

**Mekelle University**  
**College of Business and Economics**  
**Department of Management**



**The Performance and Challenges of Urban Livestock  
Farming:**

**The Case of Dessie City, Amhara Region, Ethiopia**

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## **DECELERATION**

This thesis is my original work, has not been presented for a degree in any university and that all sources of material used for thesis have been duly acknowledge.

Getu Alemu Girmay

Signature\_\_\_\_\_

May 2013

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## ACRONYMS

ANRS	Amhara National Regional State
CGIAR	Consultative Group on International Agriculture Research
FAO COAG	Food Agriculture Organization Committee on Agriculture
DA	Development Agent
DFID	Department for International Development
ECSA	Ethiopia Central Statistics Agency
EEPRI	Ethiopian Economic Policy Research Institution
	FAO
	Food Agriculture Organization
FDRE-FSP	Federal Democratic Republic of Ethiopia Food Security Program
GDP	Gross Domestic Product
FGD	Focus Group Discussion
HH	House Hold
HIV/AIDS	Human Immunodeficiency Virus/ Acquired Immune Deficiency Syndrome
IPCC	Inter Governmental Panel on Climate Change
IRDC	International Research Development Center
IISD	International Institute for Sustainable Development
MOA	Ministry of Agriculture
MoFED	Ministry of Finance and Economic Development
MoWUD	Ministry of Work and Urban development
NGOs	Non Governmental Organizations
NRSP R	Natural Resource System Program
NUDP	National Urban Development Program
SA	Study Area
SPFS	Sustainable Program for Food Security
SPSS	Statistical Package for Social Sciences
TCG	True Consulting Group
TYPP	Ten Year Perspective Plan

UA	Urban Agriculture
UN	United Nations
UNDP	United Nations Development program
UNFCCC	United Nation Framework Convention on climate change
UPA	Urban and Prei-Urban Agriculture
USAID	United States Agency for International Development
USDA	United States Development for Agriculture
USA	United States of America
WFP	World Food Program
WFS	World Food Submit

## Abstract

*Urban livestock production to over all development including income and employment generation, poverty alleviation, and improvement of human nutrition and health. This study was conducted with the main objective of assessing the performance and challenges of smallholder livestock farming in the context of Dessie City Amhara Region. There is limited scientific evidence about the progress and challenge of urban agriculture in general and urban livestock farming in particular. To this end, the study contributes in generating first hand data on the performance and challenges of urban livestock farming. To that effect the necessary data were gathered from primary and secondary sources. The overall methodology is explanatory. A stratified random sampling of 100 urban livestock farmers was drawn from selected kebel through proportionate sampling. Interview was also held with two sector heads who are from the municipal (Mayor); the urban agriculture sector head. Focus group discussions were held which are selected from the 13 kebel and one household from each kebel. To analyses the data frequencies, percentage and tabulation was used. Moreover, correlation and multiple regression analysis were employed to see the relationship between the independent and dependent variables in the study area. As the findings of the study reveals the potential of urban livestock farming that is generating for additional income (69%). The waste products livestock that use as fertilizer (58%). The number of livestock that has 11 and above (57%). The capital that they have at present 3001-6000 (32%). The activity was conducted use family labor (81%). Following this shortage of credit, lack of training, shortages of capital and market are the main constraint of urban livestock farming. The conclusion of the thesis urban agriculture is an involvement of a massive society and has significant in food security, additional income and employment generating potential for an areas whose unemployment rates are growing. Furthermore, urban livestock farming which is important in many ways which include home consumptions; as source of high valued food; additional income improve employment minimizing transport and energy cost. Following this the recommendation live stock need scientific innovation to give more production that at present government (federal, regional and local) nongovernmental organizations the community and the farmer themselves should take due attention in the productivity. In addition to this the constraints and limitations of the livestock farming such as shortage of finance access to credit veterinary worker at most poor market opportunities, infrastructures; problem of feed access to land to solve these the producers should work jointly with different stakeholders.*

# CHAPTER ONE

## INTRODUCTION

### 1.1 Background of the Study

The livestock raised in cities are poultry, birds and smaller animal. They can be raised in the dense city cores by less affluent people. Many authors have asserted that urban Livestock keeping contributes a lot to the protein needs of urban population (Smith and Olaldku 1998; Lee Smith and Lamba; cited in the DFID, 2002). Besides, urban livestock production plays a substantial role in reducing poverty and increase food security in the city, although livestock keepers in the urban area are still receiving little attention in terms of policy, institutional and technical support at their needs (Azage, 2004). According to DFID, (2002) until recently the main focus of agriculture development initiatives has been on rural area with the view that improved food production in rural areas can supply the expanding urban population. This is especially true for livestock production which received little attention from researcher and development initiatives in urban areas.

But there is a great challenge in livestock market; the production could not reach to the intended consumers directly. This is because different sectors such as livestock producers, traders, processors, retailers, food service providers and consumers participate in the livestock market. Private and public livestock inputs and service providers are also important market actors. These all make it difficult to reach the target consumers. Besides, most house hold livestock productions are consumed in the house hold and market disposal of livestock products are very limited (Asfaw et al., 2011).

In addition to this, Azage, (2004) stated urban livestock production can contribute for overall development of the country. It can be used as income and employment generation, poverty alleviation and improvement of human nutrition and health. Asfaw et al., (2011) stated that the livestock is an important sub- sector in Ethiopia's economy in terms of its contribution to both agriculture value added and national GDP. Besides, (Halderman, no date) stated that livestock are extremely important in Ethiopia economic development and pro-poor development strategy, although it could not get due attention Asfaw et al (2011) stated that, women participation in the livestock activity is higher than men participation. This in turn as Azage, (2004) stated women participation in live stock production

enhanced their status in their community and increased their productivity in urban production and strengthened their decision making power and leadership, recognition of their role. The contribution of livestock and livestock product exports to foreign exchange earnings is also large. Ethiopia livestock population is the largest in Africa. In 2008/09, Ethiopia sedentary private holding were estimated about 49 million heads of cattle, 25 million heads of sheep, 22 million heads of goats, and 38 million poultry.

Most of Ethiopian population who lives in urban areas lives with high poverty (Dawit, 2012). Ministry of finance and economic development for Ethiopia (2011) reported that by 2020 the Ethiopian people will double. It is also predicted that poverty which exists especially now will also increase in large cities of the country. This signals that there is a need for exercising urban agriculture to improve food security and to eradicate poverty (Tewodros, 2007). The experience in the past showed that there is participation of women in the area of urban agriculture. This in turn improved their income as well as nutritional level of the family. Besides, women had the upper hand economic position in the community (smith et al., 2001).

The Amhara region is one of the nine federal states which have drought and chronically food insecurity in Ethiopia (USAID, 2010). To improve this food insecurity, it is a must to implement urban agriculture. But, in the past urban agriculture was ignored by the society and policy makers (Tewodros, 2007). Dessie is one of the towns in the Amhara state which has high food insecurity. Although the topography of the city is not suitable for mechanized agriculture, there should be the need to implement urban agriculture especially livestock (small animals) farming.

## **1.2. Statement of the Problem**

Food is one of the basic needs which can be produced locally. The production of food may be mechanized or in small scale which requires sustainable methods of production (Malo and Huston, 2008). At household (HH) level, urban agriculture can be source of income and can help in fulfilling the nutritional need of people through supplying vegetable, fruit and meat. Urban agriculture also plays important role in maintaining the stability of food supply even in the time of production failure in rain fed agricultural practitioner of rural

areas. Moreover it can help women to use their time properly as the farm is near to their residence (Zezza and Tasciotti, 2010).

Many urban poor households participate in some kinds of farming to secure food for their family than non-farming house holds (Veenhuizen and Dubbeling, 2011). Having the advantages of urban farming in mind, there is a fundamental rise of urban agricultural practice with the support of technological innovation and adoption. Most of the countries change their system of food production to improve food security. In fact, in many countries urban agriculture receives little support from officials and in many countries it is still resisted (ibid). One of the challenges that the farmer face is the land for live production is scarce and costly in the urban area. This situation forced urban farmers to use the top of their buildings roof and other available area to grow their food, which is usually called micro farming but still scarcity of land becomes the key challenge to practice farming in urban and semi-urban areas (Hui, 2011).

The economy of Ethiopia, like that of other developing countries' economy, depends on agriculture which is expected to provide adequate opportunities in supplying food for its rapidly growing urban population. Though this is the fact, adequate attention is not given to enhance urban agriculture. Besides, urban agriculture is at its infant stage in the context of Ethiopian cities. For instance, there seems to be low government attention towards institutionalizing urban agriculture in the country (Lee, 1997 Geber Egziabher, 1994 cited in Tewodros, 2007). Urban and prei-urban agriculture still largely remains to be considered as an informal sector which is integrated with the formal national agriculture polices or urban planning. This makes it vulnerable and also unrealizable and risky (Weg and Faure, 2008).

According to previous research outputs, though it has long history of urban agriculture, it did not play its role. It did not contribute to increase family income, access to employment, food security and additional diet for the healthy family at the house holds (HHs) in the urban area (Messay, 2010).



The Amhara National Regional State (ANRS) has an estimated population over 17.214 million of which about 12.3% live in urban areas (CSA, 2007). It is a region where about 37% of the population is living in absolute poverty (earning less than or equal to a dollar a day), which makes the regional food insecurity more precarious like that of the national average (44.4%) (WFP, 2009). Dessie is one of the cities in ANRS which is also the principal city of the South Wollo Administrative Zone. The town is located 400km north of Addis Ababa and 475kms east of the capital of the ANRS, Bahirdar. The city is also linked to Mekelle and Afar regions which enable it to have advantages location related to marketing. On the other hand, reports from Dessie urban farming office and the municipality proved that there is a potential to be exploited in the sector. The city is believed to have immense potential in the livestock farming practices such as oxen fattening, cow, sheep, pig, and poultry. According to Veenhuizen and Dubbeling (2010) urban and prei urban agriculture most often focus on perishable and high value products (green vegetable, mushrooms, herbs, fresh milk, eggs, poultry and pig meat, fish) that can be grown in confined spaces. Furthermore, keeping livestock varied depending on the type of livestock, whereas goats, sheep, pigs and ducks were kept to obtain income derived from their sale in emergency situations, chickens and cattle were mainly kept to sell or consume their products on regular basis (Veenhizen and Dubbeling, 2010). Each of these animals has its own specific advantages particularly small animal are adaptable to back yard conditions, they require little capital to start with, it is easy to sell them and they reproduce fast (Dubbeling and Santandreu, 2003). The study investigated the potential of urban livestock farming vis-à-vis its performance in the context of Dessie town and issues that should be addressed and require intervention so as to enhance urban livestock farming area also identified.

### **1.3 Research Questions**

This study investigated the performance and challenges of urban livestock farming in the context of Dessie city. The following research questions were used in this research.

1. What are the types of livestock farming practices in Dessie city?
2. To what extent is livestock farming performed in Dessie city?
3. What are the potentials of livestock farming in Dessie city?
4. What are the prospects Constraints and limitations of livestock farming in Dessie city?

## **1.4 Objective of the Study**

### **1.4.1 General objective**

The overall objective of the study was to explore the performance and challenges of urban livestock farming in the context of Dessie City.

### **1.4.2 Specific Objectives**

The specific objectives of this study were:

1. To identify the types of livestock farming practices in Dessie City;
2. To determine the performance level of livestock farming in Dessie City;
3. To explore the potentials and institutional setup of Livestock farming in Dessie City;
4. To describe the challenges and limitations of livestock farming practices in Dessie City.

## **1.5 Significance of the Study**

It is hoped that this research work could have multiple significance. Firstly, the study provides firsthand information regarding the potential, performance and limitations of urban livestock farming practices in the context of Dessie City, Amhara National Regional State. Secondly, by identifying facts and triangulating them with existing theoretical frameworks, the study also plays a vital role in expanding the existed knowledge of urban agricultural practices in general and urban livestock farming in particular. Thirdly, the findings of the study are expected to be an input for decision makers and collaborators who are keen to improve the performance level of urban livestock farming practices and mitigating the risk of urban food insecurity.

## **1.6. Scope of the Study**

The scope of the research was limited to investigate the performance and challenges of livestock (sheep and poultry) based on a survey of sample respondents from 13 kebel in Dessie city.

### **1.7. Limitation of the Study**

It is undeniable that every study has its own limitation. The study was carried out only by surveying a sample of 100 livestock households from 13 kebelles of the city. This study focused on a selected urban agriculture (sheep and poultry) and neglected the other urban agriculture activities like oxen fattening, dairy and dairy products in order to make the study manageable. Even if all kebelles have access to livestock farming but, the study gave emphasize to the 13kebeles of the city administration.

### **1.8 Organization of the Research Report**

The research has five chapters. It was organized as follows. Chapter one consists of introduction, statement of the problem, research questions, research objective, scope and limitation of the study, significance of the study and organization of the paper. Chapter two consists of the outputs of reviewed literature. Chapter three is about description of the study area and research methodology. Chapter four provides the results and discussions of the research. Finally Chapter five deals with the conclusions and recommendation of the study.

## **CHAPTER TWO**

### **REVIEW OF RELATED LITERATURE**

#### **2.1 Urbanization and Demand for more Food**

Increased urbanization poses challenges for city management, urban development and provision of services. The recurring challenges of rapid urbanization are the escalating demand for resources, shelter and employment and the urban authorities in Africa are hard pressed to provide opportunities, infrastructure service and housing, and cities have limited resources to cope with such pressures and often fail to create the jobs necessary for growth ( UN, 2005.,also cited Muna, 2008 ).Urban agriculture has the potential to enhance the nutritional status of urban residents in general and the urban poor in particular, by directly improving food security and nutritional adequacy (smith et al., 2001). Some of the implication of farming in the cities, towns, cities and metropolis are issues related to ecologically sustainability (Leshner, 2010).

#### **2.2. The Role of Urban Agriculture**

The phrase “Urban Agriculture can refer to any agricultural activities, including crop cultivation, located within livestock, and aquaculture (fish farms) that value of urban agriculture”. Can refer to any agricultural activities take place in a Center (IRDC). The current definition that is widely accepted by international organizations as the (UNFCCC and IPCC, 1999) being used to day. This definition is urban agriculture is an industry (intra- urban) or on the fringe (peri-urban) of a city an urban center city or metropolis which gross or raises processes and distributes a diversity of food and non-food products reusing mainly human and material resources products and services found in and around that urban area and in turn supplying human and material resources products and services largely to that urban areas (Jansen and Wolf, 2010).Urban agriculture is defined as the production of crops and livestock goods (Zezza and Tasciotti, 2010). In general there are three main types of urban agriculture: backyard garden, community garden and commercial farms (Hui, 2011).

Urban agriculture requires a complementary strategy to alleviate urban poverty and food insecurity and improve urban environment management (RUAF, 2010). Urban agriculture plays a decisive role in improving urban food security since the price of supply and distributing food to urban areas based on rural production and imports continue to

increases, and do not fulfill the demand especially of the poorer sector of the population. It can also empower women in particular and the disable part of the society in general (Aded, 2004).

