

Macronutrient Composition of Selected Traditional Yams Grown in Sri Lanka

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A study was carried out to determine the moisture content, crude fat, crude protein, ash content, total carbohydrate content, and some mineral elements namely, Mg, K, Ca, Al, Cr, Mn, Fe, Co, Ni, Cu, Zn, As, Se, Sn, Pb, Li, Be, V, Ga, Rb, Sr, Mo, Cd and Ba of yams grown in Sri Lanka. Oven dried powders of *Dioscorea pentaphylla* (Katuala), *D. alata* (Rajala and Angiliala) and *D. esculenta* (Kukulala) were subjected to analysis. Samples were collected representing all the agro-climatic zones in Sri Lanka according to the availability. Moisture and total carbohydrate contents of selected yams ranged from 62.61 to 73.15 % and 18.30 to 26.84 %, respectively, with no significant variations among species ($p > 0.05$). The crude fat content of yams ranged from 0.18 to 0.06 % in the tested yams while Kukulala contained the highest crude fat content. Crude protein levels ranged from 1.30 to 1.91 % where Rajala showed the highest level. The ash content varied between 0.64 and 0.84 % with the highest quantity in Angiliala. K, Mg, Na, Zn and Fe were the most abundant mineral elements in tested yams where potassium showed the highest availability (4.61 to 5.12 mg/g). Significant differences of crude fat, crude protein, ash and most of the mineral contents were observed among different accessions of the same species.

Keywords: Agro-climatic zones, mineral composition, nutritional composition, underutilized yams

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