


2.2.2  Nkumba Elias N. (1998). Genetic attributes of bambarra groundnuts (*Vigna subterranea* (L.) Verdc.). (Supervisor: Dr. M. S. Mwala).

Bambarra groundnut (*Vigna subterranea* (L.) Verdc.) is a grain legume crop grown by peasant farmers in Zambia. The crop has been found to be useful in many farming systems as it contributes to human nutrition and soil amendments. Unfortunately, its full potential has not been fully exploited in Zambia. In order to develop cultivars that would be acceptable and suitable for cultivation, a genetic basis has to be established. The objectives of this study were to evaluate the grain yield of bambara groundnut, identify important characters for grain yield and estimate their heritability. Twelve accessions were evaluated over eight environments (4 locations x 2 spacings) in a Randomised Complete Block Design. Differences in yield were observed among the accessions which gave the average yield of 407 kg/ha while differences were noted within environments. Accession 3 and 4 were the highest yielders while accession 6 was the lowest. Phenotypic correlations between the yield and the yield components of the accessions were positive and significant for 100 seed weight, number of pods per plant, number of branches per plant, and plant height. This indicated that these characters could be used as selection criteria for grain yield. Heritability estimates for 100 seed weight was the best among the others. Generally bambara groundnut was found to be a stable crop.