The transformation of cities from only consumer of food to generators of agricultural products contributes to social, economic, and environmental benefits. However, food production also allows savings in transportation costs, storage, and in loose products, what results in food cost reduction (Jansen and Wolf, 2010). In addition to this the United States it is approximate calculated that between 35 to 40 % of its agricultural products, in money worth of market crops, are having matured in its statistical metropolitan areas (Lanknowd et al., 2006). However, Australia research is suggesting that agriculture occupying in peri-urban regions constitutes as much as 25% of the total agricultural production in terms \$ (Lanknowd et al., 2006). Following this the rapid urbanization goes together with the rapid increase in urban poverty and urban food insecurity.

### **2.3. Sustainability Dimension of Urban Agriculture**

The world commission stated that sustainable development as follows“...is a process of change in which exploration of resources, the direction of investment and institutional change are all in harmony and endorse both the current and future potential to meet human needs and operations (Wilson and Tyrchniewicz, 1995).

Following this, The Canada the federal provincial Agriculture committee defines sustainable agriculture as follows. One major challenge to the viability of urban agriculture is the land availability. Furthermore it is explains as follows “Agri-food systems that are economically viable and meet society’s need for safe and nutritious food while conserving or improving Canada’s natural resources and the quality the environment for future generation. Another definition argues that The American Society of Agronomy (1995p10) defines sustainable agriculture as“... One that, over the long term, improving environmental quality and the resources depends on which agriculture relay on provide for basic human food and fiber needs, is economically viable, and improve the quality of life for farmers and society as a whole.”

All, the above definitions explain that sustainable development in focusing on the need of the present without the forgetting the future generations. But, more importantly, that, urban grow this changing the face of the earth and the condition of the humanity. The size of modern cites in terms of number as well as physical scales is unprecedented (Deelstra

and Girardet 2010).The above definitions have expressed that sustainability helps the surrounding environment and the human beings for the long lasting their food production. In addition, to this urban agriculture and suitability have integrated linkage. In addition the above definition the following also, It is mentioned as follows. Urban agriculture is the most exciting concept of sustainable development since it addresses almost all areas of sustainability(Adedej and Ademiluyi, 2009).Urban and peri urban agriculture can be considered as an integrated part of viable strategies for sustainable and equitable urban development (Veenhuizen and Dubbeling, 2011).

## **2.4 Urban Agriculture and Food Security**

According to (FAO, 1990a) about the definition of food security the most influential and widely accepted definition is that one of the Food and Agriculture Organization of the UN defines as follows” access by all people at all times to enough food for an active and healthy life “. (Baumgartner and Belevil, 2001) stated that, Urban agriculture could contribute to mitigating the most intractable problems facing the third world cities poverty and waste management. Urban agriculture is one of several food security options for households it is one of several tools for making productive use of urban open spaces treating urban wastes saving or generating income and employment and managing fresh water resources more effectively. In addition to the above idea (Berhanu, 2004) gave emphasis on the explanation, due to the improvement of market on urban areas where house hold food security is dependent on house income, work opportunities as well as an efficient food market system are crucial to improving access to food. Urban agriculture is intensive in nature and plays an important role in ensuring food security is dependent on household income work opportunities as well as an efficient food market system (Aded, 2004).In addition to this, urban agriculture as an agent of food security can be effective throughout a city core to periphery, and thus has special relevance in low income countries (Smit et al, 2001). For example According (Veenhuizen and Dubbeling, 2011) Based in the above idea the urban agriculture in the area of food insecurity can play more, many national and local governments to the conclusion that the development of urban and peri urban agriculture needs risks, rather than being restricted and stifled.

## **2.5 Livestock Production and Urban Agriculture**

According to Baumgartner and Believe, (2001) for traditional and economic reasons, livestock production is important in many cities. The livestock raised in cities is typically poultry, birds and smaller animals which are raised by the less affluent in the dense city cores. Small livestock is important in sustainable development, since its meat to feed ratio is higher than that of large animals (Aded, 2004). The extended metropolitan region of Shanghai is largely self-sufficient in vegetable and small livestock animal (Smith, et al., 2001). Comparing to Ethiopia the following shows how the livestock contributes 12% and 33% of the total and agricultural gross Domestic Product (GDP) respectively, and provides livelihood for 65% of the population. The sector accounts for 12% to 15% of the total export earnings, the second in order of importance (ECSA, MoFED, 2011). Despite to the contribution of livestock to the economy and to smallholders' livelihood, the production system is not adequate market oriented (Ayele . et al., 2003).

## **2.6 Urban Agriculture and Stakeholders**

The economic crises in 2000 led to the formulation of a municipal policy and program on urban and peri-urban agriculture in order to support the livelihoods of the urban poor (Veenhuizen and Dubbeling, 2011). More importantly, municipal governments are in a unique position to plan for and support development project that merge local urban agriculture and to integrate direction for urban agriculture in to a broad policy frame work (True Consulting Group, 2007). Non-Governmental Organizational (NGO) is one of the organizations that support urban agriculture. Some of them were focused on community development and many on survival of the poor on the city (Smit, et al., 2001). Governments should recognize the role to play urban and peri urban agriculture and street food in making food available to poor families in urban area and in generating income for women (Weg and Faure 2008). For example According to (Hui, 2011) give emphasize to the government activity in urban agriculture that, in order to encourage people to grow their own vegetable garden, the government needs to put these issues in the land use control and building regulations. The policy makers require more precise information on how to contribute.

## **2.7 Ethiopian Urban and Food Policy**

According to Genet and Mehrab, (2010) In Ethiopia urban land ownership is administered the same way as rural land; the state and the people of Ethiopia own all urban land , and the law forbids sales or exchange of urban land . Furthermore, Ethiopian cities are also the fastest growing units in the country, adding 4.2 percent to the overall population per annum (Zenebe, 2010). For example, according to Sisay (2012), Ethiopia is among the least urbanized countries in sub Saharan Africa with only 17% of its population living in urban areas. However, currently the urbanization processes in Ethiopia area among the fastest in the world with more than 5% annual growth rate. The national urban development policy (NUDP) highlights the need for rapid development in urban centers through expansion of small and micro enterprises; construction of low cost houses ; facilitating access to land supplying related infrastructure for private sector investments and urban residents including the poor; and expansion of social service (Genet and Mehrab, 2010 ).

The rapid urban population growth in many countries means that many people live in conditions of extreme poverty, filth, overcrowding, and poor sanitation that have also aggravated food security problems (Smith and Robert, 2005). Even though there is long-held belief that urban population are better off, even favored than rural populations, recent food and financial crises have highlighted the problem of urban food insecurity in developing countries(Girma, 2012). Food access and its utilization could be constrained by economic growth, lack of jobs opportunities, lack of credit, inadequate training, inadequate knowledge etc. (Haile H.K et al., 2005).

The achievement of food self –sufficiency is one of the key objectives of the government as articulated in its GTP and rural development policy and strategies, which is also consistent with the MGD, goal of eradicating extreme poverty or hunger (MoFED, 2012). Nigussie, 2010 as cited in RUAF, (2010) policies to food production are centered on rural areas, and do not have provisions for urban and peri-urban. For example according to (Nel et al., (2009) notes that urban agriculture is an “important socio economic activity, particularly for the poor”, while acknowledging that urban agriculture can only be regarded as one aspect of a multifaceted approach, urban agriculture it is argued, deserves



greater institutional recognition and support because of the role that it can potentially play in helping to address concerns of urban poverty and food insecurity.

Safety net programs designed to provide targeted income support and access to basic social services to the poorest groups, and or those needing assistance after economic downturns, natural disasters, or other events (Middle brook, 2008).The food supply problem changes from depending on the level of analysis. Global food security involves supply through production where as food supply at a house hold level is clearly determines by own production plus entitlements and accordingly this has increasingly been reflected in food policy (ibid). In summary, a clear policy framework in currently lacking Ethiopia, however, the value of urban and peri urban agriculture is increasingly being recognized and this is being translated in to action to review policy (RAUF, 2010).

## **2.8. The Role of UA in Food security Status of Ethiopia**

Food insecurity can be tackled different factors has resulted in serious and growing food insecurity problem in Ethiopia, affecting as much as 45% of the population. Food insecurity is a wide spread phenomena in Ethiopia. It is not limited to the marginal low rainfall areas of the country, where drought takes its greatest toll. However, the severity, or share of the population that is food insecure, dose differ by region (USAID, 2004). Food is former necessity to survival. It is among the most important ingredients for human development and national stability. The approachable or existence of food is a big issue in livelihood and it is obvious that any shock in the existence of food affects the nation negatively (Tadesse, 2012).

Food security as a problem the national level was first felt in Ethiopia in the 1960s, it only started influencing policy in 1980s when food self-sufficiency becoming one of the objectives of the Ten Year Perspective plan ( TYPP) in the early 1980s (Haile H.K,2005). As in many developing countries, food security assessment in Ethiopia have traditionally focused on rural area where the majority of the population as well as the poorest and most food insecure segments of the population lives (Girma, 2012). The decline in rural poverty can be attributed to the wide range and multi-faceted pro poor programs that have been implemented in rural areas such as extension of improved agricultural technologies and farming practice, commercialization of small holder farming agriculture, rural

infrastructural development and a range of food security program ( productive safety net programs, provision of credit etc.( MoFED, 2012 ).

For many years, net food buyers, requiring the generation of income or other resources for these food purchases, opportunities to do so are, in reality extremely limited in both rural and urban Ethiopia (Riley, 2000). In Ethiopia where large proportion of house hold income ( 60% ) goes for its purchase , let along large surge slight increase has great implication for welfare of millions of households (Middle brook, 2008). As indicated in ( RUAF, 2010 ) urban food production will never be able to supply cities with the required amounts of stables, urban and peri-urban agriculture can be an important source of vegetables; fruits , milk, and certain meat products for cities, especially when rural food production and transportation system are underdeveloped. In order for “ path way from poverty” efforts to be successful, they must be able to leverage the power of the private sector to increase demand for small holder production create jobs and present expanded opportunity for sustainable livelihood development (US Government Document, 2011). Food crisis and unstable socio economic environment make the urban poor tend to suffer the most as they lack sufficient income and consumption , lack of access to employment and food, inadequate service including health and education (Kutiwa et al.,2010). If improved food security is to be achieved in poor, food insecure countries of Africa, Asia, Latin America and the Caribbean, closed donor and government coordination and collaboration is essential (Riley, 2000).

Urban agriculture not always received adequate recognition in respect of institutional acceptance. Tradition institutional acceptance has often been followed by productive policy approaches (Nel et al., 2009). Unlike the rural areas where most households derive their food requirements form agriculture production, food security in urban area is market dependent as most households produce their food from the market. Against this backdrop, urban agriculture or food production conducted in or around regions seems to provide a realistic and pragmatic solution (Kutiwa et al., 2010).The decline in urban poverty incidence and gap could be attributed to the pro poor activities under taken in urban areas since 2005 including the ongoing efforts waged by the government for like private sector

investment, job creation and distribution of subsidized basic food items provided to the urban poor in time of inflation (MoFED,2012).

Inflation in food prices is more critical for low income economies Ethiopia as it hits large number of low income households disproportionately (Tadesse, 2012).Without additional growth in agriculture, the poverty rate cannot be reduce and, as population increase, there will be 11 million more people living in poverty by 2015(USAID, 2004). In general the food security program encompasses both ongoing and newly designed intervention and is implemented mainly through government structures at the woreda and Keble level. It is intended that participation in this complementary set of interventions will lead to the graduation of significant portion of food insecure households (FDRE Food Security Bureau, 2004).

## **2.9. Contribution of Urban Livestock Farming to economic development in Ethiopia**

Livestock perform multiple function in the Ethiopian economy by providing food, input for crop production and soil fertility management, raw material for industry, cash income as well as in promoting saving, fuel, social functions and employment (Ayele et al., 2003). (For example According ECSA MoFED, 2011).Ethiopia is believed to have the largest livestock population in Africa. The livestock farming has been contributing considerable portion to the economy of the country, and still promising to rally round the economic development of the country. Recently, there has been a trend of continuous and rapid increase in global continuous consumption, production and trade of livestock products in developing countries (Asfaw et al., 2011). These livestock keeper receive or can access government and private support services and either receive approval are at least by city authorities (Guendel, 2002). Livestock fulfills an important function in coping with shocks, accumulation wealth, and serving store of value in the absence of financial institutions for saving and given missing factor and output market (Asfaw, et al., 2011).

The major player in the livestock production, processing and marketing of this product are women. To enhance the status of women and to increase their productivity in urban livestock production, and to strength their decision making power and leadership,

recognition of their role and creation of favorable policy are essential pre condition (Azage, 2004). Livestock are for asset accumulation is an ancient and traditional practice in Ethiopia and it contributes to be important to day because for the majority of the population especially the poor (Halderman (no date). The livestock sub sector plays a significant role in Ethiopia economy at both the national and house hold levels. It contributes to both agricultural value added and national GDP are substantial (Asfaw et al., 2011). It is distinguish between the different social groups involved in urban livestock keeping as they faced different constraints and opportunities and have different reasons to engage in livestock keeping (DFID, 2002).

The emerging commercially oriented livestock sector constrained by lack of feed, improved breeds and adequate support service such as veterinary, extension, credit information etc. overall, the transformation of livestock sector is limited and livestock revolution has yet to come to Ethiopia, suggesting the potential to expand the role of livestock in smallholder livelihoods and income(Asfaw et al.,2012). In highly populated areas, smaller livestock (sheep, goat, poultry etc.) are preferred over large animal that require large expanse of grazing land (Helin and Schmidt, 2012). The urban poor engage in urban livestock keeping as a response to limited alternative livelihood option and food security (Guendel, 2002). The world is the home to over one billion under nourished people, over 98% of who lives in developing world. The population of the developing world is becoming more urban population projected to double from 1.7billion in 1995 to 3.4billion in 2020 (Girma, 2012).

Livestock contribution to households' economy in different ways, e.g.as source of pulling power source of cash income, source of supplementary food, and means of transport. In addition to this, livestock are considered a means of security and means of coping during crop failure and other calamities (Haile H.K, et al 2005).

Livestock as well as confer a certain degree of security in times of crop failure, as they are a “near cash” capital stock. Furthermore, (ECSA MoFED, 2011), livestock provides farmyard manure that is commonly applied to improve soil fertility and also used as source of energy. The livestock keepers stated that livestock can be kept in the smallest possible

area within the city and is therefore more accessible for resource poor households than for instance crop production (Guendel, 2002).

It is significant that landless residents of urban and Peri-urban areas are able to benefit by keeping livestock (Halderman, 2004). Livestock is a classic indicator of asset and they are more likely to be marketed regularly or readily. According to some literature most of the time households didn't sold livestock unless food insecurity is severe (Frehiwot, 2007). In general, the exploitation of the huge national livestock resources for national growth and poverty reduction requires the re orientation of livestock production and marketing system (Asfaw, et al., 2011).

