

## ECOLOGICAL DIVERSITY AND PULP, SEED AND KERNEL PRODUCTION OF THE BAOBAB (*ADANSONIA DIGITATA*) IN BENIN

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ABSTRACT. — This study was carried out in the Sudanian (9°45'–12° N), Sudano-Guinean (7°30'–9°45' N) and Guinean (6°25'–7°30' N) zones of Benin. The distribution and relative abundance of the baobab was studied by means of megatransects and by surveying a number of selected sites. In each zone, an estimate was made of pulp, seed and kernel production from 1200 fruits harvested from 30 individuals. In the Sudanian zone and in some regions of the Dahomey-Gap in the Guinean zone, a population density of 5 baobabs per km<sup>2</sup> was recorded. In the Guinean zone, a density of only 1 baobab per km<sup>2</sup> was recorded. The baobab population's occurred on sandy soils in the Sudanian and Guinean zones and on sandy-clayey soils in the Sudano-Guinean zone. Flowering and fruiting of the baobab is seasonal. The morphology and productivity of individual baobabs varied significantly from one zone to another. The zones with high values of potential evaporation, rainfall, relative humidity, temperature, pH<sub>water</sub> and percentage of fine silt are associated with a low seed and fruit pulp production. The higher the pH<sub>KCl</sub>, the percentage of total nitrogen, organic carbon and organic matter, the higher the number of seeds produced by an individual baobab. The higher the clay and crude silt content of the soil, the better the productivity.

KEY WORDS. — Baobab, Benin, climatic zones, ecological diversity, organ production assessment.

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### INTRODUCTION

Until fairly recently much of the work on forest resources was concerned with ecology, forest management, productivity and the improvement of harvesting techniques for timber production and has neglected the importance of non-wood forest products. Information available on non-timber forest resources is generally qualitative and lacks the quantitative analysis required for the development of economic opportunities,

such as local alternatives to imported products, social development and environment management. However, the importance of these resources for conservationists, decision makers and the rural people has led to many attempts of promoting their use and their value as a means of ensuring the well being of the poor. In the case of the baobab (*Adansonia digitata*) for example, several international development agencies have financed research on the baobab in the developing countries (e.g., NORAD in Kenya and SIDA in Tan-