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Mineral deficiency in production of banana seedlings

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ABSTRACT

Objective: Banana (Musa spp.) is one of the most important fruits for food security and income. It fruits all year round thus providing a continuous supply of food. Bananas require nutrients so as to give high yields and good quality fruits. They require nutrients high in Nitrogen (N) and Potassium (K). K is important for promoting early shooting and reduces the amount of time the fruit takes to mature while improving size of the fingers and quality. Therefore, soil fertility must be maintained by continuously replenishing the soil with nutrients in form of either organic or inorganic nutrients. Nitrogen deficiency is shown by small and pale green leaves. Potassium deficiency is shown by the leaves turning brown, curling and drying up starting with the older leaves, the midrib breaks at two thirds of the stem. Nutrients are important in all stages of growth of bananas. This paper reports on observed nutritional deficiency on macropropagated banana seedlings.

Methodology and results: Seedling production was carried out in farmers' field by macropropagation technology. This is mass production of seedlings from the banana corm using sterile

sawdust as the propagation medium. During transplanting of the sprouted suckers, the soil was mixed with organic manure. After 2 weeks, the bigger, faster growing seedlings started showing symptoms of nutrient deficiency, characterized by symptoms similar to those of K. This was successfully rectified by adding a fertilizer rich in K.
Application of findings: To ensure proper growth and development of plants, banana seedlings should be provided with nutrients having high N and K. Lack of these nutrients can lead to reduction of leaf area, decline of photosynthesis and constrained growth of plants. Farmers and nursery operators need to be familiarized with symptoms associated with nutrient deficiency and the appropriate ways of managing them.

Key words: *Minerals, Seedlings, Macropropagation*