E 21

PROXIMATE COMPOSITION MINERAL CONTENT AND FATTY ACID COMPOSITION OF SOME LEGUMES GROWN IN SRI LANKA

Jaanaki Gooneratne, E R Jansz
Ceylon Institute of Scientific and Industrial Research
Siromi Samarasinghe and K T D de Silva
University of Sri Jayewardenepura, Nugegoda

The proximate composition of mature, dry, dehulled seeds of twelve varieties of legumes : Vigna spp. (radiata, unguiculata and mungo) and Glycine max was found to be: Protein (dry basis) for Vigna spp. 20.8 to 26.6% and G.max 19.7 to 23.6%, Ash for G. max was highest (5.5%)

The mineral composition (sodium, potassium - Flame Photometry; calcium, magnesium- Chemical methods; Phosphorous, iron-UV/Vis Spectrophotometry; zinc, manganese, copper and chromium - Atomic absorption Spectrophotometry) of legumes were estimaed. V. unguiculata had a high sodium content and copper content of 25.7 to 30.7 and 0.62 to 0.65 (mg/100g) respectively. G. max had a high calcium, magnesium, iron, zinc and manganese content of 554.3, 226.9, 5.4, 5.0, 2.6 (mg/100g) respectively, compared to other varieties.

Fatty acid composition was determined by GLC techniques after derivatization to methyl esters. V. radiata and V. unguiculata had high amounts of palmitic, (18.7 to 27.2%), linoleic (20.3 to 32.8%) and linoleic acids (20.0 to 32.8%). V. mungo had the highest percentage of linoleic acid (45.7). G.max had a high percentage of linolenic acid compared to other legumes.