Assessment of Beef Cattle Fattening and Marketing System in East Badawacho District, Hadiya Zone, SNNPRS, Ethiopia

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Abstract

This study was conducted in east Badawacho District, Southern Nations Nationalities and people Regional state, Ethiopia, with the objective of to assess cattle fattening and marketing system in the study area. Four kebeles (Were Mazoria, Were Gere, Wera Boshera and Wera Lalo) were purposely selected based on their potential to beef cattle production. The main feed resources in the district are communal natural land, crop residue, Enset, and Atalla. Regarding beef cattle production, the district used a traditional production system with the respective duration of feeding of 3 to 5 months was identified. The purpose of keeping cattle is depends on the season, during the dry season from January to March used for traction purposes and then they used for fattening. Due to the farmers used beef animals after they used for traction purpose the age of the cattle are above 5 years. The demand for beef cattle in district, especially in the rural areas, was high around the holydays like, Meskel, Charismas, and Easter. About 96% of the beef producers prefer to sell their animal from August to September when price is highest. About 80% of the farmers sell their cattle in the local market. The price of beef cattle in district during season ranges from ETB 10,000-18,000 birr. The major identified beef cattle production constraints in the area are feed shortage and disease problems. The market facility and market chain development is also one of the main issues needs attention to solve market problem. Forage conservation strategies and improve the utilization of improved forage one of the methods to overcome the seasonal feed shortage.

Keywords: Beef Cattle, Fattening, Marketing

1. INTRODUCTION

Ethiopia has large livestock population and diverse agro ecological zones suitable for livestock production. The cattle production plays an important role in the economic and livelihoods of farmers and pastoralists. Meat production is important in the Ethiopia economy. The annual contribution of ruminants to meat production in Ethiopia is estimated at over 3.2 million tones recuperating over 72% of the total meat production. The live stock marketing authority (LMA, 2004) estimated the annual potential for export at 72000 tones of meat with on equivalent values of USD136 million. The annual out flow of beef cattle from Ethiopia through informal market is very huge. Although the live stock sector has a significant contribution to the Ethiopia economy production per animal is extremely low, (CSA, 2003).

In addition to meat production beef cattle have a secondary product for developing countries as draft power. For cattle number has contributed increase due to greater demand for beef in developing countries and increase export demands, (Taylor, 2004). However, livestock production has mostly been substance oriented and characterize by very low reproductive and production performance of the other hand. Market oriented live stock production has been gradually emerging in recent years. The government of Ethiopia is trying to increase the export of meat and live animals that can contribute to market lead economic growth and poverty reduction in the country (Adugna, 2008). Poof nutrition and feed shortage are the causes for down grade performance of the live stock sector in Ethiopia. Most live stock destined for export or slaughter are produced in the pastoral area from rain feed pastures and are slaughter with little or no access to better quality feed required to increase weight, improve condition and dressing percentage and reduce age at slaughter. Natural pasture are the main source of live stock feed. However, they cannot fulfill the nutritional requirement of the animals. Even though Ethiopia in general and Badawacho district in particular has a large number of livestock populations, the beef cattle productivity is very low. Therefore, this study is designed to assess beef cattle fattening and marketing system in the study area.

2. Methodology

The study was conducted in east Badawacho district which is located in Hadiya zone of the southern Notions, Nationalities and peoples of regional state (SNNPRS). Shone is the district capital and found 336km south of Addis Ababa and 120km from the regional capital Hawassa. The district altitude ranges from 1774 to 2410 ma.51. The mean annual rain fall is 1216.3mm and range from 1650mm to 1400 mm. The average temperature is $12 \, {}^{0}\text{C}$. The area characterized by bimodal raining seasons.

Sample techniques

The multi- stage sampling was taken to select the representative households in the district. The first stage was used to select four kebeles purposively based on large number of beef cattle population. In the second stage, 20 households from each selected kebeles (a total of 80 households) were purposively selected based on the availability of fattening animals in the households.

Data collection

The collected data were analyzed by using SPSS statistical software version 16.0 for Windows (SPSS, 2007).

3. RESULTS AND DISCUSSIONS Household characteristics

Table 1: Sex of the respondents

sex			No of re	spondent	& their p	arentage			To	otal
	Were m	azoria	Wera ge	ere	Wera be	dshera	Wera la	lo	No	%
Female	4	20%	6	30%	6	30%	4	20%	20	25%
Male	16	80%	14	70%	14	70%	16	80%	60	75%
Total	20	100%	20	100%	20	100%	20	100%	80	100%

According to the table.1 in the four kebeles the majority (75%) of respondents were male and the remaining 25% of respondent were female.

