

## BIBLIOGRAFIA LATINOAMERICANA

### BRASIL

**Imbalanced protein and appetite.** — R. C. De Angelis, N. Takahashi, L. A. Amaral and I. C. Terra (Instituto de Ciencias Biomédicas, Universidade de São Paulo, São Paulo, Brasil). *Arq. Gastroenterol. São Paulo*, 15: 194-198, 1978.

Free amino acid concentrations in the plasma of rats fed on different diets were compared. The diets contained 7 g protein/100 g furnished by: casein or common corn, or opaque-2 corn, or egg albumin or gelatin. A protein-free diet was also included. The results showed that imbalance of the protein diet influenced the appetite; whenever the NE/E amino acid ratio increased, body development, appetite and plasma albumin decreased. An inverse correlation between the NE/E of free amino acids of the plasma and voluntary intake was observed. The results also show that the plasma aminogram did not reflect the composition of the protein in the diet.

The results obtained are discussed.

UNITERMS: Appetite, proteins, metabolism, undernutrition. 18 Ref.

### GUATEMALA

**Possible effects of seed coat polyphenolics on the nutritional quality of bean protein.**— L. G. Elías, D. G. de Fernández and R. Bressani (Institute of Nutrition of Central America and Panama, Guatemala City, Guatemala, C. A.). *J. Food Sci.*, 44: 524-527, 1979.

Studies were carried out to determine the possible relationship between the color of the seed coat of beans and the nutritive value of its protein. Beans with white, red and black seed coats and a black coated bean and its white mutant were chosen for the study. Hemagglutinin activity was located in the cotyledons of all samples with low activity in the seed coat. No activi-

ty was found in the cooked beans or in the cooking broth. Trypsin activity was influenced by a heat labile factor (true trypsin inhibitor) and by a heat resistant factor (tannins). The heat labile factor or true trypsin inhibitor was higher in the cotyledons (16-18 TUI/mg sample) than in the seed coat, while the heat resistant factor was found in highest concentration in the seed coat. Red and black seed coats had a higher concentration (23-31 TUI/mg sample) of the heat resistant factor than the white seed coat of the normal white bean and of the mutant (7-9 TUI/mg sample). Cooked beans and their broth showed trypsin inhibitor activity of the heat resistant type. Cooked cotyledons had 5-9 TUI/mg sample. Tannin concentration was high in colored seed coats (38-43 mg/g) and low in white coated beans (1.3

mg/g) while values ranged from 3.8-5.9 mg/g in the cotyledons. A highly significant correlation ( $r = 0.88$ ) was found between tannin concentration in the seed coat and trypsin inhibitor activity. No correlation between these two components was found in the cotyledons. Samples of cooked beans supplemented with methionine without the cooking broth had higher protein quality values (2.9-3.3) than samples fed with the broth (1.7-2.1). Protein digestibility was lower for red (70.4%) and black beans (75.0%) fed with the broth than beans fed without the broth (78.7% and 77.9%, respectively), but the broth had no effect on the protein digestibility of white coated beans (81.3 and 81.4%). The data suggest that color of the seed coat is related to the protein quality of beans. 29 Ref.