

Growth and storage root development of sweetpotato inoculated with rhizobacteria under glasshouse conditions

ABSTRACT

A pot experiment was conducted to determine the effects of rhizobacterial inoculation on growth and storage root development of Sepang Oren sweetpotato. Inoculation positively affected plant growth. The highest growth was observed on plants inoculated with *Klebsiella* sp. which increased shoot dry weight by 23% compared to control. Five of the isolates were able to produce sweetpotato storage roots. *Klebsiella* sp. and *Erwinia* sp. produced higher storage root yields of 35.15 and 8.22 g plant⁻¹, respectively, compared to the other treatments. The inoculation significantly increased the uptake of nutrients in plant tissue and the concentrations of nutrients in soil. The results suggest that *Klebsiella* sp. and *Erwinia* sp. are potentially effective as bioenhancers and biofertilizers for sweetpotato.

Keyword: Sweetpotato; Rhizobacteria; *Klebsiella* sp.; *Erwinia* sp.; Biofertilizer