

## Characterization of Banana Based Farming Systems in the Arumeru District, Arusha- Tanzania

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**Abstract :** Arumeru district is located in Arusha region in Upper Pangani basin in Tanzania. Economically it is dominated with agricultural activities. Banana, coffee, maize, beans, tomatoes, and cassava are the most important food and cash crops. This paper characterized the banana-based farming system of Arumeru district, evaluates its sustainability as well as research needs. The household questionnaire was performed on-site and on farm observation. Transect walk also involved to identify different agro- ecological zones. Results show that farm holdings (home gardens) are smaller than a hectare (0.7 ha) and continue to fragment as population continues to grow. Banana cultivation is the backbone of the farming systems present both in the upland and plains. In the upper belt banana found their place in the forest, which form the home garden structure typical to East African highland banana production systems. However, in the plains, cultivation is done in monoculture and depends heavily on irrigation. We found slightly less cultivars present and hypothetically more pest and disease pressure. This was mainly seen for *Fusarium oxysporum* species, which eradicates susceptible cultivars such as Mchare cultivars rapidly given the method of irrigation. The smaller permanent upland home garden plots provide thus a more suitable environment where banana perform better. It should be noted that findings indicated good performance to occur in the less suitable plains too. Good management is believed to be the most influencing factor, although our survey failed in identifying them. Population pressure is currently pushing the sustainable system in the uplands to its boundaries. Nutrient mining, deforestation and changing rain patterns threat production not only on Mt. Meru but on a global scale.

**Keywords :** Arumeru district, banana-based farming system, Tanzania, Arumeru district

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