

“ INFORMATIVO ABRATES ”
BRAZILIAN ASSOCIATION OF SEEDS TECHNOLOGY

Special Issue

**10th CONFERENCE OF THE INTERNATIONAL
SOCIETY FOR SEED SCIENCE**

April 10th to 15th, 2011 - Costa do Sauípe - BA

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“ Informativo da ABRATES ”

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182. SCARIFICATION WITH SULPHURIC ACID OF *Parkia gigantocarpa* Ducke SEEDS (FABACEAE).

¹Cruz, E. D., ²Ferreira, J. E. R., Silva, A. C. da. (¹Embrapa Amazônia Oriental, Belém-PA, Brazil, eniel@cpatu.embrapa.br, ²Cikel Brasil Verde Madeiras Ltda., Belém-PA, Brazil, ³Universidade Federal Rural da Amazônia (UFRA), Belém-PA, Brazil.

Seed coat impermeability to water occurs in Fabaceae seeds, including *Parkia gigantocarpa*, a tropical tree species. To promote germination in seeds with coat impermeability the use of sulphuric acid (H₂SO₄) is recommended. The objective of this study was to identify the ideal period of scarification of *P. gigantocarpa* seeds with sulphuric acid. The tested scarification periods were: 0, 10, 20, 30, 40, 50 and 60 min. The following variables were measured: seedling emergence (E), emergence speed index (ESI) and the dry mass of hypocotyl dry mass (DMH), epicotyl (DME), root (DMR) and leaf (DML). Seedling emergence was measured during 14 days with daily counts of the number of emerged seedlings. A seedling was considered emerged when it showed cotyledons above the soil surface. ESI was obtained by daily counts of the number of emerged seedlings, quantified during emergence test. At the end of the emergence test, seedlings were removed of the substrate to obtain DMH, DME, DML and DMR after drying at 65 °C for 48 hours. Seeds were sown on a mix of sand and sawdust (1:1). The experimental design was completely randomized with four replications of 25 seeds each. Data were submitted to Bartlett homogeneity variance test and arcsin $\sqrt{(x+0.5)}/100$ transformation was performed on IVE. Data were submitted to ANOVA analyses and treatment means were compared by Tukey's test ($P \leq 0.05$). All treatments with sulphuric acid promoted seed germination. However, immersion time of 30 and 40 min, in general, were the treatments with the best performance for most variables.

Keywords: Germination, Hard seed, Dormency

183. PHYSIOLOGICAL QUALITY OF *Araucaria angustifolia* SEEDS DURING CONTROL CONDITIONS OF STORAGE.

¹Garcia, C., ¹Coelho, C. M. M., ¹Maraschin, M., ²Oliveira, L. M. de, ²Pavelski, J. A. ¹Universidade Federal de Santa Catarina (UFSC), Florianópolis – SC, Brazil, cileide@cca.ufsc.br, ²Universidade do Estado de Santa Catarina (UDESC), Lages – SC, Brazil.

The *Araucaria angustifolia* species stands out as the most important of the Subtropical Ombrophilous Forest and had an intensive exploration due to its high economic potential. The recovery actions of species are hampered by recalcitrant characteristic of its seeds. The objective of this study was to evaluate different storage conditions as to efficiency in maintenance of physiological quality of mature seeds from *A. angustifolia* freshly harvested in the city of Pánel, in the hills of Santa Catarina. The storage conditions were: normal laboratory ambient without temperature control, refrigerator (5°C) and freezer (-18 °C), under 120 days. The physiological quality of seeds was evaluated on samples freshly harvested and every 60 days of storage, through germination and vigor (germination speed index and accelerated aging). The experiment was conducted under completely randomized design, with 4 replications of 25 seeds, and with Tukey test for means separation of 5% probability level. The results showed variation between deterioration rate of *A. angustifolia* seeds as to storage condition. The seeds kept in refrigerator preserved their viability by 120 days after harvest, but the germination speed index was reduced from 0.5 of fresh seeds to 0.03 after 120 days, demonstrating vigor reduction. There was total loss of viability seeds stored in freezer during 60 days, and stored in ambient without temperature control under 120 days after harvest, where intense action of microorganisms favored the process. Throughout the storage, there was no significant difference between water content of seeds stored in different conditions. The germination percentage of fresh seeds that were subjected to accelerated aging (65%) did not differ significantly from the not aged seeds stored under 60 days in refrigerator (51%) and in ambient without temperature control (71%), it demonstrated the test efficiency to anticipate the viability results of *A. angustifolia* seeds in 60 days.

Keywords: *Araucaria angustifolia*, conservation, vigor, germination.

Acknowledgements: UFSC, CAPES, UDESC.