Constraints, Opportunities and Challenges of Cattle Fattening Practices in

), lack of cooperation with in the association member's (7th), limited access to credit (7th), lack of processed and mixed ration feed suppliers (11th) unpredictable cattle market (11th) were the major recognized constraints in urban cattle fattening practices in Dessie town. In consistence with different constraints the cattle fattening sector in Dessie town tightened with so many challenges which needs short and long term solution. Better housing system (clustering approach), absence of endemic health problem of fattening cattle, presence of five functional four factories, increase demand for meat, presence of federal as well as regional government great emphasis, motives and interest of the educated society to be part of the sector, availability of infrastructure such as road and electric access were the identified opportunities related to cattle fattening practices in Dessie town.

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alleviation and become an important business sector. Simultaneously attention needs to be focused on smallholder cattle fatteners as well as private sector as engines of economic vitality. In Ethiopia, government and non-governmental organizations currently encourage the emerging small scale as well as commercial fattening farms and support establishments of the sector either in cooperative or private farm. However, there is limited information about their constraints

fattening practices. As urban cattle fattening p work and investigation overall activities and pe improvement technolog generating informatior challenges, appropriate as well as peri urban c recognizing the fact th recent comprehensive attention to the promoti erefore, it is ess constraints, opportunit emerging urban and pe based on the above ba the constraints, opportu fattening in the urban a

Materials and Methods

Study area

e study was conducted in Dessie town. Dessie is located in northern part of Ethiopia in Amhara National Regional State, South Wollo zone at a distance of 400 km from Addis Ababa. Its astronomical location is at 11°8′N-110 46' North latitude and 39°38′E-410 13' East longitude. Relatively it is bounded by Kutaber Woreda in the north, Dessie Zuriya Woreda in the east, by Kombolcha town in the south. e topography of Dessie is a highland type surrounded by 'Tossa' mountain [5]. Its elevation ranges between 2,470 and 2,550 meters above sea level. Dessie is one of the reform towns in the region and has a city administration consisting of municipality, 10 urban and 6 peri urban kebeles.

Sampling procedure and sample size

Urban and peri urban kebeles was selected using complete enumeration technique (censes) whereas, individual and group cattle fatteners in per urban and urban kebeles nominated via systematic random sampling and complete enumeration procedures, respectively. Accordingly, all peri urban and urban kebeles who practices cattle fattening were totally considered. In the case of individual and group cattle fatteners' selection due to manageable number of cattle fatteners, the entire individual and group cattle fatteners with in each urban kebeles was totally nominated. However, because of large number and homogenous cattle fattening tactic systematic random sampling approach was applied in the selection of individual cattle fatteners' in each peri urban kebeles. Basically, the urban cattle fatteners organized in to three sub class of associations called 'mahiber' depend on the number of members they bounded. 'Yegel' is an association which has one member only. 'Shirikina mahiber' is associations which comprise two to nine members. 'Mahiber' is an association which comprises the largest number of participants which incorporate ten and more than that. Micro and Small Enterprise O ce collaborate with the Agriculture O ce organize and provide already prepared cattle fattening shade (cluster of fattening in one zone) with ve years contract agreement. Generally, for this study urban and peri urban kebeles as well as individuals and groups who practices cattle fattening within each kebeles were completely considered.

Accordingly, Segno-Gebeya (01), Arada (03), and Bowanbo-wuha (010) were selected from urban kebeles which holds di erent structured cattle fatteners. Tita (011), Kurkur (012), Boru-Selase (013), Kelem-Dereba (014), Gerado-bilen (015) and Gerado Endodber (016) were selected from peri urban kebeles for the study. us, peri urban individual cattle fatteners were selected via systematic random sampling approach from the registered list of cattle fatteners from each selected peri urban kebeles. Accordingly, 22, 42, 7, 32, 31 and 15 registered peri urban cattle fatteners were selected systematically from Tita (011), Kurkur (012), Boru-Selase (013), Kelem-Dereba (014), Gerado-bilen (015) Gerado Endodber (016), respectively. As well, one 'yegel' which has one member, one 'shirkina mahiber' hold 9 participates and two 'mahiber' embraces 31 cattle fatteners were completely considered from Segno-Gebeya (01), Arada (03), and Bowanbo-Wuha (010) urban kebeles. e sample size in each peri urban kebeles was determined based on the proportional to size sampling method where as in urban kebeles all cattle fattening participants under 'Yegel', 'Shirkina Mahiber' and 'Mahiber' were considered. erefore, totally, sample sizes of 190 (41 urban and 149 peri urban) cattle fatteners were considered for the survey. e sample size (n) was determined using the formula recommended by [6]. N=0.25/SE2 Where: N: number of sample, SE: standard error, with the assumption of 4% SE, 190 households were sampled.

