



## **Assessment of the traditional cattle fattening system in Damot Woyde Woreda, Wolata zone.**

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### **Abstract**

This study has conducted to assess on traditional beef cattle fattening system in Wolaita zone Damot woyde Woreda. The objective of this is to assess the traditional beef cattle fattening management to investigate the problem of cattle fattening and to evaluate the profitability of cattle fattening system. Results are based on assess of 60 sample households selected by stratified sampling method. The average of the more participants 37% carried out fattening. The Literacy house hold heads accounts 76%.The male headed household constitutes 64% for cattle fattening system than female headed. With respect to Livestock holding more dominate fattening of steer and milking cow (29.01) and (16.96%) are respectively. The major income of farmer generated income of theme (27.27%) of milk production and (27.27%) fattening. Almost all respondents' cattle for fattening were used Local breed. The respondents practices during April-September due to feed availability and market demands. More respondents' assessment area utilizing roadside grazing (18.18%) river side grazing (15.15%),grazing on broader of crop land (12.12%). Confined (33.33%)and grazing (21.21%) and in the dry season they are used cattle for fattening system crop residues (33.33%).inset (24.24%).hay (15.15%).cassava (15.15%),sweet potatoes (6.06%)and maize and bean (6.06%) are particularly important during dry season when there is critical feed scarcity .Frequency of fattening animals is greater than 6\*1 day by altering available feed. One after the other and until finishing animals are fed under confinement House management of (78%) under confined in house until, they reached to market selling .The major disease are tsetse flies (64%), ticks and lice (36%).outbreak of disease in wet season (67%) and dry season (33%).The opportunities of the areas (39%) of the marked demand and (28%) socio cultural. Almost all producer market the fattening animal on eye- ball estimation and also no aid given for farmers on shortage of capital and from NGOs to alleviate their constraints. Generally quality and quantity of seasonal available feed are usually in adequate nutritive values and the major prevalence disease found in the study areas. Almost all farmers used extensive farming system, so the farmer should be improved to semi- intensive farm system otherwise there is high negative impact on the farmers and countries Economy.

**Keywords:** Beef, Cattle, Fattening System.

### **Introduction**

Agriculture is one of the main stay of Ethiopian economy, accounts store the GDP over 90% of the national foreign exchange earnings and 85% of the national labor forces. Cattle production in Ethiopia is an integral part of the mixed farming, agro – pastoral and pastoral production system in both rural and urban areas small holder cattle far tenting is emerging as an important source of the income. In rural Ethiopia cattle

fattening is based on locally available feed resource (zewdu and sintayehu 1987).

Over 90% of the agricultural output is produced by small holder cultivation of crop However, livestock production also play important role in the economy of small holder farmer. Livestock are the major rural population and provide a wide range of food and services to rural population (FAO, 2007).

The productivity of Livestock in Ethiopia in general and production in particular is extremely Low in terms of milk, meat production and drought power output (Azage and Alemu *et. al* 2008), mainly because of inadequate nutrition unimproved genetic resources and prevalence of disease and parasites, inadequate nutrition, unimproved genetic resources and prevalence of disease and parasites, inadequate nutrition, unimproved genetic research and extension service. Beef production of the country is characterized as extensive low input system in conjunction with crop production as result of which beef production and productivity are very Low as compared to the world average (MOA, 1998).

rapid growth of population and urban areas, expanding crop production, frequent droughts, uncontrolled grazing, bush encroachment and land erosion have , over the past several decades, contributed to a reduction in land available for grazing, the principal resource supporting livestock production in Ethiopia. The result has been a shortage of feed that impedes livestock productivity efficiency and profitability (kumsa *et al* 2008).

