EFFECT OF LOW-DIGESTIBLE CARBOHYDRATES ON CAECAL AMMONIA CONCENTRATION IN RATS AND TURKEYS

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Summary. The work comments on the results of a series of experiments on caecal ammonia concentration in rats and turkeys fed diets containing different types and doses of low-digestible carbohydrates (LDC). Dietary lactulose and inulin (4-8%) added to a diet for rats effectively reduced the caecal ammonia concentration compared to the cellulose or sucrose control group. A strong adverse effect was observed in the case of 4-5% oligosaccharides from lupin and pea seeds. Dietary 5% xylitol and β-galactosyl-derivatives of sugar alcohols slightly enhanced or had no effect on caecal ammonia concentration in rats. In young turkeys, small doses (0.1-0.4%) of low-digestible carbohydrates were sufficient to decrease ammonia concentration in the caeca, while in older birds that effect was not observed.

Keywords: low-digestible carbohydrates, ammonia, caecal digesta, rat, turkey.