

Abstract

It is known that urban agriculture has economic, social and ecological importance for both practitioners and the user community. In Ethiopia, urban vegetable production using the contaminated Akaki River around fringes of Addis Ababa has been a common practice. In this area, the potential of urban agriculture has not been realized due to problems associated with subsistence agricultural practice, lack of sufficient land, underdeveloped marketing structure that affects the marketing profitability, and benefits of producers. Moreover, literature survey has shown that little is known about the production system, opportunities, and challenges. Hence, this thesis attempts to comprehensively address the issues of production, marketing value chain, challenges and health related implications of urban vegetable production through wastewater irrigation.

The study was based on conducting a household survey on 75 respondents (producers and consumers) and performing review of secondary documents. The results obtained from the study were analyzed using descriptive statistics with simple tests coupled with qualitative analysis methodologies.

The results from the study indicated that the male dominated vegetable production system produced mainly cabbage, lettuce, cucumber, and green pepper. The production frequency of these vegetables is on averages about five times per year. In addition, the irrigation practice of producing vegetables using the Akaki River wastewater has been dominated by furrow irrigation. This practice is known by its traditional features which can have an impact on the efficiency of water use, as reflected by the shortage of water during the dry seasons.

Another issue related to use of Akaki River for irrigation purpose is that it receives industrial wastes and household solid wastes which can result in its contamination. In spite of the different problems such as river pollution and dominance of the traditional subsistence type agricultural practice Akaki River based wastewater irrigation resulted in higher vegetable productivity was compared to that of the national average. The vegetable producers were also found to be profitable.

The results obtained showed that marketing of products directly on the farm could also have a significant impact on the profit for the producers. Furthermore, the low level of safety standards followed by producers together with a high level of expected pollution is consistently increasing the health risks. Apart from the negative implications, vegetable production using Akaki River wastewater is found to increase opportunities related to improved plant growth, household consumption, and job opportunities.

Based on the main findings of the study, it is recommended that together with different stakeholders, local authorities should work to identify and deliver better yield vegetable varieties, improve the irrigation system, enforce practical application of wastewater management strategies and develop better marketing and pricing information.

Key Words: Akaki river, wastewater, Vegetable, irrigation, urban agriculture