Ethiopia is country with deep rooted and aged socio-economic problem. Due to high rate of unemployment, the general development of rural with its attendant economic gap between urban and rural areas, high population growth rate that exert excessive pressure on educational and health system, inadequate health and education service, high incidence of disease, Due to this the country leveled as one of the least developing nation in sub- shoran Africa (E E A; 2000)

Ethiopia is 10<sup>th</sup> in the world ranking of total livestock population and 1<sup>st</sup> in case of Africa but comparing this population in Ethiopia with the productivity of livestock population is last stage, due to health care system, nutrition states and poor management are inadequately equipped and organized. As a result, cattle sheep and goats mortality rate in developing country is very high as compared to the developed country (E V A, 2000)

The economic based on farmer in Damot woyde Woreda is mixed farming system. Damot woyde Woreda has a large number of livestock populations. As a result of block yard farming practices of agriculture, its productivity is low and food security has poor nutritional status, lack of good management, poor select local animal and poor quality of beef fattening production (ERSHA,1999)

The objectives of the study were:

- ❖ To assess the traditional cattle fattening management practice in the study areas
- ❖ To investigate the problem of cattle fattening in the study areas.
- ❖ To evaluate the profitability of cattle fattening in the study area.

## Literature Review

**Cattle fattening in Ethiopia:** Beef cattle are raised for meat and by product production. The cattle production includes feeding breeding and marketing cattle with the eventual processing for consumer (Daniel T, 2002)

There are three types of beef cattle fattening system in Ethiopia.

**Traditional type of fattening system:** Cattle are kept mainly for draft power, milk and manure production and are usually sold when they are too old for these purposes or drought or cash shortage force people to sell. Oxen are usually sold after their plowing season when they are in poor condition, meat yields are low, the beef is poor quality and farmer returns often inadequate to buy replacement oxen (MOA, 2002).

**Product based type of fattening system:** In 1984 ministry of agriculture (MOA) began to help peasant farmer in Debrezeit area to fatten purchased cull oxen using molasses and mill by product this has produced profitable result for participant farmers and the number of animal fattened has increased every year (MOA, 1996) the main source of feed is agro by product like wheat bran and linseed cake.

**Intensive type of fattening system:** Intensive feeding of the available feeding supply to young oxen are used for drought power could best describe the intensive fattening practice. The feed types used for the fattening are entirely obtained from crop production especially from maize and sorghum, fagot, (1992) substantiated that in Ethiopia the farmers often young bullocks and edge of the field with lower leaves taken from the stems of the sorghum plants. Among the most common feed type used for fattening, thinning, least strip and part of maize and sorghum plants are major feeds offered to fattening animal during the main and early dry seasons.

**Housing of fattening system:** Live stock farm building and structure include like LS shed store houses, water tanker, pens. LS building must be designed in a way that they are safe for both the animal and the people working on farm. Otherwise, they can also be possible source of danger to both animal workers alike. But our country case most of the farm used animal under fattening is confined with family, no special house is constructed for fattening animal to fears their and shortage of capital (Akililu.2006).

**Time and length of fattening system:** The period of fattening system supply is only adequate for single (90-120 days) fattening cycle (3-4 months). The period of feed supplying most country is September or early October to December. So by starting in the late out season the fattening correspond with time or maximum forage growth and the availability Animal do not lock peak condition for Christmas market and to be sold at lower price held until Easter (FAO;2007).

**The determinants of fattening system:**

**Institutional factor:** As reported by Van Den Ban and Hawkins; (1998) adoption of increase fattening system is affected by police environment like input supply market, credit and price polices valuation, (Musaba, 2010). Identified that the level of education participation in off and on farm actives and training are among the factor positivity influencing participation of house hold in beef production.

**Age, Bread and Sex Factor:** Cattle are mainly for draft power and milk production and usually only sold when they are too old. These are infwencing for fattening system, and the most farmers used indigenous animal for beef production (MoA2002).

## Materials and Methodology

### The description of the study area

The survey was conducted in the wolaita zone Damot woyde Woreda, which is founded in SNNPR. The Woreda situated at 390 km. away from the Capital city of Addis Ababa, Ethiopia and 121 km from Hawassa, the capital city of SNNPRS. If also 26 km away from zone center, wolaita sodo. Damot woyde Woreda has 23 rural and 4 urban kebeles. The total area overegged of the Woreda is 32398.26 hectares. The total population of Woreda a male 61651 Female 64160 which is total population 125811 (DFWED, 2014).