## **2.10 Theoretical and Conceptual Framework**

### **2.10.1 Conceptual Framework**

Livestock farming, like that of other economic activities has its own roles and challenges. With all challenges that vary per area and development status of practitioners, urban livestock farming plays a role in creating employment opportunities and income generation

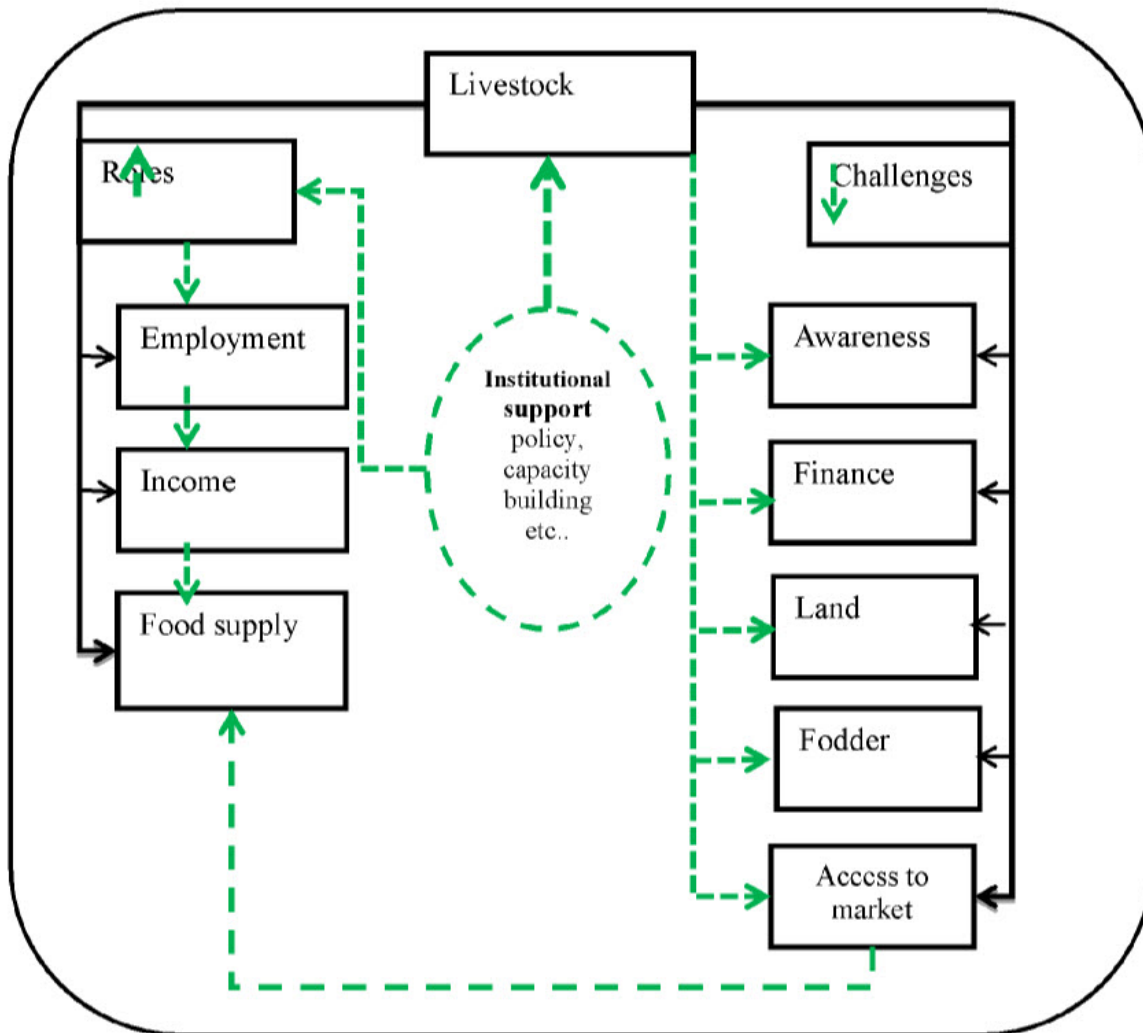


Fig. 1: Livestock farming: Roles, challenges and the quest for institutional Intervention (Source: Own design, November 2012)

**Dependent variable:** - current market value of livestock.

**Independent variables:** - Distance to the market; educational status of the respondents; initial capital; total number of the livestock.

**Land:** -In the face of growing population, access to land is becoming an increasingly critical factor in production (Berhanu, 2004).Urban and peri urban agriculture often makes productive use of land that is not fit for construction (flood or earth quake prone areas, land under power lines and in buffer zones) and adds value to land that might not otherwise have an economic output (Dezeeuw and Dubbeling, 2010).

**Market:** -The effects of urban and peri-urban on poverty alleviation vary with the type of participants involved, the products produced and the degree of market orientation among other things. The most subsistence oriented and semi commercial types of urban agriculture may have smaller economic significant, but the number of households involved is often high and urban and peri urban agriculture of plays an important role in the survival strategies of the urban poor, who may benefit from urban and peri urban agriculture in various ways (Dezeeuw and Dubbeling, 2010). However, in addition to the above, urban agriculture also included in to formal, non-formal and community marketing: require specific interventions such in such areas as price control , the creation of new trading opportunities and way of linking producers with consumers(Dubbeling and Santandreu, 2003).

**Food supply:** -Urban and peri urban agriculture contribute to enhancing urban food security and healthily nutrition of the urban poor. Urban households that involved in some sort of farming or gardening are more food secure, have a better and more diverse diet, and eat more vegetables than non-farming households (Dezeeuw and Dubbeling, 2010).By producing food locally and balancing production with consumption, the embodied energy of the food requires to feed the city is reduced because of lower transportation, distance, less packing and processing and greater efficiency in the production inputs (Taylor, 2010). Furthermore, urban agriculture offers healthy food, sustainable jobs, and the greater awareness about the ecology of food system (ibid). A global estimate (1993 date) is that 15- 20% of the world's food is produced in urban areas (Weg and Faure, 2008).

**Awareness:** -The 2007/2008 food crisis has made national and city authorities more aware of the need to enhance attention to rising urban food security; to strengthen the resilience of the urban food system; and reduce vulnerability of urban poor to price hikes in the international market (Dezeeuw and Dubbeling, 2010).

**Income:** - Urban agriculture is an easy in easy out entrepreneurial activity for people at different level of income. For the poorest of the poor, it provides good access to food. For the stable poor, it provides a source of income and food quality food at low cost, for middle income families, it offers the possibility of savings and a return on their investment in urban property. For small and large entrepreneurs, it is a profitable business (UNDP,

2009 as cited in Leshner, 2010). Moreover, to achieve food sovereignty and ensure that the low income groups will have access to food in adequate quantity and quality. Urban agriculture should be promoted as a family practice that can help meet that family's own nutritional needs, within their own traditional (Dubbeling and Santandreu, 2003).

**Employment:** - Urban and peri urban agriculture is intensive in nature and plays an important role in ensuring food security. In urban areas where household's food security is dependent on household income, work opportunities as well as an efficient food market (ADED, 2004). Furthermore, one of the most innovative ways of generating income and creating new jobs is adding value to urban agriculture through the processing and marketing of food (Dubbeling and Santandreu, 2003).

**Institutional support:** -Government and non-government agencies also have a wide range of partnership roles to play. In the area of policy, enabling legislation, technology, and credit, national governments hold great power over the viability of urban agriculture (Smith et al., 2001). The key elements to facilitate urban and peri urban are the simplification of institutional frameworks and responsibilities, and the proper institutionalization of urban and peri urban agriculture, as well as broad based participation of the different stakeholders (Weg and Faure, 2008).

**Fodder:** - Lack of feed and safe drinking water is much more a problem for large livestock keepers, probably simply because these animals eat and drink much more than small animals. Harassment, though not frequently mentioned, is also a constraint specific to large livestock. This may be related to the regulation which says that it is forbidden to have large animals freely roaming around (SPFS, 2001).

**Finance:** -To ensure the success and expansion of urban agriculture, local producers need access to micro credit and investment programs. Local government should implement credit and finance policies and instruments, especially for the poorer and most vulnerable groups, applying conditions that are compatible with the technical and productive nature of urban agriculture. The financing program should be coupled with actions aimed at strengthening social organization, technical assistance; training and marketing support (Dubbeling and Santandreu, 2003).



The independent variable shown in the conceptual frame work were selected after going through various literature review given above, which were hypothesized to influence the productivity. Therefore, the outline factors in the conceptual frame work are thus the most important and relevant ones for determining the productivity of the livestock.

### **2.10.2 Theoretical Framework**

Urban agriculture has different types and this may be why there is a shortage of understanding of phenomenon at all level of the community, particularly decision makers. Furthermore, urban agriculture is an umbrella term encompassing a wide range of activities involving the production, processing, marketing and distribution of food in urban and peri urban areas. To make it clear the following theoretical definitions may give a clue. Nugent (2010), urban agriculture takes various forms at different level of development, with a given set of topographical features, climate and traditions, urban agriculture changes in response to income growth and urban development. In addition to these definitions the following shows the role urban agriculture in country. For example according to Baumgartner and Belevli, (2001). Urban agriculture comprises the production, processing and distribution of a diversity of foods, including vegetables and animal products within (intra-urban) or at the fringe (peri-urban) of an urban area. Urban agriculture main focus is food production (for sale or personnel consumption) and /or higher income. However, Nel et al (2006) also explain that urban agriculture “A complex system encompassing a spectrum of interests, from a traditional core of activities associated with the production, processing marketing, distribution, and consumption, to a multiplicity of other benefits and services that are less widely acknowledged and documented. These includes recreation and leisure; economic vitality and business entrepreneurship, individual health and well-being; community health and well-being; land scope beautification; and environmental restoration and remediation”.

Following to this, according to (Zezza and Tasciotti, 2010).Urban agriculture may have a role to play in addressing urban food insecurity problems, which are bound to become increasingly important with the secular trend towards the urbanization of poverty and of population in developing regions.



## **CHAPTER THREE**

### **RESEARCH METODOLOGY**

#### **3.1 Description of the Study Area**

##### **3.1.1 Location and Topography**

Dessie (also spelled Dese or Dessye), aged more than a hundred and ten years old, is a multi-ethnic city in north central Ethiopia. The Dessie area called partly as Lakomelza, is one of the earliest inhabited region in Wollo, previously known as Bête Amhara, moreover, Wasal, first mentioned in an early 16<sup>th</sup> century Italian itinerary and now probably lost in the debris of time, was said to be precursor of Dessie. It was during Ras Imru's governor ship of Wollo that the Dessie town administration was first established in the late 1920s. The 1942 Imperial decree listed Dessie as one of the only six "schedule A" Municipalities in Ethiopia.

Located on the Addis Ababa- Mekelle road in south Wollo administrative Zone of the Amhara Region, the city has a latitude and longitude of 11° 8' N 39°38'E with an elevation between 2470 and 2550 meters above sea level and characterized by a rugged and undulating topography (steep slopes, hills and plains). For example According to CAS, Dessie in 2005 occupied an estimated area of 15.8 square kilometers, which gave the city a dense of 11,213.79 people per square kilometer (the official web site of Wollo University, 2012). Dessie city administration lays bounding Tehuledrie woreda in the North in the south Dessie Zuria and Albuko woreda in East Kombolcha town administration and in West Dessie Zuria Woreda. It is located about 400kms NE of Addis Ababa.

### **3.1.2 Climate**

According ministry MAO (1998) Dessie in general is found within the tepid cools moist Mountains and plateau climatically region. Mean annual temperature varies from 13 to 17 °C and the mean annual rainfall records 900mm. the rain fall data for the study area suggest that area falls within the moderately cool-to-cool subtropical summer rainfall zone of the FAO (2000) as cited in Belay, 2002).

## Location of the Study Area

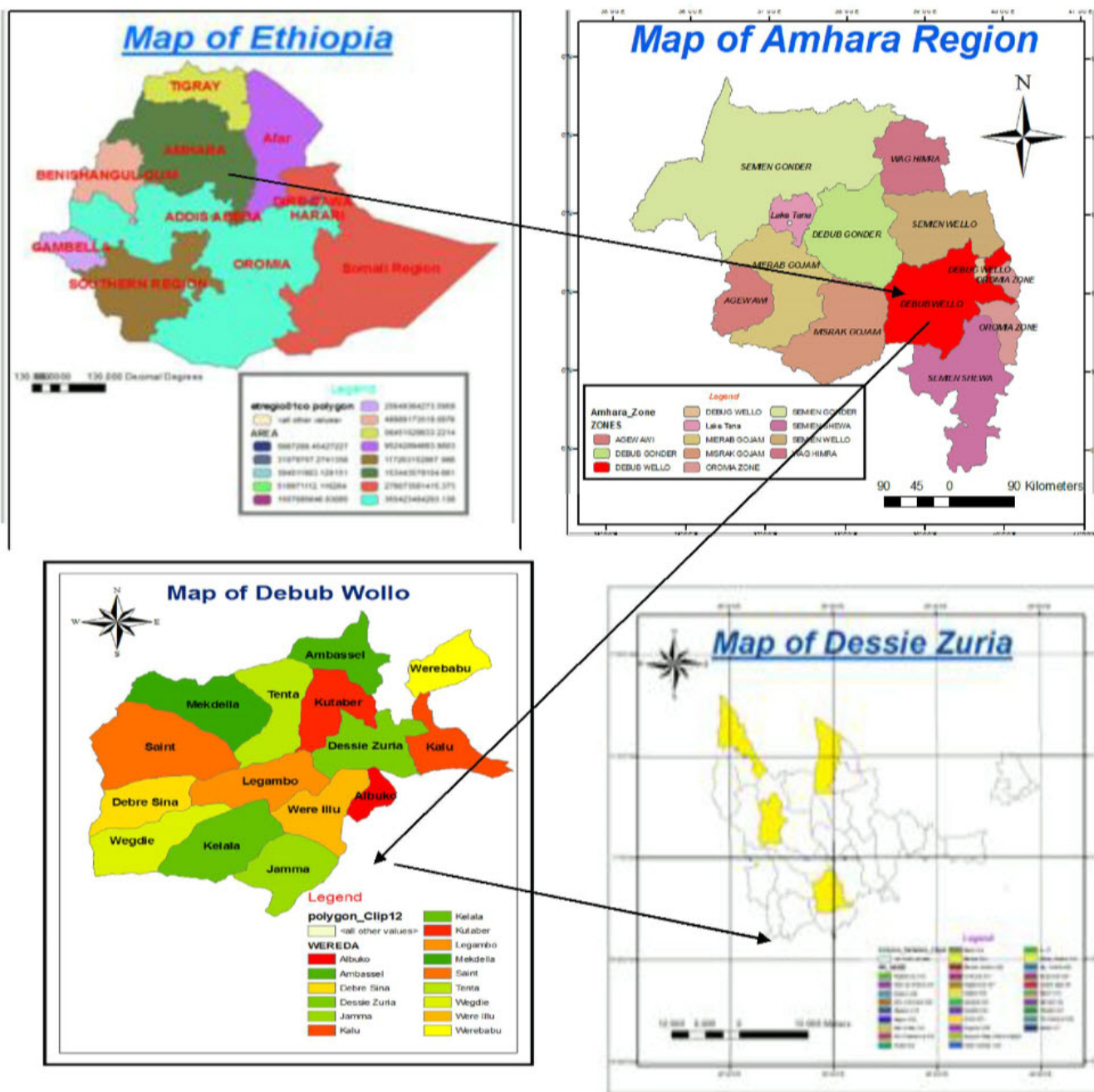


Fig. 2: Geographical Location of the Study Area

## **3.2 Research Strategy and Design**

In this study the overall methodology of the research was the explanatory method. Following this both mixed method was used by. In addition to this the data was administered and finally show the correlations of the dependent and independent variables.

