

Effect of daily supplement of coriander seeds powder on weight gain, rumen fermentation, digestion and some blood characteristics of Awassi ewes

Authors:

Mohammed SF¹,
Saeed AA² and
Al-Jubori OS¹

Institution:

1. Department of Animal Production, College of Agriculture, University of Baghdad, Iraq.

2. Department of Animal Production, College of Agriculture, University of Al Qasim Green, Iraq.

Corresponding author:

Saeed AA

ABSTRACT:

This experiment was carried out at the College of Agriculture, University of Baghdad to investigate the effect of *Coriandrum sativum* seeds powder on Awassi sheep diet. Body weight gain, inviter digestible co-efficient rumen fermentation and blood lipids were found out and analyzed. Sixteen Awassi ewes aged 3-4 months and weighed 17-20kg were used in the experiment. The experiment was carried out from 1.4.2017 to 4.6.2017. Ewes were randomly segregated into four groups where each group consisted of four ewes fed in the group feeding system. Two ration of concentration from 30% to roughage 70% and 70% concentration to 30% roughage with or without supplemented coriander 6 g/head/day were used for the analysis. Results revealed non-significant differences in total and daily ewes weight increase when fed with 70-30 or 30-70 with or without coriander supplementation (3.95 and 3.38kg, and 0.088 and 0.061 g/day respectively). However, significant interaction ($p<0.05$) of ration ratio with coriander supplementation in daily weight increase was seen. No significant differences were noticed in *in vitro* digestion coefficient of dry and organic matter, stomach rumen fermentation, $\text{NH}_3\text{-N}$ and TVFA, while significant reduction ($p<0.05$) in pH when feeding with high level of roughage (30-70) with or without coriander addition, compared to 70-30 ration (pH=6.71 and 7.35 respectively). Non-significant differences were noticed in cholesterol, HDL, VLDL due to the ration ratio (30:70 and 70:30). Significant increases ($P<0.01$) in triglyceride lipids LDL (49.32, 57.17, 40.27 and 46.29 respectively) when low level of concentration was used coriander supplementation also resulted in significant decrease ($P>0.01$) in triglyceride lipid and LDL (49.88 and 40.40 respectively). Interaction of ration ratio and coriander supplementation was significant ($P>0.05$) in triglycerides and LDL (30) rations (PH=6.71 and 7.35 respectively). Non-significant differences were noticed in cholesterol, HDL, VLDL due to the ration ratio (30:70 and 70:30). Significant increase ($P<0.01$) in triglyceride lipids LDL was seen (49.32, 57.17, 40.27 and 46.29 respectively) when low level of concentration was used coriander supplementation also resulted in the significant decrease ($P>0.01$) in triglyceride lipid and LDL (49.88 and 40.40 respectively). Interaction of ration ratio and coriander supplementation was significant ($P>0.05$) in triglycerides and LDL.

Keywords:

Coriander seed, *Coriandrum sativum*, Weight gain, Blood lipid, Rumen fermentation, Awassi lambs.