Table 2: Level of Education

Level of education	No of	respondent	t & thei	r percentag	e				Total		
	Were	Mazoria	Wera	Boshera	Wer	Wera Gera		ra Lalo	No	%	
Illiterate	12	60%	10	50%	6	30%	8	40%	36	45%	
Basic education	-		-	-	-	-	-	-	-	-	
Grade 1-8	8	40%	6	30%	4	20%	4	2%0	22	27.5%	
Grade 9-12	-	-	2	10%	6	30%	6	30%	14	17.5%	
Above 12	-	-	2	10%	4	20%	2	10%	8	10%	
Total	20	100%	20	100%	20	100%	20	100%	80	100%	

According to the table 2 in the four kebeles 45% of responded were illiterate and 27.5% had educational level of primary and secondary schools. From these house hold characteristic the researcher understood that in the sampled kebeles the majority farmers were illiterate and others were educated formally. According development agent in the sampled kebeles due to large proportion of illiterate farmers in the kebeles creates difficulty in the technology transfer because if requires great effort to educate them to adapt a given new technology, Both survey and discussion with development agents, show that educated formers were more Experienced in meat production performance than illiterate farmers.

Type of breeds

Table 3: The number of households rear different livestock type

Breed type	No of	responder	nt & thei	ir percent	age				Total	
	W/ M	azoria	W/G	lera	W/B	oshera	W/ I	alo	No	%
Cattle	12	60%	10	50%	12	60%	8	40%	42	52.5%
Sheep	4	20%	6	30%	4	20%	4	20%	18	22.5%
Goat	2	10%	4	20%	4	20%	4	20%	14	17.5%
Poultry	2	10%	-		-		4	20%	6	7.5%
Total	20	100%	20	100%	20	100%	20	100%	80	100%

According to the table 3 in the four kebele from total population 52.5% of respondents were reared the cattle breed. From this breed type were cattle, sheep, goat and poultry were reared by farmers of the district and researcher under stood that in the sampled kebeles the farmers were fattened the cattle breed. The number of cattle & sheep per house hold in kebeles was higher than that of goats and poultry. The composition of cattle, sheep, goats and poultry was 52.5%, 22.5%, 17.5% and 7.5% respectively. This finding is a agreed with reports of (Zewdu, 1999), in the same agro-ecological zones Hawassa zuria district who obtained that the major respondents were domesticated the cattle breeds.

According to the table 4 in the four kebeles the 100% of respondents were reared or domesticated local breed. From these breeds type of researcher understood that in the sampled kebeles the all farmers were fattened local breeds. The local cattle breed is preferred by the community because of its relatively smaller body size and lower market price for buyers, and it requires lower cost for management, as well as the local breed adapt the harsh climatic condition the local breed resist and the adapt the harsh climatic condition and disease rather than that the cross and exotic breeds. This finding is agreed with reports, of (Lewdu, 1999), in the same agro- ecological zones in Hawassa zuria district, who abstained that the major respondents were fattened local breeds.

Type of cattle			No of	responde	nt & theiı	· percenta	ige		Г	'otal
breed	W/ N	Aazoria	W /B	oshera	W/ Ger	a	W/ Lalo)	No	%
Local breeds	20	100%	20	100%	20	100%	20	100%	80	100%
Cross breed	-	-	-	-	-	-	-	-	-	-
Exotic breed	-	-	-	-	-	-	-	-	-	-
Total	20	100%	20	100%	20	100%	20	100%	80	100%

Table 4: Type of cattle breed & respondents

Land holding

Table 5: Land holding per household

Form grazing system	No of respondent	& their percent	tage		
	Were Mazoria	Were Gera	Were Boshera	Were Lalo	Average
Crop land (ha)	1.97	1.69	1.65	1.55	1.715
Pasture land (ha)	0.03	1.31	0.15	0.15	0.41
Total	2	3	1.80	1.75	2.125

Table 5 reviled that of total farmers 2.13ha own 1.72ha and 0.41ha of crop land and pasture land, respectively. The higher and lower land holding under crop land 1.71 5 and pasture land 0.41. The majority of respondent have crop land in average 1.72ha. In additional the respondents were used the more crop land than pasture land for their fattening animals the aim of maximize and improve their fattening production. This finding is line with (Tolera, 2001 and Netsanet *et al.*, 2010), in the same agro-ecological zones, in Shashago district, who obtained that the majority respondents were used crop land than the pasture land, the reason suitable and utilization of animal food.

