

Haematological and serum biochemical parameters of West African Dwarf goats fed dried cassava leaves-based concentrate diets.

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Abstract

The study was conducted to investigate the effects of feeding different levels of dried cassava leaves at 0%, 20%, 40% and 60%, respectively, using guinea grass as basal feed, on the haematological and serum biochemical parameters of West African Dwarf (WAD) goats. The study lasted for 116 days during which haematological and serum biochemical parameters were monitored in 40 male goats before and after, using a completely randomized design. At the start of the experiment, packed cell volume (PCV) ranged from 21.5% to 25.5% while haemoglobin concentration (Hb) and RBC significantly ($P < 0.01$) ranged from 7.3 to 8.6 g/dl and 10.4 to $13.2 \times 10^{12}/l$, respectively. White blood cells reduced significantly ($P < 0.05$) from 16.4 to $11.7 \times 10^9/l$ as dried cassava leaves increased in the diets. At the end of the trial, there was a slight increase in the values of PCV and Hb in the diets ($P > 0.05$). Lymphocyte reduced significantly ($P < 0.05$) from 50.0% to 63.5% in the diets. Neutrophils, however, increased ($P > 0.05$) at the 0% to 40% levels and reduced at the 60% level of dried cassava leaves inclusion. At the start of the experiment, values for glucose significantly ($P < 0.05$) ranged from 40.1 to 56.0 mg/dl. Total protein and albumin values ranged significantly ($P < 0.05$) from 56.0 to 68.5 g/dl and 30.6 to 38.4 g/dl, respectively. At the end of the experiment, serum creatinine increased significantly ($P < 0.05$) as the level of dried cassava leaves increased from 0% to 60% in the diets. The study revealed that inclusion of dried cassava leaves in the diets of West African Dwarf goats had no deleterious effects on the haematological and serum biochemical parameters of WAD goats and could therefore be included in ruminant diets up to 60%.