The Role of Working Donkeys in Urban and Rural Areas of Assosa District, Benishangul Gumuze Region, Ethiopia

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Abstract:
The study was undertaken during January 2015 up to January 2016 at urban (Assosa town) and rural (Keshmndokebele) of Assosa district in Benishangul Gumuze regional state of west Ethiopia. The aim of the study was to explore the role of keeping working Donkeys*in the study area. A cross-sectional systematic random survey of 200 households (100 from urban and the rest 100 from rural area of Assosa district) was undertaken by using semi-structured and pre tested questionnaire. Information on the role, of working donkeys in rural and urban areas of Assosa district was generated by using semi-structured and pre-tested questionnaire. Primary data were processed and analyzed by using SPSS version 20.0 software. Descriptive statistics were used to analyze the data quantitatively. Data gathered through key informant interview, focus group discussion and personal observation were analyzed qualitatively to strengthen data obtained from household survey. Methods of triangulation were used to measure the validity of the data. Donkeys in the study area were kept mainly for the purpose of transportation (pack and drought). "Draught" animals were equids used for the transport of goods and people by cart. "Pack" animals were equids used for the transport of goods by pack. In urban area all donkeys were engaged in drought type of work whereas 90% of working donkeys in rural areas were involved in pack type of work. Donkeys transport was also used in agricultural production, mainly to transport manure to the fields and the harvest from the fields to the homestead and from home stead to the market. Farmers with donkeys were able to use more fertilizer, because it could be transported easily from the market Place to the homestead and from the homestead to the fields. working donkeys were also acting on cart away of house hold wastes, fetching water, shifting household material (when there is a change in residence), carrying the sick animal or people to hospital like ambulance, transporting shopping, carrying fuel wood to homestead and market, pulling fencing materials, transporting People, transporting house building materials, transporting grain to the mills and back to home, transporting home consumables and construction materials Therefore area based development interventions could help to avoid management problems of working donkeys and to improve the role that donkeys play in promoting*

the livelihood of small holders. Those Women who own donkeys use their donkeys for transportation of different materials and supplies from their home to market.

Key words: *Donkey, Rural, Urban, Assosa, role, District, purpose*

Introduction

The donkey (Equusasinus) is indigenous to the African continent and its wild progenitor is usually considered to be the Nubian wild ass [1]. According to the suggestion of Archaeological evidence and molecular data donkeys may have been domesticated 5000 years ago in Africa [2]. About 39 million donkeys live in the developing countries and 36% of this number is found in Africa [3]. Ethiopia has an estimated over 5 million donkeys [4] and [5] which is the second largest donkey population in the world after China and nearly 40% of Africa's equine population [6]. Thus, it is home to a considerable number of indigenous donkey populations. After human labour, the donkey is the cheapest form of agricultural power and therefore, within reach of the 'poorest of the poor'.

Donkeys are essential to the livelihoods of many households in rural and urban areas of Ethiopia, relieving families from repetitive and energy-consuming tasks. Equines are the most important animals in the farming and transport systems of Ethiopia [7]. They are important animals to the resource-poor communities in both rural and urban areas, providing traction power and transport services at low cost and in the remote areas of Ethiopia [8]. It is estimated that 75 percent of farms in the country are located more than a day and a half's walk from all-weather roads, and animals are therefore, vital for the transportation of farm produce to the market. Studies have shown that apart from help in transport, donkeys play a significant role in helping to empower women in many developing nations [9]. Donkeys' assistance in traditionally time-consuming activities such as fetching water and gathering fuel wood, helps give women more time and opportunity to earn extra money and involve in community issues, both important aspects in raising female status. It also helps in transporting farm produce to homesteads and market places, and agricultural inputs to farms [10].

In addition to their popularity in the transport sector, donkeys are perceived as disease resistant and hardy specie by non-pastoralist communities and even animal health policy makers [11] [12]and [13]. Donkeys are preferred to other equines because of their affordability, survivability, docile nature and ease of training and handling. The ability of donkey to thrive on poor quality minimally supplemented feeds has also made them popular in environments where feed shortages can

seasonally become a critical problem. Donkeys have been reported to survive better under drought condition than any livestock species due to their small body size and low dry matter intake requirements minimizing their water and maintenance needs in arid and semi-arid areas [14].Domestic donkeys are the least studied and neglected mammals of the world[1] and recent studies [15] and [16] revealed that domestication events and historical processes of domestic donkeys is still an on-going debate. Despite the fact that donkeys are important in the development of rural economy, however, it generally received very little scientific attention. Donkeys have a generally low social status and this presumably arises from its perceived low productivity as a single purpose animal compared to cattle that may provide milk, power and meat as well as having a social and financial security function [17].In Ethiopia, 56% of households kept donkeys mainly for pack services (to generate income and homestead use), 26% for cart use (to generate income), and 14% for pack use but exclusively for homestead use and 4% exclusively for renting, breeding or petty trade [18].

