

Effects on growth performance, faecal microflora and plasma cholesterol after feeding with spraydried metabolite in postweaning rats.

ABSTRACT

A study was conducted to study the effects of feeding a spray-dried metabolite (SDM) produced by *Lb. plantarum* I-UL4 in the diets of postweaning rats on growth performance, faecal pH, Enterobacteriaceae bacterial and lactic acid bacteria (LAB) counts in the faeces and on plasma cholesterol concentrations. A total of 15 female 4-weeks-old Sprague dawley rats were randomly assigned to 3 groups of diets: basal diet (control), 0.25% SDM and 0.5% SDM diets. Daily feed intake, daily growth rate, blood plasma for total cholesterol concentration and faecal Enterobacteriaceae and LAB were measured. The growth rate, total feed intake, feed conversion ratio, and pH were not significantly different ($P > 0.05$) among all the treatment groups. The faecal Enterobacteriaceae counts in the 0.25% and 0.5% groups were significantly ($P < 0.05$) lower than in the control group. However, there was no significant difference ($P > 0.05$) in the LAB counts among all the treatment groups. The plasma cholesterol concentration was significantly reduced ($P < 0.05$) following the feeding of the metabolite. The control had the highest concentration of cholesterol. However, the 0.5% SDM group had the lowest plasma cholesterol concentration, followed by the 0.25% SDM group.

Keyword: Metabolite; Lactic acid bacteria (LAB); Enterobacteriaceae; Plasma cholesterol; Rats.