4.4 Available feed resource

According to table 6 in the four kebeles 32.5% of respondent the major feed recourse were Enset, natural pasture, Atalla, browse trees, and other supplements. The contribution and status of each feed resources were different because farmers in the district produce and other crops. The major grain 8.13%, hay % natural pasture 10% coffee residue 6.5% Rhodes grass by cut and carry system 11.88% and Banana leaves 5% were produced in limited amount stock feed resource (including beef cattle) from in four kebeles respectively, when feed shortage accrued. Table 6: Major feed resources

Feed type	No of	respond	lent &	their p	ercenta	ige				
	W/ M	azoria	W/0	Gera	W/Be	oshera	W/ I	Lalo	Total	
Natural pasture	4	20	0.8	4	2	10	1.2	6	8	10
Нау	0.8	4	1.2	6	1.2	6	0.8	4	4	5
Maize	1.2	6	0.5	2.5	4	20	0.8	4	6.5	8.13
Banana leave	0.5	2.5	1.5	7.5	-		2	10	4	5
Enset (false banana)	6	30	6	30	10	50	4	20	26	32.5
Atalla (by product of local alcoholic drink)	4	20	4	20	0.8	4	8	40	16.8	21
Coffee residue	1.5	7.5	2	10	0.5	2.5	1.2	6	17.2	6.5
Rhodes grass	2	10	4	20	1.5	7.5	2	10	9.5	11.88
Total	20	100	20	100	20	100	20	100	80	100

In addition, about 32.5% and Rhodes grass by cut and carry system to feed resource their livestock grass hay availability was also low because farmers have no enough natural pasture, to store for time of feed resource separate a hay and thus contributes little to solving the feed shortage that accurse during the period. This finding is in the line with report of (Netsanet *et al.*, 2010), in the Badawacho district, who obtained that the majority of the respondents (32.5%) feeding the inset for their fattening animals.

Table 7: Major av	ailabl	e feed	d reso	urces	for f	atteni	ng by	vseaso	on									
Feed type	No of	f respon	dent &	their pe	rcentage	e												
	W/ M	lazoria			W/G	era			W/B	oshera			W/La	alo				
	Dry	%	wet	%	Dry	%	wet	%	Dry	%	wet	%	Dry	%	wet	%		%
Natural pasture	2	10	6	30	2	10	6	30	2	10	6	30	2	10	6	30	24	30
Нау	2	10	-		2	10	-		2	10	-		2	10	-	-	8	10
Maize grain	-		4	20	-		4	20	-		4	20	-	-	4	20	16	20
Enset (false banana)	8	40	2	10	8	40	2	10	8	40	2	10	8	40	2	10	8	10
Atalla (a byproduct of local alcoholic drink)	8	10	2	10	8	40	2	10	8	40	2	10	8	40	2	10	8	10
Banana leaves	-		4	20	-	-	4	20	-	-	4	20	-	-	4	20	8	10
Rhodes (cut and carry system)	0		2	10	-	-	2	10	-	-	2	10	-	-	2	10	8	10
Total	20	100	20	100	20	100	20	100	20	100	20	100	20	100	20	100	80	100

4.5 The type of feed resource availability by season

Free grazing on pasture land and cu and carry system were practical in study area. Some farmers provide

supplements at the Moring and evening some farmer use hay for dry season feeding different produced other crops. The result natural pasture 30% hay, 10% Enset, 20% Atella 10% and Rhodes grass by cut and carry system 10% are produced of animal with concentrate mixture that would improved production us beef. In additionally, banana leaves and maize grain were available feed resource of beef cattle in wet season because it depends on availability of rain fall.

This finding is in line with report of Workneh (2006), in the Badawacho districts, who obtained that the majority of respondents (30%) were feeding the natural pasture for their fattening animals.