## **3.3 Data Type and Data Source**

### **3.3.1 Data type**

The type of data that used in this research is that both qualitative and quantitative data type. The quantitative data was from questionnaires of the respondents' interview and FGD. The qualitative data was from the different governments documents' meeting minutes etc.

### **3.3.2 Data source**

The sources of the data are primary and secondary data. Primary data were collected from the head of the two sectors; the Urbana Agriculture sector; the Municipality (Mayor) and agent of site (DA) and as well as the livestock owners. The secondary data were collected from each sector the quarterly report, meeting minutes of the year 2010/2011 and the Ethiopian Central Statistics (CSA) Dessie branch. The secondary data is important because it helps to crosscheck the information with the primary data.

## **3.4. Target population and sampling**

The target populations of the study were livestock owners (sheep and poultry,) found in 13 *kebels* of the study area. The livestock activities founded as a business for the livestock developers. The total numbers of the owners of the livestock (sheep and poultry) in Dessie City Administration are male 471 female 529 total 1000.

### **3.5 Data collection Instruments**

The instruments used for the primary sources of data are questionnaires and focus group discussion and interview. The secondary data from different government documents.

#### **3.5.1 Questionnaire**

The researcher used (semi-structured) questionnaires that were originally prepared in English, later translated to Amharic to make easy for enumerators to administer the questionnaire.

#### **3.5.2 Interview**

In addition to the semi-structured questionnaire a semi-structured interview was conducted with two sectors those are the Municipal head (Mayor), the Urban Agriculture sector head, and the three development agents (DA). This interview was conducted using the local language and was finally transcribed. This was used to supplement the description of the qualitative data. The main purpose of conducting this interview was to add knowledge which is not touched with the other methods.

#### **3.5.3 Focus Group Discussion**

Furthermore, focus group discussions were conducted to generate relevant data about the performance and potentials of urban livestock farmers of the area who were supposed to have better understanding of their urban livestock farming activity. In determining the size of the focus group discussion and selection of the members that were included in the group discussion it was decided to include all the 13 kebelles and to select one household heads from each kebelles and purposively total of 13 members were selected and included. The members are the livestock developers among those who an experience at least more than five years and above.

### **3.6 Data Collection Procedures**

Following this took a discussion about the purpose of the study was describe in detail and this which helped the researcher to be successful during the collection of the data and finally at the time of analysis in final the research. The questionnaires were administrated at the house hold heads level at the time of the data collection in the livestock keeping period. The enumerators were helped and supported by the DA. And as well as 10 individuals who have the ability in collecting data. Even if they are the DA and

experienced individuals the researcher give additional information to the enumerators to answer any questions that arose. Respondents first received a verbal description of the study, and informed consent was obtained prior to the survey. Participation in the study was voluntary and all participants' responses were confidential.

Questionnaires were administrated for house hold heads involved as subjects of the study and every house hold head was supposed to answer every question included in the questionnaires. Then, the interview of the two local officials and three DA workers were held and the focus group discussion with the selected 13 household urban livestock farmers of the study area was held to gather relevant data.

### **3.7 Sample Size Determination and Sampling Procedure**

#### **3.7.1 Sample Size Determination**

Out of the Livestock developer and there are also main stake holders those are 2 office sector head and 3 Development Agent which are all about. These are the Municipal head (Mayor), the Urban Agriculture head, and the 3 Development agents (DA). The total number of the sector heads 2, the three (3) Development agent and 100 livestock developers, in addition to the sample livestock farmer respondents. Considering the homogeneity of all the livestock developers, 10% ( Tezera,2010) of them is considered to be samples for the study and hence a total sample size of 100 urban livestock developers are taken for generating primary data. The total urban livestock developers, (i.e., the sample frame) constituted 13 sample areas (SAs) as categorized by the City Administration. A 10 % stratified the different sheep and poultry developers. Proportionate sample is taken from each of the sample areas, as indicated by table 1.



Table: 1 Stratified sheep and poultry sampling computed using Dessie City Administration (2011/2012)

Sample Area	Sheep Producers (2011/2012)	Poultry Producers (2011/2012)	Total Producers (2011/2012)	Samples selected
SA1	45	33	88	9
SA2	26	25	51	5
SA3	21	26	47	4
SA4	27	30	57	6
SA5	21	17	37	4
SA6	25	15	44	4
SA7	23	22	41	4
SA8	44	23	84	8
SA9	27	20	48	5
SA10	37	39	74	7
SA 11	100	45	145	14
SA12	110	49	159	16
SA13	103	47	150	15
<b>Total</b>	<b>609</b>	<b>391</b>	<b>1000</b>	<b>100</b>

### 3.7.2 Sampling Procedure

The study took a sample size of 100 from the 13 kebelles out of the 16 kebelles. This is because of the others are have no much livestock and they are found in the center of the city which is not available to livestock developing. Since the study is concerned with the livestock farmers in Dessie city administration, the target population from which the sample was defined as proportionally selected from the 13 kebelles according to their livestock resources. The sampling frame used for the selection of the livestock farmers was a list of 1000 household registered in the city administration in the year 2011/2012. These selected kebelles are kebelles 1,2,3,4,5,6,7,8,9,10,11,12,13, and this is shown in table one.

### **3.8 Data Analysis**

Data was processed manually. Since the type of the research is significantly mixed type tables and percentages were used as an analysis tools. Following this SPSS version 16 process the data deal with

Simple descriptive analysis techniques such as percentage and frequency distributions were used. Besides, correlation and multiple regression analyses were employed to see the relationship between the dependent variable current market value of the livestock and independent variables educational status of the respondents, initial capital, land area in meter square and total number of livestock. Finally, the results were summarized in tables to make appropriate analysis and draw meaningful interpretation or conclusions.

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## **CHAPTER FOUR**

### **RESULTS AND DISCUSSION**

#### **4.1 Introduction**

In this chapter the result of the study were presented and discussed. Out of 100 questionnaires administrated, all 100 questionnaires were collected and checked for their completeness, and accuracy; no questionnaires rejected or incomplete. This was because of the enumerators which have better understanding to the study area as well as the research area was very nearer to the researcher and there was a strict follow up of the researcher. This chapter is organized around five parts. First, the socio- economic and demographic characteristic of the urban livestock such as age, sex, family size, marital status, religion, education and employment distribution of the respondents was discussed. Second, the potential of urban livestock farming at household level which emphasized on the productivity of the livestock and their income for the urban livestock farmers was presented. Third, types and characteristics of livestock were presented. Fourth, the performances of livestock at the household level that are important sustainability of the livestock farming were discussed. Finally, the constraints of the livestock farming at the house hold level in the study area were explained.

#### **4.2 Respondents' Demographic Characteristics**

The livestock producers were requested to answer questions pertaining to their age, sex family size, marital status and religion. This was done to see the age group that participated in livestock farming. The sex composition of the respondents. One of the very important features of households that need to be considered is household size. The number of persons in a household influence the amount of labor the household can engage in livestock farming and amount of food consumed. The sample house heads were approached to see their marital status. The livestock producers were asked about their religion. The following table shows the result.

Table 2: Age, sex, family size, marital status, and religion Distribution of the Respondents

S.N	Demographic Characteristics	Description	Frequency	Percentage
1	Age Distribution	Below 18	5	5
		18-30	13	13
		31-50	53	53
		51 and above	29	29
		Total	100	100
2	Sex Composition	Male	47	47
		Female	53	53
		Total	100	100
3	Family Size	1-2	9	9
		3-4	35	35
		5-6	41	41
		7 and above	15	15
		Total	100	100
4	Marital Status	Single	18	18
		Married	45	45
		Divorced	23	23
		Windowed	14	14
		Total	100	100
5	Religion	Orthodox Christian	51	51
		Muslim	49	49
		Total	100	100

As shown from table 2, 53% of the urban livestock keepers are in the age interval of 31\_50, 29% of them are 51 and above years old, 13% of them are in the age of 18 \_30, and 5% of them are below 18 years. The middle age is the most numerous group of urban livestock keepers.

Based on table 2, of the respondents 53(53%) of them are female and 47(47%) of them are male. This shows that most of the livestock owners in the study area are female. This is due to the fact that the activity is done at a time while women working at their home chore.

According to Robin and et.al (2010), livestock are an important asset for women. It is often easier for many women in developing countries to acquire livestock assets. It can be in heritage, markets or collective action processes. It is difficult for them to purchase land or other physical assts. Moreover a common perception is that women are more likely to own small livestock, such as chicken, sheep and goats than large animals such as cattle, buffaloes and camel (Kristjanson and et.al, 2010).

As Mkwambisi and et al., (2011) stated in their research that, one key result is that within each income and education group, female farmers obtain more income than male farmers. This may be because women from all social groups do not have access to the same well- paid jobs in the formal economy as their male counterparts. Both the research shows female have the upper hand.

Following this, as can be seen in table 2, 9% of the respondents have 1-2 family size. 35% of them have 3-4 family size and 41% of them have 5-6 family size and 15% of them have above 7 family sizes. This shows that the highest number or (41%) of the respondents have large number of family which can help the keepers to participate in different activities. The more subsistence-oriented semi commercial type of urban agriculture may have smaller economic significance, but the number of households involved is often high in urban and peri urban agriculture. It plays an important role in the survival strategies of the urban poor, who may benefit from urban and peri-urban agriculture in various ways (Dubbeling and et al., (2010).

As Messay (2010) presents in his study urban agriculture in Adama the average family size of the small holding urban farmers is over 5-6 head. This collarets with the conclusion given in the above.

As it is indicated in table 2, among the sampled household heads who engaged themselves in livestock farming, 18% and 45% are single and married respectively, while 23% and 14% of them are divorced and widowed respectively.

As it is shown in table 2, there are two religions which are predominant in the study area. These are the Orthodox Christians 51% and the Muslim 49%.

#### 4.2.1 Educational and Employment Status

The educational status of the respondents in each household has its own importance in their livestock production. The different educational level of the respondents who are participating in the urban livestock farming is diversified; it is not a marginalized activity. The involvement people of different educational level can create chances to share their knowledge among themselves.

Table 3: Educational and employment status of the respondents

S.N	Demographic Characteristics	Description	Frequency	Percentage
1	Educational Status	Illiterate	30	30
		Read and Write	22	22
		Grade 1-6	20	20
		Grade 7-12	11	11
		College Education	9	9
		Total	100	100
2	Employment Status of the respondents.	Livestock Farmers	43	43
		Daily Laborers	21	21
		Government Employed	14	14
		Other Activity	22	22
		Total	100	100

The educational level of the urban livestock farmers is presented in table 3. As can be seen from the table, 30(30%) are illiterate. While 22 (22%) of them can read and write. Those who attended 1\_6 grade are 20(20%). Those who attended 7\_12 grade are 11(11%). But, the rest 9(9%) of them attended at college and university level. A high proportion of livestock keepers were found to be in low level of formal education. This shows that different people with different level of education are involved in urban livestock farming. Therefore, the urban livestock farming activities is not a marginalized activity.

The information gained through research activities should primarily raise the awareness of all stake holders to the realistic potential of urban agriculture in contributing to food security (Jacobi, et al., 2001as cited in Baumgartner and Belevi 2001).

The livestock producers replied to the question that asks the employment status of the households. This helps to understand the respondents' participation in different activities to generate more income and to improve their life standard.

Table 3 shows the occupational structure of the livestock farm owners in the study area. Of all the urban livestock farming households covered by the survey, 43(43%) of them identifies themselves as livestock farmers, 21(21%) daily laborers, 14(14%) government employee and 22(22%) involved in other activities. This implies that the highest numbers of the respondents are predominantly livestock farmers.

According Dubbeling and et al., (2010) other cities and countries mainly support urban and peri-urban agriculture in order to stimulate local enterprise development and employment creation. As Mkwambisi and et al., (2011) study in Malawi approved that 42.5 percent of low income groups and 55.2 percent of female headed households used urban agriculture as sources of employment.

### **4.3. Potential of livestock farming**

The role of urban livestock farming concerning the household income, poverty alleviation, employment creation and socio economic potentials were investigated in the study area of Dessie city administration. Despite its substantial sectoral contribution, livestock production particularly rearing sheep and poultry were practiced by few urban farmers.

The livestock farming have different potentials in Dessie administration. Of the respondents 48% rear sheep, whereas 38% keep poultry and the rest 14% both sheep and poultry (from respondents). Concerning additional income, 69% of them gain additional income from the livestock farming. The livestock leftover has its contribution for different purposes. 58% of the respondents use the leftover as fertilizers.

The livestock activity can also run with small amount of capital at its initial period. 72% of the respondents started the activity with the initial capital of 1-1000(Eth. Birr). Besides, the livestock developers have different number of livestock but, 57% have 11 and above numbers of livestock each respondent.

The availability of market is the other potential of the livestock farming. It helps the farmers to produce more. 75% of them have access to market but, the distance is far from half a kilo meter up to 4 kilometers.

Concerning employment, 81% of the respondents used livestock farming as their family labor. To make urban livestock farming sustainable, the experience of the producers should be continuous and must participate more farmers. The experience in urban livestock farming 45% have 6 years and above. In addition to the difference between the urban livestock farmer in their income status. To eradicate this disparity the farmers should participate in different livestock activates to increase their income. The households responded that they use the leftover of the animal for different purpose. These are fertilizer as well as fuel consumption. This shown in the following tables.



Table 4: Reason for involvement in livestock farming

S.N	Description	Frequency	Percentage
1	Additional Income	69	69
2	The need to feed family	17	17
3	Hobby	14	14
<b>Total</b>		<b>100</b>	<b>100</b>

As presented in table 4, the majority 69(69%) of the respondents confirmed that factor that motivated them to start the activity is to generate additional income. Whereas, 17(17%) of the respondents confirmed that the need to feed their family motivated them to start livestock farming, and 14(14%) of them used it as hobby. From this we can understand that livestock farming is important to people for generating their income. The FGD also assure even if there are some constraints it is important the urban livestock farming in bringing additional income. According to UNDP (1996a) as cited in Dubbeling and et al., (2010), livestock farming provides a source of income and a good quality of food at low cost. As Baumgartner and Belevi (2001) indicated the main driving forces for farmer to become engaged in urban agriculture are food security and income generation.

Table 5: Use of livestock leftover

S.N	Description	Frequency	Percentage
1	Use as Fertilizer	58	58
2	For Fuel	23	23
3	Selling to others	5	5
4	I don't know how to use it	14	14
<b>Total</b>		<b>100</b>	<b>100</b>

As presented in table 5, more than half of the respondent 58(58%) of the respondents use the livestock waste for fertilizer and 23 (23%) of them uses for fuel to their house use. A very few 5(5%) of them sell to other individuals and 14(14%) of them do not have knowledge how to use the livestock waste products. This shows that the waste product of their animal helped them to produce more production from their agricultural. In addition to this, it helps the urban agriculturalist to have more animal instead selling or consuming. As stated by Baumgartner and Belevi (2001), a considerable potential of urban agriculture could consist in reusing urban

solid and liquid waste and, thereby, helping to overcome the waste problem and saving resources.

