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“Development on the margin”

## The Baobab Tree in Malawi: Abundance or Scarcity?

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### Abstract

Baobab (*Adansonia digitata* L., Malvaceae Family) fruit pulp has recently begun to be commercialised in Europe and the USA, offering a great opportunity for rural farmers in Africa. However, for many plant products, the opening of new market niches increases the demand which in turn often increases the difficulty of managing plant populations sustainably. The baobab tree provides nutritious food, medicine, fibre, fodder and crafts (apart from income) to local people in Africa. Despite the number of recent studies on this species, little is known from Malawi, the main exporter of baobab fruit pulp in Africa.

Information on distribution and density was gathered from field surveys. Maxent was used together with spatial environmental data and geo-referenced records of the baobab tree to analyse its ecological preferences and potential cultivation sites. Fruit and leaf morphological diversity was assessed in eight study sites selected following a latitudinal gradient.

The baobab tree was found to be widely distributed in southern Malawi, with variable densities. Modelling results show that this species could be cultivated in most of the southern region. A large morphological diversity in both fruit and leaf characteristics was observed, which gives the opportunity to select more desirable characters. While some high density areas could be further exploited (‘local abundance’), as there is little natural regeneration (‘future scarcity’), cultivation is recommended, especially in areas having low baobab density in southern Malawi. Although further studies considering genetic variation are necessary, it seems that there is room for selecting superior baobab tree planting material.

**Keywords:** *Adansonia digitata*, cultivation, density, distribution, morphology