

Assessment of Beef Cattle Production and Marketing Practice at Mahabuba Farm in Harar Town, Ethiopia

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Abstract

The study was conducted to characterize beef cattle production and marketing practices at Mahabuba Farm. The farm was established in 2012 in Harar Town for the purpose of exercising beef fattening and supplied to different consumer found in this zone and also some time, they supplied to the West Hararge zone and the East shewa zone. This farm obtained different species of beef cattle from Harar town, from small towns which is found in this zone, Arsi and Borana breeds were purchased from Adama town. Feed resources for beef cattle were purchased from the farmers and Agro-industrial by product found in this town and outside of the town. Native grass hay was purchased from Adale and Stover (Maize and Sorghum) were from farmers in the town and also the conserved feed from farmers live around the town. Agro-industrial by products was also bought from the factories in and around Harar town (Hamaresa, Harar beer and flour from different miller) and Dire Dawa town. The major portions of the feed of beef cattle were concentrate mix feed to feed fattened animals. Method of decision of finishing animal was based on body condition and market demands. This farm fattened around 50 animals in one round or batch. The farm can supply finished beef cattle to market around three times in a year. Fattening activity was actively performed from September to January, targeting to deliver fattened cattle for Meskel and Christmas. Beef cattle supplied to the market after 3-4 months and fattening price on average 15000 ETB were obtained. The maximum and minimum price of fattened animal in the dry and wet season was 20000 ETB, 10000 ETB and 13000 ETB, 8000 ETB, respectively.

Keywords: - Beef, Cattle, Production and Harar town

Introduction

Ethiopia owned a large livestock population (CSA, 2010). Cattle production plays an important role in the economies and livelihoods of farmers and pastoralists. Cattle produce a total of 3.2 billion liters of milk and 0.331 million tons of meat annually (CSA, 2008a). In addition, 14 million tons of manure are used annually primarily for fuel. Beef industry refers to the industry that deals with conversion and processing of live animals into different products and by products. The beef industry is very important to the livelihood of the people for nutrition, household income and social benefits. Beef provides protein, energy, minerals and essential vitamins like B₁₂, A, D and K. The potential of the beef industry in Ethiopia lies in the availability of natural resources for beef production and a big cattle population. There is no documented information on fattening, marketing practices and their challenges in the town. In general beef cattle husbandry and marketing practices have not been studied in the farm. Therefore, the paper was designed to characterize beef cattle production and marketing practices of Mahabuba Farm.

Materials and methods

The study was conducted in Harar towns found in the East Hararge Zone, Oromiya Regional State. Mahabuba farm was one of the beef farms which was established in 2012 in Harar town and located in the south direction at the entrance of the town when arrived from the capital city of the country.

Farm visit

A onetime farm visit was made to develop the data about beef cattle production system, feed resource and feeding system, housing facilities, season of fattening and marketing, methods to decide finishing period of fattening cattle, source of beef cattle breed, marketing channels, fattening duration, fattening cycles constraints of beef cattle fattening and situation of the farm.

Sampling and Data Collection

The farm was purposively selected to assess its performance. Data on the types of livestock species used for fattening, form of livestock selection, breeds of cattle and market demand, fattening cycle and duration, feed resources, feeding procedure and constraints were interviewed from the fatteners.

Result and Discussion

Beef Cattle Production System

In this farm animal was kept in a big fence, by separating into different groups from the time of joining the farm. This fattening system was by product based fattening production system. This is a type of fattening practices

around urban and per-urban area in which the agro-industrial by-product such as molasses, cereal milling by-product and oilseed meals is the main sources of feed for fattening. In this system grazing land is completely unavailable and crop-residues are only significant roughage source for beef cattle which was characterized by more controlled production factors like nutrition, housing, health care and other management practices. This farm fattened around 50 animals in one round or batch

Source Beef Cattle and Species (Breed) and Criteria for Selecting

The source of beef cattle was from Hararge high land, breed from East Hararge small town (Dawe, Fadis, Burka, Babile, Haramaya and also Harar town) borana and Arsi-Bale breeds were from Adama town. Criteria's of beef cattle for fattening was purchased based on visual observation good appearance (color, free from external parasites and body defects), medium body condition, age (3-4 years old), health condition and sex. Male animals were more selected than female animals according to in this farm.