As Messay (2010) stated in his research in the Adama, very few sample small- scale urban producers reported that they make use of decomposable household wastes and dung to fertilize their farm lands. Some of them rather use dung to fulfill their household energy requirements for heating and cooking after preparing it in the form of dry pancake.

Table 6: Amount of income saved from livestock farming revenue

<b>S.N</b>	<b>Description</b>	<b>Frequency</b>	<b>Percentage</b>
1	Quarter	23	23
2	One third	22	22
3	Half	24	24
4	No Saving	31	31
<b>Total</b>		<b>100</b>	<b>100</b>

One of the contributions of the livestock farming is to increase additional income of the farmers. Besides, beyond the using of house hold consumption, it helps them to save some amount for emergence use. As presented in table 6, 22(22%) of the respondents save one-third, 23(23%) of them save quarter of their income, 24 (24%) of them save half and little far of their income and 31(31%) of them do not save. The total farmers which are participated in saving are 69 (69%), whereas, those who did not participate in the saving are 31(31%). These need considerations why they are not participating in the saving activity.

#### 4.4 Types and Characteristics of Livestock Farming Practices

The number of livestock that the household have determines the amount of capital they have and the capacity of the institution. This can increase different resources like consumption, for sell and using their dug for fertilizer and power sources. The existence of market nearby is very important to the livestock producers. It helps them to sell products as well as to buy other desirable items from other people. This minimizes time, transport cost etc. As mentioned in Fig.3 the current amount of capital state how the livestock farming is going on in the productivity of the animals as well as create the commitment to the producers to continue practicing it as their future activity to make it sustainable. The following table shows types of livestock farming.

Table 7: Number of livestock owned by the Farmers

S. No	Description	Frequency	Percentage
1	Sheep	57	48
2	Poultry	43	38
<b>Total</b>		<b>100</b>	<b>100</b>

Table 7 shows the types of livestock that each respondent has. Out of the respondents 48(48%) of them have sheep and 38 (38%) of them have poultry and 14(14%) of them have both sheep and poultry. This shows that the sheep farmers largely produce more than the poultry farmers. As Messay (2010), a case study from Adama 87 percent of the sample households owned some number of milk cows, chickens, equines, sheep and goats are important livestock types being bred by small scale urban farmers in the town.

As Mkwambisi (2011), a study in Malawi stated also it is important that income –generating strategies are not tied to owning land. In this way livestock production (especially poultry and small ruminants), which does not require much land, is perfect. These studies have relation with the study conducted on.

According to Kristjanson and et al., (2010), livestock are important for livelihoods and have significance potential for poverty alleviation often in areas where few other options exist. Small livestock is important in suitable development, since its meat to feed ratio is higher than that of the large animal. Livestock can be produced cheaply in small spaces, while all form of

livestock are becoming increasingly important source of protein as rising incomes lead to changing diet (Asfaw and et al., (2011).

Table 8: Initial capital for conducting livestock farming

Description	Sheep	Percent	Poultry	Percent
1-1000	22	38.60	23	53.49
1001-2000	10	17.54	7	16.28
2001-3000	11	19.30	8	18.60
3001-4000	8	14.04	3	6.98
4001-5000	6	10.52	2	4.65
Total	57	100	43	100

Table 8 shows that the initial capital that the urban livestock have. Among 57 respondents of sheep and poultry 22(38.60%) and 23(53.49%) of the respondents have capital ranging from birr 1- 1000, 10(17.54%) and 7(16.28%) of the respondents have capital ranging from 1001-2000, besides 11(19.30%) and 8(18.60) of them have capital ranging from birr 2001-3000. 8(14.04%) and 3(6.98%) of them have capital ranging from birr 3001-4000. And the rest 6 (10.52%) and 2(4.65%) of the respondents have capital ranging from 4001-5000 respectively. From this we can understand that the highest number of the respondents that is 22 (38.60%) and 23(53.49%) low that is 1000 birr only respectively. This shows that most of the livestock farmers begin their livestock rearing at lower capital.

Table 9: source of finance for the livestock farming.

S.N	Description	Frequency	Percentage
1	Relative	26	26
2	Micro finance institutions	39	39
3	Banks	1	1
4	Others	4	4
5	No credit	30	30
<b>Total</b>		<b>100</b>	<b>100</b>

Table 9 shows that after the sources of initial startup capital, livestock, knowledge and skills facilitated the activity at its initial times. This area needs an improvement. Of the respondents 26(26%) of them get startup capital from their relatives and 38(38%) of them get support from micro finance institutions. 30(30%) of them do not have credit. Those who gave the answer yes explained that their reason was fear of inability to pay, fear of high interest and others no need of credit. The FGD discussions also confirmed that micro finance institutions are sources of their finance because; the interest is relatively smaller than the other credit institutions.

Table 10: Amount of land used to engage in livestock farming

Land per m2	Sheep	Frequency	percentage	Poultry	Frequency	percentage
10	15		26.32	14		32.56
20	12		21.06	11		25.58
30	11		19.29	8		18.60
40	8		14.04	4		9.30
50	11		19.29	6		13.96
Total	57		100	43		100

Table 10 shows land used in livestock farming in sheep and poultry that 15 (26.32%) and 14 (32.56%) of the respondents use 10 meter square out of their total land. 12(21.06%) and 11(25.58%) of the respondents use 20 meters quire out of their total land. 11(19.29%) and 8(18.60%) of the respondents use 30 meters square out of their total land. 8(14.04%) and 4(9.30%) of the respondents use 40 meters square out of their total land and 11(19.29%) and 6(13.96%) of the respondents use 50 meter square out of their total land for livestock farming respectively. This land is not included the area that is used for the other activities including for house constriction. But even if small livestock needs small spaces or land for their rearing, generally there is a shortage of land in the study area. The FGD discussion also shows that the land that they have is not satisfactory for their urban livestock farming.

According to Baumgartner and Belevi( 2001), small livestock can be produced cheaply in small spaces, while all the form of livestock are becoming increasingly important source of protein as raising incomes lead to changing diet.

Table11: The Number of livestock that the household have at present

Description	Sheep	Percent	Poultry	Percent
1-5	1	1.75	20	46.51
6-10	22	38.59	10	23.26
11 and above	34	59.65	13	30.23
Total	57	100	43	100

Table 15 shows the number of poultry 20(46.51 %) of the respondents have livestock (poultry) from 1- 5, and sheep and poultry 22 (38.59%) and 10(23.26%) of the respondents have 6-10 livestock. 34 (59.65%) and 13(30.23 %) of the respondents have 11 and above livestock sheep and poultry respectively. The number of live stocks in the study area are as much as higher in number that 34(59.65 %) and 20(46.51 %) of the respondents have 11 and above and 1-5 live stocks respectively. It is also indicated in the correlation matrices of the variables that when you increase the number of livestock the resource of fodder at the same time increase.

According to Baumgartner and Belevi (2001).The livestock rising in cities is typically poultry, birds and smaller animals which are raised by the less affluent in the dense city core.

Table 12: Market for livestock farming

S. N	Description	Frequency	Percentage
1	Yes	75	75
2	No	25	25
<b>Total</b>		<b>100</b>	<b>100</b>

In table 12, 75 (75%) of the respondents give the answer yes and 25 (25%) of them give the answer no. But the market area is far with different kilometer from half kilometer up to five kilometers. These ranges have its own implications in the livestock farming. The nearer the market is the more advantageous than far market from the farming area.

Table 13: Location of livestock farming from local market

<b>S. N</b>	<b>Distance to the market( km)</b>	<b>Frequency</b>	<b>Percentage</b>
1	0.5	10	10
2	1	18	18
3	2	24	24
4	3	28	28
5	4	20	20
<b>Total</b>		<b>100</b>	<b>100</b>

Table13 shows that the distance from the farming area to the market place in kilometer. Among the respondents 10(10%) of them are 0.5Kilometer far from the market area.18 (18%) of them are 1 kilometer far from the market area. 24(24%) of them are 2 kilometers far from the market area. 28 (28%) of them are 3 Kilometers far from the market area and 20(20%) of them are 4 kilometers far from the market. As it is indicated in the correlation matrices of the variables when you apart from the market center your number of livestock will be increase this is because of the land that you have is greater than the core area. This help to be food secure. According to Zenebe (2010), urban agriculture in principle needs to be supported with service like extension, inputs research, and credit and market information.

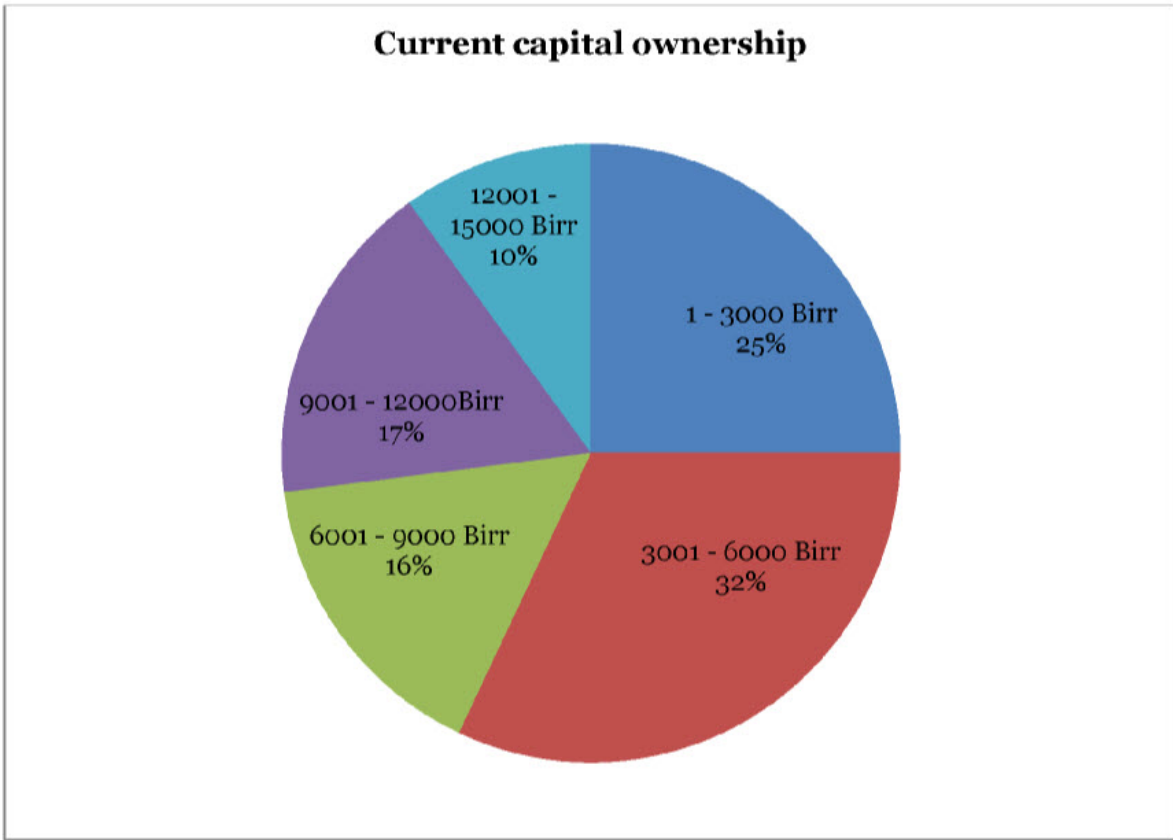


Fig. 3 Current capital ownership

As shown from the in Fig 3, 25(25%) of the respondents have birr from 1-3000 as current capital. 32(32%) of them have birr 3001-6000 as current capital, 16(16%) of them have birr from 6001-9000 as their current capital, 17(17%) of the respondents have birr from 9001-12000 as current capital.10 (10%) of the respondents have birr from 12001-15000 as current capital. As shown in the table 13 previously the initial capital for conducting livestock farming 72% of the respondents have start with capital of ETH-birr 1-1000. But, after they implemented the livestock farming 32% of the respondents have ETH-birr 3001-6000. This shows that the urban livestock developers currently relatively in a good status.



Table 14: Reasons to keep these animals

S. N	Description	Frequency	Percentage
1	Their Interest	3	3
2	Lack of Capital	20	20
3	Shortage of Land	45	45
4	Shortage of feed	30	30
5	Lack of Knowledge	1	1
6	No reason	1	1
<b>Total</b>		<b>100</b>	<b>100</b>

As it is indicated in table 14, about 3(3%) of the respondents keep them for personal interest, 20(20%) of them responded that lack of capital forced them to keep the land, 45(45%) of the respondents claimed that shortage of land is the reason for keeping the livestock and 30(30%) of them responded that shortage of feed and lack of knowledge are the main reason to keep the animals and the rest 1(1%) have no reason for keeping the animals. From this we can understand that shortage of land and feed are the two most problems that restricted the farmers to produce these animals in the study area.

According (Baumgartner and Belevi (2001) availability of land is very often the crucial element for people to engaged in urban agriculture, even more so is its access. This implies both manner of land use and legal aspects, as well as a near and a secure access.

#### **4.5 Household Level Performance of Livestock Farming**

##### **4.5.1 Contribution to household income**

Different producers engaged in different activities beyond the livestock farming to shoot up their income. This helps the producers to have more income and improve their life, as well as to alleviate poverty. While producing something, it has different interest consumption and saves. The following table shows this.

Table 15: Major Source of household income (excluding livestock farming)

S.N	Description	Frequency	Percentage
1	Income from Private firms	7	7
2	Government employee	15	15
3	Pension	27	27
4	Self employed	16	16
5	Have No additional Income	35	35
<b>Total</b>		<b>100</b>	<b>100</b>

Table 15, 7(7%) of the respondents have income from private firms, 15(15%) of them get from government employee, 27(27%) of them from pension, 16(16%) of them from self-employment and 35(35%) of them have no additional income. This shows that the majority of urban livestock farmers depend on the urban livestock farming only. Those people who have no additional income beyond livestock farming should have to give an advice to participate in other activities instead to increase their income. The FGD participants deep-rooted that the livestock farming is their primary sources of their income.

As Dubbeling and et al., (2011) cited in Moustier and Danso (2006) in many cities in developing countries, the most frequently type of urban agriculture encountered is the family farm, combining production for self-consumption with sale on the market to raise their income.

As Mkwambisi (2011), stated in his study, the poorer use much smaller plots of land that they do not own age often female headed households. They undertake urban agriculture as food insurance and income generating activity.

Table 16: Income use for consumption

S. N	Description	Frequency	Percentage
1	Quarter of it	14	14
2	One third of it	5	5
3	Half of it	46	46
4	No Amount	35	35
<b>Total</b>		<b>100</b>	<b>100</b>

Table 16 shows the reason why they need to utilize the urban livestock farming. Out of the respondents 5(5%) of them expend one third their income, 14 (14%) of them expend quarter of their income and 46(46%) of them expend half of their income and finally 35(35%) do not expend from their income. From these we can understand that urban livestock farming have contribution in the saving.

