

Analysis of Nutritional Value for Soybean Genotypes Grown in Lesotho

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Abstract : Soybean was introduced in Lesotho to increase the spectrum of nutritious foods, especially protein, oil and carbohydrates. However, since then, determination of nutritional value has not been performed, hence this study. The objective of the study was to distinguish soybean genotypes on the basis of nutritive value. The experiment was laid out using a Randomized Complete Block Design with 27 treatments (genotypes) and three replications. Compound fertilizer 2:3:2 (22) was broadcasted over the experimental plot at the rate of 250kg ha⁻¹. Dimensions of the main experimental plot were 135m long and 10m wide, with each sub-plot being 4m and 3.6m. Inter-row and intra-row spacing were 0.9m and 0.20m, respectively. Samples of seeds from each plot were taken to the laboratory to analyze protein content, ash, ca, mg, fiber, starch and ether extract. There were significant differences ($P>0.05$) among 28 soybean genotypes for protein content, acid detergent fiber, calcium, magnesium and ash. The soybean cultivars with the highest amount of protein were P48T48R, PAN 1663 and PAN 155R. High ADF content was expressed by PAN 1521R. LS 6868 exhibited the highest value of 0.788mg calcium, and the cultivars with the highest magnesium were NA 5509 with 1.306mg. PAN 1663, LCD 5.9, DM5302 RS and NS 6448R revealed higher nutritional values than other genotypes.

Keywords : genotypes, Lesotho, nutritive value, proximate analysis, soya-bean

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