Duration of Cattle Fattening and Fattening Cycles

Beef cattle were fattened in this farm throughout the years by both natural feed resources and agro- industrial byproducts. A length of the fattening period of beef cattle in the interviewed farm was 3-4 months. Finishing was dependent on body condition of fattened animals and time on beef demand (during holiday and when beef animals were absent from the market) which were fattened by the farmers around the town and from neighboring districts.

Sources of Feeds and Feeding System

Feed for beef cattle in this farm was purchased from framers and Agro-industrial by product, because of shortage of land for feed or forage production. Hence, native grass hay was purchased from Adale, Stover (Maize and Sorghum) where from farmers in the town and also the conserved feed from farmers live around the town. Agro-industrial by products was also bought from the factories in and around Harar town (Hamaresa, Harar beer and flour from different miller) and Dire Dawa town. This farm was more benefited, because of easily obtained concentrated types of feed from nearby agro-industrial byproducts which form the major portions of the concentrate mix fed to feed fattened animals.

Roughage - Roughage feeds are characterized by relatively higher fiber content and lower energy and protein contents than concentrates. The source of roughage used for beef cattle production in the interviewed farm includes crop residue (maize and sorghum Stover) and native grass hay which was bought from farmers. The feed is not uniformly supplied and the quality is poor (Ibrahim and Ololaku, 2000)

Agro industrial by products - Agro-industrial by-products widely used as source of beef cattle include those resulting from flour mills and oil processing factories. The agro- industrial by-products (concentrate) feeds are used as energy and/or protein. Accordingly, they classified as energy or protein sources or sources of both energy and protein. The source of concentrate feeds commonly used on this farm includes wheat bran, wheat middling, and cotton seed cake; lean seed cake and soya bean, however, sorghum and maize grains were utilized by few in the farms and minerals by mixing with both roughage and agro- industrial by product feed resource.

Feeding System - Feeding procedure, initially animals were not weighed and feed was provided by common sense. Moreover, the ratio of concentrate to roughage was not known in this Farm. The daily feeding frequency was two times of feeding of concentrate supplements were, almost all this farm followed the classical daily feeding procedure that is initially given the roughage and then concentrate on the top of roughage. Generally, this farm provided roughage and concentrate on the mix which is uncommon in the trials usually conducted at stations. They provide roughage as an ad-libitum twice in a day at morning and evening before providing concentrate. Usually this farm offered concentrate mix, though the ratio of mixing of different ingredients. Concentrate was offered every day throughout the fattening period. Generally livestock was provided feed without knowing the age and body weight of the animals. Major feed resources used as a basal diet for fattening cattle were crop residues. One of the challenges of cattle fattening, feed shortage such as poor quality of natural pasture, A need for greater knowledge on the use of crop residues and Poor availability of concentrated and feed supplements when needed.

Housing Facilities - House is fundamentally important to protect animals from predators, theft and from adverse weather conditions. In beef cattle production farms, fattening animals were fed and drunk in group because there had no compartment with a specific dimension in both feeding and watering troughs during physical observation of the farms. Most feeding troughs were made up of woody materials and from cement concrete. Major sources of water for beef cattle in the farm were from springs. Furthermore, most of the shelters were exposed to sun, rain and wind without overhead shed, but, there were sheds for watering and feeding troughs. At this farm isolated house had not available for patient livestock. Moreover, in this farm there were no drainage systems and the out late for the waste materials produced.

Methods to Decide Finishing Period of Fattening Cattle

Decisions at end of cattle, beef fattening finishing period was depend on considering the rate of live weight change by visual observation based on their feed intake and future price or the demands of beef cattle were more in the market and butcher.

Season of Cattle Fattening and Marketing

A result of season of cattle fattening and marketing on this farm was at the time of both holiday and non-holiday and cattle fattening were practiced throughout the years. In some extent cattle fattening activity was actively performed from September to January, targeting to deliver fattened cattle for Meskel and Christmas. The price of beef cattle in this feedlot farm in after 3-4 months fattening on average were 15000 ETB were obtained. The maximum and minimum price in the dry and wet season was 20000 ETB, 10000 ETB and 13000 ETB, 8000 ETB respectively.

