2v. — (EMBRAPA-DPP. Documentos ; 14)

The metabolic profile test combines the most commonly used clinical blood analyses in a single system and is based on the identification of abnormalities on statistical deviations from the population mean. The purpose of the present study was to identify, in a Saanen goat herd, the physiological values of blood cellular components, of serum electrolyte concentrations, of serum proteins and biochemical components and of serum enzyme activities in order to establish a standard metabolic profile to be used as a monitor of the health of intensively bred animals whose metabolism is subjected to severe strains. In addition, possible significant variations between dry and lactating goats and between goats in different lactations (first and second) were studied by analysis of variance. Blood samples were drawn during the winter from a herd of Saanen goats reared exclusively inside a goathouse. One hundred ten goats were randomly selected: 30 dry goats about 30 days before before delivery and 80 goats during the second month of different lactations (50 in the first and 30 in the second lactation) were sampled once only. The results (mean+SD) indicate that significantly (P<0.05) higher values of erythrocytes, triglycerides, alfa globulins, CPK, alfa HBDH, and LAP were found in dry goats in comparison with lactating goats, whereas the following values were lower: hemoglobin, MCH, MCV, calcium, magnesium, cholesterol, total proteins, SDH, gamma GT, LDH, ICDH, GLDH. First lactation goats displayed significantly (P<0.05) higher values of hemoglobin, MCH, MCV, pyruvate and lower values of total proteins than second lactation goats. No significant changes (P>0.05) in the PCV, MCHC, leukocytes, neutrophils, eosinophils, basophils, lymphocytes, monocytes, phosphorus, glucose, lactate, blood urea nitrogen (BUN), creatinine, albumin, total lipids, beta and gamma globulins, A/G ratio, ALT, AST, OCT, aldolase, alkaline
phosphatase, pyruvate kinase and MDH were observed. In order to
detect nutritional deficiencies or imbalance, control metabolic
profiles were performed every two months, randomly analyzing
blood samples. Although some parameters showed variations with
respect to the range of the standard profile, the goats did not
show any decrease in milk production or clinical symptoms. In
conclusion, the metabolic profile test, conceived to control
metabolic diseases in cows, is also suitable to describe the
humoral pattern of intensively bred goats and to evidence humoral
variations which, if not rectified, may become initially pre-
clinic changes and subsequently signs of metabolic disease
dependent on the level of production.