### Sampling Design

From the total 27 kebeles three kebeles : Tora Sadebo, Elo Erasho and Anka Shashara were selected purposely based on their potential to tradition cattle fattening and form the selected three kebeles A total house hold 60 Households, 20 households from each Kebele will be selected by using random sampling Methods.

### Methods and Data Collection

In collecting and necessary data both primary and secondary source were employed. The primary data was collated by house to house assessing on traditional cattle fattening system using structured questionnaire, interview and discussion with respondent's .and also the secondary data was obtained from Damot woyde Woreda agricultural Office, viewing available Literature and web site.

### Data Analysis

The data collected was analyzed by a descriptive statics using average mean and percentage .The analyzed data was presented by tables.

## Results and Discussion

### Household characteristic Respondents profile

From selected households, the majority of respondent are male headed households which constitute 63.3% where as female heeded 36.7% in tradition beef cattle fattening system. The maximum age of the selected respondents are above 41 year old the second age of the selected respondents were 31-40 years old the follow one is 21-30 year and the minimal age of respondent with averagely of 36.36%.24.24%, 21.22%, and 18.18% age are respectively .the averagely family size of house hold was 4.6 it is Lower than level (CSA.2006).

**Table: 1 The Characteristics of respondent Profile**

<b>Gender of headed house hold</b>	<b>Number of respondents</b>	<b>Percentage</b>
Male	38	63.3
Female	22	36.7
<b>TOTAL</b>	<b>60</b>	<b>100</b>
<b>Age</b>		
15-20	11	18.3
21-30	13	21.7
31-40	14	23.3
Above 41	22	36.7
<b>TOTAL</b>	<b>60</b>	<b>100</b>
<b>Educational status</b>		
Illiterate	14	23.3
1-4 Grade	24	40
5-8 Grade	18	30
9-10 Grade	4	6.7
Literacy	46	76.7
<b>TOTAL</b>	<b>60</b>	<b>100</b>

**Live stock hold in the selected area**

The result on livestock as presented in the (table 2) as below, The mainly comprise fattening animals what we could probably be conducted that Tora Sadebo, Elo Erasho and Anka Shashara have a good traditional cattle fattening practice. The farmer in area highly keeps fattening is steer (29.01%) making cows for

fattening(16.96%)but(12-94%) heifers(15.2%).calves (13.39%).sheep (5.4%) and goat(7.1%).In the study area majority of fatteners used to steer due to their efficiency of gain. higher demand on market and resistant to environment. According to (Akililu2006), identified to relatively similar on assessment traditional system of his averagely was (33.3%).

**Table: 2 Livestock hold size in selected area**

<b>Livestock species</b>	<b>No. cattle of 60 house hold</b>	<b>Percentage</b>
Fattened steer	95	29.01
Milking Cow	55	16.96
Bull	42	12.94
Heifer	50	15.2
Calves	44	13.39
Sheep	18	5.4
Goats	23	7.1
<b>Total</b>	<b>326</b>	<b>100</b>

The major income generation of from milk production, Coffee, fattening, and cereals and poultry production.

**Table: 3 Role of cattle fattening in income generation**

<b>Source of major income</b>	<b>No of respondents</b>	<b>Percentage</b>
Milk production	16	26.67
Coffee	11	18.33
Fattening	16	26.67
Cereal	9	15
Poultry production	8	13.33
<b>Total</b>	<b>60</b>	<b>100</b>

The above table show that according to respondents disused with a good income generation for farmers of (26.67%) milk production (milk, butter, cheese) 26.67%) gain their income were fattens animals,(18.33%) of also from coffee and (15%) of cereal crop concluding maize, teff, wheat, sorghum) and (13.33%) of poultry production.

According to Samson and Tadele (2000) Annual report of Ethiopia Economic income is Variation due to have more inflow cash resource option than presented dwellers.

**Age, sex and breed of cattle for fattening**

The result of the assess on age, sex and breed of animals used for fattening as presented in table :4 indicted that almost all the farmers practices castrated male animals with their age more above 6 years

(60.61%). This is why the farmers prefer male (steers) or castrated and above 6 years animals because of their efficiency of gain, their resistance to environmental stresses, consume less feed and have higher demand on market.