Effect of Breed, Sex, and Gender of Cattle on Market Demand

All cattle breeds are preferred for export market though; there is variation in demand among breeds. Borana is the most selected than the rest of cattle breeds because of the reflection of the inherent quality of the specified breed in that it possessed a docile temperament, heavier live weight, better feed conversion efficiency and lean carcass compared to the Arsi-Bale and Hararge highland cattle breeds. However, all cattle breeds had equal benefit of the domestic markets. In case of gender they only select a male animal for beef cattle production in this farm.

Marketing Channels of Beef Cattle

Marketing involves all events involved in the production, flow of goods and services from point of production to consumers. All business activities facilitating the exchange are included in marketing (Lemma *et al.*, 2005). The channels of beef cattle marketing found in the study in this were before and after the Holidays; animals are taken to the local market for selling on market days. Buying and selling are completed through bargaining practice. In the process of cattle marketing farmer, whole seller, trader and butchers are involved. Marketing channel referred to the sequential arrangement of various marketing intermediaries involved in the movement of products from producer to consumers. Participants in beef cattle marketing in beef, are, producers, middlemen or brokers, traders and consumers, however, butchers and hotel owners directly buy beef animals directly from the producers or farms.

Constraints Affecting Beef Cattle Production at the farm

Fatteners suggest different constraints that hindered the performance of cattle fattening activity in the this farm was a shortage of quality water, absence of quality and quantity feed resource, shortage of improved beef animals, lack of market information, lack of transportation facility, lack veterinary services, marketing problems, insufficient land and the occurrence of disease and absence of weighing balances during selling and buying was based on only physical performances of animals. This constraint was similar with find of (Firew, 2007), inadequate supply of quality feed, drought, diseases and parasites were the main reasons for low productivity of the indigenous cattle breeds and are the major factors limiting cattle productivity in Ethiopia. Lack of market-oriented production, lack of adequate information on livestock resources, inadequate permanent trade routes and other facilities like feeds, water, holding grounds, lack or non-provision of transport, ineffectiveness and inadequate infrastructural and institutional set-ups, prevalence of diseases, illegal trade and inadequate market information (internal and external) are generally mentioned as some of the major reasons for the poor performance of this sector (Belachew and Jemberu, 2003). As the reports of (Umar and Baulch, 2007), Poor and uneven access to market information is a well-known constraint to livestock trade in the country.

Records

Their records were on amount of feed purchased with price and date of newcomers started feeding.

Recommendation

- ✓ Evaluating and selecting only on visual appraisal is not economically important to indicate all the traits of individual performance of animals, so during purchasing animals for fattening weighing balance should be used to know the exact body weight of animals most selected for fattening
- ✓ Depending on the age of the animal, different types of beef breed were fattened in this farm, but it was uncommon to fattening young animals. Therefore the farm should include this age class at the farm in the future to maximize their profits, the reason is young animals have higher feed conversion efficiency than large animals, low cost to purchase and has a short period of fattening.

Reference

- Belachew H and Jemberu E. 2003. Challenges and opportunities of livestock trade in Ethiopia. Challenges and opportunities of livestock marketing in Ethiopia. In: Yilma Jobre and Getachew Gebru. (eds), Proceedings of 10th annual conference of the Ethiopian Society of Animal Production (ESAP) held in Addis Ababa, Ethiopia, August 22–24, 2002. ESAP, Addis Ababa, Ethiopia. pp. 1–14.
- CSA (Central Statistical Authority) (2010) Ethiopian agricultural sample survey 2010, Vol. II. Report on Livestock and Livestock Characteristics, Bulletin, 468.
- CSA (Central Statistical Authority). 2008a. Livestock and Livestock Characteristics, Agricultural Sample Survey. Volume II, Statistical Bulletin, 446, pp 188
- Firew, T. 2007. Evaluation of alternative feed resources for ruminants under arid zones of the tropics and sub-tropics: the case of cactus pear (*Opuntia ficus-indica*) in Ethiopia. Ph.D. Thesis. Humboldt University of Berlin, Germany.
- Ibrahim, H. and Olaloku, E., (2002): Improving cattle for milk, meat and traction. Manual 4. ILRI (International Livestock Research Institute), Nairobi, Kenya. pp135.
- Umar, A. and Baulch, B. 2007. Risk Taking for a Living: Trade and Marketing in the Somali Region of Ethiopia, UN OCHA-PCI, April, 2007.