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Study on Major Health Problem of Cattle Development in Mezhenger, Sheka and Benchi-Maji Zones of South Western Ethiopia

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The study was conducted in Bench-Maji and Sheka of Southern Nation's Nationalities and Peoples Regional State and Mejenger Zone of Gambella National Regional State to identify the major health problems recognized by farmers and livestock constraints in the study Zones. The questionnaire survey result revealed that Black leg (66.5%), ticks (46.5%), bloat (39%), Trypanosomiasis (37%), leech/Hurdiasis(30.5%), FMD (29.5%) and LSD (28.5%) were the most common suspected diseases affecting cattle health in that order of importance and Anthrax (21.5%), Pneumonia (20.5%) and abortion (16%) were the next important health problems of cattle production. The major cattle production constraints in the study areas perceived by the households were feed shortage, diseases prevalence, and lack of drugs, lack of market and inadequate extension and veterinary services. In the study area, the main traditional medicines used (Plants) were Kerebicho, Bisana, sensel, hot pepper (capsicum frutescens), tobacco leaf (Nicotianatabacum L.) and Fexo *(Lepidiumsativum)*. In addition to these plants, in the study area, senafich, yabshero, Kerosene, butter, ashand Vegetable oil were also used as a traditional medicine for treat sick cattle. It was suggested that expansion of veterinary services, introduction of alternative animal feed sources and detailed epidemiological study would help to alleviate cattle health constraint in the study area.

Keywords: Major disease, Constraints, ethno-vet, cattle

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INTRODUCTION

Ethiopia has the largest livestock population in Africa, with a total cattle population of 57.83 million, 29.70 million goats, 28.89 million sheep, 60.51 million chickens and 1.23 million camels (CSA, 2016).These livestock resource has been contributing a considerable portion to national economy. The livestock contributes about 16.5% of the national Gross Domestic Product (GDP) and 35.6% of the agricultural GDP. It also contributes 15% of export earnings and 30% of agricultural employment (Leta and Mesele, 2014). However, the productivity of the livestock resources and the benefits obtained from the sector does not matching with the high livestock population (MoFED, 2010).

The Southern Nations, Nationalities and Peoples

Region (SNNPR) has a huge number of livestock population with the current estimate of about 11.17 million cattle, 4.70 million sheep, 5.34 million goats and 10.85 million chicken (CSA, 2016). According to Bureau of Planning and Economic Development (BOPED) report trends in cattle population in the region slightly increasing starting from 1997 while it was relatively constant for sheep and goats (BOPED, 2002). Livestock have various social and economic functions in both highlands and lowlands/pastoral farming systems. In the lowland and mid altitude areas of the region, livestock are part of the mixed farming complex providing integrated inputs for crop production and outputs such as milk, meat, eggs, hides and skins(Getachew, 2003). In the low land parts of the region, livestock are generally the sole sources of livelihood providing milk, meat and transport at large, while hides and skins provide additional income (Hussen et al., 2008; Behnke, 2010).

Despite large number of livestock population, the productivity of animal and the contribution of this sector to the national economy arelow due to constraints of diseases, nutrition, poor management, and poor performance of endogenous breed and lack of appropriate health services (Shiferaw et al., 2005).Among these constraints disease is the most important and responsible for reducing both numbers and productivity of animals (Solomon et al. 2003; Negassa et al. 2011). It is estimated that the aggregate annual economic loss from animal diseases through direct mortality and reduced productive and reproductive performance in Ethiopia is US$ 150 million (Admasu, 2002).To improve the productivity there is a need to improve the production environment of the animal. Knowing the type and extent of the common and/or major health problems is very important to livestock owners, Veterinarians and researchers and can assist in the development of herd health strategies and the selections of possible interventions (Radiostits, etal., 2007). This task involves identifying major cattle disease, existing traditional knowledge and traditional medicines and health intervention (Benin et al., 2002).

In the past different authors attempted to study livestock and livestock products marketing conditions in some parts of the country. However, the work on identifying major cattle diseases and constraints of livestock have not been well investigated or very limited in Southern Nations, Nationalities and Peoples Regional State particularly in Sheka and Bench-Maji zones and in Mejenger zone of Gambella region. Therefore, this study was designed to identify the major diseases of cattle production, constraints and their treatment options in Sheka and Bench-Maji zones and in Mejenger zone of Gambella region.