According Kristjanson and et al., (2010), the poor men and women keep animals for multiple purpose, both productive (food security, income) and non- productive (savings insurance, culture). Asfaw and et al.,(2011) also stated that livestock fulfils an important function in coping with shocks , accumulating wealth, and serving as a store of value in the absence of formal financial institutions and other missing markets.

#### **4.5.2 Contribution to Employment**

Work by its nature it is a social which participate different group of individuals to fulfill the objective of that activity. This creates employment as well as additional income to the households. The duration which passed in livestock activity has its own advantage to improve the activity. While stay in the activity for long period of time, it makes the activity sustainable. This sustainability leads for more expansion instead of getting additional income.

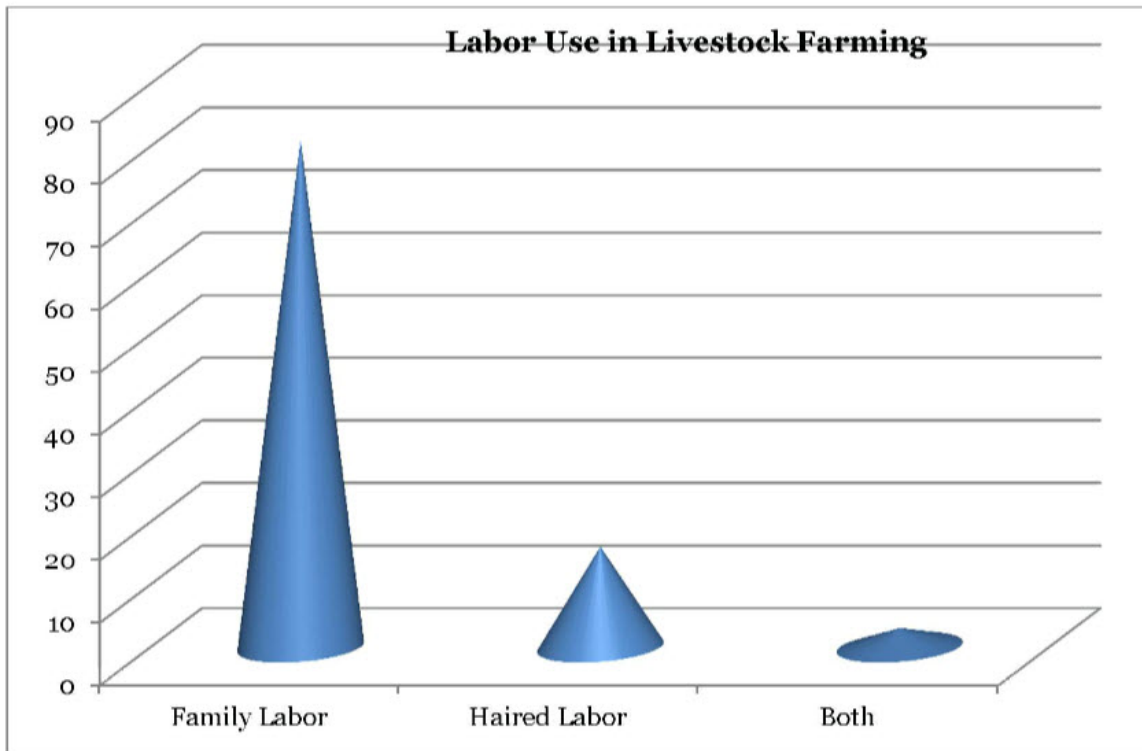


Fig 4 Labor use in the livestock farming

The urban livestock farming is not the activity of an individual or a group of people, but it is the coordination and participation of the different parts of groups.

As can be seen in Fig 4, the urban livestock activity is performed most of the time by all the family members. Out of the respondents more than three fourth or 81(81%) of them perform this activity using their family labor only, 16(16%) of them practice it using haired labor only and only 3 (3%) of them use both. This shows that the activity needs the participation of different family groups. Participatory activity help the group to produce and use it properly their production.

Table 17: Experience in urban livestock farming

S.N	Experience (years)	Frequency	Percentage
1	Less than a year	11	11
2	1 - 2 Years	16	16
3	3 - 4 Years	22	22
4	5 - 6 Years	6	6
5	6 years and above	45	45
<b>Total</b>		<b>100</b>	<b>100</b>

Table 17 shows the year of participation of the farmers in urban livestock activity. Out of the respondents 11(11%) practiced less than a one year, 16(16%) practiced for 1-2years and 22(22%) of them practiced 3 to 4years and 6(6%) of them practiced 5\_6 years and 45(45%) of them practiced 6 and above years. This shows that most of the respondents engaged in the livestock activity more years in the study area. Activities should expand when it is beyond its capacity. During the expansion there are different conditions which make not to expand. This may hinder the activity not to go at its most capacity.

Urban and peri-urban agriculture can be considered as an integrated part of viable strategies for sustainable and equitable urban development. Dubbeling and et al., (2010) and as well as to make sustainable urban agriculture in principle needs to be supported with service like extension, inputs, research credit and market information among others( Zenebe 2010).

Table 18: Intention to expand activity

S.N	Description	Frequency	Percentage
1	Yes	84	84
2	No	16	16
<b>Total</b>		<b>100</b>	<b>100</b>

As can be seen in Table 18, 84(84%) of the respondents need to expand their livestock farming and 16 (16%) of them did not need to expand their livestock farming. Those who says yes explained that their reason is an increased need of the home consumption; means of income; and hobby. On the other hand, those who said no confirmed that they have shortage of capital; feed shortage; shortage of land and markets.

Table 19: Area to have the expansion

S.N	Description	Frequency	Percentage
1	large area	31	31
2	At the present location	53	53
3	No need of expansion	16	16
<b>Total</b>		<b>100</b>	<b>100</b>

As can be seen in Table 19, 31(31%), of the respondents want in the large areas at the out skirt of the city. 53(53%) of them want to expand at the present location and 16 (16%) of them do not need of expansion. This shows that the huge numbers of the respondents need to expand their activity in the present area because of restriction in getting additional land. According to (Baumgartner and Belevi (2001) urban planner could identify appropriate areas for farming activities; encourage infrastructural development required by farmers and implement protective measure to provide land security.

## **4.6 Constraints and Limitations of Livestock Farming in Dessie**

### **4.6.1 Land**

The livestock producers were asked to respond to the questions pertain to their adequacy of land in practicing livestock farming, place to keep livestock and shelter for livestock. This helps the producers to be sustainable and produce more in their places.

Table 20: Adequacy of land in practicing livestock farming

<b>S. No</b>	<b>Description</b>	<b>Frequency</b>	<b>Percentage</b>
1	No enough land	65	65
2	Have land (yes)	35	35
	<b>Total</b>	<b>100</b>	<b>100</b>

As it is indicated in table 20, the largest portion of the livestock farmers 65 (65%) of them have no enough land and 35 (35%) have land. This shows that there is a shortage of land for livestock farming in the study area.

Those who said no gave the following reason. They said that shortage of land, lack of interest to have land, cost of land were some of their reasons. On the other hand those who said yes stated the following reasons. They stated that the source of land for their farming is that some of them bought it. Some of them said that they were given by the municipality, some of them rented from the other individuals, and the others get it as gift and inheritance from family. The usual ingredients of urban agriculture programmes are enhancing security of land use, improving infrastructure and working capital: improving access to credit; technical and management support to producer groups and micro/meso enterprise engaged in processing and marketing (Dubbeling and et al., 2010).

According to Dubbeling and et al. (2010) the city council recognized the importance of urban farming to improve access to healthy food by the urban poor and adopted policy guide lines and a new municipal law on urban and peri-urban horticulture, livestock and aqua culture.

Table 21: Place for livestock farming carryout

<b>S. No</b>	<b>Description</b>	<b>Frequency</b>	<b>Percentage</b>
1	Around their residence	67	67
2	Separate place	33	33
<b>Total</b>		<b>100</b>	<b>100</b>

Shelter is another necessity for the livestock farming. Table 25 shows where livestock is kept. 67 (67%) of the respondents keep their livestock in residence area and 33 (33%) of them keep in separate areas. This shows that they live together with their animals at the same house. This may cause sanitation problem in the residence.

Table 22: Shelter used for livestock

<b>S.N</b>	<b>Description</b>	<b>Frequency</b>	<b>Percentage</b>
1	In door	54	54
2	Out door	46	46
<b>Total</b>		<b>100</b>	<b>100</b>

Table 22 shows that the type of shelter which is used by urban livestock farmers. 54 (54 %) of the respondent uses indoor shelter, 46(46 %) of them use outdoor shelter.

Table 23: Fear of eviction from your livestock farming area

<b>S.N</b>	<b>Description</b>	<b>Frequency</b>	<b>Percentage</b>
1	Have fear	22	22
2	Do not have fear	78	78
<b>Total</b>		<b>100</b>	<b>100</b>

An attempt has been made to investigate the institutional constraint as perceived by the urban livestock farming households. Table 23 shows the response whether they have any fear of eviction from the farming activity area. 22 (22%) of them have fear and 78 (78%) of them do not have fear of eviction from the area. This shows a positive implication in urban livestock

farming. As it is solicited from focus group discussions and interviews made for the study, the participants stressed that though the potential of the livestock in the study area is available to moderately engage in the production of livestock, the topography of the area is rugged and mountainous.

#### 4.6.2 Extension and Training Support

Sharing ideas, dissemination and support service such as extension services and access to training are important in urban livestock farming to produce effectively and efficiency. The following tables shows support from the urban agriculture sector office.

Table 24: Support from the urban agriculture sector office

S.N	Description	Frequency	Percentage
1	Got veterinary service	68	68
2	Training	16	16
3	No support	16	16
<b>Total</b>		<b>100</b>	<b>100</b>

Table 24 shows that out of the respondents 68 (68%) got veterinary service, 16 (16%) got training and 16 (16%) did not get support from any sector. From this we can understand that even if the highest portion of the farmers got training service. Few of the farmers are neglected by the sector. According Kristjanson and et al., (2010) strong organizations can also play an important role in efficiently provided veterinary service to poor livestock keepers. Urban livestock farming needs the support of stake holders. The urban agriculture sector should provide help to the urban livestock farmers. The FGD discussion innate that the supports that they gain from the sector veterinary service and to some extent training is important for the expansion of the urban livestock farming.

As Mkwambisi (2011), in his study stated that without government intervention, market information and extension services, urban agriculture consistently under performs relative to its potential.



Table 25: Technical support from government or NGO

S.N	Description	Frequency	Percentage
1	Yes	63	63
2	No	37	37
<b>Total</b>		<b>100</b>	<b>100</b>

As it is indicated in Table 25, 63 (63%) of the respondents confirmed that they did not get technical support from government and NGOs and the rest (37%) get support from government and NGOs. They are supported by providing credit; giving training; make available of market place; and others no support is provided. Thus the government and NGOs did not give the right support to the livestock farmers in the study area to flourish the activity. As stated by Zenebe (2010) NGOs organizations is primarily in their ability to work at grass root level, spearhead or promote new production and market chain strategies, provide training opportunities, inform policy makers of facilitate a community voice in policy development. In addition to this Zenebe (2010) stated the government is working at all levels to ensure the sustainability and productivity and safety of urban agriculture at large. As well as, government and NGOs is also one of the pillars of the urban livestock farming in providing different technical assistance.

Table 26: Support by extension agents

S. No	Description	Frequency	Percentage
1	Yes	42	42
2	No	58	58
<b>Total</b>		<b>100</b>	<b>100</b>

As it is shown in table 26, 42 (42%) of the respondents get support from extension workers and 58 (58%) of them do not get support from the extension worker. From this we can understand that the support from the extension agents in the study area is not satisfactory. To enhance this activity government should give due attention to the urban livestock activity. There are many reason such as lack of consideration in research, lack of awareness by policy makers and urban planners, lack of appropriate extension package and production technologies, inappropriate land use polices and biased health and environment concern (Zenebe and et al., (2010).

Table 27: Importance of extension agents

S.N	Description	Frequency	Percentage
1	Very important	32	32
2	Moderately important	10	10
3	Low	36	36
4	Do not Known	22	22
<b>Total</b>		<b>100</b>	<b>100</b>

Table 27 shows the importance of extension agents in urban farming. 32 (32%) of the respondents stated if there is support from extension agents it is very important, and 10 (10%) of them stated it is moderately important, 36 (36%) of them stated it is low and 22 (22%) of them stated that they do not know. Thus, the importance of the extension agents is relatively known by the farmers so; the government should give awareness to the farmers to increase the awareness of the respondents.

Table 28: Source of initial livestock

S. N	Description	Frequency	Percentage
1	Purchases	83	83
2	Inheritance	15	15
3	Gift	2	2
<b>Total</b>		<b>100</b>	<b>100</b>

Table 28 shows the next decisive factor which is initial source of livestock that is needed for the first time. 83(83%) of them said purchases, 15(15%) of them said inheritance and 2 (2%) of them said gift. From this we can understand that more than three fourth of the respondents have bought the initial livestock and this shows the respondents at their initial period they have their own interest to start the livestock activity.

Table 29: Source of livestock production knowledge

S. N	Description	Frequency	Percentage
1	From relatives and friends	75	75
2	Short-term training	10	10
3	Previous employment	13	13
4	Others	2	2
<b>Total</b>		<b>100</b>	<b>100</b>

As it is indicated in table 29, knowledge and skill of urban livestock farming is also another important urban livestock activity. Concerning this, 75(75%) of the respondents responded that they have the knowledge and skills learned from their relatives and friends and 10 (10%) of them said they acquired the knowledge from short training. 13(13%) of them acquired the knowledge from previous similar employment, and 2(2%) of them acquired from others. From this we can understand that the urban livestock farming practices pass from the generation to generation.

#### 4.6.3 Fodder supply

One of the basic needs for livestock farming is the availability to fodder supply. This table shows how much the fodder is available in the surrounding areas. It minimizes the cost and transport. The following table shows this.

Table 30: Response on cost of animal fodder

S.N	Description	Frequency	Percentage
1	Beyond capacity	33	33
2	High but producers could buy it	47	54
3	Fair	20	20
<b>Total</b>		<b>100</b>	<b>100</b>

As it can be seen from table 30, animal feed is the other important basic need of the livestock. 33 (33%) of the respondents stated that the feed of the livestock in the study area is beyond their buying capacity. 47 (47%) of them said the feed of the livestock in the study area is high but they could buy it and 20 (20%) of them stated that the feed of the livestock in the study area is fair. This shows one of the problems which livestock farmer face is lack of feed for their animals. The animals are typically raised in harsh environments where drought and theft are

common and commercial feed and veterinary services are beyond the means of most people (Kristjanson and et al., 2010).

#### 4.6.4 Neighborhood effect

Working together with neighborhood is important. The following table shows difficulty complaint with neighbors.

Table 31: Difficulty (complaint) with neighbors

<b>S.N</b>	<b>Description</b>	<b>Frequency</b>	<b>Percentage</b>
1	Yes	27	27
2	No	73	73
<b>Total</b>		<b>100</b>	<b>100</b>

The urban livestock farming is which is conducted in a very small confined place and sparse area. Because of this the livestock farmers have find different difficulty (complaint) from their neighbors.

