

REVIEW ON STATUS AND CHALLENGES OF URBAN AGRICULTURE ETHIOPIA

*Moges Girmay and Workie Sahlu

Ethiopia.

Article Info

Article Received: 20 March 2024,
Article Revised: 11 April 2024,
Published on: 01 May 2024.



*Corresponding author:

*Moges Girmay

Ethiopia.

mogesgirmay0@gmail.com

ABSTRACT

This review was focused on overall situation and challenges of urban agriculture in and around Addis Ababa. Hence, the objectives of this review were to assess status of urban agriculture and to identify challenges face to practice urban agriculture in and around Addis Ababa city. The review was based on reviewing secondary data from journal articles, books, published and unpublished reports of national and international organizations based on their relevance to the topic. According to the review, UA is playing key roles in poverty reduction, food security improvement, urban waste management and recycling, urban greening and job creation in the area. However, it is found that very low attention has been given to UA as a result of which the sector has been suffering from lack of proper awareness among stakeholders, and high scarcity of vital inputs such as water and power.

KEYWORDS: Urban, Urban Agriculture, Challenges.

1. INTRODUCTION

1.1. Background of the Study

Attention to urban agriculture is steadily increasing especially in developing countries. These urban farming activities take place in diverse parts of the cities such as in the backyards, rooftops and others. According to,^[1] urban agriculture plays an important role in improving nutrition and health, create job opportunities for the community and contribute to increasing the recycling of nutrients. Therefore, the opportunity to grow or acquire food produce locally becomes a critical component of survival in the city. Thus, urban agriculture plays a significant role in contributing to the welfare especially among the poorer urban residents.^[2]

Urban- agriculture (UA) encompasses the production of food and non-food plant and tree crops and animal husbandry in, or around, a village, town or city. Urban agriculture involves crop and livestock production of different kinds. Urban agriculture includes food products, from different types of crops such as grains, root crops, vegetables, mushrooms. fruits and animals including poultry, rabbits, goats, sheep, cattle, pigs, guinea pigs, fish Etc. As well as non-food products like aromatic and medicinal herbs. ornamental plants, tree products, etc. or combinations of these,^[3] Ethiopia is a country where

subsistence agriculture of low productivity predominates and there has been an acute deficit in food supply and hence food self-sufficiency is a primary issue in the national agricultural development policy. Rural agriculture is not in a position to supply sufficient food both for the rural and the urban population. Hence, urban agriculture activities have been carried out in cities supplementing rural agriculture. Although Urban Agriculture plays a significant role in producing food and generating employment and income for the urban dwellers, it has been given less emphasis.^[4] Tinker, 1994 Cited in,^[4] stated that; Despite its critical role in producing food for the city dwellers around the world, urban food production has largely been ignored by scholars and agricultural planners; government officials and policy makers at best dismiss the activity as peripheral and at worst evict farmers, claiming that urban farms are not only unsightly but also promote pollution and illness.

Urban agriculture is a traditional practice in Ethiopia, and the urban-based population is used to keeping cattle, sheep, and chickens, or growing rain-fed crops and vegetables, on the plots adjacent to their houses. In addition to its benefits for the production of foods from vegetables, crops and rearing animals, urban agriculture has socio-economic and environmental benefits. For

instance, UA in Addis Ababa create large number of employment and source of income for the city residents.^[5]

2. REVIEW METHODOLOGY

Data collection in the review article is undertaken document analysis through an in-depth review of related literature from a different source. In the same manner, to achieve the review objectives data were collected from the intensive finding review of published and unpublished materials like books, research articles, published and unpublished reports from national and international organizations (governments), non-governmental organizations, policy briefs, and other indexed scholarly materials. The search was executed from 01 November 2022, up to 25 June 2020. In this review, almost all relevant sources that were released between 1988 and 2017 were included.

3. THE REVIEW PROCESS

3.1. Concept of Urban Agriculture

Urban agriculture is defined differently by different authors and organizations; hence there is no common agreed single definition. However, the definition given by different authors and organization is serving as a working definition. According,^[6] UA is defined as the growing of plants and the raising of animals for food and other uses within and around cities and towns, and related activities such as the production and delivery of inputs, and the processing and marketing of products.

In a broad sense,^[7] defined as the growing of plants and the raising of animals within and around cities, it provides food products from different types of crops (grains, root crops, vegetables, mushrooms, fruits), animals (poultry, goat, sheep, cattle, pigs etc.) as well as non-food products (e.g. Medicinal herbs, ornamental plants, tree products). As he mentioned the complexity and confusion for several academicians, policy designers and city administrators,^[8] defined as urban/peri urban agriculture is an urban-based economic activity that comprises a variety of agriculture related livelihood system ranging from subsistence production and processing at the household level to more commercialized agriculture^[9] put urban agriculture broadly as any agricultural production such as horticulture, floriculture, forestry, fishery, poultry and livestock mainly in public open spaces within or fringe of cities. Urban agriculture is one kind of city industry where its produces are supplied to market to meet daily demands of urban consumers.