MATERIALS AND METHODS

Description of the study areas

The study was conducted in Benchi-Maji and Sheka zones of the Southern Nations Nationalities and Peoples Regional State and Mejenger zone of Gambella National Region State. Bench-Maji zone and Sheka zones are located in south west of Addis Ababa at 561 and 694 km, respectively. The altitude of Bench- Maji ranges from 850 to 3000 meters above sea level and that of Sheka is 1200 to 3000 meters above sea level. The annual average temperature of Bench- Maji ranges from 20 to 40^0C and the annual rainfall from 1200 to 2000 mm and that of Sheka ranges from 15.1-27.5^{o}C annual average temperature and 1201-1800mm annual mean rainfall. The Zone has high livestock population consisting of 447000 cattle, 73700 sheep, and 69200 goats, 9700 equine and 254300 chickens (SNNPRSIEMP, 2011). Mejenger is one of the Gambella regional Administrative zone and bordered south east by the SNNPR and west Mengesh woreda. Godere is bordered on the south and east by the SNNPR and on the west by Gambella zone .The zone is characterized by Forest coffee production along with spices that are collected from the forests for market. Farmers in Bench Maji, Sheka and Megenger zones lead their livelihoods by mixed crop-livestock production system (Figure 1).

Study Population

Target population comprises of cattle of Bench Maji, Sheka and Megenger zones and study population was those cattle in selected districts of Bench Maji, Sheka and Megenger zones which was kept under extensive and semi-extensive systems. Study households at individual' level was selected from kebeles population of Shey-Bench, Meinit-Shasha, Masha and Godere districts of Bench Maji, Sheka and Megenger zones, respectively.

Study design

Cross-sectional study technique was carried out from November 2015 to November 2016 in Bench Maji, Sheka and Megenger zones. Study involving questionnaire survey and semi-structured questioner were carried out in random selected study households.

Sample size and Sampling procedure

A Multistage purposive random sampling procedure was employed to select sample districts known for livestock populations. Four districts were selected randomly from

