P045

Dormency break treatments effect on seed germination of carnauba (*Corpenicia prunifera* Moore)

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The objective of this work was to study the effect of dormancy breaking treatments on the carnauba seed germination. The experiment was carried out at Embrapa Meio-Norte experimental area, in T[illegible]sina, PI, Brazil, in a nursery with 50% shading, from January to April of 2004. The dormancy breaking treatments were: T1 (control treatment) - intact seeds; T2 - seeds without endocarps; T3 – seeds without endocarps immerged in water for 24 hours; T4 - intact seeds immerged in water for 24 hours; T5 - seeds without endocarps immerged in water for 48 hours; and T6 - intact seeds immerged in water for 48 hours. A completely randomized experiment design with six replications of 15 seeds each was used. The characteristics evaluated were: percent of seed germination, measured at 38, 45, 52, 59, 65 and 77 days from the planting date; germination speed index (GSI); germination average time (GAT); germination average speed (GAS); root emission rate (RER) and root length (RL), measured at 2[illegible] days after planting. All studied characteristics, except GAS, were affected by the treatments. The T2 treatment had the highest rates of seed germination in all the evaluation dates, reaching 90% at 52 days from planting. However, after 65 days from planting there was no more difference among treatments. T2 (0.340), T5 (337) and T3 (323) showed the highest values of GSI, indicating that endocarp removal accelerated the germination process. T1 (0.235) and T6 (237) presented the lowest IVE values.

P046

Germination of citrus seeds in vitro

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Citrus are an important fruits in Brazil. *Trifoliata* orange (*Poncirus trifoliata* L. Raf) and Limão cravo (*Citrus limonia* L. Osbeck) are most important rootstocks for citrus. Breeding program and rapid multiplication of new hybrids need studies on germination of seeds in vitro. Fruits were kept under refrigeration for a month. Seeds were extracted from fruits and were washed with alcohol (96%) during 1-[illegible]min were sterilized by diacid (0.1%) during 5-20 min, hypochlorite Na during 5-20 min or $KMoO_4$ (0.1%) during 1-10 min and were placed on mediums WPM, B-5, RS-1, MS (25%, 50%, 75%, 100 %, 125% of macroelements) with GA_3 0,1-10 mg/l or BAP 1-5 mg/l. The tubes with seeds were kept in a growth room at temperatures of 19-34 °C and 16 h of light per day, for 1 month. With alcohol and $KMoO_4$ occurred 100% of sterilization. Higher temperatures were more effective for the first 2 weeks, but at the end of the month more seeds germinated at 31 °C. Low concentration of GA_3 stimulated germination at first 3 weeks, higher levels of GA_3 (10m g/l) stimulated germination more frequently and was more effective. BAP on concentration 1 mg/l stimulated 100% germination of seeds on mediums W[illegible]I and MS (75%, 100% of macroelements).