Due to poor infrastructure transportation by vehicles is virtually in accessible and hence the role of equines in a socio economics of the country is substantial [19]. farmers use alternative means like draught animals specially donkeys and mules to transport crops, fuel wood, water, building materials and people by carts or on their back from farms and markets to home[20] Despite the valuable services in livelihood in rural and peri-urban areas of Ethiopia much of health care services are directed towards cattle than equines this resulted in multiple welfare /safety problems associated with inaccessible water, feed and shelter at working sites and suffering several lesions [21].In urban and rural areas of Assosa district households keep and utilize donkey for different purposes. In spite of this the knowledge about the roles of donkeys and their husbandry practices are very low and there is relatively low level of research interest on it. Little comprehensive effort has been exerted to systematically assess and generate baseline information on husbandry practices, safety status and roles of working donkeys kept in Assosa district. Limitation of information on role, husbandry practices and safety status of working donkey will contribute major problems towards development of suitable intervention strategies and seriously undermine the efforts towards achieving food security and reducing poverty through utilization of working donkeys. Therefore the following presented study was conducted in order to assess management practices, safety status and identify major welfare problems in urban and rural areas of Assosa district. describing and understanding the existing real challenges and opportunities of keeping working donkeys under various management conditions

and at different locations is The first consideration in designing suitable strategy and implementing any area specific working donkey development intervention, thus the result of this study will provide base line data that serve as an input for further area specific development interventions to be intended to undertake in the future. Besides, the research findings would be used as an information source for further research and policy makers both at regional and national levels.

Material and Methods

Description of Study area

The study was carried out at two settings (Keshmengel that represent rural and Assosa town that represent urban) in Assosa district of Benishangul Gumuz Region, Western Ethiopia, located 660 km away from Addis Ababa. Based on difference in Socio-economic status, growth and density of population and availability of (social services, facility and infrastructure) the two settings were classified as urban and rural. According to this classification urban areas were characterized by having population with (better economic status and higher density). Urban areas also have a good access to social services, facility and infrastructure. To the contrary rural areas are characterized by having population with (relatively low economic status and lower density) rural areas also have a lower access to social services, facility and infrastructures. This location difference was expected to have a variation on management practices, safety status and the role of working donkeysas a result the study was conducted in relation to setting difference. Assosa district is located between geographical coordinates of 9o 30'N to 11o 39'N latitude and 34o 20'E to 36o30'E longitude [22]It is 2330 km2 wide and range in altitude from 1300-1570 masl[23]. According to[24]the human population size of the BGRS is 670847 with 6.7 persons per km^2 and the majority (more than 91%) of the population living in rural areas [25].Assosa zone comprises 39.9% of the regional population and 37.4and40.3% of the regional urban and rural population respectively. Based on [24]Assosa comprised of 28.0% of the zonal rural population [24]the rainfall pattern of the district is mono-modal occurring for 6 or 7 months of the year usually between March/April and August/September. Mean annual rainfall is about 800-1200 mm [26].Mean annual temperature in Assosa ranges between 25 -30°C, and 21-35°C. According to Assosaannual metrological report [27] the hottest period in this district extends from January to May, the peak being March. Whereas, the coolest periods occur from June to November, the lowest being August.

Sampling techniques and procedure

This study employed both probability /random and non-probability /purposive sampling techniques. Based on the availability of matured working donkeys of any sex categories as well as the way they are managed purposive sampling technique was used to select five study "gotts"/sample gotts that represent each kettenas in all kebeles at Assosa town and all "gotts" in Keshmengel kebele . All households found in the study kebelles were clustered based on possession of matured working donkeys of any sex categories and the way they are managed. Lottery sampling technique was used to select study households from each cluster. Purposive sampling technique was employed to select individuals that participate on group discussion and key informant interview.From each "gotts" in all "kettenas" of Assosa town and Keshmengel kebele.A total of(n=200) households (n=100 from Assosa town and n=100 from Keshmengel kebele) that possess at least one matured and any sex category of working donkey were selected to assess management practice, safety status and socio economic role of working donkeys in the two locations of the study area. In each kebeles one focus group discussion was carried out. A single focus group was contained (n=8) members. Members of this group were those individuals that actively participate on house hold survey. In the five study kebeles (four urban kebeles, and one rural kebele) five focus group discussions were carried out. Generally a total of (n= 40) representative sample household heads were attended focus group discussion. Individuals, professionals, authorities, development workers of GOs and NGOS that has enough knowledge /awareness to offer data required by this survey were attended on the key informant interview. A total of (n=22) key informants from urban (n=11) and from rural (n=11) were carefully selected for attending on this interview. Generally the total sample size required for undertaking this study was 262.

