

EFFECT OF FABA BEAN SEEDS AND THEIR FRACTIONS ON RAT CAECUM PHYSIOLOGY

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Summary. The influence of dietary supplementation (5%) of a casein diet with faba bean seeds, faba bean hulls and faba bean oligosaccharides extracted from cotyledons on the metabolism of the caecum was investigated in an experiment on Wistar rats. In rats receiving the diet with seeds and their fractions (hulls and oligosaccharides), a greater weight of caecal tissue (especially in oligosaccharide treatment) was recorded, compared with the control group. The significantly greater accumulation of digesta was observed only in the case of the oligosaccharide group. The highest hydration of digesta as well as activity of bacterial β -glucuronidase activity was in the control group. The highest activity of β -glucosidase was in group fed diet containing whole faba bean seeds. The oligosaccharide addition to a diet was associated with the highest activities of α -glucosidase and α -galactosidase, the highest production of short-chain fatty acids in the caecum as well as the most beneficial composition of particular acids.

Keywords: Bean, rats, caecal digesta, digestible.