

PERFORMANCE OF GOATS FED PROTECTED PROTEIN DURING GESTATION AND LACTATION

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SUMMARY

Thirty Zariabi goats weighing on average of 49 Kg in their late pregnancy period were randomly assigned into three groups. The effects of formaldehyde treatment of soybean meal and heat treatment of soybean seeds on some rumen parameters, blood constituents and milk production and its composition. Kids performance (birth weight, weaning weight and body weight gain) was also studied. Trial lasted 7 weeks before kidding and 12 weeks after kidding.

The obtained results indicated that yields of milk, 4% fat-corrected milk (4% FCM) and its components were higher ($P<0.05$) when goats were fed formaldehyde treated soybean meal (F-SBM) or heated soybean seeds (H-SBS) diet than those fed untreated soybean meal (U-SBM) diet. Milk non-protein nitrogen and rumen ammonia nitrogen concentrations were lower ($P<0.05$) on F-SBM or H-SBS diets. On the other hand, yields of true protein nitrogen, casein nitrogen and unsaturated fatty acids in milk were higher ($P<0.05$) for goats fed protected protein than those fed unprotected protein. The concentration of plasma urea nitrogen was decreased when goats were given protected protein either by formaldehyde or heat than those fed the unprotected one, whereas the concentrations of total protein, albumin and globulin were increased. Birth weight and weaning weight of kids were improved ($P<0.05$) for goats receiving diets containing F-SBM or H-SBS than those receiving diet contained U-SBM.

On the light of the above-mentioned results, this study recommended the use of protected protein in formulating rations for Zariabi goats during late pregnancy and milk production during their kids suckling periods.

Keywords: *Formaldehyde, heat, soybean, goats, gestation, kid, milk production, milk protein fractions, milk fatty acids, blood constituents.*