Data collection and management

The data input for this study was obtained from both primary and secondary sources. The major sources of secondary data were from governmental and non-governmental publications, annual and inventory reports, previous studies, internet sources and books. The primary data was collected from sample households, participants of Focus group Discussion and Key informant interviews which were made with district Agricultural office experts, extension agents and working donkey owners. In addition personal observation was used as another source of primary data. Pretested and semi structured questionnaires were used for generation of both qualitative and quantitative data. Data on techniques of working donkeymanagement (feeding, housing, watering, etc.) in the study area were gathered through different

data collection methods Thus, Household Survey, Focus Group Discussion, Key Informant Interview and Personal Observation was employed to collect primary data. Questionnaires were prepared in English and translated into Amharic, to collect the data from the households. The HH survey was conducted by 5 recruited and trained enumerators, who were fluent in local Language of Berta people, Amharic and Oromifa with close supervision of the researcher. With regard to their educational status, the enumerators were Diploma holders from ATVET in animal science.

Data processing, Analysis, interpretation and presentation techniques

The primary data collectedfrom household survey through structured questionnaires were processed (data were checked for accuracy, dataentries will be coded, coded data will be entered in to the computer and editing of the data were completed). Processed data were analyzed by using statistical package for socialscience [28] SPSS version 20.0. Descriptive statistics such as percentage, mean, ranking, standard deviation, and cross tabulation were used to analyze the data quantitatively.On the other hand, data gathered through key informant interview, focus group discussion andpersonal observation were organized according to themes and analyzed qualitatively to strengthendata obtained from household survey. On top of these, methods of triangulation were used toanalyze data collected from different sources and eventually data were presented using tables and charts

Result and Discussion

Demography and social characteristics of donkey owners

A total of 200 interviews (100 from rural and 100 from urban) were carried out in the two study locations of Assosa district with a 100 % response rate. All respondent from urban and 90% from rural were males. Even though there was an option for the People who do not own donkeys to have access to them through different local sharing or hiring Relationships and renting, all interviewed households were donkey owners. The household size varied within and between surveyed sites. In rural areas the majority of the households comprised of five to seven members with an average of 6±2 (mean±std) members. In urban areas majority of households comprises three to five members. The average sizes of house hold members in the urban were 4±2 (mean±std). Distribution of household size is shown in Table 4. Purchase was source of donkey for urban respondents. Purchase, inherit and exchange were source of donkey for 90, 2 and 8% of respondents in rural areas. Educational status for majority of donkey users in the two study locations was primary school leavers. In addition to donkey all respondents at rural and 70% at urban keep other livestock.

Majority of donkey users in the two study locations were in matured age category. This indicates that limited number of young generation was involved in utilization of working donkeys. Husband as a member of family was the owner of donkey in the two study locations. [29] reported that ownership of donkeys by women is not uncommon; in many societies they are owned and controlled by men. Among the Maasai for instance, though women have access to the use of donkeys, a woman cannot sell a donkey without a man's permission. According to[30] among the Dogon people of south-eastern Mali, a woman may own female donkeys, but the management of livestock is nearly always in the hands of her husband. Though a Dogon man will say that women owners have full rights over what happens to their livestock, the situation is frequently ambiguous

Table 1: Demographics and social characteristics of Respondents in Assosa district

