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Preliminary Selection of Early Bambara Groundnut for Urban Markets in Limpopo Province (South Africa)

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Abstract

Bambara groundnut (*Vigna subterranea*) is an important food legume in many parts of Africa. In urban areas, it is consumed predominantly as fresh boiled nuts (snack) or processed dry grain. In the urban markets, early maturing cultivars are preferred since their availability coincides with the time of high demand but low supply, thus attracting good profit margins. Therefore, the objectives of this study were to identify and select for earliness in local landraces of bambara groundnut. Ninety-four accessions of the crop were evaluated under rain-fed conditions in Limpopo Province (South Africa) using an ecologically representative testing location at the University of Venda Experimental Station. The seed of each accession was planted in observation field plots during December at the beginning of the 2011/2012 cropping season and evaluated under rain-fed conditions for various agronomic traits including earliness, pod yield per plant and pod size. The study was repeated using thirty-five accessions that were selected from the first experiment as well as a local check variety during the 2012/2013 cropping season. Eighteen accessions that matured within 91 – 114 d were identified. The average grain yield among six of these early types was 1.11 t ha⁻¹. There were highly significant ($p < 0.01$) differences among the genotypes in terms of pod width, seed size and yield. Further selection of elite early types that possess large grains will be beneficial to both the growers and end-users in the region. There is merit for increasing the number of testing locations across the Limpopo basin in order to determine the stability of these varieties.

Keywords: Bambara groundnut, landrace, markets, maturity