

**EFFECT OF PRE-SOWING TREATMENTS ON GERMINATION OF
*Ziziphus mauritiana***

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Ziziphus mauritiana, which is commonly known as 'Ber' (*Masan*), is a potential crop for commercial cultivation due to its high nutritious value. Low success rate and longer germination period in seeds due to its hard seed coat are key issues in the production of planting material. Therefore, this study was carried to evaluate the effects of pre-sowing seed treatments on germination of ber seeds. The experiment was laid out on a Completely Randomized Design with six treatments and three replicates. Soaking in 50% H₂SO₄ for 15 minutes, cracking of seed coat using a hammer, complete removal of the seed coat, soaking in cold water (4 °C) for 24 hours, and soaking in hot water (80 °C) for 5 minutes were used as treatments. Treatment without a pre-sowing method was used as control. Ber seeds from well-matured fruits were extracted immediately after harvesting. Treated seeds were sown in sterilized sand nurseries in a shade house. Percentage of germination was measured at weekly intervals up to 11 weeks. The seedling height, the number of leaves, and canopy diameter were measured in two-months-old seedlings. Seeds with complete seed coat removal promoted germination (63%) significantly ($p < 0.05$) with a mean germination time of 45 days (time to 50% germination, T₅₀ = 45 days). It was shown a 53% higher germination when the seed coat is completely removed than the control. Seedling height, canopy diameter, and the number of leaves were not significant among treatments. In conclusion, the complete removal of the seed coat can effectively be applied for ber seeds to enhance the success of seed germination within a short time.

Keywords: Ber, Seed germination, Seed treatment, Seedling growth