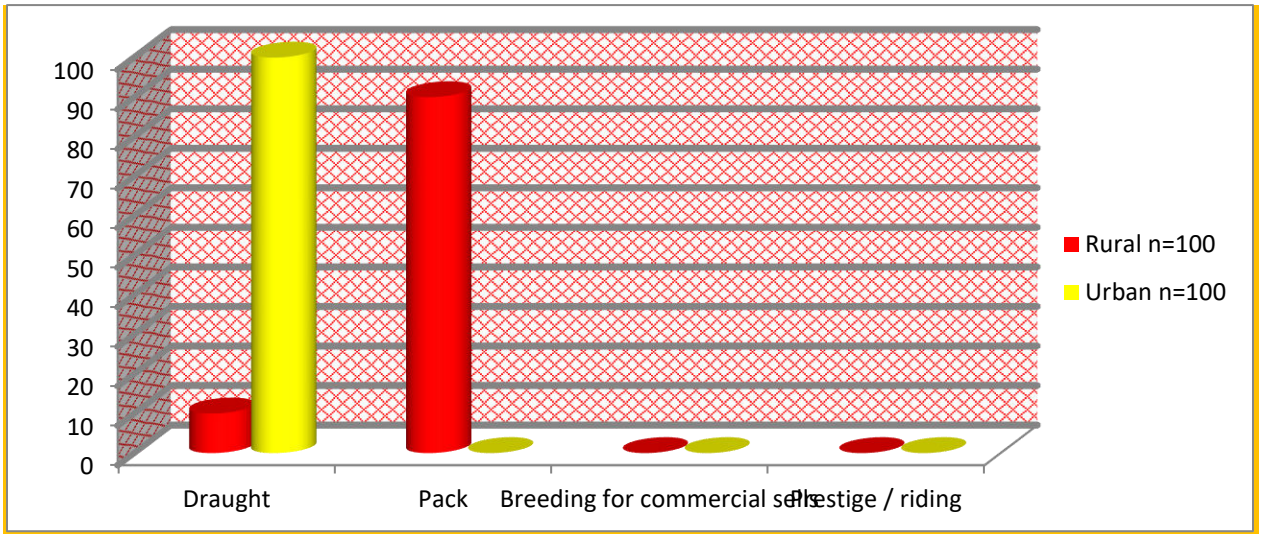
No	Parameters		Study sites	
			Rural	Urban
			n=100 %	n=100 %
	Sex of respondent	female	10	0
		male	90	100
	Education level	Illiterate	35	10
		Primary	60	60
		Secondary	5	10
	Donkey ownership	Husband	100	100
		Wife	0	0
	Household size, (no. of person)	3-5	100	0
		>5-7	0	100
		>7	0	0
	Source of donkeys	Purchase	90	100
		Inherit	2	0
		Exchange	8	0
	Keeping other livestock spp.	yes	100	70
		No	0	30
	Mean age of respondents, years		36.2	32.5

4.3. Purpose of keeping and the role of working donkeys

4.3.1. Purpose of keeping working donkeys

Donkeys can be kept for the purpose of draught, packing, sloughing, breeding for commercial sells, prestige/riding. All respondents from the two study areas reported that they were keeping working donkeys for the purpose of transportation (pack and draught). Table-3 indicates the main reasons for keeping working donkeys in the two study locations. According to (Fred and Pascal, 2006) equids are kept for transportation purpose in different agro ecological zones of Ethiopia. Their meat and milk are consumed only in few areas of the country. In south west Ethiopia donkey meat is delicacy and the milk believed to treat whooping calf. (Pritchard et al., 2005) reported that in some regions of North West Kenya and s Animals were categorized as draught, pack, riding and other type of working equid. "Draught" animals were equids used for the transport of goods and people by cart. "Pack" animals were equids used for the transport of goods by pack. "Riding" animals are those used by owners for non-tourist riding, whereas the category "other work" included foals and non-functional animals. A study by (Tamador et al., 2011) has shown thatdraught donkeys are used for transport of building materials, farm products, consumer goods, public transport. Pack donkeys, on the other hand were used for distributing milk and transport of light goods and plastic containers. Information obtained from key informant interview indicated that Donkeys have reduced the domestic transport burden of rural women and have created employment and income-generating opportunities for many people in the urban study area. a study by (Mohammed, 1991) revealed that farmers use alternative means like draught animals specially donkeys and mules to transport crops, fuel wood, water, building materials and people by carts or on their back from farms and markets to home. Based on (Crossley, 1991; Svendsen, 1997), donkeys are considered as beasts of burden in many developing countries.

Fig 1: reasons for keeping working donkeys in rural and urban areas of Assosa district



4.3.2. The role of working donkeys

4.3.2.1. Donkeys transport role in agricultural production and marketing

As indicated on table 4 below donkey transport in the two study locations was also used in agricultural production, mainly to transport manure to the fields and the harvest from the fields to the homestead and from home stead to the market. It also showed that farmers with donkeys were able to use more fertilizer, because it could be transported easily from the market Place to the homestead and from the homestead to the fields. according to majority of rural respondents and some of urban respondents, agricultural systems practiced by the farmers require a great deal of water 200 liter per day for urban and 300 liter for urban respondents. Some of the respondents from the two locations reported that during the dry seasons, farm animals feed is scarce and the owners of livestock have to move from place to place to find it

Table 4: donkey's transportation role in agricultural production and marketing

No	Transported materials	Rural N%	Urban N%
		n=100	n=100
1	House hold waste and Manure from homestead to fields /farm	50	10
3	Artificial fertilizer from market to home stead and from homestead to field/farm	80	10
3	Harvest from field to homestead	100	10
4	Harvest from homestead to market	100	10
5	Crop residue from field to homestead	100	10
	Crop residue from home stead to market	100	10
6	Hay from field to homestead	20	35
7	Transportation of water from its source to homestead for family and livestock consumption	60	25
8	Farm tillage	0	0
9	Threshing	0	0

