

Analysis of soil and plant nutrients in the spread of Banana Bunchy Top Disease in Rusizi District

**Habiyaremye Gabriel and Christophe
Mupenzi**

Independent Institute of Lay Adventists of Kigali, Department of Environmental
Management

Abstract

Banana in Rwanda is an important crop; however it has many production constraints which limits its potential such as banana bunchy top disease (BBTD). This study was conducted to assess the role of soil and plant nutrients in the spread of banana bunchy top disease in Rusizi district specifically in Bugarama, Muganza and Nzahaha Sectors. Soil and plant samples were collected from selected farmers' fields having banana bunchy top incidence and managed differently. The samples were analyzed in laboratory for nutrients content. We sampled 12 fields plots in Bugarama plain (Bugarama, Muganza and low part of Nzahaha sector) where banana bunchy top disease was dominant and from 8 farm plots in the area surrounding Bugarama area (the remaining part of Nzahaha sector). The result showed that the parameters measured varies accordingly to BBTD incidence and banana plantation management. Additionally, it has been seen that, the reason limiting the spread of BBTD in the areas surrounding Bugarama plain was caused by many factors: Potassium, Calcium, Total Nitrogen and Phosphorus based on their existence at high level in the area with BBTD than in the area without BBTD. Altitude had an influence on the spread of BBTD; as altitude increased BBTD incidence decreases. Persistence of BBTD in Bugarama may be attributed to the low altitude of 963m

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