4.6 Beef cattle fattening and marketing

In area study farmers buy oxen during the dry season especially from January to march for traction purposed. Farmers in the area supply beef cattle to shone town and rural markets in Mazorra, Wera Ggre, Wera Boshela, Wera Lalo on specific market days. Beef cattle marketing varies considerably a cross the district. The type of fattening system practical were semi-intensive as expert respondents. They practices identification of cattle starting from day of purchasing and the have also the records such as: cost of buying prices of individual sell and veterinary services. Development in come generation prefer to by this mature animal due to their relative faster growth rates. In the traditional system, oxen were usually sold after the pouching season while they were in poor body condition. Meat yield were low, the beef was of poor quality and returns to farmers were often inadequate even to buy are placement ox. Fattening activity in the area, however, differs substantially from the above mentioned enterprises small holder farmers commonly fattened mature and therefore much older animals (above 5 years old) for short duration usually from 3-6 months, based on availability of adequate feed facilities and the animal body weight and fattened level. On the others hand, some farmers purchase oxen specifically to fatten and sell them so as to get higher price per weight margins on each fattened animals.

Place of Markets	No of 1	espond	ant & the	eir perecr	ntage				Total	
	W/ ma	zoria	W /Bos	shera	W/ ge	ra	W/ lalo		No	%
Local market	NO	%	NO	%	NO %		NO	%	NO	%
Central market	20	100	16	80	16	80	12	60	64	80
In the village market			4	20	4	20	8	40	16	20
Total	20	100	20	100	20	100	20	100	80	100

Table 8: The place of where respondents were purchased the beef cattle

According to table 8 in the four kebles 80% respondents were purchased from local market and only a few respondents (account in percent about 20% were purchased from village. From the result the researcher under stood that the larger portion of the respondents were purchased from local market. This finding line with (Dejene, 2001) in the same agro-ecological zones in west Badawacho district, who obtained that the majority respondents were purchased from local market in west Bodawacho district. In additional above discussed our result similar with that to the previous researchers result, in the studied area.

			0							
Place of market	No o	f responde	nt & th	eir percent	age				Total	
	W/n	nazoria	W/B	loshera	W/g	era	W/la	alo	No	%
Local market	16	80%	14	70%	18	90%	16	80%	64	80%
Centeral market	2	10%	2	10%	-		-		4	5%
In the village market	2	10%	4	20%	2	10%	4	20%	12	15%
	20	0 100% 20 100% 20 100% 20 100%							80	100%

Table 9: The area of where respondent are sailing their fattened animals

According to the table 9 in the four kebeles larger portion (80%) of respondent were selling at local market and they remaining respondents (in percent account 5 &15%) were selling at central market and in the village respectively. From the result the researcher understood the larger portion of respondents were sold at local market. This finding is agreed with report of (Workneh, 2006), in the some agro-Ecological zones in Adillo districts of Kambata-Tambaro zones, who obtained that the majority respondents were selling the their fattened animals, at local markets. Because of small holder farmers do have little knowledge on how the market and why price fluctuates and have virtually no information on market condition.

According to the table 12 of the four kebeles most (60%) of respondents were got good market demand the month from August to September. Next to that the respondents about 20% of respondent were got the good market demand the months from November to December. In similarity the remaining (20%) of respondents were got good market demand from March to April.

Table 10: The season which was respondent were got good market demand when they selling their fattened animals.

Season	No o	of resp	ondent & t	heir p	ercent	age							Tota	ıl
	W/ r	nazori	a	W /I	Bosher	a	W/ §	gera		W/ I	alo		No	%
	No	%	Price	No	%	price	No	%	price	No	%	price		
August to	12	60	10000-	12	60	10000-	12	60	10000-	12	60	11000-	48	60
September			18000			18000			18000			18000		
November to	4	20	9000-	4	20	9000-	4	20	9000-	4	20	10000-	16	20
December			12000			12000			12000			15000		
March to	4	20	11000-	4	20	11000-	4	20	11000-	4	20	12000-	16	20
April			15000			15000			16000			16000		
Total	20	100		20	100		20	100		20	100		80	100

Based o the above table, the majority (60%) of respondents are got good market demand the months from August to September. In generally, the respondents were got good income or market demand during above mentioned or explained months, in the cause of the religious of the holidays, Meskel, and Christmas in the study area. This finding is ling with report of (Ayela, 2000). In Badawacho district, who obtained that the majority respondents were got good market demand the season from August to September due to the cause of holiday (Meskel).

