Abstract:
The use of tissue culture (TC) banana (Musa spp.) planting material is an effective method of providing pest and disease-free plants. Although there are many added benefits to using TC plants, the adoption of TC technology remains relatively low in East Africa. Currently, adoption is increasing under impetus from the private sector. Adopting TC banana technology, however, is more expensive for the farmer than conventional suckers and may not be economically beneficial across all banana-producing areas in East Africa. One of the greatest potential dangers for sustainable commercial TC plant production is the limited use of certification for plant quality and health, which is especially important in order to avoid the spread of viruses. Additionally, TC plant nurseries are important components, as they provide essential distribution hubs connecting TC producers with farmers. However, TC nurseries in East Africa face an array of challenges. Organizing banana farmers into groups has long been considered advantageous, as they foster increased buying and selling power, reduce economic and social risk, increase economies of scale, and facilitate access to credit and inputs in the case of formally certified groups. Distribution of superior planting material alone, however, does not ensure improved productivity. Smallholder farmers are constrained by factors such as a lack of: land, capital, access to technology and effective marketing infrastructure. As such, efficient distribution systems need to deliver TC plants as part of a package, including training and access to micro-credit. Despite a booming commercial sector, there is only anecdotal evidence that farmers who have adopted TC bananas have benefitted substantially in terms of higher yields and household incomes. Sound socio-economic analyses are crucial to guide policy strategies, to learn from successes already achieved and to identify important constraints for a wider dissemination of TC banana in the region.