Screening of baobab (*Adansonia digitata* L.) collection for rootstock selection

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The Problem

- Baobab (*Adansonia digitata* L.) is an underutilized multi-purpose resilient tree.
- It has the potential of contributing to food security, climate change mitigation and biodiversity improvement.
- One challenge associated with baobab is the late fruit set of the trees.

Fig. 1: Starting baobab seed germination from the lab.

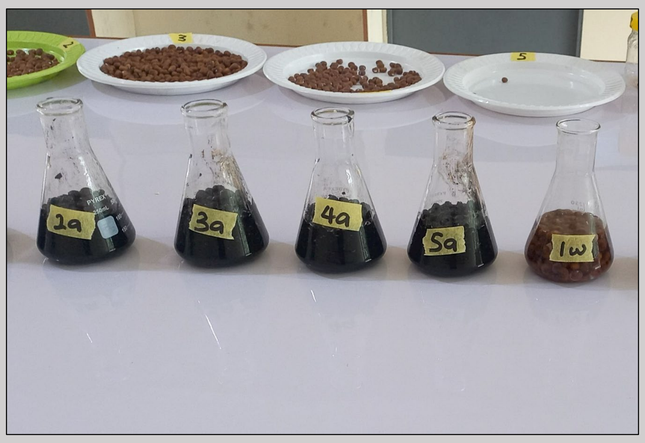

Fig. 2: Baobab seeds in acid

Fig. 3: Pods of five of the accessions used in the experiment

The Way

- Long juvenile period of baobab can be overcome, for example, by grafting the young trees.
- Suitable genotypes of baobab must be found for rootstock.
- Screening can be made from baobab accessions being conserved at the Ho Technical University.

Fig. 4: About two weeks after seed germination at the nursery

Fig. 5: Six weeks after seed germination

Materials and Methods

- Nine (9) accessions of baobab at the genebank of the Ho Technical University (HTU) were used.
- The experiment was conducted in the nursery at HTU.
- The design was Randomized Complete Block with four replications.
- The traits assessed included the number of leaves, plant height and stem girth at soil level and were taken six weeks after germination to 11 weeks.
- Analysis of variance was performed on the data.

Fig. 6: Grafting exercise

Fig. 7: Baobab plant fruiting after two years of planting on the field

Fig. 8 & 9: Boabab business serves as a significant income source for women

Results and Discussion

- Significant differences were observed among accessions in terms of plant height and number of leaves from week six to eleven.
- However, significant differences in terms of stem girth were observed in only weeks six and seven.
- Plants with higher number of leaves and height could be considered as fast growing and suitable as rootstock, however, their stem girths were not superior.
- Screening of more accessions is recommended.
- The results of this work should help to increase the attractiveness of replanting baobab trees in rural areas.