Data collection and analysis

Information about households (cattle fatteners) characteristics, major constraints, opportunities, challenges and motives of urban and peri urban cattle fattening practices were collected using a structured questionnaires. Key informant interviews were carried out regarding major constraints, opportunities and challenges with Agricultural O ce Experts and Developing Agents. Furthermore, formal and informal group as well as individual discussion carried out with urban and peri urban cattle fatteners. Researcher personal observations together with his practical experience in the study town related to cattle fattening were also incorporated. Consequently, all the collected data were coded and entered into a data base using statistical package for social sciences (SPSS). Descriptive statistics such as mean, percentile, frequencies and GLM of the statistical so ware were used to analyze the data using the SPSS statistical so ware. Index was calculated to provide ranking of constraints of urban and peri urban cattle fattening practices according to the following formula.

Index of cattle fattening constraints was calculated. First a weighted value was given for each constraint based on their rank (3 for the 1

Constraints					Peri urban *kebeles* (n=149)				Urban *kebeles* (n = 41)				Rank
		Constraint priority			TW	Index	Rank	Constraint priority			TW	Index	
		1st	2nd	3rd				1st	2nd 32	3rd			
1	Recurrent drought & feed shortage	88	40	21	365	0.408	1	12	10	6	62	0.252	2
2	Feed price increment	33	37	42	215	0.24	2	22	20	15	121	0.492	1
3	Unsuitability of the environment	25	31	29	166	0.186	3	4	6	2	26	0.106	3
4	Illegal brokers												

Generally, female participations as owner was less in the cattle fattening practices in Dessie town when compare to the male participants.

Age of the household heads: It is revealed that the overall cattle fatteners involved in the study were between in the age of 27.4 to 55.4 years. e average age was 37.2 years (Table 4) which indicated that the middle age category of the community involved in the cattle fattening sector in the current study town. In the urban and peri urban kebeles the average age was 32.9 and 41.4 years, respectively which revealed that the urban cattle fattening accomplished by young generation and also the sector is premature compare to the peri urban kebeles.

Education status of household heads: Out of the household heads included in the current study, about 3.7% and 8.4% were taken religious and basic education ('Meserete timihert') whereas, the rest accounted for about 16.5%, 36.9%, 23% and 11.7% had formal education background of 1st cycle primary school (1-4), 2nd cycle primary school (5-8), secondary school (9-10), and preparatory school (11-12), respectively. When associate the education level of urban and peri urban cattle fatteners, all of urban cattle fatteners were achieved the 2nd cycle primary school (5-8),(42.9%) secondary school (9-10) (35.8%), and preparatory school (11-12) level) (21.3%) while with some exception (12%) majority of peri urban cattle fatteners (88%) was with in and below 2nd cycle primary school (5-8) (Table 4). e di erence may be due to the way of living and degree of focus for education. Such educational achievement in the peri urban participants has negative impact for the introduction of modern cattle fattening technology as well as adoption of modern fattening approach.

Family size of the households/member's size of the associations: According to the result, at study town level, the average family size of the HH is 7.5 persons per family. e maximum and minimum HH sizes were 9.2 and 5.9 persons per family in Dessie town (Table 3). When relate the average family size of the urban and peri urban cattle fatteners, 9.6 and 5.3 people per family or member per association, respectively. e urban result was higher, due to the number of participants in each association considered as a family member in the current study.

