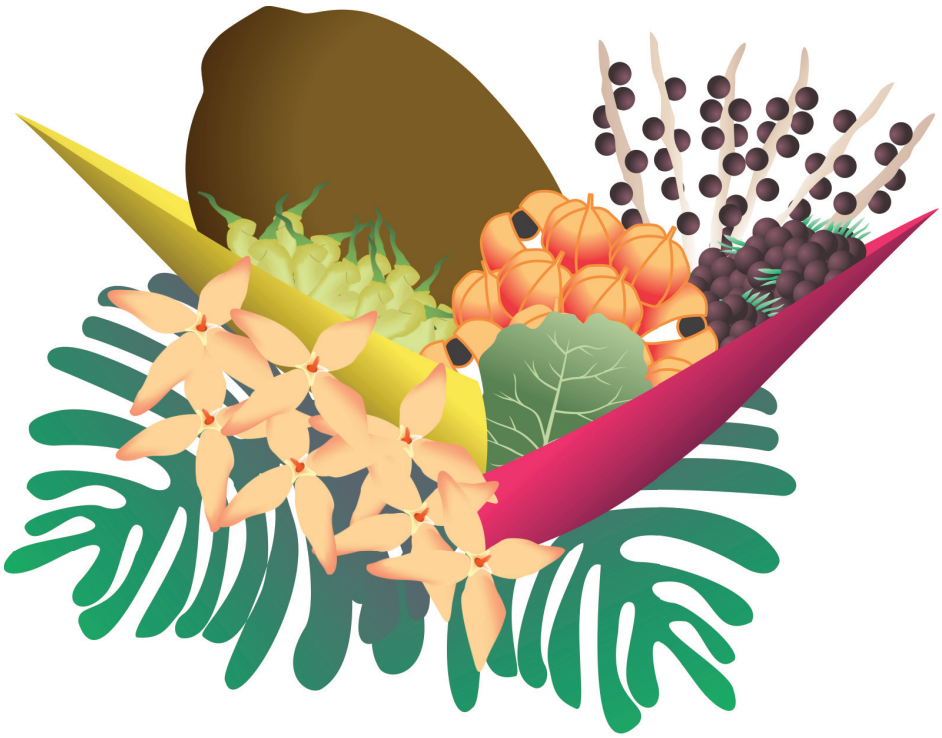
Anais da LXI (61ª) Reunião Anual da Sociedade InterAmericana de Horticultura Tropical – ISTH

Annals of LXI (61ª) Annual Meeting of the InterAmerican Society for Tropical Horticulture – ISTH

Anales de la LXI (61st) Reunión Anual de la Sociedad InterAmericana de Horticultura Tropical – ISTH



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FR075: GENETIC VARIABILITY OF *Moniliophthora perniciosa* ISOLATED FROM *Theobroma* sp.

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The fungus *Moniliophthora perniciosa* is the causal agent one of the main cacao (*Theobroma cacao*) and cupuassu (*Theobroma grandiflorum*) disease, of which have origin probably in the Amazon basin. The genetic knowledge is important for better understanding of plant pathogen evolution and control strategies. The aim of this study was to determinate genetic variability of *Moniliophthora perniciosa* isolates from *T. grandiflorum* and *T. cacao* trees growing in seven states of Brasil: Acre, Amapá, Amazonas, Pará, Rondônia, Roraima e Bahia. A sample of 49 isolates *M. perniciosa* were obtained from infected host tissues, which were cultured in an appropriate medium for mycelium growth and extraction of genomic DNA using CTAB method. For PCR reactions, seven ISSR primers were selected according to the polymorphic and reproducible amplification bands. The Jaccard coefficient was used to calculated the pairwise genetic similarity using a binary matrix de ISSR locos scored for presence (1) and absence (0). The UPGMA dendrogram was generated for analysis of 49 *M. perniciosa* isolates. The ISSR markers produced 122 scorable fragments, with an average 17.4 fragments per primer, of which all these fragments (100%) were polymorphic. The isolates from Amazonas were grouped on the same large cluster and a minor group composed by isolates from Bahia was observed. Isolates from the other states, shown to be dispersed randomly in the dendrogram without distinction on the collecting state. The results of ISSR analysis revealed a high degree of variability among all isolates, except for the isolates from Bahia.

Keywords: disease; genetic diversity; ISSR

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FR037: GERMINATION CITRUS ROOTSTOCKS SEEDS

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In the citrus nursery production is desirable rootstocks, planted from seed with uniformity in germination and that results in high and rapid germination. Therefore, the aim this work was to evaluate the germination percentage and the germination speed index (GSI) of different citrus rootstocks. The seeds of ´Trifoliata`, ‘Flying Dragon`, ‘Swingle` citrumelo and hybrid Rangpure lime x Sunki were extracted from ripe fruits collected from the collection of rootstocks EPAGRI / EEI, in Brazil. After extraction, the seeds were washed in water to remove the mucilage and then put to dry in the shade for three days. It was eliminated deformed, damaged or immature seeds. Three hundred seeds to evaluate the germination and GSI. The seeds were sown in plastic trays containing sand as substrate. From beginning of the germination process, the evaluations were performed every 3 days for a period of 60 days. The germination rates were determined according to GSI, adapted from Maguire formula (1962). Rangpur lime x Sunki and ‘Swingle` showed the largest values for GSI, respectively (14.1 and 10.7). Moreover, germination was more slowly for ‘Trifoliata` and ‘Flying Dragon` rootstocks that showed the same behavior over time with similar GSI. From the 41st day occurred considerable increase in the GSI Rangpure lime x Sunki where 30% more seeds germinated when compared with ‘Swingle`, showing the vigor of this material. At 59 days, the total percentage of germination was: 21.3% (‘Trifoliata`), 24% (‘Flying Dragon`), 63% (‘Swingle`) and 93% (Rangpure lime x Sunki). The hybrid Rangpure lime x Sunki showed promising results and should be evaluated for other traits such as disease tolerance.

Keywords: *Citrus* spp.; seedling production; germination speed index.

Financial Support: Fapesc; Finep.