

Casein and gluten diets of the same protein value: Long-term ad libitum feeding tests with young rats

Tagle, Maria Angélica

Colombara, Eugenia

Pak, Nelly

Araya, Julia

Donoso, G.

The performances of young rats fed ad libitum during 55 days on casein and gluten diets with 4 and 8 NDpCal% were studied. The gluten diets contained about 1.7 and 3.6 times more protein (g/100 g diet) than the casein diets. At the low level of utilizable protein the rats on both diets showed a malnutrition syndrome in many ways similar to the protein-calorie malnutrition described in children. At this inadequate protein level gluten was more effective than casein to depress food intake. The rats on gluten showed: poorer growth performance, higher relative weight of kidney and lower relative weight of testes, higher body water and protein contents, higher protein concentration in the liver. lower hepatic glycogen, lower hemoglobin and higher hepatic activity (U/100 g rat) of aspartate aminotransferase than the rats on casein. At the 8 NDpCal% level the rats on gluten showed: higher dietary intake, better growth performance, higher relative weights of kidneys and liver, lower body water