. In such periods, donkeys transport enables the livestock farmer to move longer distances to carry the available feed in reasonable amounts. Apart from this, donkey transport plays an important role in transporting local brewery byproducts. According to (Starkey and Starke, 1997) working donkeys are used for farm tillage, threshing, raising water and milling. Equines are the most important animals in the farming and transport systems of Ethiopia (Biffa and Woldemeskel, 2006). They are important animals to the resource-poor communities in both rural and urban areas, providing traction power and transport services at low cost, and in the remote areas of Ethiopia (Gebreab et al., 2004). It is estimated that 75 percent of farms in the country are located more than a day and a half's walk from all-weather roads, and animals are therefore, vital for the transportation of farm produce to the market.A study by (Croxton, 1993; Starkey, 1995b) revealed that in many droughts prone areas farmers started to use donkeys because their oxen died and they were unable to replace them for one reason or another.

4.3.2.2. Donkeys role in transportation of other goods and commodities

in addition to their involvement in transport of agricultural production, in the current study table 5 below has shown that working donkeys were also acting on cart away of house hold wastes, fetching water, household material shifting (when there is a

change in residence), carrying the sick animal or people to hospital like ambulance, transporting shopping, carrying fuel wood to homestead and market, pulling fencing materials, transporting People, transporting house building materials (wood, sand, soil, stone and straw), transporting grain to the mills and back to home, transporting home consumables (cooking oil, sugar, home baking flour, salt), transporting construction materials (cement, timber, corrugated iron sheets, steel ,bricks etc.). the study by (Mutharia, 1995) indicated that the Maasai community in Kenya uses donkeys for fetching water, for household shifting (during migration), for carrying the sick to hospital, for carrying sick calves, for transporting shopping and for pulling fencing materials needed for constructing bomas. according to (Aganga et al, 1994) in Botswana, donkeys are used for transporting people and goods, for transporting sand for building houses and for fetching water and firewood. (Marshall and Zahra Ali, 2000) reported that In Ethiopia, donkeys are a major mode of transport. They transport at least 12 different commodities including vital food supplies. During recent wars, donkeys kept guerrilla armies supplied with food, guns and ammunition. Some rural Ethiopians recall that in famines of the past they only survived by someone bringing in food on donkeys. The role of donkeys in assisting refugees and guerrilla fighters is commemorated in northern Ethiopia. A study by (Salah Fahmy, 2000) revealed that donkeys are also used in densely populated city areas. In Cairo and other Egyptian cities, Zabbalin communities use donkeys for rubbish collection.

Table 5: the response of households on role of donkeys in transporting various goods/items

	Transported materials	**(%) respondents**	
		Rural	Urban
		n=100	n=100
1	Water from the source to home	50	10
3	Fuel wood from collection site to market or homestead	80	10
3	carrying the sick people or animal to hospital /clinic	100	10
4	Shifting house hold materials during changing residence	100	10
5	Transporting shopping	100	10
6	Pulling fencing materials	100	10
6	Transporting people	20	35
7	house building materials (wood, sand, soil, stone and straw)	60	25
8	transporting grain to the mills and back to home	70	100

9	home consumables (cooking oil, sugar, home baking flour, salt)	80	100
10	Construction materials (cement, timber, iron sheets, steel, bricks etc.).	70	100
11	Cart away of house hold wastes /rubbish	0	50

According to (Dawson and Barwell, 1993) in developed world tractors are seen to modernize farming. Moreover motorized transport on roads and high ways are seen as the indicators of the development of transport. In the last few decades governments and development agencies have invested billions of dollars in transport infrastructure. But, for many people in the Third World, investments in roads did not end their isolation or reduce their transport burden. Many people cannot afford motorised transport and many communities in the world are not part of the road network. More importantly, studies have shown that most of the transport activities of rural households take place within the community and are related to subsistencetasks such as the collection of firewood and water and transport to and from the fields.

