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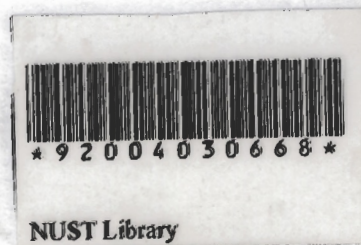
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The effect of paramphistomes on the level of bovine serum proteins

A dissertation submitted in partial fulfillment of the Bachelor of Science (Honours)
Degree in Applied Biology and Biochemistry

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Blood and faecal samples were collected from cattle from various localities in Bulawayo province. After slaughter, their rumens and reticulum were cut open and examined for paramphistomes. Using physical examination of livers and conventional methods of parasitological examinations of the direct smear and salt floatation on faecal samples, cattle infected with paramphistomes only were identified. Cattle without parasites were used as controls. Albumin and globulin serum proteins were fractionated and their concentrations assayed using the Folin-Lowry method. Results showed that on average, 44.3% of the 115 cattle examined in Bulawayo provinces were infected with paramphistomes. Of the 115 faecal samples examined, 44.5% had nematode eggs as shown by the salt floatation method and 40.9% gave positive results with the direct smear method.

The average total serum protein, globulin and albumin concentrations of infected cattle was lower by 5.21%, 4.25% and 4.61% respectively compared with non-infected cattle. The results showed that parasite loads of less than 500 do not significantly affect the levels of bovine serum proteins. The two-way analysis of variance (ANOVA) further confirmed at the 95% confidence level that paramphistome loads of less than 500 do not affect the level of bovine serum proteins.