Animals at glary are less in depositing fat, mature stress are preferred over younger one, because of their higher fat deposition and docile in nature to handle, most of time bulls for draft proposal until they reached 6 years. Exotic cattle fattening system haven't been any practical in the study areas. But .almost all (100%) cattle used for fattening were Local breeds as respondents said .This may be due to the fact the exotic breeds were didn't introduce for breed 's improvement and did not habitual. According, to former researchers (Akililu., 2006) with above disagreement so former researchers were habituated Exotic breeds in his study areas.

**Table: 4 Age Sex and breeds of cattle for traditional fattening**

Characteristics	No of respondent	Percentage
Age:		
< 6 years	24	39.39
>6 years	36	60.61
<b>Total</b>	<b>60</b>	<b>100</b>
Sex :		
male	40	66.67
female	20	33.33
<b>Total</b>	<b>60</b>	<b>100</b>
Breed:		
Local	60	-
Exotic	-	
<b>Total</b>	<b>60</b>	<b>100</b>
Castrations:		
castrated animal	60	100
Infected		
<b>Total</b>	<b>60</b>	<b>100</b>

**Time frequency and Length of fattening**

As indicated in tables below the farmers practice during April to September higher fattening (57.57%), May to August (12.12%) because of feed availability and higher market demand as respectively most respondents said that animals are confined for about more than 4 months (84.84%) and less than 4 Months

(15.16%) fattened animals depending on body condition of animals, market conditions and feed resources.

The frequency of traditional cattle fattening system is twice per year (48.48%) 36-36%) of one year per year and (15-16%) three per year identified to similar (Daniel T., 2008).

**Table: 5 Time Length and frequency of fattening**

<b>Time length and frequency of fattening</b>	<b>No of respondent</b>	<b>Percentage</b>
Time of fattening April-September May – Aug	34	57.57
Sept-December	18	30.31
<b>TOTAL</b>	<b>60</b>	<b>100</b>
Length of fattening >4 Months	51	84.84
3-4 Months	9	15.16
Frequency of fattening 2x1 year	29	48.48
3x year	9	15.16
one 1year	22	36.36

**Feeding Management of tradition fattening animals**

**Feed Resource:**

Major feed resource of tradition cattle fattening are presented in table 6. More of respondents assessment are utilizing road side grazing (18-18%) river side grazing (15.15%) grazing on broader of crop land (12.12%), confined (33.33%) and grazing (21.21%) and in the dry season they are used cattle for fattening system crop residues (33.33%) Inset (24.24%), hay (15.15), cassava (15.15%) sweet potatoes (6.06%) and maize and bean (6.06%) are particularly important

during dry season when there is critical feeds scarcity. Frequency of fattening animals is greater than 6\*1 day by altering available feed one after the other and until finishing animals are fed under confinement. Frequency of feeding less than 4\*1 day is 24.24% and more than 6\*1 day (75.75%) are respectively. Overall, the most important feed resource of cattle feed were grazing on natural grazing land (including road side grazing, river side grazing, and grazing on broader of crop lands. confined, crop after math, crop residues and maize and bean respectively. (Jema, 2008) identified similar feed resource for cattle fattening in Tamaqua averagely district, north Ethiopia.

**Table: 6 Feeding Resource Management of Fattening Animals**

<b>Feed types and grazing</b>	<b>No respondents</b>	<b>Percentage (%)</b>
Road side grazing	11	18.18
River side grazing	9	15.15
Grazing on broader crop land	7	12.12
Confined	20	33.33
Grazing	13	21.21
<b>TOTAL</b>	<b>60</b>	<b>100</b>
Dry season feed		
Crop residues	20	33.33
Insets	14	24.24
Cassava	9	15.15
Sweet Potatoes	4	6.06
Hay	9	15.15
Maize and bean	4	6.06
<b>TOTAL</b>	<b>60</b>	<b>100</b>
Frequency of feeding		
<4x1 day	15	25
>6x1 day	45	75

**House Management**

As Presented table 7 interviewed of respondents during fattening under confined in house until they reached to market selling (78%) this due to available

of feed management; supply water and supplement of feed and 6% of respondents used theater and grazing for fattening. Thus identified to as similar with Akililu Gethahun, (2006).