As can be seen in table 31, 27 (27%) of the respondents confirmed that they get complaint from their neighbors and 73 (73%) of them responded that they did not get complaint from their neighbors. Those who said yes give some example of compliance. These are the negligence; quarreling and animal poisoning.

#### 4.6.5 Water supply

Water supply is basic for livestock farming. The existence and pureness of water help the animal to be good in their health. Besides the distance of the water from farming area minimized the time and cost to transport.

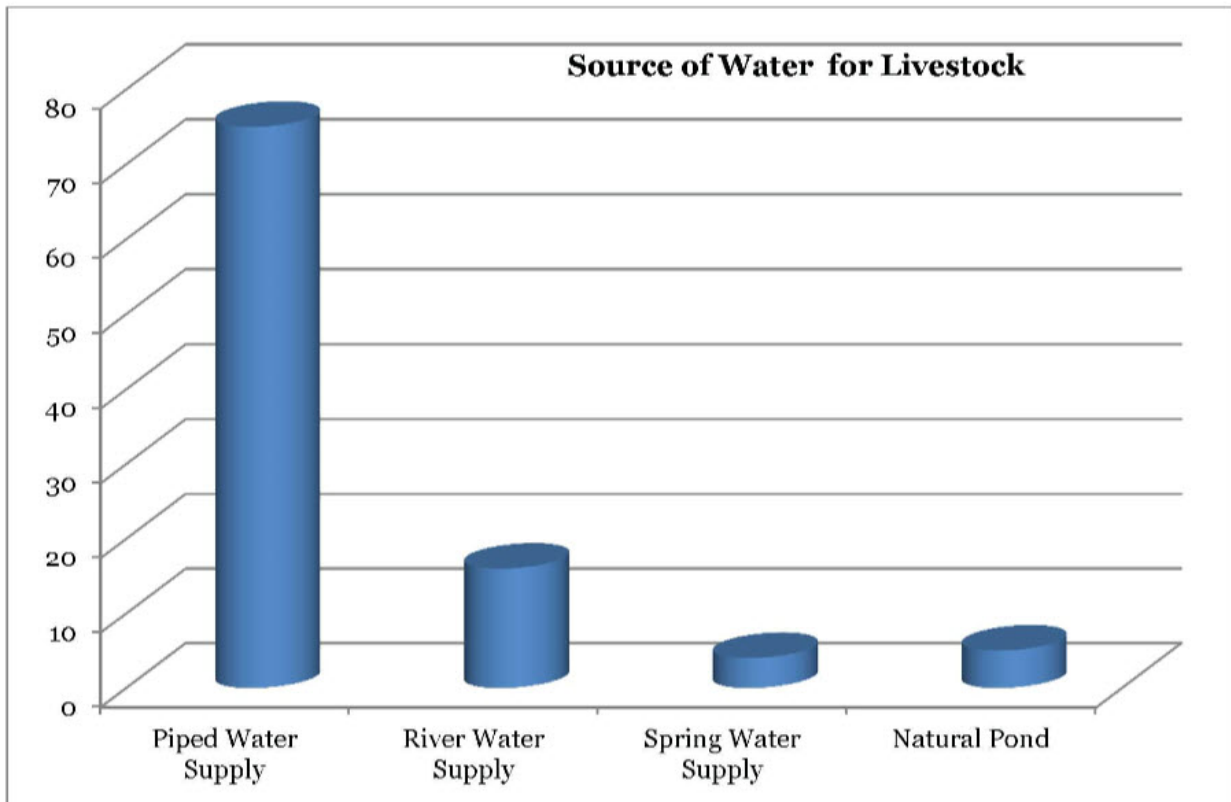


Fig. 5 Source of Water Supply

Water is one of the basic necessities for the livestock. Fig. 5 shows that the source of the water. 75 (75%) of the respondents use piped water supply as source of drinking water for the animal, 16(16%) of them use river nearby as source of drinking water for their animal, and 4(4%) of them use spring water and 5 (5%) of them use natural ponds. From this we can understand that the source of water they used for the livestock is very expensive. This may be an obstacle for the farmer productivity in urban livestock farming.

#### 4.6.6 Government Recognition and Support

The livestock producers were requested to respond to the question concerning government's recognition of their livestock farming and attitudes of government towards urban livestock farming.

Table 32: some of problems to your livestock farming practice

S.N	Description	Frequency	Percentage
1	No problem from any one	65	65
2	The Keble is obstacle	25	25
3	The city administration has an obstacle	10	10
<b>Total</b>		<b>100</b>	<b>100</b>

From table 32, we can understand that 65 (65%) of the respondent confirmed that none of the administration body in Dessie City has some problems in their livestock farming. while 25 (25%) stated that the Keble administration is some problems to their urban farming practice. 10 (10%) of them responded that the city administration is some problem to urban livestock farming. This shows that even if the number of the respondents who have no problem from any one is high but the other small numbers of the respondents have negative feeling urban livestock farming. These problems are land for rearing; available market place.

Table 33: Recognition of the sector by the government: Respondents' perception

S.N	Description	Frequency	Percentage
1	It is not recognized by the Govt. (No)	51	51
2	It is recognized by Govt. (Yes)	49	49
<b>Total</b>		<b>100</b>	<b>100</b>

Table 33 shows to what extent urban livestock farming is recognized by the government. Of the respondents 51 (51%) of them responded that they do not believe that their activity is recognized by the government. About 49(49%) of them responded that they believe their activity is well recognized by the government. This shows that the government gives more or less little attention for the urban livestock farming. The government recognized the importance of livestock in to alleviate poverty. The government has increased its emphasis on modernizing and commercializing the livestock subsector in recent years (Asfaw and et al (2011).

#### 4.6.7 Startup capital

Capital is one of the factors which are important to any activity. The same is true the startup capital is also the decisive factor at the beginning of urban farming. It creates strength at the process consequently, the result would be

Table 34 : Source of startup capital

S.N	Description	Frequency	Percentage
1	Own money	72	72
2	Borrowing from relatives	10	10
3	Inheritance and gift	18	18
	<b>Total</b>	<b>100</b>	<b>100</b>

Table 34 shows the source of start-up capital. Sources of initial livestock, sources of knowledge and skill are the very important aspects in the urban farming in the study area. As it is indicated 72 (72%) of the respondents used their own money to start the activity; 10(10%) of them borrowed from relatives and friends; 18(18%) of them inherited and got it as gift.

Furthermore, the producers believe that the urban livestock farming is more advantageous for the poor individuals. Their animals are their means of survival, income and employment. But, as even if they use them for different purpose, they did not deny that there is also a challenge that they face during the process. Among the problems, lack of training, shortage of land, lack of finance, lack of modern market, lack of available fodder to their animals are among the challenges that face them.

#### 4.6.8 Relative Effect of Constraining Factors in Livestock Production

The value of a correlation coefficient indicates the extent to which two characteristics are related to each other, with the result ranging from a perfect positive relationship (1.00) through no relationship (0.00) to perfect negative (-1.0). This classification system stated in Lodico, and Voegtle (2006) was taken as a frame work for describing the magnitude of relationship. That is, 0 to 0.19 is no relationship or weak relationship; 0.20 to 0.34 is slight relationship; 0.35 to 0.49 is moderately strong relationship; 0.50 to 0.64 is strong relationship; and 0.65 or greater in very strong relationship.

Table 35: Correlation Matrices of the variables

Description	The current market value	Distance to market (km)	Educational status	Initial Capital	Land area (km <sup>2</sup> )	Number of livestock
The current market value of the livestock	1					
Distance to the market in km	.576**	1				
The educational status of the respondent	-.697**	-.405**	1			
Initial Capital	.449**	.372**	-.379**	1		
Total land area in kilometer square	.525**	.468**	-.372**	.110	1	
Total number of livestock	.565**	.310**	-.431**	.477**	.183	1

\*\* . Correlation is significant at the 0.01 level (2-tailed).

The correlation matrices of the variables shows relationship between the dependent variable current market value and the independent variable distance to the market; educational status of the respondents; initial capital; land area in meter square and total number of livestock.

As shown in table 35, distance to the market has positive and statistical significant relationship with the dependent variable (the current market value of the livestock)  $r=0.576$ . This is because the farmer may have easy access to land, food, labor and other material which are important to the farming of the livestock farmer due to the improvement of market on urban areas where house hold food security is dependent (Berhanu 2004). On house income work opportunities as well as efficient food market system are crucial to improve access to food. In addition to this livestock markets are one way to improve the ability of these producers to regulate stocking.



However, lack of infrastructure, distance between producers and consumers, high transaction costs and poor price information are still constraints in many places (Okike et al, 2004 as cited in FAOUN, 2011).

As shown in table 35 the educational status of the respondents has negative and statically significant relationship with the dependent variable (the current market value)  $r=-0.697$ . This resulted when the farmer awareness or educational status increase. They may engage in many other activities and careers. They also have better opportunity to participate in relatively better occupation. They could also involve market with a very limited livestock numbers. The educated individuals who are participated in the urban agriculture need an additional income and food production to compensate for low wage (Guendel 2002). In addition to this, the livestock keeping for the middle income households urban livestock keeping can be seen as a response to growing urban demand and markets for the poor it is in the first place a response to crisis (ibid).

As shown in table 35 the initial capital has also show positive and statically significant relationship with the dependent variable (the current market value of the livestock)  $r=0.449$ . This is also due to that if the farmer has relatively large initial capital, they can buy better quality animal and they become effective in his livestock agriculture because of this the amount the capital he/she has would increases every time. The small livestock are convenient buffer against shocks for several reasons: they require lower capital investment, they are easier to sell quickly, if one dies it is less damaging, they grow and breed faster, and they survive on harsher terrain ( Co stales et, al 2005 as cited in ( FAOUN, 2011).

As shown in table 35 the land area in kilometer square has positive and statically significant relationship with dependent variables (the current market value of the livestock)  $r=0.525$ . This is due to the fact that if the farmer has relatively large area for her/his livestock agricultural activity. He cans rare large number of livestock with better quality and s/he became effective in her/his livestock agriculture. Because, the small animal needs a small area that also have as much as many animal can producc. As indicated in table 44, the total number of livestock has positive and statistically significant relationship with the dependent variable (the current market value of the livestock)  $r=0.565$ . When the total numbers of livestock increase, the

current market value of the livestock also increase. This is because; the higher the total of livestock, the larger amount of income from their livestock.

Table 36: Model summary of the multiple regression analysis

Model	Standardized Coefficients	t	Sig.
	Beta		
(Constant)		2.627	.010
The educational status of the respondent	-.390	-5.562	.000
Initial Capital	.079	1.142	.257
Total land area in kilometer square	.230	3.391	.001
Total number of livestock	.254	3.678	.000
Distance to the market in km	.202	2.841	.006
<b>R = 0.829      R<sup>2</sup> = 0.688      Adjusted R<sup>2</sup> = 0.671</b>			

Table 36 shows the regression results yield except the educational status of the respondent, initial capital, total land area in kilometer square, total number of livestock and distance to the nearest market in kilometer had shown that positive and statistically significant relationship to total livestock ownership of the respondents. Generally, the combined effect of all the independent variable to the total livestock ownership had shown that (R<sup>2</sup> 0.688) and the percentage contribution of all independent variable to the dependent variable is 68.8%. This indicates that the contribution of all independent variable to the dependent variable is 68.8% and the remaining 31.2% are contributed by all other factor which is not included in this study.

## CHAPTER FIVE

### CONCLUSION AND RECOMMENDATION

#### 5.1 Conclusion

This study was an attempt to investigate the performance and challenges of the urban livestock in Dessie city administration of Amhara region. The research tried to address the four research questions mentioned at the first chapter of the paper. To attain the stated objective first, south wollo zone, Dessie city administration was selected. This was because the livestock farming in the area was identified by the researcher real experience. Besides, its topography is rugged mountainous and which is more available for the rearing of those small livestock animals. Stratified sampling technique was used to select samples. Of the total of 16 kebel of the city administration, 13 kebel were selected.

Finally, using a random sampling, 100 urban livestock farmers were selected from, 13 kebel by applying proportional to the size of the population. Qualitative and quantitative data were gathered. To do so, both open and closed ended questionnaires were used to collect data from the respondents. Besides, focus group discussion and interview with responsible DAs and city administration officials were conducted.

Different analytical techniques were applied to analyze the collected data. SPSS 16.0 statistical technique was used to analyze the data. Frequencies, percentage, descriptive statistics such as correlation analysis were also employed to see the relationship between the dependent and independent variables. Finally, multiple regression analysis was run. The finding of this study showed the current level of the livestock farming in the study area.

Correlation was also used to determine relationship among variables. In this regard, a correlation matrices of the variables was used to examine correlation between the independent variable ( the current market value ) and the dependent variable ( distance to the market in kilo meter; the educational status of the respondents ; initial capital; total land area in meter square; and total number of livestock). Following this model summary of the multiple regression analysis were conducted to the complied effect of all the independent and dependent variables. As the urban livestock characteristics indicate. The family size of (41%) of the respondents is

5-6 individuals. (43 %) of them use livestock farming as a source of employment. Besides, (69%) of the respondents livestock farming generated additional income for them.

The use of livestock leftover helped (58%) of the producers to use fertilizer. 29% of the respondent used 10metre square. This was out of the land that they used for their resident and other activity. Out of the respondents 57% had 11 and above of livestock at present.

75% had market place, but the distance of the market was far from half to four Kilometers. In this case while they were apart from the market place, the price of the livestock decreased. Nearly, 32% had 3001-6000 birr as current capital. 81% of the farmers used their family labor. Duration of the farmers in this activity varied in years. Of the respondents 45% of them worked for 6 and above years. Animal feed is one of the basic things for animal farming. The shortage of animal feed harms the livestock health and performance. Out of the respondents 47% of the respondents had shortage of animal feed.

Water is another basic thing needed for animal farming. Clean water is good for the health of the livestock. Out of the respondents 75% of the respondents used piped water. Others used river, spring, and natural ponds. Here the piped water is good for the health of the livestock but, it is expensive.

The recognition of the livestock farming by the government is important for their sustainability. Out of the respondents 51% of them reported that there was no recognition by the government form livestock farming. To facilitate the livestock farming it needs at the initial capital. The source of this capital 72% of them was their own money.

## **5.2 Recommendation**

The finding of the study discovered that the level of performance and challenges of urban agriculture in the study area had different problems. The urban agriculture (livestock) for the farmers and the consumers as well as the community at large has its own contribution in the economic growth of a given country at large and locally in particular. This study gave a clue to the mitigation of the problem faced by those involved in it and facilitated sustainable urban development. To make the urban agriculture sustainable (livestock), it needs the participation of different stakeholders such as government, non-government organization, community and

the farmers themselves. They should take their own parts from the findings to achieve their aims of bringing about sustainable urban development. The following points are suggested based on the findings of the research.

