**Tropentag, September 17-19, 2013, Stuttgart-Hohenheim**

"Agricultural development within the rural-urban continuum"

# Effects of Different Treatments on the Germination and Early Seedling Growth of Dawadawa (*Parkia biglobosa* (Jacq.) Benth.) from Northern Ghana

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**Abstract**

Effective domestication and conservation of an important tree like *Parkia biglobosa* can be achieved when alternative ways of breaking the dormancy characteristics posed by the seeds of this plant is established. The experiment conducted at the plant house of the University for Development Studies, Nyankpala Campus investigated the most effective pre-sowing treatment to break seed dormancy and the assessment of early seedling growth of *P. biglobosa* seeds collected from the three northern Regions of Ghana. Matured seeds of *P. biglobosa* were collected from Wa (Upper West Region), Navrongo (Upper East Region), and Cheyohi near Nyankpala (northern Region), dried at room temperature and tested for viability by flotation method. The seeds were subjected to the following pre-treatments; soaking in 100 % sulphuric acid for one minute, soaking in hot water for two minutes, and soaking in cold water for 24 hours. The seeds were sown in polypots and after five (5) weeks, parameters measured included germination performance, number of leaves, seedling height and girth. The results obtained indicated that seeds from the three northern regions, treated with concentrated sulphuric acid had the highest germination percentage (60 %), recorded the highest number of leaves, the greatest height and also stem girths. For all the treatments however, the seedlings germinated does not differ significantly. This study revealed that seeds treated with concentrated sulphuric acid improved seed germination and early seedling growth. Thus we recommend to treat *P. biglobosa* seeds with sulpheric acid for early germination. Also soaking seeds in hot water can be effective where and when concentrated sulphuric acid is unavailable.

**Keywords:** Germination performance, pre-treatment, seedling growth

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