

Evaluation of Different Cowpea Genotypes Using Grain Yield and Canning Quality Traits

Authors : Magdeline Pakeng Mohlala, R. L. Molatudi, M. A. Mofokeng

Abstract : Cowpea (*Vigna unguiculata* (L.) Walp) is an important annual leguminous crop in semi-arid and tropics. Most of cowpea grain production in South Africa is mainly used for domestic consumption, as seed planting and little or none gets to be used in industrial processing; thus, there is a need to expand the utilization of cowpea through industrial processing. Agronomic traits contribute to the understanding of the association between yield and its component traits to facilitate effective selection for yield improvement. The aim of this study was to evaluate cowpea genotypes using grain yield and canning quality traits. The field experiment was conducted in two locations in Limpopo Province, namely Syferkuil Agricultural Experimental farm and Ga-Molepo village during 2017/2018 growing season and canning took place at ARC-Grain Crops Potchefstroom. The experiment comprised of 100 cowpea genotypes laid out in a Randomized Complete Block Designs (RCBD). The grain yield, yield components, and canning quality traits were analysed using Genstat software. About 62 genotypes were suitable for canning, 38 were not due to their seed coat texture, and water uptake was less than 80% resulting in too soft (mushy) seeds. Grain yield for RV115, 99k-494-6, ITOOK1263, RV111, RV353 and 53 other genotypes recorded high positive association with number of branches, pods per plant, and number of seeds per pod, unshelled weight and shelled weight for Syferkuil than at Ga-Molepo are therefore recommended for canning quality.

Keywords : agronomic traits, canning quality, genotypes, yield

Conference Title : ICABBBE 2019 : International Conference on Agricultural, Biotechnology, Biological and Biosystems Engineering

Conference Location : Cape Town, South Africa

Conference Dates : November 04-05, 2019