1. Dessie has much livestock potential. Of these poultry and sheep is the predominant one. This is because of the rugged and mountainous topography Dessie city. These livestock even if they are small they could feed large portion of the people when they are compared with the large animals. They also need small land and little initial capital. These livestock need scientific innovations to give more production. With this they need special attentions by the different stakeholders instead to make more productive. Government (federal, regional and local), nongovernmental organizations (NGOs), the community and the owners themselves should take due attention in the productivity of these live stocks. In line with this, the owners should take the lion's share and should be committed in urban livestock farming.
2. Livestock farming at house hold level is important for the food security and creation of employment at national, regional, local household level since it could participate especially the poor dweller of the urbanities. But to make this effective the individual farmers are not strongly organized. This creates different problems in the urban livestock farming. To solve these problems by organized the farmers' different stake holders participate in sharing experience, knowledge and skills.
3. The constraints and limitations of the livestock farming in the study area are shortage of financial income, access to credit(fear of inability to pay; have no qualetrall ,poor market opportunities(absence of linkage and absence of information ) , infrastructures, access to land, institutional service, municipal regulations and policies and awareness. To solve these problems, the urban livestock farmers should work with different groups (stake holders) by bringing together local authorities, NGOs, university (research) farmer group's civil societies and other stakeholders in a joint to increase producers' interest and to contribute to food security and poverty alleviations. By doing them instead of only consumer they should be also producers this create them to have additional income as well as escort them to food security.

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This questionnaire is developed for the study of “performance and challenges of urban livestock farming in Dessie city administration Amhara National Regional State”.

Dear respondents, first of all I would like to thank you for your willingness for this filling. The purpose of this questionnaire is to collect data relevant to the stated study. With the intention of identifying the performance and challenges of urban livestock farming in Dessie city. You are required to contribute for the study through giving the correct response for the questions provided. Your response will be kept confidential. Thank you for your collaboration in advance.

**NB.** Give your answer on the blank line with  $\chi$  mark

Keble \_\_\_\_\_

Enumerator's name \_\_\_\_\_

Date of \_\_\_\_\_

Signature \_\_\_\_\_

**Part one: Household Demographic and Socio-Economic Characteristics**

1. Age: in years.

1. Below 18 \_\_\_ 2. 18 – 30 \_\_\_ 3. 31- 50 \_\_\_ 4. 51 and above \_\_\_\_\_

2. Sex:

1. Female \_\_\_\_\_ 2. Male \_\_\_\_\_

3. Family size: 1. 1 – 2 2. 3 -4 3. 5-6 4. Above 7

4. Marital Status: - 1. Single \_\_\_\_\_ 2. Married \_\_\_\_\_

3. Divorced \_\_\_\_\_ 4. Widowed \_\_\_\_\_

5. Religion

1. Orthodox \_\_\_\_\_ 3. Catholic \_\_\_\_\_ 5. Others \_\_\_\_\_

2. Protestant \_\_\_\_\_ 4. Muslim \_\_\_\_\_

6. Educational Status

1. Illiterate (cannot read and write) \_\_\_\_\_
  2. Basic Education \_\_\_\_\_
  3. Primary education 1<sup>st</sup>–6<sup>th</sup> grade \_\_\_\_\_
  4. Secondary education 7<sup>th</sup>–12<sup>th</sup> grade \_\_\_\_\_
  5. above secondary education \_\_\_\_\_
7. Employment: - 1. Government \_\_\_\_\_ 2. NGO \_\_\_\_\_
3. Cooperative \_\_\_\_\_ 4. Livestock rearing \_\_\_\_\_
5. Daily laborer \_\_\_\_\_ 6. Others \_\_\_\_\_

### **Part two: potentials of Livestock Farming Activities**

8. What is your reason when you involve to this activity?
1. Food to family \_\_\_\_\_
  2. Generate additional income \_\_\_\_\_
  3. Hobby \_\_\_\_\_
  4. For recreation \_\_\_\_\_
9. To what purpose you use the waste product of your livestock?
1. Using as fertilizer \_\_\_\_\_
  2. Selling to others \_\_\_\_\_
  3. No knowledge to waste disposal of livestock \_\_\_\_\_

### **Part three: Types of livestock**

No	Question	Types of live stock		Number of live stock		
		Sheep	Poultry	1-4	5-10	11 and above
10	What types of livestock you Are rearing?					
11	How many livestock you have at Present?					
12	Out of this sheep					
13	Out of this Poultry					

14. Why you prefer these animals?

1. Interest \_\_\_\_\_ 2. Lack of capital \_\_\_\_\_ 3. Shortage of land \_\_\_\_\_  
4. Access of feed \_\_\_\_\_ 5. Lack of knowledge \_\_\_\_\_ 6. No reason \_\_\_\_\_

**Part three: Performance of livestock at Household level**

15. What is your source of income? Beyond the urban livestock activity: -

1. Private firms \_\_\_\_\_ 2. government \_\_\_\_\_ 3. Pension \_\_\_\_\_  
4. Self employment \_\_\_\_\_ 5. No, income beyond livestock farming \_\_\_\_\_

16. How much of your income use up to yourself?

1. One third 2. quarter \_\_\_\_\_ 3. Half \_\_\_\_\_ 4. No amount expend \_\_\_\_\_

17. Who perform the activity?

1. Family members only \_\_\_\_\_ 2. Employees only \_\_\_\_\_ 3. Both \_\_\_\_\_

18. For how many years participate in this activity?

1. Below one year \_\_\_\_\_ 2. One year \_\_\_\_\_ 2. Two years \_\_\_\_\_

3. Three years \_\_\_\_\_ 4. Four years \_\_\_\_\_ 5. Five and above years \_\_\_\_\_

19. Do you have any intention to expand your activity?

1. Yes; want to expand \_\_\_\_\_ 2. No; I do not want to expand \_\_\_\_\_

20. Why you want to expand?

1. Increased home consumption \_\_\_\_\_ 2. Increased income \_\_\_\_\_  
3. Increased income + home \_\_\_\_\_ 4. Increased income + hobby \_\_\_\_\_

21. Why not want to expand?

1. Capital shortage \_\_\_\_\_ 2. Feed shortage \_\_\_\_\_  
3. Land shortage \_\_\_\_\_ 4. Not willing to expand \_\_\_\_\_

22. Where do you want to have the expansion?

1. Convenient and large area at the out skirts of the city \_\_\_\_\_

2. at present location \_\_\_\_\_ 3. No expansion \_\_\_\_\_

**Part four: - Constraints for the urban livestock farming at Household level**

23. Do you have a specific plot of land for your live stock farming?

1. Yes \_\_\_\_\_ 2. No \_\_\_\_\_

24. If so, who gave you the plot of land? 1. Buy \_\_\_\_\_ 2. Municipality \_\_\_\_\_

3.gift\_\_\_ 4. Inherited from family\_\_\_ 5.rent from other \_\_

25. If not what is the reason?

1. No access of land \_\_\_\_\_ 2. Cost of land is high \_\_\_\_\_

3. No interest to have land \_\_\_\_\_ 4. Not know \_\_\_\_\_

26. Do you have market near your livestock farming? 1. Yes \_\_\_\_\_ 2. No \_\_\_\_\_

27. The distance in kms is

1. Half km\_\_\_ 2. One kms\_\_\_\_\_ 3.Two kms\_\_\_\_\_ 4.Three kms\_\_\_ 5. Four kms

28. In what way helps you the urban agriculture sector office for your career?

1. Veterinary active\_\_\_\_\_ 2.Training\_\_\_\_\_

3. Availability of the market place \_\_\_\_\_ 4. No support in given \_\_

29. did the government or NGO provides you technical support?

1. Yes \_\_\_\_\_ 2.no\_\_\_\_\_

30. If your answer for question No. 29 is **yes** what type of technical support you gain?



1. Credit \_\_\_\_\_
2. Training \_\_\_\_\_
3. Make available of market place \_\_\_\_\_
4. No support is given \_\_\_\_\_
5. Other supports? Mention \_\_\_\_\_

31. How do you rate the assistance given?

1. High \_\_\_\_\_
2. Medium \_\_\_\_\_
3. low \_\_\_\_\_

32. How is the Cost of animal feed in your locality?

1. It is beyond my capacity \_\_\_\_\_
2. High but I could buy \_\_\_\_\_
3. Fair \_\_\_\_\_
4. Cheap \_\_\_\_\_

33. Do you find any difficulty (complaint) with neighbors? 1. Yes \_\_\_\_\_ 2. No \_\_\_\_\_

34. (Ref .Q 33, if 'yes' what is the difficulty (complaint) with neighbors?)

1. Negligence \_\_\_\_\_
2. animal poisoning \_\_\_\_\_
3. Quarreling \_\_\_\_\_

35. What is the source of water for your animals?

1. River \_\_\_\_\_
2. Spring \_\_\_\_\_
3. Ponds natural \_\_\_\_\_
4. Ponds / artificial \_\_\_\_\_
5. Dam \_\_\_\_\_
6. Water tap \_\_\_\_\_
7. Other, if so mention: \_\_\_\_\_

36. Place where livestock is conducted? 1. Residence \_\_\_\_\_ 2. Separate area \_\_\_\_\_

37. Types of shelter used for livestock housing

1. Indoor \_\_\_\_\_
2. Outdoor \_\_\_\_\_
3. Both \_\_\_\_\_

38. Who decide at household level in the livestock farming products (selling, consumption, gift ...)

1. male \_\_\_\_\_ 2. female \_\_\_\_\_

3. All family members \_\_\_\_\_

39. Do you have any fear of eviction from your livestock area?

1. Yes \_\_\_\_\_ 2. No \_\_\_\_\_

40. Which one is considered as an obstacle to your livestock farming practice?

1. Keble administration \_\_\_\_\_ 2. City administration \_\_\_\_\_

3. No, problem from any one \_\_\_\_\_

41. Do you believe that urban livestock farming is well recognized by government?

1. Yes \_\_\_\_\_ 2. No \_\_\_\_\_

42. What do you think of government's attitudes towards urban livestock farming?

1. Is positive \_\_\_\_\_ 2. Is negative \_\_\_\_\_ 3. Do not know \_\_\_\_\_

43. What is your source of veterinary services?

1. Modern private clinics \_\_\_\_\_ 2. Local traditional practitioner's \_\_\_\_\_

3. Ministry of agriculture \_\_\_\_\_

44. Do you frequently vaccinate your animals? 1. Yes \_\_\_\_\_ 2. No \_\_\_\_\_

45. Are you supported by extension agents in your activity? 1. Yes \_\_\_\_\_ 2. No \_\_\_\_\_

46. How do you rate the importance of extension agents?

1. Very important \_\_\_\_\_ 2. Moderately important \_\_\_\_\_ 3. Do not know \_\_\_\_\_

47. Who gives you your source of start-up capital?

1. Private (own money) \_\_\_\_\_ 2. Borrowed from friends \_\_\_\_\_

3. Relative \_\_\_\_\_ 4. Borrowed from bank \_\_\_\_\_ 5. Inheritance / gift \_\_\_\_\_
48. Source of initial livestock. 1. Purchase \_\_\_\_\_ 2. Inheritance \_\_\_\_\_  
3. Gift \_\_\_\_\_ 4. Others \_\_\_\_\_

49. What is your source of knowledge and skills?
1. Relative and friend \_\_\_\_\_ 2. Pervious similar employment \_\_\_\_\_  
3. Short training \_\_\_\_\_ 4. Others \_\_\_\_\_

50. What is your source of credit during your activity of urban live stock farming?
1. Relative \_\_\_\_\_ 2. Micro finance institution \_\_\_\_\_ 3. Co operative \_\_\_\_\_  
4. Bank \_\_\_\_\_ 5. Traders \_\_\_\_\_ 6. Friends' \_\_\_\_\_  
7. NGO \_\_\_\_\_ 8. Others \_\_\_\_\_ 9. No credit \_\_\_\_\_

53. If not why? . 1. Fear of inability to pay \_\_\_\_\_ 2. Lack of asset for collateral \_\_\_\_\_  
3. No one to give credit \_\_\_\_\_ 4. High interest rate \_\_\_\_\_  
5. No need to credit \_\_\_\_\_ 6. Others \_\_\_\_\_

Additional comment \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Thank you!**

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In depth Interview outline with the head of the **Sectors**

These Interview outline developed for the study of “performance and challenges of urban livestock farming in Dessie city administration Amhara region.

Personnel information

Age \_\_\_\_\_

Job title \_\_\_\_\_

1. For how long has the livestock program been active in Dessie? In which Keble.
2. How many people have been benefited from the livestock (sheep and poultry) program (estimate)?  
Are they mostly males or females.
3. Which sections of the society ( such as in terms of gender, background, locations etc)  
Are mainly engaged in livestock farming in the city?
4. How is the spatial (or geographic) distribution of livestock developers in Dessie town?
5. How do you think the livestock farming (sheep and poultry) in Dessie benefited the targeted low income communities?
6. In your opinion. What are the factors that affected the livestock farming especially sheep and poultry producers? In Dessie.
7. Do you think livestock farming is important in urban cites?
8. What are the constraints, problems and opportunities that need to addressed to improve livestock farming (sheep and poultry) in Dessie city?
9. Who should play what role so that livestock production in Dessie will contribute the maximum possible positive outputs?
10. Any other comment or idea you have?

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**Thank you!**

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In depth Interview outline of the Development Agents

These Interview outline developed for the study of “performance and challenges of urban livestock farming in Dessie city administration Amhara region.

Personnel information

Age \_\_\_\_\_

Job title \_\_\_\_\_

1. Is the city favorable to urban livestock farming (sheep and poultry)?
2. What type of support you give to the urban agriculturalist in general and livestock in particular?
3. What are the major difficulties / problems you faced while you assist the urban livestock farmer?
4. Is urban livestock farming is important to the urban low income dwellers?
5. For how long has the livestock program been active in Dessie? In which Keble.
6. How many people have been benefited from the livestock (sheep and poultry) program (estimate)? Are they mostly males or females.
7. Which sections of the society ( such as in terms of gender, background, locations etc) Are mainly engaged in livestock farming in the city?
8. How is the spatial (or geographic) distribution of livestock developers in Dessie town?
9. How do you think the livestock farming (sheep and poultry) in Dessie benefited the targeted low income communities?
10. In your opinion. What are the factors that affected the livestock farming especially sheep and poultry producers? In Dessie.
11. Do you think livestock farming is important in urban cites?
12. What are the constraints, problems and opportunities that need to addressed to improve livestock farming (sheep and poultry) in Dessie city?
13. Who should play what role so that livestock production in Dessie will contribute the maximum possible positive outputs?
14. Any other comment or idea you have? \_\_\_\_\_

**Thank you!**

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Focus group discussion outlines with **livestock farmers**.

These Focus group discussion outlines developed for the study of “performance and challenges of urban livestock farming in Dessie city administration Amhara region.

Questions

Group characteristics (name, age location education level, marital status, number of children if any estimated income from livestock farming)

1. What kind of support you get from the city administration?
  2. Is livestock farming (sheep and poultry) are important in your locality? Mentioned the benefits and opportunities of each animal.
  3. Mention the reasons that you participate in the urban farming (sheep and poultry).
  4. Who is your source of land for your livestock farming?
  5. Who gave you the initial source of your livestock?
  6. What is the support of government and NGO in your livestock farming?
  7. Who are your sources of information for your market?
  8. Do you have credit from any one during your farming activities?
  9. Who help or support you in veterinary service? Why?
  10. What are the challenges during your livestock farming?
  11. From where you find your animal feed?
  12. Addition comment \_\_\_\_\_
- 

**Thank you!**