
METABOLITES, METABOLIC HORMONES AND HEMATOLOGICAL PROFILES IN MOUNTAIN GOATS BEFORE THE BREEDING SEASON AND DURING THE FIRST TRIMESTER OF PREGNANCY

M. R. Herrygers, Dept. of Animal and Range Sciences, Montana State University, Bozeman, MT 59717

R. Garrott, Dept. of Ecology, Montana State University, Bozeman, MT 59717

C. Butler, Dept. of Ecology, Montana State University, Bozeman, MT 59717

J. G. Berardinelli, Dept. of Animal and Range Sciences, Montana State University, Bozeman, MT 59717

Objectives were to evaluate the relationships among energy-related metabolites, hormones, and hematological variables in mountain goats (*Oreamnos Americans*) before the breeding season and during the 1st trimester of pregnancy. Does were from herds in the Palisades (PAL) and NE Yellowstone (NEY) areas. Samples were collected from July to Aug. (before breeding season) and mid-Jan. (1st trimester of pregnancy). Sera was assayed for insulin (I), thyroxine (T4), triiodothyronine (T3), b-OH-butyrate (bOHB), blood urea nitrogen (BUN), and total protein (TP). Concentrations of TP did not differ ($P > 0.05$) between pregnant (P) and non-breeding season (NB) does. bOHB, I, BUN, and T3 concentrations, and the T3:T4 ratios were greater ($P < 0.05$) in NB does than in P does. Whereas, T4 concentrations were greater ($P < 0.05$) in P does than in NB does. Obviously, NB does have a different profiles of metabolites, metabolic hormones and select hematological variables compared to P does. In conclusion, these differences may be related to P does utilizing and partitioning nutrients to support placental and fetal growth and development. These differences may also be related to the effect of season, since there were no non-pregnant does were sampled in Jan. Another factor that may be important for interpretation of these differences is location. All NB does were sampled in the PAL, while all P does were sampled in the NEY.