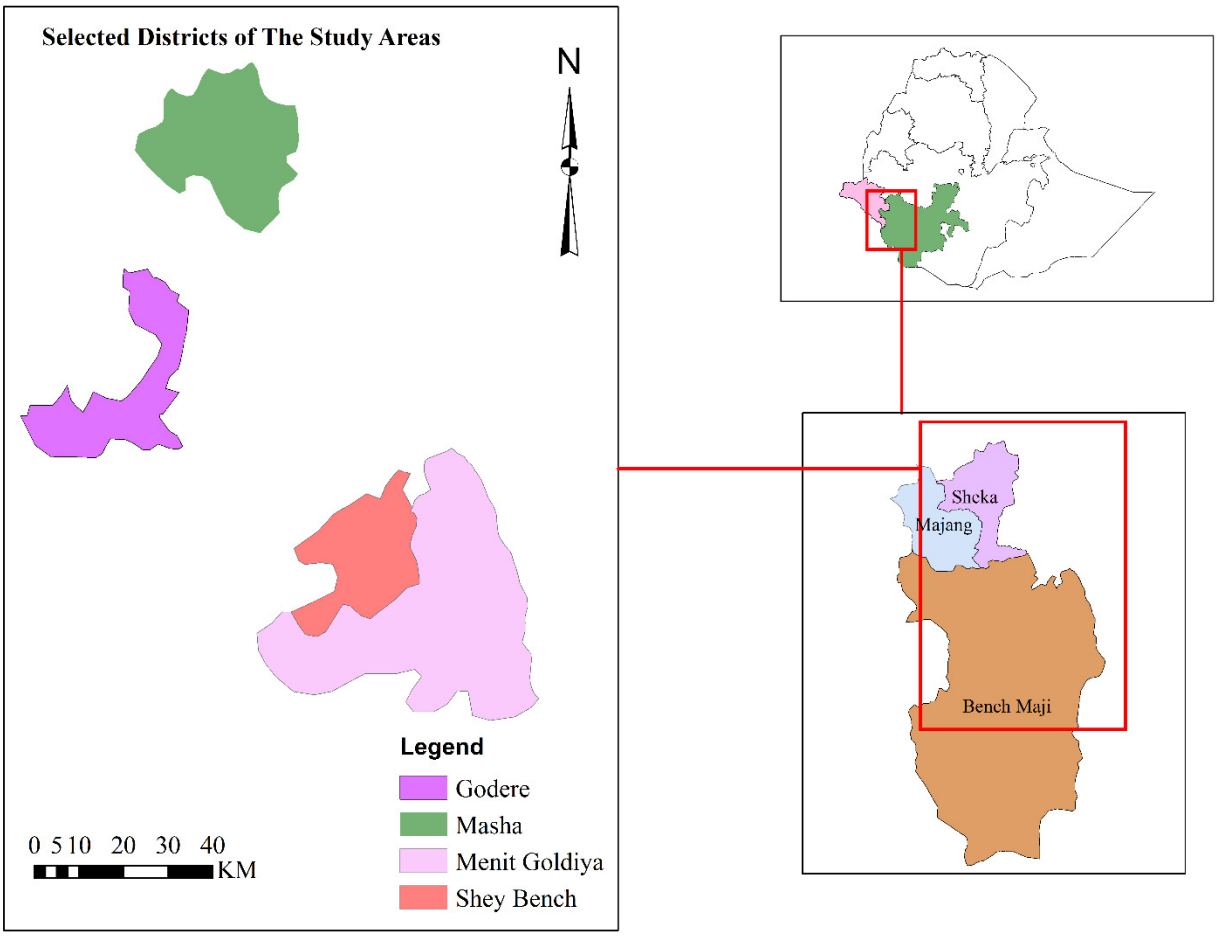

Figure 1: Map of Study areas

each zone, namely Shey-Bench and Meinit-Shasha from Bench- Maji, Masha and Godere from Sheka and Mejenger zone, respectively. From Each districts two kebeles were randomly selected and 50 households were randomly selected from the two selected kebeles. Sampling frame of households was taken from respective kebeles. A total of 200 (50 respondents' × 4 districts) respondents per district that have cattle were randomly selected and interviewed. The focus group discussion was carried out by modifying the method described by Belletet al. (2012). Focus group discussion was involved key informant farmers, development agents and veterinarians.

Data collection

A detailed and organized semi-structured questionnaire was used to gather the required information on major animals' health problems, diseases that considered as important by farmers and measures taken by farmers against animals' diseases and their constraints. A total of 200 households were included in this interview. The questionnaire was administered using face to face interview of cattle owners randomly selected from different kebeles of districts of Bench Maji, Sheka and Megenger zones.

Data analysis

Data obtained from questionnaire survey was recorded and stored in Microsoft® Excel for Windows 2010. Questionnaire findings were coded and analysed using descriptive statistics by using Statistical Package for Social Sciences (SPSS) version 20 (SPSS Inc., Chicago, Illinois, USA).

RESULT AND DISCUSSION

Demographic characterization of the interviewees

From the 200 respondents 73.5 % (n=147) were male

and 26.5% (n=53) were female. The mean age of the respondents in sheka 47.72±11.96 was higher than 41.96±13.01 in Mejenger and 36.49±8.36 in Bench-Maji zones. This survey indicated more family size age (2.69 ±1.83) was lies between 15 - 40 years. The top, bottom and average age of the respondents is 74, 20 and 39 respectively. The family size of the house hold ranges from 1-14 and the mean is about 5.Having many members of family in rural areas seems to be considered as an asset and a security in times of retirement (Agajie et al., 2002). The proportion of illiteracy in Sheka zone (6%) was much lower than in Bench- Maji (27%) and Mejenger zone (28%). Majority (31.5%) of respondents in the study area had attended upper primary (5-8) and the rest 14.5%, 12% and 1.5% of the respondents had attended secondary school, read and write 'Meserete Timihirt' and college education, respectively. Based on the current study result, only 10% of the respondents were illiterate. The percentage of illiteracy in this study was lower than that reported by (Tesfaye, 2007) in Metema (45%), and (Adebabay, 2009) in Bure districts. Therefore, this can be considered to be a good opportunity to facilitating extension services for rural development and transferring technology (Table 1).