**Table 7: House Management**

House System	No. Respondents	Percentage
Confined	47	78
Theater grazing	13	22
<b>Total</b>	<b>60</b>	<b>100</b>

**Health Care Management**

The most respondent said there less health care management in the study area, less enough veterinary services, accessibility infrastructure. The major affect disease in the area of about 64% is Tsetse fly and 36% of are ticks and lice. Outbreak of disease 67% higher in wet season than in the dry season. Thus is due to poor feed management and less vaccination services.

Farmer the study used to control and prevention disease by vaccination services.

Farmer the study area used to control and prevention disease by vaccination services is (42%) (28%) of herbal plants in local name “Mayilo” plants and supply of clean water 30% and kept hygiene and sanitation of animal crash.

**Table: 8 Health care Management**

Major disease	No. of respondents	Percentage
Tsetse fly	38	64
Tick and Lice	22	36
Outbreak of disease		
<i>Dry Season</i>	20	33
<i>Wet Season</i>	40	67
Prevention and Management		
<i>Cleaning Water</i>	18	30
<i>Vaccination</i>	26	42
<i>Local Plants</i>	16	28
<b>Total</b>	<b>60</b>	<b>100</b>

**Opportunities of fattening**

The main opportunities that respondents to encourage farm to practice (39%) of the current of market demand more in holyday (Meskel Bali and Gena),

28% of socio-cultural aspects and (15%) availabilities for local feeds in the area. As discussed opportunity cattle fattening identified to agreement Daniel, T, 2008).

**Table: 9 Opportunities of cattle fattening**

Opportunities	No of respondent	Percentage
Market demanded	33	54%
Feed availability	11	18%
Socio cultural	16	28%
<b>Total</b>	<b>60</b>	<b>100</b>

**Problems of cattle fattening in study Area**

In study area there are many problems which cause cattle fattening about 33% of respondents prevalence of disease (tsetse flies) and less services of veterinaries

25% of respondents un improved breed of fattening animals, about 21% have less infra structure and shortage of capital in the study area. Identified to similar with Duguna G. M (2000) annual reported of (EVA).

**Table: 10 Problems of Traditional cattle fattening**

Problems	NO. of respondents	Percentage
Prevalence	20	33
Unimproved breed	14	25
Low nutritive and forage	13	21
Lack of infrastructure and	13	21
Shortage of capital		
<b>Total</b>	<b>60</b>	<b>100</b>

**Market Location and channels in the study**

The respondent have used to all market found in their localities .The Woreda found adjacent to the Wolaita Zone inter to their nearest respective market. The kerchech market day of Saturn day, the Anka orob

market day of Wednesday and the Dimtu market day of Thursday ranks the percentages of (35%25%&4% respectively are the main market respondents to be sold. For urgent income need farmer also visit in the nearest day in either near or distance location?

**Table: 11 Market Locations and Channel**

Market Location	Respondents	Percentage
Kerchech	16	35%
Anka Orob	15	25%
Dimitu	29	40%
<b>Total</b>	<b>60</b>	<b>100%</b>

**Average Price of fattened animals and profit of fattening per animals**

Almost all of the producer market their fattened animal on eye-boll estimation .Producers usually sold with retail trader price for their immediate income need .However all respondents market in eye boll due to lack of marketing on live weight based and

unknown in the study area. Although ; analysis of profit from fattening is not clearly known but, it is indicated that about (60%) of respondents net profit earns is 1100-1900 ETB having per fattening animals and 40% of the respondents that the net profit is 900-1300 ETB. having gross profit manager from 3500-4200 ETB. This is agreement with finding Kebede and Rey (1992).

