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# Effect of Fossil Shell Flour Supplementation on Hematobiochemical Profiles and Parasitic Loads in Dohne Merino Wethers

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## ABSTRACT

In recent livestock production, Fossil Shell Flour (FSF), a naturally fossilized sediment, has garnered attention as a feed additive. This study investigated the impact of varying FSF levels on hematobiochemical profiles and gastrointestinal parasite loads in Dohne Merino wethers. Twenty-four wethers were randomly assigned to different treatments: a basal diet (0% FSF) and diets supplemented with 2%, 4%, or 6% FSF. Blood and fecal samples were collected at intervals during the feeding trial. Results revealed that wethers fed FSF-supplemented diets exhibited significant increases in red and white blood cell counts from day 25 to 100 compared to the control group ($P < 0.05$). Additionally, wethers on a 4% FSF diet had significantly lower blood urea and serum creatinine levels ($P < 0.05$). Overall, FSF supplementation improved hematobiochemical parameters and notably reduced gastrointestinal parasite burdens, particularly at the 4% inclusion level.

**Keywords:** fossil shell flour, blood haematology, serum biochemistry, faecal egg count, Dohne-Merino sheep

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