Cattle Herd Structure

Cattle herd structure and number per household in the study zones showed in Table 2. The overall mean of cattle holding per household was 8.18±0.44. This figure was less than that of (Tesfaye and Puskur, 2007) with 12.25±0.6.23 cattle per household in Northwestern Ethiopia and greater than that of Belay et al. (2012) with 4.53±0.4 cattle per House hold in *Dandi* district. The current study showed that the mean of cattle per house hold in Bench-Maji and Sheka zones were highly significant ($p<0.05$) than Mejenger zone. In Bench Maji and Sheka zones cattle production is very important because of the mixed livestock farming system. In Mejenger zone, cattle are not reared in large numbers in this livelihood zone primarily due to pasture shortage, which is caused by the widespread growth of perennial crops such as coffee. It was observed that the average number of cows, heifers , calves (male & female),steers, bulls and oxen were 3.34±0.21, 2.30 ±0.14, (1.71±0.09 &1.53±0.09), 1.90±0.26, 1.66±0.12 and 1.88±0.08 head, respectively. In the study areas average size of cows and heifers were kept by the farmers higher than the rest of the cattle classes. This indicates that farmers in the study area keep cattle mainly for milk production and heifers were used for replacement purpose .This was in agreement with the finding of Berihu et al. (2014), were Heifer and cows dominate (54%) the most shares of cattle herd followed by Castrated oxen (25.4%).The result revealed that there were significant difference ($p<0.05$) between the study areas in the size of cows and oxen. In sheka zone, there was significantly larger number of cows 4.06±0.58 than in Bench-Maji (3.71±0.28) and Mejenger (1.89±0.14) zones .The average size of oxen (2.07±1.08) in Bench-Maji was larger than in Sheka (1.71±0.13) and Mejenger (1.08±0.08) .The need for plow oxen was maximum in Bench-Maji Zone because of the annual crops cultivation was more .The need for plow oxen for cultivation. In Mejenger and Sheka zone were also minimal due to the dominance of perennial cash crops (Table 2).

Land Holding

Respondents were asked about the land use patterns mainly for four purposes; crop production, grazing, haymaking, improved forage crop production and others (tree, residences). The average size of total land owned was not significant different ($p>0.05$) between the zones. Likewise, land allocated for different purpose was not significant different except for grazing land. Land allocated for grazing was higher in Sheka zone (0.46±0.06) Hectare than in Bench- Maji zone (0.38±0.03) and Mejenger (0.27±0.03) zones. In Mejenger zone, widespread growth of perennial crops such as coffee might be caused shortage of grazing land and Livestock are not reared in large numbers in the zone primarily due to pasture shortage. Overall land allocation for crops production (1.95±0.09) was much higher than other purposes. Land allocation for improved forage crop production in the study zones was very small (0.14±0.06) Hectare. This might be associated to the major feed resources in the zones depend on natural pasture and crop residues. There was no/ little land allocated for hay making in all of the study zones. In general, the average land holding size per household is (2.32±0.11 ha) which is greater than to the findings (1.6 ha) of (Azage et al., 2009) in North Gondar, Amhara Region of Ethiopia. The average land allocation for cropping, grazing, hay making, cultivated forage and for others per house hold in the study zones presented in table 3.

Major diseases of Cattle

In current study, major animal diseases were identified through questionnaire survey and group discussion involving key informant farmers, development agents and veterinarians. As reported by Assegid (2000) cattle diseases and their consequences have several impact on the small holder farmers' livelihood directly and in directly. Respondents confirmed that diseases are the main constraints of their cattle production. Based on the this survey result, the most prevailing diseases affecting cattle production in the study areas were Black leg

Table 1: Profiles of the respondents' proportion (%) by sex, family size mean ± SD educational status (%)

Description	Bench Maji (N=100)	Sheka (N=50)	Mejenger (N=50)	Overall (N=200)
Sex of the respondents				
Male	75	70	74	73.5
Female	25	30	26	26.5
Family size by age group				
Age of the respondent	36.49± 8.36	47.72± 11.96	41.96± 13.01	40.66± 11.54
Below 7 years	2.32 ± 1.59	1.96 ± 0.96	1.70 ± 0.83	1.57 ± 0.63
7-14 years	3.00 ± 0.86	2.59 ± 1.83	1.90 ± 0.90	2.63 ± 1.72
15-40 years	2.40 ± 1.36	3.20 ± 2.39	2.76 ± 1.93	2.69 ± 1.83
41-64 years	1.25 ± 0.55	1.44 ± 0.51	1.63 ± 0.81	1.47± 0.67
Above 64 years	1.00± 0.00	1.00± 0.00	1.00± 0.00	1.00± 0.00
Educational status				
Illiterate	27	6	28	22
Read and write	9	14	16	12
Lower Primary (1-4)	18	12	26	18.5
Upper primary (5-8)	34	42	16	31.5
Secondary (9-12)	11	24	12	14.5
College/University	1	2	2	1.5