3.2. The status of ua in and aruond addis ababa

Most UA practitioners in Addis Ababa and the small towns in close proximity are low-income earners who practice UA mainly for survival and achieve a combination of nutritional and socioeconomic benefits. UA in and around the city involves livestock keeping, predominantly dairy cows, sheep and chickens; egg production and the cultivation of rain-fed and irrigated crops, mainly vegetables but also cereals and pulses, on homesteads,

river banks, school compounds and other open fields. The UA consists mostly of dairy farms and vegetable production. Carrot, potato, tomato, different kinds of cabbages, cauliflower, beetroot, pepper, green beans, cucumber, lettuce and celery are widely produced. Moreover, mushroom, fruits, flower, seedlings and pig productions are newly emerging UA business areas.

According to a,^[10] report, for instance, 30% of vegetables, 60 to 70% of milk and 40 to 60% of eggs consumed in Addis Ababa are supplied by UA. Approximately, 62 tone of honey is produced within Addis Ababa each year. Contrary to its immense contribution in various aspects, the contribution of UA to total employment is quite low (estimated to be only 3% in Addis Ababa). In relation to this,^[11] indicated more than 50% of the household heads in Addis Ababa are engaged in service sectors, and nearly 40% are in manufacturing, repairing and construction sectors while the place of UA in this regard is minimal.

According to estimates by Addis Ababa UA Core Process Office vegetables are produced on more than 300ha of Addis Ababa. And there are about 6,500 vegetable producers and about 5,800 livestock/dairy owners. There are about 470 micro- and small-enterprises farmers, particularly women, youth and elderly people engaged in livestock, vegetable and mushroom micro-enterprises in Addis Ababa. The existing few studies,^[11] indicate that there are about 31,000 dairy cattle in Addis Ababa and the surrounding areas. Most dairy farms are operating in residential areas in a confined management practices with little or no access to grazing systems.

In case of Addis Ababa, the city administration is trying to restructure and capacitate its office for UA ranging from city administration to *woreda* (district) level. This was mainly because the efficiency and effectiveness of UA in Addis Ababa is far from the goal targeted in urban and peri-UA policy/strategy of the city. There are intense challenges arising from lack of professionals in UA; poor technical knowledge of the officers; wide misunderstandings about UA among residents, urban planners, city administrators and the UA operators themselves; lack of funding; poor productivity per unit area; genetic improvement gaps; lack of proper quality and quantity of feed; and policy/strategy implementation gaps. This all set of circumstances call for comprehensive and integrated approaches in UA in and around Addis Ababa.

3.3. Challenges of urban agriculture

There are a number of challenges that were facing the urban farmers in different Ethiopian cities. These were classified into three broad categories, namely: institutional, financial and capacity related challenges; the finding will be discussed under result chapter.

Globally, in many cities, it is being practiced as an informal sector and has little support from local councils,^[12] The problems are commonly known and identified by different

researchers. The key factors (inputs) such as land and water supply are serious problems as the result of little attention from responsible bodies.

^[8]Stated that UPA face specific challenges compared to those rural-based agricultural activities. The critical problems are scarcity of land and water resources.

The competition for these decisive resources with other sectors also escalates the problem. Lack of recognition by city administrations, and societal neglect are also crucial challenges to urban and peri-urban agriculture.

Hazardous biological and chemical exposures among farmers and consumers as a result of wastewater use on vegetable crops; transmission of zoonotic diseases in the context of (usually confined) livestock activities; and malaria transmission possibly increased due to irrigation and drainage schedules.

The root causes associated with accumulation of heavy metal in the environment by applying wastewater for agriculture in developing countries currently includes rapid industrialization and increased exploration of natural resources, and indiscriminate use of raw city effluent for irrigation accelerated the addition of heavy metals onto soils. For instance, Lead (Pb) is one of the most widespread and persistent metal pollutants in soils.

In Bahr Dar city UPA development is challenged by many factors. The most pressing challenge emanates from being in a vacuum of semi-official recognition with limited active support from the City Administration. There is neither a separate office in charge of UPA nor a clear policy/strategy/plan concerning UPA in the City. This has a practical problem in using or asking to use idle urban lands for certain agricultural activities. The other challenge is urbanization itself. The increasing demand for land by the long-drawn-out urban population creates scarcity of urban land, which is usually solved by displacing UPA engagements.

Similarly,^[13] reported that, in Mekelle, 'owned' land is actually land owned by the state, for which farmers have a certificate entitling them to use it during their lifetime. More recently, Tigray Regional State has given property right licenses to farmers, but still there is no right to sale or land transfers to a third party (meaning a non-family member). Thus, lack of government recognition is the biggest institutional challenge facing urban farming households.

