

The influence of feeding low and high level of *Brachiaria decumbens* diets on the hematology, serum biochemistry, and acute phase proteins of sheep

ABSTRACT

The present study aims to determine the hematology, serum biochemistry, and acute phase proteins (APPs) responses of both serum and cerebrospinal fluid (CSF) in sheep fed with low and high levels of *Brachiaria decumbens* (*B. decumbens*) diets at different time phases. A total of 30 6-month-old male Dorper cross sheep were randomly divided into three treatment groups consisted of 10 sheep each. Treatment 1 (control) sheep were fed with *Pennisetum purpureum* and concentrates as the basal diet, whereas Treatments 2 and 3 sheep were fed with low (10%) and high (60%) level of *B. decumbens*, respectively. The hematology results revealed that there were significant differences ($p < 0.05$) in the red blood cells, mean corpuscular volume, mean corpuscular hemoglobin concentration, white blood cells, neutrophils, monocytes, eosinophils, basophils, platelets, and plasma proteins between groups. Except for packed cell volume, there were also significant differences in allhematology parameters at different time phases. All biochemistry parameters except creatinine revealed significant differences among treatment groups. However, there were significant differences in all parameters between time. On the other hand, APPs results showed significant differences in the serum haptoglobin and serum amyloid A in both serum and CSF between groups and time.

Keyword: *Brachiaria decumbens*; Hematology; Biochemistry; Haptoglobin; Serum amyloid A; Serum; Cerebrospinal fluid; Sheep