Table 2: Herd structure of the respondents in the study areas (Mean ±SE)

Cattle herd type	Study area					
	Bench Maji	Sheka	Mejenger	Overall	Test	
	(N=100)	(N=50)	(N=50)	(N=200)	F value	P value
Cow	3.71±0.28	4.06±0.58	1.89±0.14	3.34±0.21	8.331	0.000*
Heifers	2.45±0.18	2.46±0.32	1.62±0.17	2.30±0.14	2.543	0.082
Female calves	1.38±0.10	1.85±0.30	1.52±0.14	1.53±0.09	2.028	0.138
Male calves	1.76±0.12	1.73±0.23	1.55±0.14	1.71±0.0.09	0.326	0.723
Steers	2.06±0.34	1.75±0.47	1.00±0.00	1.90±0.26	0.691	0.514
Bulls	1.90±0.13	1.58±0.21	1.16±0.16	1.66±0.12	1.745	0.185
Oxen	2.07± 1.08	1.71±0.31	1.08±0.08	1.88±0.07	10.227	0.000*
Mean holding of cattle /HH	9.96±1.59	9.32±09	4.12±0.39	8.18±0.44	16.209	0.000*

Table 3: Land holding per hectare (mean ± SE) and land use pattern in the study area

Land allocation in (Ha)	B/Maji		sheka		Mejerger		Overall	
	N	Mean ±SE	N	Mean ±SE	N	Mean ±SE	N	Mean ±SE
Crop Land	100	1.74±0.10	50	2.17±0.22	50	2.16±0.24	200	1.95±0.09
Grazing Land	68	0.38±0.03	41	0.46±0.06	21	0.27±0.03	130	0.39±0.03
Land for hay making		-	1	0.13±0.00		-	1	0.13±0.00
Land for Improved Forage	5	0.08±0.02	2	0.09±0.03	2	0.34±0.29	9	0.14±0.06
Land allocated for others	48	0.24±0.02	33	0.23±0.01	28	0.22±0.01	109	0.24±0.01
Total Land owned	200	2.11±0.13	50	2.73±0.27	50	2.36±0.23	200	2.32±0.11

(66.5%), ticks (46.5%), bloat (39%), Trypanosomiasis (37%), leech/Hurdiasis(30.5%), FMD (29.5%), LSD (28.5%) and Anthrax (21.5%), Pneumonia(20.5%) and abortion (16%) were the next important diseases (Table 4).

The questionnaire surveys revealed that Black leg (66.5%) the most important infectious diseases of cattle, which was responsible for the loss of many animals. Reports from Tigray (Yohannes, 2007) and from Adaaliben District, central Ethiopia (Tesfahiwet, 2004)

Table 4: Common suspected disease reported by farmers (N, %)

Diseases		Bench-Maji		Sheka		Mejenger		Total	
Scientific name	**Local name**	**N**	**(%)**	**N**	**(%)**	**N**	**(%)**	**N**	(%)
Black leg	Abagorba /Kuacha/	81	81	32	64	20	40	133	66.5
Anthrax	Yemberet/Oger	18	18	16	32	7	14	41	20.5
CBPP	Samba	7	7	6	12	4	8	17	8.5
Pneumonia	Michi	14	14	9	18	20	40	43	21.5
Mastitis	Yetutbeshita	14	14	3	6	9	18	26	13
Abortion	Wurja	17	17	12	24	3	6	32	16
Bloat	Ye hodmenfat	42	42	20	40	16	32	78	39
Leech	Arkit	52	52	8	16	1	2	61	30.5
Ticks	Meshider	44	44	31	62	18	36	93	46.5
Internal parasite	YewustTili	1	1	7	14	3	6	11	5.5
Lumpy skin disease	Lupitupo	11	11	31	62	15	30	57	28.5
FMD	-	26	26	2	4	31	62	59	29.5
Mengimites	Ekek	12	12	4	8	7	14	7	11.5
Trypanosomiasis	Gendi	52	52	4	8	18	44	74	37

indicated that the Black legis an important disease. Blackleg was also reported by other author (Belayneh, 2002) and (Moges and Bogale, 2012) inthe Ginchi watershed area and Lay-Armacheho District in Northwestern Ethiopia, respectively. The high occurrence of this disease could be due to the endemic and resistant nature of the spore of causative agents that can stay in soil for many years and when the spore get into the animal body, due to its short incubation period, infected animals die soon (Radostits et al.,2007).