Challenges raised by professionals (Agricultural Experts and Development Agent's) and urban and peri urban cattle fatteners in common	urban	Peri urban
Ø Lack of modern cattle fattening experience		
Ø Environmental challenge		
Ø Absence of market linkage		
Ø Poor cattle market infrastructure. In any of the cattle market no service other than fencing.		
Challenges upstretched by Kombolcha ELFORA meat processing factory		
Ø The meat factory complains there is no urban and peri urban cattle fattening farm which has continuous capacity to supply up to the factory demand.		
Challenges observed by the researcher		
Ø Lack of organized and computerized recording system at town office and kebele level. In addition, partially less consistent recording at individual urban cattle fatteners level where as no at all in peri urban fattening.		
Ø Presence of old meat processing house with old infrastructure. Lack of veterinary equipment for pre and post mortem diagnosis in meat slaughtering house called 'kera'. No recorded data to check and trace back the pervious health history of cattle specially, for proper controlling of drug withdrawal period. Generally, no equipment's and laboratory for meat inspection (it also manager suggestion)		
Ø Individual or groups open cattle fattening farm without professional license		
Ø Cattles to be fattened trek long distance without feed, and rest. No reserved area for rest and service such as water and watering area with minimum cost		

Income sources of household head: Farming (48.0%), cattle fattening (31.9%), civil servant (employment in different organization) (18.9%), other trade other than cattle (1%), and cattle trade (0.34%) were the identified income sources for those cattle fatteners participated in the study town. Farming different crops (96%) followed by other trade other than cattle (2%) were the income sources of peri urban cattle fatteners. The rest, secure their income via employment in government institutions and NGO as civil servant (0.7%), cattle trade (0.7%) and cattle fattening (0.7%) (Table 2). The data show that, in urban kebeles, cattle fattening (88.9%) and employment in government institutions and NGO as civil servant (11.1%) was the only source to secure their income. Particularly, cattle fattening take the major share,

has another advantage, which could be used as a potential source of fattening cattle. is opportunity enables the study area to use the

by cattle fatteners in Dessie town. e current result is in line with [9] which reported that inadequate feed supply is one of the major constraints hampering market oriented livestock development in the Amhara National Regional State (ANRS) in particular and in Ethiopia in general. Particularly, clarify feed shortages are root causes for the poor performances of the livestock sector in general and fattening in particular. Similarly, Belete explain the fattening practice is constrained by high feed cost, poor quality and low availability of feed resources, inadequate veterinary services, and weak extension services as well as good management practices and proper policy support for livestock development. erefore, producing a high quantity and quality of feed for animals is a key factor in raising healthy and productive livestock sector [2]. In Dessie town especially September to December relatively there is abundant feed resources. On the other hand, the feed shortage and price increased severely towards January to June. is nding support the idea which shows alternating periods of surplus and de cit result in a very low level of production for the entire year [10]. Similarly, agro industrial by products are available with relatively low cost during September up to December. is is because, the indicated months are the major period to harvest di erent crop in and around the study areas which will be inputs for factories. Consistently, in the peri urban kebeles farmers particularly, cattle fatteners use their own feed resource comes from the farm. According to Tessema, seasonal variations in feed quality and quantity are the main limitation to animal production and cause uctuation in productivity throughout the year, particularly in the dry seasons during which feed is limited. Generally, the government

di erent service for the cattle fatteners. In and around the study town there were more than ten cattle market other than fencing totally there was no market infrastructure. Simply provides the cattle marketing space with 5-7 birr per ox service charge. e current research nding agrees with Shitahun who described that marketing system was one of the least developments of the livestock sub-sector in the study area. It was characterized by a large number of highly dispersed markets,

management aspect (researcher observation) at cattle fatteners' level. Few of urban cattle fattening farm with the guidance of governmental o ce, try to record information like marketing price. But, in the cattle handling and management aspect no recording system totally. Such limitation severely a ects the sector and makes it di cult to purse to the modern production approach.

Less focuses and professional considerations

As per the key informant interviews and group discussions with town and kebele Agricultural experts less consideration was given for animal science profession compare to other agriculture eld such as crop science and natural resource sector. Majority of the works were undertaken in group wise and other agriculture related sector was taken the largest coverage. During reporting great emphasis was given for other agricultural related sector. Accordingly, animal science expertise engaged and evaluated by other agriculture activities. Generally, such practices have negative impact on study area specialization, and create di culty to support cattle fatteners with equipped practical and modern skill, and dri ing of animal science experts to other eld of study.

Inadequate practical support and limited practical experience of experts

Inadequate practical support and limited practical experience of experts were the challenges which a ect the cattle fattening sector in Dessie town. ey explained that majority of trainings and technical

cattle fattening sector those intensive plans intended to do by regional as well as federal government must be implemented practically.

Acknowledgements

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