

Plant Protection

Technique for Evaluating Resistance of Sweet Potato Accessions to the Weevil, Cylas formicarius elengantulus Fabr.

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ABSTRACT

The technique developed involves the use of potted plants covered with nylon tulle at the base to produce consistent weevil-free tuberized roots. The plants are provided with trellises for vine support and are kept in an open field. Later, the well-developed, undetached tuberized roots were exposed by removing some soil from the pot and were then artificially infested with newly emerged adult weevils. The tubers were harvested 20 days later and examined and sliced to record the weevil population present and the extent of damage inflicted. The technique developed was effective in separating resistant from susceptible accessions and in detecting those that escaped weevil infestation in field screening.

Effect of Type in Histological Differentiation, Precocity, Production, and Susceptibility to Nematodes in Sweet Potato

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ABSTRACT

Studies were conducted in order to determine the influence of the length and the origin of cuttings (upper, medium, and lower) used as planting on the histological differentiation of the roots, the degree of rooting, crop precocity, root and foliage yields, and susceptibility to root-knot nematode (Meloidogyne incognita). In all studies cv. 'Japones' was used.

Rooting and initial vigor were highest with upper (96%) and medium (75%) cuttings. Upper cuttings gave origin to root systems that differentiated earlier because of their simple structure and more efficient hormonal complex. Upper 35-cm cuttings gave the highest yield (23 t/ha) and were significantly better than 25- and 15-cm cuttings. Lower 15-cm cuttings gave the highest foliage yields (22 t/ha). The upper 15-cm cuttings were considered resistant to root-knot nematode, while the lower 25-cm cuttings were tolerant, but at the same time they were the most sensitive.