A lumpy skin disease (28.5%) is the other important infectious viral disease that is revealed in this questionnaire survey. This agrees with the findings of Tesfahiwet (2004) in that LSD was an important infectious disease in Adaaliben *Woreda*, central Ethiopia. Other reports also showed that lumpy skin disease was also common in Alamataworeda and Alaba Woreda in northern Ethiopia, (Yohannes, 2007). LSD has a very high morbidity and moderate mortality. Its transmission from infected to healthy animal is high, as a result it mostly occurs as an outbreak and this could be the reasons that make it very common disease mentioned by farmers, furthermore it may be also due to low prevention measures like vaccination. LSD was important because of presence of insect vector in the endemic area (Radostits et al., 2007). About 37% of trypanosomosis was also identified as major protozoan parasitic diseases of cattle. This finding agrees with the finding of Moges and Bogale (2012) who reported 39.13% in Lay-Armacheho District in Northwestern Ethiopia. Shewit (2004) indicated that trypanosomosis was an important cattle disease in south west Ethiopia.

The study also revealed that with ratio of 11.5% mange mites were ectoparsites of cattle that affects skin mostly encountered in the study area. This result was relatively high compared that of Haftu et al. (2014) who recorded a prevalence rate of 8.1%, and relatively also high compare that of Chalachew (2001) who reported prevalence of 1.86%. This difference might be due to the management, climate condition and season. An animal that is affected by mange mites shows with clinical signs like rubbing, itching, emaciated body condition and loss of hair in the field area observed (Radostits et al.,2007).

About 16% of abortion was recorded in the present study which is consistent with the Bitew and Shiv (2011), Dinka (2013), Ebrahim et al. (2016) and, Benti and Zewdie (2014) reported 13.9%, 14.6%, 17.22% and 12.2% of abortion, respectively. On the other hand, When compared with the findings of Gizaw *et al*. (2007) who reported 2.23%,Degefa*et al*. (2011) who reported 8.7% and Haile *et al*. (2014) who reported 2.56%, which are lower than the current finding, but compared with the finding of Siyoum et al. (2016) who reported 28.9%in Adea Berga, West Shewa the present finding is lower. The difference in prevalence of abortion may be due to variation in practice of AI, genetic, nutritional status, infection, level of toxicities and husbandry management system in different areas. The incidence of

abortion more than 2 to 5% should be viewed seriously, and efforts should be made to determine the causes so that proper methods of control may be instituted (Esheti and Moges, 2014).

About 39% of bloat was identified as major health problems of livestock in the study area. The current finding is higher than the previous reports by Haftu et al. (2014) who reported 0.9% of bloat. Bloating is the common gastrointestinal disorder that causes sudden death of ruminants and it could be suggested that bloat occurs in the study area when animals graze lush grass in and around the marshy area which is found in the study areas. It may also occur due to anatomical disorders like esophagus obstruction (Radostitset al., 2007).

It is well understood that tick are important economical diseases that affect hide and skin quality. Different works showed that tick is the most common economically important ectoparasites affecting all animals in general and large and cattle in particular. Reports of Tesfahiwet (2004) and Asfaw (1999) indicated that tick burdens were observed in Adaaliben *Woreda* and Borena province of Ethiopia, respectively. Their high occurrence may be related to high temperature during the dry season which favors their reproduction and attachment to the animal. It may also be due to lack of coordinated control scheme within zones.

The other parasite which respondents indicated during the interview as important health problem is leech/Hurdiasis (30.5%).Leech is a blood sucking parasite that attach to the pharynx part of the oral cavity while animals drink leech infected water sources, especially during the dry season when water is no more available. Leeches due to its blood sucking nature, is responsible for losses of large amount of blood within a short time resulting in anemia and related disorders (Radostits et al., 2007).

