USES OF PREPARED PROBIOTICS INSTEAD OF HARMFUL GROWTH PROMOTERS IN SHEEP PRODUCTION TO AVOID ADVERSE EFFECT ON HEALTH

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Executive Summary

Probiotics are individual microorganisms or groups of microorganisms, which have favourable effect on host by improving the characteristics of intestinal microflora. The present research was taken to investigate that probiotic could be successfully used as nutritional tools in animal feeds for promotion of growth, modulation of intestinal microflora and promoting meat quality of sheep as well as immense potential to become an alternative to antibiotics and other growth promoters. The study was conducted at Environmental Biotechnology Laboratory and Animal Farm under the Department of Animal Production & Management, Sher-e-Bangla Agricultural University. The research was for one year, but the sheep rearing period was for three months and it was the month of March-May, 2018. Eight- to nine-month-old sheep were collected from BLRI, Savar, Dhaka. The sheep were group penned for each of the replication. The control group- T_1 was fed basal diet (control). Antibiotic group- T_2 containing 14 mg/L of Renamycin and probiotic group- T_3 (probiotics prepared by bacteria) provide 10 ml/kg of feed and probiotic group- T_4 (probiotics prepared by bacteria and yeast) provide 10 ml/ kg of feed. Same amount of feed supplied to all group but probiotics group produced highest live weight which had significant ($P<0.05$) difference with sheep of control and antibiotics group. Dressing percentage was not affected by probiotics. The significantly ($P<0.05$) lowest glucose level was found in probiotics group. That indicates better fibre digestion and better weight gain. But other haematological parameters like PCV, RBC, WBC, Platelets, cholesterol and ESR did not affected ($P>0.05$) by probiotics. The number of harmful bacteria reduced in probiotics group which had significant ($P<0.05$) difference with sheep of control group. Testicular weight and G.I.T weight affected by probiotics. No significant ($P>0.05$) difference was found in weight of liver, spleen, lungs and heart. Again, fresh meat quality and chemical composition did not affect ($P>0.05$) by probiotics supplement. It is concluded that probiotics feeding as a feed additive causing better live weight gain by competitive exclusion of pathogenic microorganism and improved fibre digestion.

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