

SUMMARY

Strategies to improve the percentage of germination in bismarckia palm (*Bismarckia nobilis* Hildebr. & H.Wendl.) in Fortín, Veracruz

The bismarckia palm (*Bismarckia nobilis*) is very striking, it grows in open habitats and is prized for its big crown of greenish-blue fan-shaped leaves, which are purple in their youth and bluish-gray in their adult stage. For seeds it take from 3 to 6 months to germinate; in addition, the percentage is low under uncontrolled conditions, especially when the temperature and humidity conditions are not optimal. On the other hand, it presents a problem when transplanting because its roots are very sensitive, this being the main reason why only a small number of producers are dedicated to the production of seedlings of this species in nursery; because the percentage of survival is very low. Therefore, the objective of this work was to determine the necessary conditions to promote the successful germination of the bismarckia palm seed. For this, seeds were collected in Davie County, Florida, USA; later, seeds were soaked continuously for six days, changing the water every 24 hours; mechanical scarification was performed with electric drill with wire brush. The seeds were planted in trays and placed in greenhouse conditions, with humidity of 95-99% and temperature of 38-40 °C. Three substrates and three bag sizes (20 x 25, 20 x 40, 20 x 45 cm) were evaluated for the development of seedlings. The variables studied were length and root thickness, as well as number of leaves. The experimental design was factorial. Humidity and temperature conditions were adequate to obtain a homogeneous germination and a high percentage. Although the interaction size of the bag did not presented statistical differences, the substrate that included biomass, tepecil and black earth allowed the best root development. The large bag allowed the best development of the root in length and thickness and avoided the "pig tail", as well as the highest percentage of seedlings established after transplantation.

Key words: *Bismarckia nobilis*, substrates, trasplantation, roots "pig tail".