4.3.2.3. The role of donkeys in reducing women's work load

Attendants of key informant interviewee reported that women play three tangible roles in the household / family. These roles include Child-bearing and rearing Responsibilities and domestic tasks relating to the maintenance of the household (cooking, fetching water, and collecting firewood) are referred to as reproductive roles. In most societies these are the responsibilities allocated to women. Women, as well as men, also carry out productive roles, producing food or cash crops and/or working in the formal or informal sector. There are also community-relatedroles. These relate to management of collective community resources (usually the responsibility of women) and the participation in formal community politics (usually men).Attendants of focus group discussion and key informant interview reported that donkeys in rural area were commonly used to assist women in transporting water from the source to homestead, firewood from collection area to homestead, agricultural products (grains, pulses, vegetables, fruits, tubers etc.) to market, crop residues and fuel wood to market, construction materials (bamboo for fencing and house construction) to market. Researchers observed that women who own donkeys use their donkeys for transportation of different materials and supplies from their home to market. Those women who do not own/not accessible to working donkey either rent donkey or use their back and head for carrying and transporting materials and supplies from home to market and shopping from market to home.

according to (Fernando and Keter, 1996) A comparison of two Maasai women, one using a donkey to fetch water and the other carrying it herself indicated that the use of donkeys could save up to about 25 hours per week for other activities. The women saw this time saved as valuable for carrying out other tasks, for rest and leisure and for more involvement in community work. Based on (Marshall and Zahra, 2000)in Northern Ethiopia, ownership of donkeys still poses women with a problem of cultivating their fields (because plowing is a male activity and only done with oxen). But female heads of households were especially articulate in their analysis of the importance of donkeys. They said that use of donkeys could provide them with income generating opportunities that would enable them to make as much money as men and diversify their risk by securing an alternative, off-farm income. A study by (Dijkman and Sims, 2000) indicated that for many years, in the Andean regions of Bolivia, donkeys (together with horses and llamas) provided the only alternative to head loading, backpacking and walking.

4.3.2.4. Donkey transport as a source of income

According to all respondents at the two study locations, donkey owners can earn income by providing transportation service, by hiring out donkeys with donkey carts to donkey users, by supplying donkeys and their carts to donkey users through income sharing relationships. As indicated on table 5 below high income was generated through provision of direct transportation service than other methods of generating income from working donkeys. Income generated by working donkeys in urban was higher than rural. Information obtained from focus group discussion and key informant interview indicated that the existence of donkeys among smallholder farming households and other groups of poor people has provided them with opportunities to continue with their productive activities, and to increase their cash incomes. In Niger in 1990, ox and donkey carts became very popular because hiring them out became a good source of income (Kruit, 1992). In Botswana, cart owners could earn US$ 5-10 for transporting goods a distance of12 km (Aganga et al, 1994). In Omdurman city in Sudan, farmers and pastoralists who migrated to the city because of drought and famine in Western Sudan were unable to start new and different jobs. They used their expertise in using donkey-drawn6carts to become water vendors and transporters of people and goods. Owning and operating donkey carts is a good and profitable career and daily incomes are often higher than the average formal sector wage. Many of these donkey cart owners and operators support big families living in the villages (Abdelgadir, 1996). A study by (Sisay and Tilahun, 2000) revealed that in Addis Ababa where the minimum monthly net income

of a Donkey Pack Transport Operations (Birr 125) in 1997 which was higher than the minimum salary of a civil servant of Birr 105.

Table 6: the response of households on role of donkeys in transporting various goods/items

No	Means of income generation	Mean income Generated Per Day		(%) Respondents	
		Rural	Urban	Rural	Urban
		n=100	N=100	n=100	n=100
1	Hiring out donkeys with their carts to the users	20.5	50.8	50	10
2	Providing transportation service	60.10	150.10	80	10
3	supplying donkeys and their saddle with harness and carts to the users through income sharing relationships	30.5	80.30	100	10

Conclusion

It was found that shortage of feed, health problems, predator attack; poor extension service and lack of suitable shelter were the most commonly known constraints of working donkeys kept at the two study locations. Health problem was ranked as the first most important constraint that affects management of working donkeys, followed by feed shortage, lack of shelter, predator and poor extension service respectively in urban area. During group discussion, experts in urban area identified similar management constraints of working donkeys In rural areas health problem rated the first most important constraint of working donkeys management, Followed by lack of shelter, predator, shortage of feed, and poor extension service respectively. Experts' in the two surveyed locations during group discussion underlined that working donkey management system in general was backward. due to lack of knowledge farmers in rural area and donkey owners in urban area do not give more attention for donkey, especially in supplementary feeding, health care, housing management, reducing the load, providing adequate rest times, providing day time shelters and using appropriate harnesses. Hence, improving the health of working donkeys, practicing supplementary feeding, provision of separate night time shelter, reducing of the load, providing adequate rest times, providing day time shelters and using appropriate harnesses could increase the role of working donkeys in promoting the livelihood of small holders. In order to improve the

knowledge of donkey owners on improved and effective working donkey management practices, continuous training and awareness creation should be done on feeding, housing and health management of working donkeys. To solve the problem of feed shortage, efforts should be made to promote access to industrial by products and production of grains. Establishing animal health clinics and equipping them with the necessary facilities, drugs and animal health professionals could be important to identify, control and monitor diseases of donkey in all locations.

