

Compost Enriched with Actinomyces and Bacillus Polymyxa Algae as a Partial Substitute for Mineral N in Ewaise Mango Orchards

Authors : Abdelaziz Sheba Abdelrahman

Abstract : Compost enriched with actinomyces and Bacillus polymyxa algae as a Partial Substitute for Mineral N in Ewaise Mango Orchards Organic fertiliser, compost enriched with actinomyces, and the biofertilizer Bacillus polymyxa algae were used as a partial replacement for mineral N fertiliser in Ewaise mango orchards during the 2019 and 2020 seasons. When compared to using mineral N alone, the results showed that reducing the percentage of mineral N fertiliser from 100 to 50% and using compost enriched with actinomyces at 25 to 50% and Bacillus polymyxa had an announced promotion on leaf area, total chlorophylls, leaf N, P, and K, yield, and fruit quality. The use of compost enriched with actinomyces and Bacillus polymyxa, as well as mineral N, resulted in a significant decrease in nitrite in the pulp. Reducing mineral N to 25% of the suitable N had a negative impact on yield. The application of appropriate N via 50% inorganic N + compost enriched with actinomyces at 50% + Bacillus polymyxa algae increased yield quantitatively and qualitatively in Ewaise mango orchards. This promised treatment significantly reduced nitrite levels in the pulp fruit.

Keywords : bacillus polymyxa algae, fertiliser, biofertilizer, ewaise mango

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