Pneumonia (20.5%) was observed in cattle as the main infectious disease in the study area. This might be animals movement is common for searching of feed, water and to be sold for market during drought period. In addition to these there are predisposing factors such as stress, excessive cold (due to high altitude ranges) that can favors the bacteria to multiply and then evade the lower respiratory tract from which infection is triggered. Radostits *et al.* (2007) also indicated that the disease is common when animals are exposed to wet, chilly weather or exhausted by heavy work.

Anthrax (21.5%) is categorized as soil borne diseases in the study area occurred frequently. The disease was one of major health problems of cattle. Several studies reported that Anthrax was claimed to be the leading cattle health problem in Ginchi water shed area (Belayneh, 2002). This finding is agrees with previous reports from Tigray regions by Abraha (2007).However, present finding was higher than reported from Eastern zone of Tigray by Haftu et al. (2014). The high occurrence of these diseases could be due to the endemic and resistant nature of the spore of causative agents that can stay in soil for many years and when the spore get into the animal body, due to its short incubation period, infected animals die soon. The other explanation could be due to low vaccination coverage in all zones (Radostits et al., 2007).

Mastitis was most important disease affecting cows as mentioned by 13% of the interviewed farmers. Cows are at risk of acquiring mastitis when there is improper milking and poor udder health management like preventing teat from lesion causing agent like tick infestation (Quinn et al., 1994). Mastitis was also one of the most economically important multi-causal infections of cows in Kersa Woreda of Southwest Ethiopia (Ebrahim et al. 2016).

According to this result, internal parasite was observed as common health problem of cattle production. Internal parasite was found frequently causing mainly loss of body condition, emaciation and weak in draught power of cattle. The high occurrence of parasitic diseases in the study area could be due to low deworming practices and the increasing of irrigation lands in the zone at which reproduction and development of the parasites and their intermediate host is favored. Feseha (2009) reported that Internal parasite commonest disease-affecting cattle in other crop-livestock production system areas of Ethiopia. Other reports (Belayneh, 2002 and Tesfahiwot, 2004) also showed that internal parasite in Ginchi watershed and Adalibenworeda were major animal health problems of cattle, respectively.

Foot and mouth disease (FMD) was most important disease affecting cattle as mentioned by 29.5% of the interviewed farmers. Molla et al. (2012) showed that FMDwas common in South Omo zone, South-Western Ethiopia and Haftu et al. (2014) also reported that FMD was the most important diseases affecting cattle in Ganta Afeshum district, Eastern Zone of Tigray. The higher occurrence of the disease was due to the fact that higher contact pattern of domestic animals to wild animals and also their high migratory pattern of the disease.The questionnaire surveys revealed that ticks (46.5%), the most important ectoparasite of cattle in study area. This study showed the presence of high tick infestation in the area. This was may be due to the climate helps for highest tick infestation in the study area. Tick infestation is highest in area by a complex interaction of factors such as climate, hot susceptibility and grazing habits (Abraha, 2007).

According to this survey, there was different traditional veterinary medicine ingredient that used to treat the infected cattle. These locally available traditional medicines were summarized in table 4. So as this survey indicated, in the study area, kerebicho used to treat blackleg, mastitis and pneumonia disease and given

Table 5: Traditional medicine to treat sick animal in the study areas

Type of diseases	Traditional treatment used	Method of treatment
Blackleg	Kerebicho, Bisana, sensel	Smoking the sick animal with kerebicho, Drenching grinded bisana or sensel leaf with water. Branding with hot iron
Ticks	Kerosene, butter	Painting the area with kerosene or butter where ticks present
Pneumonia /cough	kebericho	Fumigating the sick animal with kebericho
Internal parasite	Soap, hot pepper Fexo *(Lepidiumsativum)*, senafich Tinbaho, yabshero	Drenching soap, grinded feto the grinded powder with water.
Bloat	Vegetable oil, ash	Drenching hot vegetable oils
LSD	Soap, senafich	Washing the sick animal with soap
Mastitis	Kebericho/soap	Fumigating the sick animal and washing with soap

thought fumigation plants to sick animal. Bisnana and sensel plants used to treatof blackleg through drenching by grinded their leaf. Kerosene and butter used to treat tick by painting the area with these traditional medicine where tick present. Internal parasite was treated with hot pepper, fexo, senafich, Tinbaho and yabshero by grinded these medicine and given through drenching. Vegetable oil and ash were used to treat bloat and give through drenching (Table 5).