In Assosa town special passage way was not provided for working donkeys that provide transportation service through the town. It was found that to move through the town vehicles and working donkeys used the same passageway. Researchers and respondents identified that this action might cause for overcrowding and traffic accident that occur around the road in the town. To mitigate these problems it is advisable to provide separate passage ways both for relaxed movement of working donkeys and vehicles throughout the town. In the main market at Assosa town researchers observed that there was no separately shaded place provided for assembly of working donkeys, this also created overcrowding in the market and inconvenience for movement of traffic through the market. To overcome this problem it is also advisable to provide separate and shaded assembly yard for working donkeys that provide service at the market. According to all respondents from the two locations both governmental and nongovernmental development practitioners paid limited attention for development and utilization of working donkeys at Assosa town and the rural study area of Assosa district. Thus, all development workers should be advised to support this sector through delivering necessary in puts required for betterment of the service delivered by working donkeys and designing a strategy that control every activity of working donkeys in the two study locations of Assosa district. During this survey work researchers observed that majority of donkey users/drivers were not donkey owners but they own donkeys through income sharing agreement and renting. To take higher share of the income that the owner of the donkey do not know donkey drivers expose donkeys for long time work, long distance travel and overloading, they do not care about the safety of donkeys. To avoid these problems donkey owners should be advised to drive/use their donkeys by themselves or supervise the activity of those who drive their donkeys.

Acknowledgment

Our special and sincere gratitude goes to reviewers, who are assigned on behalf of the university and contributed much for enrichment of this research paper both at its proposal and report stage. We are grateful to Assosa University, Faculty of Agriculture and Natural Resources, Department of Animal Science for creating conducive environment (financial support and study leave) that enable us to propose, conduct and complete this study within the given time frame without any complication. Livestock experts of Bureau ofAgriculture and Rural Development, livestock experts of office of urban agriculture, livestock experts of Assosaworeda office of agriculture and rural development in Benishangul Gumuze Regional State were acknowledged for their cooperation in providing us secondary data and other necessary information required by this survey work at regional level, at woreda level and urban level. We like to express our gratefulness to development agents of the four study kebeles at urban study area (Assosa town) of Assosa district for their assistance in facilitation of data collection and communication with respondents. We want to gratify development agents and management bodies of Keshmengelkebelle for their support in convincing farmers to provide the information required from them and attending on data collection. We further extend our appreciation to the rest of our best friends and colleagues for motivating usfrom the beginning up completion of this survey work. We thank our almighty for being greater than any challenge that we faced when we conduct this survey.

Reference

1. *Beja-Pereira A, et al. African origins of the domestic donkey. Science 2004; 304: 1781. Access from: www.ncbi.nlm.nih.*
2. *FAO 2005 FAO statistical data base website. Food and Agricultural Organization of the United Nations. Last visited January 2008, www.faostat.fao.org.*
3. *Teshome M, Addis M, and Temesgen W. Seroprevalence and risk factors of African horse sickness in mules and donkeys in selected sites of West Amhara Region, Ethiopia. African J Microbiol Res 2012; 6(19): 4146-4151.*
4. *CSA (Central Statistical Authority of Ethiopia). Statistical Report on Farm Management Practices, Livestock and Farm Implements, (2009/10). Part II. CSA, Addis Ababa, Ethiopia.*
5. *Alemu G, Azage T, Alemu Y. Research need of donkey utilization in Africa. In: Fielding D, Starkey P. (Eds.). Donkeys, people and development. A resource book of the Animal Traction Network for Eastern and Southern Africa (ATNESA).*

Technical Center for Agricultural and Rural Cooperation (CTA), Wageningen, the Netherlands, 2004; 77 -81.

