Using humic acid in diets for dairy goats

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Abstract:

The effects of diets containing different levels of humic acid (HA) were determined on several blood and milk parameters in dairy goats. Eighteen Saanen goats (2 years old, 52 kg body weight) were fed three diets containing: 0 g HA/kg body weight (T1), 1 g HA/kg – (T2), or 3 g HA/kg – (T3) in a 3x3 latin square experimental design. Each period consisted of 21 days preliminary period and 7 days collection phase. Blood and milk samples were collected at the end of the sample collection periods. The total DM intake values were 1.73, 1.74 and 1.79 (kg/d) for goats fed T1, T2, and T3, respectively. Goats fed the T3 diet had higher (P<0.05) milk yields than goats fed the T1 diet (milk yield=2.45 and 2.11 kg/d, respectively), and this yield was similar to that of diet T2 (2.37 kg/d). However, the addition of HA did not improve the milk fat, solids non-fat, protein, or lactose content of milk. HA
administration to goats significantly reduced the total cholesterol of blood (P<0.05; 3.21, 2.61 and 2.64 mmol l⁻¹ for T₁, T₂ and T₃, respectively), and the LDL cholesterol levels of blood serum that were determined as 0.60, 0.39 and 0.42 mmol l⁻¹, respectively (P<0.05). Further investigation will be required to elucidate the effects of humic acid on goat performance.

**Key Word:**
blood metabolites / goat / humic acid / milk composition