



Seed germination and first growth performance of four *Sclerocarya birrea* (marula) provenances in Burkina Faso

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ABSTRACT

Objective: In Sub-Saharan Africa, high pressure on savanna ecosystems has led to a decline in plant resources. This work aims to assess germination success by simple pretreatment of *Sclerocarya birrea* (marula) seeds from 4 sources in Burkina Faso.

Methodology and Results: Seeds were collected in farmer's fields, and from goat dung. A randomized complete block design with three replicates of 24 seeds was adopted. Variance analysis towards Student Newman and Keuls tests was used to compare growth parameters. There was no difference in germination success among the provenances of Wayen, Tiogo, Boromo, and Bondoukuy ($p > 0.05$). Pretreatment influenced germination with higher values for seed that went through the digestive tract of goats irrespective of provenance. Significant differences among provenance were found for seedling height and collar diameter after four months' growth ($p < 0.000$).

Conclusion and application of results: The study underlines the importance of using pretreatment. The Wayen provenance should preferably be used in a breeding program for reforestation and conservation of *Sclerocarya birrea*.

Keywords: *Sclerocarya birrea*, germination, plantation, pretreatment, restoration, West Africa.