

Proximate analyses and anti-nutritional factors in local and improved cowpea varieties

ABSTRACT

Cowpea (*Vigna unguiculata*) seeds from local and improved varieties obtained from Abuja market, International Institute of Tropical Agriculture (IITA), and National Centre for Genetic Resources and Biotechnology (NACGRAB) were analyzed for the proximate determination (protein, moisture and ash) and anti-nutritional composition (Phytate, Alkaloid and Tannin). The seed protein content in the local and improved cowpea varieties ranged from 22.61% to 27.92%. The highest crude protein was found in NG/SA/066-1 (27.92%) and lowest was in Sampea 10 (23.76%). There was no significant difference in the moisture and ash content among the local and improved cowpea varieties. The result of the anti-nutritional composition showed that the highest phytate content (1.94 mg/g) was found in Big white variety while the lowest phytate content was found in Butter beans (0.84 mg/g). White cowpea variety recorded the highest alkaloid content at (2.54 mg/g) while Butter beans recorded the lowest alkaloid content at (0.24 mg/g). The highest tannin content was found in Big white at (5.72±0.15 mg/g) while the lowest was found in NG/AO/035 at (1.92±0.03 mg/g). The results herein can aid in cowpea breeding and conservation.