Veterinary service in the study areas

Based on the current study, the respondents there was veterinary service in the study areas which accounts 88.7% and the rest 11.3% of the respondents responded that there was no veterinary service in the study areas. The veterinary clinic found in the study areas gave vaccination, treatment and castration. The veterinary services are mainly given by the government (75.4%), veterinary drug suppliers (17.4%) and private veterinarian (7.2%). The current study indicated that majority of veterinary services (96.7%) were given with payment and the rest (3.6%) services were given with free of charges. In study areas, veterinary services mainly performed by veterinary technician (80.6%) followed by animal health assistance (14.9%) and veterinarian (3.7%). Low veterinary drugs (28.2%), the distance to health clinic (27.1 %) and shortage of veterinary services (26.7%) were the three most health related problems in the order of importance stated by the households in Bench-Maji Zone. Shortage of veterinary personnel (50%), high price of veterinary drug (22.7 %) and Low veterinary drugs (20.5%) were the major health related problems in Sheka zone. In Mejenger zone, Low veterinary drugs (36.3%), high price of veterinary drug (23.8 %) and shortage of veterinary personnel (21.4%) were the three most common health related problems. In the study area almost all of the respondents (97.4%) did not keep any items of recordings. The rest 2.6% of the respondents were keep service date, calving date and cost for medication records. Accordingly, the most important constraints of cattle production in the study areas were feed shortage, disease prevalence, lack of drugs, inadequate extension and veterinary services and lack of market. The present study was comparable with the findings of Haftu (2015) who reported that the availability of feeds was noted as major constraints in Hossana town, Ethiopia. Ebrahim et al. (2016) also indicated that major constraints of animal health problems include low quality and inadequate animal health services, minimum attention to the services, low and/or no private sector involvement in Kersa Woreda, Southwest Ethiopia. Shortage of feed was the major constraints to cattle production in Jimma town, Oromia State, Ethiopia (Belay et al., 2012). Inadequate animal feed resources as one of the important challenges of Ethiopian cattle was also reported by Yilma et al (2011) (Table 6).

CONCLUSION AND RECOMMENDATIONS

This study revealed that cattle health problem is the fore front problem of cattle development programs in Bench Maji, Sheka and Megenger zones. The most predominant health problem affecting cattle production in the study areas were Black leg, ticks, bloat, Trypanosomiasis, leech/Hurdiasis, FMD, LSD, and Anthrax, Pneumonia and abortion were the next important diseases. These diseases are the leading causes of mortality, production losses, reduce growth rate, reduce reproduction ability of animals, down grade of livestock products (hides and

Table 6: Ranking of livestock constraints perceived by the respondents

Constraints	Percentage (%)			
	Bench-Maji	Sheka	Mejenger	overall
Shortage of feed	21.18	17.76	19.66	19.53
Disease prevalence	13.18	15.42	10.46	13.02
Lack of drugs	11.66	6.4	10.12	9.39
Inadequate extension and veterinary services	12.56	17.68	12.84	14.36
lack of market	8.42	8.5	7.22	8.04

skins) and public health hazards were principal problems. The major cattle production constraints in the study areas perceived by the households were feed shortage, diseases prevalence, and lack of drugs, lack of market and inadequate extension and veterinary services. The main traditional medicines used (Plants) were Kerebicho, Bisana, sensel, hot pepper (capsicum frutescens), tobacco leaf (Nicotianatabacum L.) and Fexo (Lepidiumsativum). In addition to these plants, senafich, yabshero, Kerosene, butter, ash and Vegetable oil were also used as a traditional medicine for treat sick cattle. To improve health problem of cattle:

- ✓ Equipping the established veterinary clinic with necessary facilities, drugs and animal health professionals could be important to prevent and control cattle disease in the study areas.
- ✓ Provision of strong extension services and training on cattle disease and management should be very important.
- ✓ Detail epidemiological study on major economically important diseases of cattle should be under taken.
- ✓ Indigenous knowledge of animal owners about animal health and traditional medicines should be supported by scientific knowledge and detail studies.
- ✓ Animal feed development packages should be scaled up to stop feed shortage and intern reduces animal health problems.

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