Abstract

The demand for bananas (Musaspp.), which is ranked as the most important fruit crop in Kenya has been on the rise owing to both their dietary contribution and income generation. Meeting this demand has however been hampered by losses during production or post-harvest. This study assessed banana disease and post-harvest losses in leading producing counties in Kenya namely; Kisii, Nyamira and Embu. The study also assessed the efficacy of Rhizophagusirregularisin controlling Fusariumoxysporumf.sp. cubense. Structured questionnaires were used to collect data on post-harvest losses. Disease scoring tables, charts and photos were used to confirm observed symptoms and hence, disease occurrence and severity. AMF biocontrol efficacy experiment was conducted using tissue culture bananas grown in the greenhouse. The study revealed that most smallholder farmers were unaware of the causes or the prevalence of post-harvest losses. The findings also revealed a significant difference ($p<0.05$) in the severity of banana diseases across various cultivars from the three counties. The AMF treated bananas showed a significant difference ($p<0.05$) in plant height, total leaf area and chlorosis in comparison to other treatments. The study also revealed a reduction of Fusarium'spathogenic effects including chlorosis, reduced leaf surface area and eventual necrosis.