According to the table 11 about 60% of respondents are bought the age of animals above 6 year and the next to that the respondents about 40% of respondents are bought the aged animals i.e. from five to six years. This finding is line with reports of (Tumato,1998) in Badawacho districit, who obtained that the majority respondents were bought, the old animals (the age of above 6 years), because of older animals are fast weight gain. Table 11. The age of animal when the farmers purchased for fattening

Age of animal	No of	f responde	nt & the	ir percent	age				Tota	1
	W/ N	lazoria	W /B	oshera	W/ C	Gera	W/ L	alo		
	No	No % No %		%	No	%	No	%	No	%
1-2 year	-	-	-	-	-	-	-	-	-	-
3-4 year	-	-	-	-	-	-	-	-	-	-
5-6 year	4	40%	4	40%	4	40%	4	40%	16	40%
Above 6 year	6	60%	6	60%	6	60%	6	60%	24	60%
Total	10	100%	10	100%	10	100%	10	100%	40	

4.7 The Duration of fattening animals

According to the table 12 of the four kebeles about 60% of the respondents are fattened of stay their fattening animals the portion from 4 t o6 months and the next, to that the respondent about 40% of respondents are fattened of stay their fattening animals the portion from 3-4 months. From that the result the researcher under stood or concluded the most portion of the respondents are fattened their animals the period from 4.-6 months. Table 12 The fatting duration

Duration	No c	of responde	nt & the	ir percent	age				Total	
	W/ N	Mazoria	W/Be	oshera	W/ Ger	a	W/ Lale	С		
	No	%	No	%	No	%	No	%	No	%
1-2 age	-	-	-	-	-	-	-	-	-	-
3-4 age	8	40%	8	40%	8	40%	4	20%	32	40%
4-6 age	12	60%	12	60%	12	60%	16	80%	48	60%
Above 6 age	-	-	-	-	-	-	-	-	-	-
Total	20	100%	20	100%	20	100%	20	100%	800	100%

4.8 The constraints of beef cattle fattening and marketing system of the study area

Table 13: The major constraints of beef cattle production and marketing

constraints	No of respondent & their percentage								Total	
	W/Mazoria		W /Boshera		W/ Gera		W/ Lalo		No	%
Disease	4	40%	3	30%	3	30%	3	30%	13	32.51%
Shortage of the feed	2	20%	2	20%	2	20%	3	30%	9	22.5%
Poor hygiene of poor sanitation	1	10%	2	20%	1	10%	1	10%	5	12.5%
Poor market demand	1	10%	1	10%	1	10%	1	10%	4	10%
Lack of transpiration (suitable road)	1	10%	1	10%	1	10%	1	10%	4	10%
Lack of skilled man power	1	10%	1	10%	2	20%	1	10%	5	12.5%
Total	10	100%	10	100%	10	100%	10	100%	40	100%

According to the table 13 of the four kebeles from the total about 32.5% of respondents are lost the their

fattening production due to the various diseases (32.5%) and the next to that about 22.5% of respondents are lost their fattening (beef) production due to the feed shortage. In additional other remaining constraints are poor hygienic (poor sanitation), sometimes poor market demand, lack of suitable road to access the good markets, lack of skilled man power are the minor problem in the study area. This finding is line with report of (Tumato,1998) in Badawacho, district, who obtained, that the majority respondents were lost their fattening production by disease.

Conclusion and Recommendations

This study was conducted in east Badawacho district, Southern Nations Nationalities and people Regional state, Ethiopia. A total of 80 household were sampled from these kebeles. Even though east Badawacho district was dominantly characterized by mixed crop-live stock subsistence farming system. The number of cattle was higher than that of sheep, goat and poultry. Natural pasture and crop residue where the most commonly used feed resource for beef cattle. Although Enset was providing significant amount of feed for society, now a days. Beef cattle marketing in district was restricted to shone and Adillo towns. Farmers traditionally fatten cattle specially oxen after the computation of tillage by feeding grass for one to three months. The type of cattle supplied as beef cattle were from both sex groups age was greater than above 5 years. Then they sell the beef animals at price ranging from ETB 11000 birr to18000birr at local market. The demand for beef cattle in district, especially in the rural areas, was high around the holydays like, Meskel, Charismas, and Easter. About 96% of the beef producers prefer to sell their animal from August to September when prices are higher. Diseases and feed shortage was the main problem for those farmers.

In order to solve the feed shortage the respective bodies should provide the improved forage crop and forage conservation techniques. Health centers and veterinary clinics should be expand and distribute in to all areas of farmers in order to reduce disease problem. The market facility and market chain development is also one of the main issues needs attention to solve market problem.

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