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Effect of different levels of supplemental groundnuts shells on hematological parameters of cattle during the dry season in communal grazing areas of North West Province, South Africa

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An eight-week feeding trial was conducted to determine the effect of supplementing the diet of communal cattle with different levels of groundnut shells (GNS) on hematological parameters. Thirty-five cattle were randomly allocated to five treatment groups (A, B, C, D and E) with seven animals in each group. The basal diet consisted of blue buffalo grass and water *ad libitum*. Treatment group A received the basal diet and water only. Treatment group B was supplemented with 700g/kg of GNS, C with 1050 g/kg of GNS, D with 1400g/kg of GNS and E with 1750g/kg of GNS. Blood was collected once a week for eight weeks. An analysis was done through the IDEXX Catalyst machine. In each of the parameters measured, the animals receiving 1050g/kg of GNS had higher values compared to the control group and all other treatment groups even those supplemented at higher levels of GNS. The parameters in which the values were significantly ($P < 0.05$) higher in the group offered the 1050g/kg GNS compared to the controls were red blood cells (RBCs), lymphocytes (LYM), monocytes (MONO), eosinophils (EOS) and platelets (PLT). These results would indicate that supplementing the diet with GNS with a crude protein of 11.67% or higher would improve the animal's ability to produce more RBCs, LYM, MONO, EOS and PLT and thereby improve the health and productivity of the cattle.

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