6. *Biffa D. and Woldemeskel M. Causes and Factors Associated With Occurrence of External Injuries in Working Equines in Ethiopia. Int J Applied Res Vet Med 2006; 4: 1-7.*
7. *Gebreab F. et al. Donkey Utilization and Management in Ethiopia. In: Fielding D, Starkey P. (Eds). Donkeys, People and Development. A resource book in the Animal Traction Network for Eastern and Southern Africa (ATNESA). ACP-EU Technical Centre for Agricultural and Rural Cooperation (CTA). Wageningen, Netherlands, 2004; 46-49.*
8. *Fernando P, Starkey, P. Donkeys and Development: Socio-Economic Aspects of Donkey Use in Africa. In: Fielding D, Starkey P. (Eds). Donkeys, People and Development. A resource book in the Animal Traction Network for Eastern and Southern Africa (ATNESA). ACP-EU Technical Centre for Agricultural and Rural Cooperation (CTA). Wageningen, the Netherlands, 2004. pp. 31-41. Avialable at: www.atnesa.org/donkeys/donkeys-fernando- socioeconomic.pdf.*
9. *Mekonnen T. Rural transport systems in Ethiopia. Proceedings of a National Workshop on Food Strategies for Ethiopia held at Alemaya University of Agriculture, 8-12 December 1986, Ethiopia.*
10. *Fesseha G. Use of equines in Ethiopia. Proceedings of the Fourth National Livestock Improvement Conference held in Addis Ababa, 13-15 November 1991. Ababa, Ethiopia. 1993 pp. 51-58.*
11. *Alujia, A.S. and F. Lopez, 1991. Donkeys in Mexico. In: D. Fielding and R.A. Pearson, (Editors), Donkeys, Mules Horse in Tropical Agricultural Development CTVM, Edinburgh, pp: 1-7.*
12. *Bakkoury M and Belemlih A 1991 some aspects of the use of equines in an urban area of Morocco. In Fielding D and Pearson R A (Editors). Donkeys, Mules and Horses in Tropical Agricultural Developement, CTV, Edinburgh, pp 26-27*
13. *NRC (National Research council) 1994. Number and percentage distribution of horse, asses, mules and camel used for draught purpose by and region for private helding .stastical Bulletin 132, Addis Abeba, Ethiopia.*
14. *Rossel S, Marshall F, Peters J, Pilgram T, Adams MD, O'Connor D. Domestication of the donkey: timing, processes and indicators. Proceedings of the National Academy of Sciences of the United States of America 2008; 105: 3715–3720.*
15. *Fielding D. A preliminary survey of donkey and horse use in Africa. Mimeo, Edinburg Agriculture, Edinburgh. 1986.*

16. *Admassu B, Shiferaw Y. Donkeys, horses and mules - their contribution to people's livelihoods in Ethiopia. The Brooke 2011, Addis Ababa, Ethiopia.*
17. *DID (Department of International Development), 2006. DID Ethiopia Country Assistance Plan? 2006-2010. Consultation Draft, [www.dfid.gov.uk].*
18. *Mohammed, A., 1991. Management and Breeding aspects of Donkey around Hawassa, Ethiopia. In: fielding and R.A. Pearson, (Editors). Donkeys, Mules and horses in tropical agricultural development. CTVM, Edinburgh UK PP: 185-188.*
19. *Solomon, M. and A. Rahmeto, 2010. Observation on Major Welfare Problems of Equine in Meskan District, Southern Ethiopia, Livestock Research for, 22(3).*
20. *CSA (Central Statistical Authority), 2008. Sample enumeration Results determinants in Ethiopia. Research Report 9. ILRI (International Livestock research institute), Nairobi, Kenya, pp: 52.*
21. *Mutharia L, 1995. A participatory assessment of pastoral resources and their utilisation in selected areas of Kajiado District. Study 1: Oloyiankalani Group Ranch: Study 2: Eselenkei/Emutoroki Group Ranch. Intermediate Technology Kenya, PO Box 39493, Nairobi. 71p and 69p.*
22. *SOS, 1995. Changing Places? Women, resource management and migration in the Sahel. SOS SahelUK, 1 Tolpuddle Street, London N1 0XT, UK. 169p.*
23. *Pritchard JC, Lind burg AC, main DC and Whey HR 2005. Assessment of welfare of working horses, mules and donkeys using health and behavior parameters. Preventive veterinary medicine 69, 265-283.*
24. *Svendsen, E. D. (1997): The Professional Handbook of the Donkey, 3rd edn. Whittet Books LTD, W14OBY, London; pp 166 – 182. (s)*
25. ***Aganga A A and Tsopito C M 1998** A note on the feeding behavior of domestic donkeys: a Botswana case study. Applied Animal Behavior Science 60: 235 – 239*
26. *Aganga A A, Letso M and Aganga A O 2000 feeding donkeys. Livestock research for rural Development. Volume 12, Article # (1). Retrieved August 29, 2007, from: www.cipav.org.co.*
27. *Smith D. and Pearson R.A 2005.A review of factors affecting the survival of donkey in semi-arid regions of sub-sahar Africa tropic animal health and production 37(1):1-9*
28. ***Maloiy G M O 1973** the effect of dehydration and heat stress on intake and digestion of food in the Somali donkey. Environ. Physio. Biochem. 3: 36 – 39*