According to,^[14] in Addis Ababa about 44% of the farmers did not get any kind of technical advice from the agricultural extension workers. On its part, the Addis-Ababa Urban Agriculture Department admitted that they did not have enough experts to provide the required and continuous support to the urban farmers.

4. CONCLUSION

In summary, Urban agriculture is an industry that produces, processes and markets food, largely in response to the daily demand of consumers within a town, city, or metropolis, on land and water dispersed throughout the urban and peri-urban area, applying intensive production methods, using and reusing natural resources and urban wastes, to yield a diversity of crops and livestock. According to the review, the sector suffers from lack of proper attention by stakeholders, poor implementation, organizational problems, management and supervision. The overall conclusion of this review was that one of the economic significances of urban agriculture is its capacity to create income, food supply, employment opportunity and environmental management. According to a CSA (2007) report, for instance, 30% of vegetables, 60 to 70% of milk and 40 to 60% of eggs consumed in Addis Ababa are supplied by UA.

5. ACKNOWLEDGMENTS

We, the researchers, would like to thank the works of others.

6. AUTHORS' CONTRIBUTIONS

All authors write, read, and approved the manuscript equally.

7. COMPETING INTERESTS

The authors declare that they have no competing interests.

8. REFERENCES

1. Sheila Golden. Urban Agriculture Impacts: Social, Health, and Economic: A Literature Review. *UC Sustain Agric Res Educ Progr*. Published online 2013:22. [http://asi.ucdavis.edu/resources/publications/UA Lit Review- Golden Reduced 11-15.pdf](http://asi.ucdavis.edu/resources/publications/UA%20Lit%20Review-Golden%20Reduced%2011-15.pdf)
2. Ida Naziera Ngahdiman, Rika Terano Zm And Js. Factors Affecting Urban Dwellers To Practice Urban Agriculture. *Int J Adv Res.*, 2017; 5(7): 1580-1587. doi:10.21474/IJAR01/4872
3. Nigatu Samuel. Problems And Constraints Of Urban Agriculture In Addis Ababa: A Case Study Of Urban Agrlculture Cooperatives In Nifas Silk- Lafto Sub-City. Published online 2009.
4. Gebrelibanos G. Assesment Of Urban Agriculture In Addis Ababa; The Case Of Mushroom Cultivation. 2015; (May).
5. Abrham Kassa. Challenges and Prospects of Riverbank Urban Agriculture: The Case of Mekanisa, Gofa and Saris Subject: Opening of self-administered account at EiABC MSc Thesis in Environmental Planning and Landscape By: Abrham Kassa Supervisor: Hailu Worku (PhD) E. Published online 2012.
6. De Zeeuw H, Van Veenhuizen R, Dubbeling M. The role of urban agriculture in building resilient cities in developing countries. *J Agric Sci.*, 2011; 149(S1): 153-163. doi:10.1017/S0021859610001279
7. FAO. Fighting Poverty and Hunger: What Role for Urban Agriculture? *Econ Soc Perspect*. Published

- online 2010:2. http://www.fao.org/economic/es-policybriefs/briefs-detail/en/?no_cache=1&uid=45052
8. Mulugeta Messay. The Need for Policy Framework for Urban/Peri-Urban Agriculture in Ethiopia: A Reflection. *Ejossah*, 2013; IX(1): 80-108.
 9. Tjeerd Deelstra and Herbert Girardet. Urban agriculture and sustainable cities. *Urban Agric Sustain Cities*, 2001; 4(December): 43-65. http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list_uids=20400564
 10. CSA. the Federal Democratic Republic of Ethiopia: Statistical Report on the 2012 Urban Employment Unemployment Survey. *Cent Stat Auth.*, 2012; (16): 42-47.
 11. Demissie Gebremichael, Alemayehu Taye Gebremichael, Azeb Worku, Muluneh Woldetsadik Abshare YMHGB and DG. *Building Urban Resilience*.
 12. Deborah Fahy Bryceson and Deborah Potts. Effects of Seizure Type and Waveform Abnormality on Memory and Attention. *Arch Neurol.*, 1988; 45(8): 884-887. doi:10.1001/archneur.1988.00520320074019
 13. Ali M. Socio-Economic Analysis of Daily Labourers in Urban Masses: A Case Study of Northern Ethiopia. *Ethiop J Environ Stud Manag.*, 2014; 7(1): 50. doi:10.4314/ejesm.v7i1.6
 14. Thomas P.Z.Mpofu. An evaluation of the performance of urban agriculture in Addis-Ababa City, Ethiopia. *Res J Agric Environ ...* 2013; 2(2): 51-57. <http://www.apexjournal.org/RJAEM%5Cnhttp://www.apexjournal.org/pdf/Mpofu.pdf>