 | 2 | 6.7 |
| Educational Level | | |
| Illiterate | 7 | 23.3 |
| Read & write | 8 | 26.7 |
| Primary school | 4 | 13.3 |
| Secondary school | 4 | 13.3 |
| Above secondary | 3 | 10 |
| Spiritual | 2 | 6.7 |
| No response | 2 | 6.7 |

Table 2: Purpose of keeping sheep per household

| Purpose | N | % |
|----------------------|----|-------|
| 1. Sale(cash income) | 13 | 43.33 |
| 2. meat | 8 | 26.67 |
| 3. sale and meat | 7 | 23.33 |
| 4. manure | 2 | 6.67 |
| Total | 30 | 100 |

Table 3: Sources of sheep feed in the study area

| Feed source | Respondents | % |
|---------------------------|-------------|-------|
| 1.Natural Pasture | 18 | 60 |
| 2.Crop Residue | 12 | 40 |
| Supplementary Feed Type | | |
| Food Left Over | 5 | 16.67 |
| Atella | 3 | 10 |
| Salt | 6 | 20 |
| Nuge Cake | 5 | 16.67 |
| Dashen Brewery by Product | 3 | 10 |
| Multiple Feed | 8 | 26.67 |
| Total | 30 | 100 |

Sheep Production System and Purpose of Rearing in the Study Area:

Purposes of keeping sheep in study area are indicated on Table 2. The sheep production systems in the study area were peri urban system. On average sheep keeping per house hold were 4 heads. In this system feed resource were usually house hold wastes, market area wastes, food left over, by product, road and river side grazing. From the total of respondantes the purpose of sheep production on the study area were sale (cash income) (43.33%), meat (26.67%), sale and meat (23.3%) and for manure (6.67%). Easter, Meskel, New Year and Christmas were the main period on which producers slaughter sheep in the order of importance. Based on the informal survey result, male sheep at young age (from 4 to 12 months of age) were mostly slaughtered for home consumption.

This study was in line with that of Ibrahim (1998) urban and peri-urban production system was practiced in town and cities by wage earners who invest cash (sale) on sheep production for short-term profit. Sheep producers in the study area rear sheep for four main purposes: for cash income, home slaughter, sale and meat and manure during festivals.

Feed Resources: Sources of sheep feeds in the study area are indicated on Table 3. The main feed resources for sheep production in the study area were natural pasture which is contributing (60%) and crop residue (40%). Natural pasture and crop residue was the main feed resource during the rainy season; natural pasture, crop stubble grazing and crop residue in the dry season.

The sheep producers in the study area were used supplementary feeds specially multiple feed which were contribute 26.67%, food left over and nug cake 16.67%, Dashen brewery by product and attella (10%) and supplement 20% minerals sources of salt.

The main feed resource in the study area was natural pasture and crop residue. This result was agreed with that of the report of (Solomon *et al*, 2008a, 2008b) the major available feed resource for sheep were natural pasture, crop residue, agro-industrial by-product and cultivated improved forage crops.

Marketing System in Study Area: In the study area the marketing system were provide information flows from consumer to producer and vice –versa. There were three types of sheep market. i.e. primary, secondary and terminal market depends on the purpose of buyer. In the two selected market areas (Azezo and Auto parko) were sold and purchased in every market days. At Azezo (Kebele 20), the medium market area were predominant sold sheep, cattle and goat species. The second market place located in Auto parko (kebele 17) in that market place the predominant animals were sold sheep and goat.

During festivals the demand were very high and the animals sold by better prices. The minimum and maximum price of sheep in Gondar town was 600-2400 ETB per sheep. Marketing of sheep and goats was fluctuated on the bases of seasonality. This report was in line with that of the report of EARO (2000) demand and price increased during festival periods. Factors affecting market supply, as measured by the number offered, include high demand during religious festivals, quality and quantity of grazing.

Sheep marketing channels in Gonder town was indicated on the following diagram.

Major Constraint of Sheep Production: There were several sheep production constraints in the study area. From the total of respondents the major constraints of sheep production in the study area were shortage of feed and land which was contributing (40%) the other constraints were sheep diseases (26.67%), labor shortage (16.6%) market problem (10%) and lack of extension service (6.67%) [20, 21].

The constraints of the study area were in line with that of the report of EARO (2001b), feed shortage, diseases and parasites, animal management, genotype and genetics and socio-economic and institutional constraints were the main problems in sheep production in the country. This study was also in line with that of Abebe *et al*. (2000), feed shortage in the dry and rainy season,

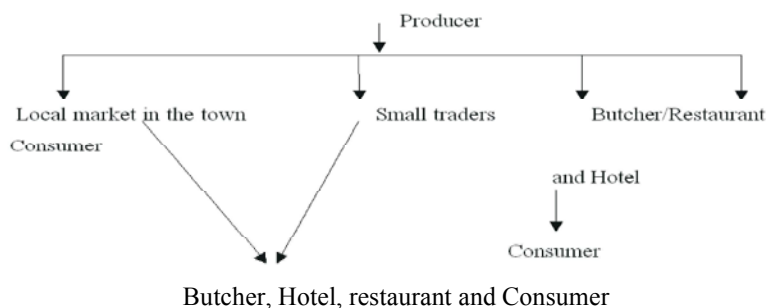


Fig. 2: Diagram of market channel in the study area

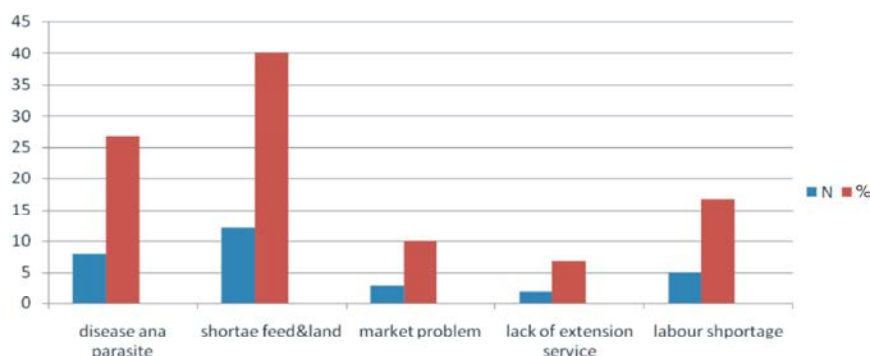


Fig. 3: Constraints of sheep production in Gondar town

diseases, inadequate veterinary service and lack of capital are the main Sheep production constraints in Lallomamma Mider Woreda, North Shoa [23].

CONCLUSION

Generally, the overall results of the present study indicated that sheep production in Gondar town is one means of income generation for family. However, sheep diseases, feed shortage and land (technical constraint) are the main constraints which decrease sheep productivity and producers income in the area. The main purpose of sheep rearing in the study area is for sale (cash income). The feed sources in the study area are mainly natural pasture and crop residue and also provide supplement feed (food left over, attela, Dashen brewery by product, mineral salt and nuge cake). The purpose of keeping sheep in the study area is more of market-oriented. The market price is depending on body weight, colour, festivals, age and the health of sheep. Based on the above information it is recommended that:- The government should give a great enfaces on sheep feed improvement strategies and feed processing industries, agricultural rural development office must be provided an extension service to sheep producers, there should be present sheep cooperatives and regular market information report

should be announced by different communication methods. Further researches on reproductive performance of sheep, carcass quality and breed types in Gondar town should be conducted.

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