**Table: 12 Average of price of fattened animals and profit of fattening per animals**

Profit of animals	No. respondent	%(percentage )
1100-1900 ETB	36	60
900-1300 ETB	24	40
<b>Total</b>	<b>60</b>	<b>100</b>



## Conclusion and Recommendations

The assess was conducted on traditional cattle fattening around wolaita zone; Diguna Fango Woreda were selected purposely based on their potential to traditional cattle fattening and from the selected three kebeles 60 households were selected randomly. Thus the farmer in the study area cattle fattening using traditional cattle fattening practices. Preference of farmers on fattening is almost all local breed and castrated animal when their age more than 6 years. More over; available feed resources included in the area are grasses, Inset, hay; maize ; bean, cassava, sweat potatoes, crop residues, etc. with a feeding frequency greater than 6 times per day with shifting one feed with others cut and carry system of feeding under confinement. And also no aid is give for farmers on shortage of capital and from NGO to alleviate their constraints.

Generally, quality and quantity of seasonal available feed are usually; in adequate nutritive values and the major prevalence disease found in the study area. We recommended on in the present study area there is less attention from farmers and stakeholder for the cattle fattening production system on the following situation.

❖ Almost all farmers used extensive farming system, so the farmers should be improved to semi-intensive farm system otherwise there is high negative impact on the farmers and countries economy.

❖ To alleviate on major problems and to meet optimum level of production much work to be done introducing forage, improving health care and providing credit to solve shortage of capital.

❖ Veterinary services have less accessible in the study area so; respective bodies should be strengthening attention to existing veterinary services center.

❖ Market System in the study area takes place traditional way so; farmers benefiting them from fattening productivity properly respective bodies.

❖ Generally; all the above consequence are potentially fulfilled in the study area future time all the above situation should be Markedly done the farmers and stake holders get a great result from these enterprise.

## References

- Akililu Getahn, (2006) Research survey on traditional cattle fattening system report. Hawassa until, Ethiopia pp;7-8
- Azage Tegene and Alemu Gebere wold (1998) prospects for pi urban dairy development in Ethiopia pp 28-39 in ESAP preceding fifth national conference of the Ethiopia society of animal production. Addis Ababa Ethiopia 15 -17 may (1997)
- Central statistical Agency (2008). Agricultural sample survey, (2007/2008) volume reporting livestock and livestock characteristic private peasant holding; statistical bulletin 417 AA Ethiopia
- Daniel, T,( 2008) Beet Cattle production system and opportunities for market orientation in Borena zone, southern Ethiopia M.S, thesis Haramaya University Ethiopia pp; 139
- Duguna G,M (2000) Annual report of Ethiopia veterinary association Addis Ababa Ethiopia
- FAO (2007) Good practices for animal feed and livestock maintaining quality of food and feed grain through and processing Rome; Italy
- Diguna Fango woreda (2003) documented annual report of Duguna fango Woreda Agricultural extension office June, (2003 )
- MOA(1996) animal and fishery resource development main department tautening extension manual FLOP Addis Ababa Ethiopia pp;83
- MOA (2002) performance report of the agricultural extension department (Amharic version) June; (2002) A.A
- Musaba E.C (2010) analysis of factors influencing adaption cattle management technologies by communal farmers in northern Namibia. Livestock research for rural development retrieved on March 2010 from [http www./rrd 22/b musa 22/04 htm](http://www.rrd22/bmusa22/04.htm)
- Fagot. J 1992, animal production in tropic sub tropics second edit, Masmylan precssltd Hong Kong
- Samson G/Michael and Tadele freed (200) animal report of Ethiopia economic Addis Ababa mega
- Van den Ban- An new, And H.S Hawkins. (1998). Agricultural extensions second edition oxford block well science.

Zewdu, K. and G.M Sintayehu (1987), livestock market survey result of animal resources marketing department. In institute of agricultural research processing of the first national livestock improvement conference 11 -13 February (1987) Addis Ababa Ethiopia pp; 97 -99.

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**How to cite this article:**

Tekalign Woldehana Uro. (2019). Assessment of the traditional cattle fattening system in Damot Woyde Woreda, Wolata zone. Int. J. Adv. Res. Biol. Sci. 6(10): 110-119.

DOI: <http://dx.doi.org/10.22192/ijarbs.2019.06.10.011>