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"Effect of carvacrol and cinnamaldehyde on performance of growing lambs"

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Abstract

Effects of plant extracts on lamb performance and carcass characteristics were determined using 60 lambs (24.6 ± 0.77 kg initial live weight, LW) receiving 0 (control) or 260 mg/d of plant extracts (carvacrol or cinnemaldehyde) in iso-nitrogenous and iso-energetic barley- or corn-based diets. Diets were fed *ad libitum* in a 2 × 3 random block design over 11-week period. Saleable meat yield (as proximal cuts) from the carcasses were assessed. Feeding plant extracts did not affect dry matter intake (DMI), but they increased the average daily gain (ADG) of ewe lambs fed barley, as compared to the control diet (278.2 vs. 214.8 g/d; $P < 0.05$). Male lambs exhibited greater ($P < 0.01$) DMI and ADG (1402.5 g/d and 346.1 g, respectively) than did the female lambs (1222.3 g/d and 257.8 g). The males had heavier final liveweights, but saleable meat yield was similar ($P > 0.05$) between sexes (22.3 ± 0.40 kg in males vs. 21.9 ± 0.55 kg in females). No effects of plant extracts on ruminal pH or concentrations of ammonia, total VFA or individual VFA were observed, but acetate:propionate ratio was reduced by plant extracts when barley was fed (average 1.16 compared with 1.34 without supplements).

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