NUTRITIONAL EVALUATION OF SOME GRAIN LEGUMES AS A COMPONENT ON THE FORMULATION OF HUMAN FOOD

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An assay was carried out in order to determine protein and mineral contents and the aminoacid profile in flour of raw seeds of Cajanus cajan (L.) Millsp., Vigna radiata (L.) Wilczek, and two varieties of Vigna unguiculata (L.) Walp. (Black eye and White seed), obtained from an arid zone of Maracaibo Plain (10° 34’ LN; 71° 44’ LO), with a Typic Haplorgid soil. High values of crude protein were obtained (17.52; 21.22; 50.21 and 24.25% in flour of pigeon pea; black eye cowpea, white cowpea and mung bean, respectively). Potassium values were high in pigeon pea (1704 mg/100 g of flour), compared to those found in black eye cowpea, white cowpea and mung bean (1364, 1399 and 1356 mg/100 g of flour, respectively). Calcium contents on all tested legumes were lower than those reported by others researches. Total essential aminoacids (Hist, Arg, Thr, Phe, Val, Met, Ile, Leu and Lys) on pigeon pea, white cowpea, black eye cowpea and mung bean were 41.02, 46.92, 46.90 and 44.24 g/100 g of protein, respectively, values that were similar to those reported on soybean by Hadjipanayiotou and Economides (2001). Results showed that tropical legumes tested could be included as an industrial food ingredient for human consumption.

Key words: Cajanus cajan, Vigna radiata, Vigna unguiculata, flour, protein, minerals, aminoacids