THE EFFECT OF BREED AND PRODUCTION FACTORS ON IMMUNOGLOBULIN G CONCENTRATION IN GOAT COLOSTRUM

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The importance of successful passive transfer in neonatal ruminants is well established. Although studies have primarily been conducted in calves, it is clear that newborn goats also depend on ingestion of antibody-rich colostrums shortly after birth to provide immunological protection.

Pre-suckle colostrums were collected from 5 Purebred Boer meat goats, two purebred LaMancha dairy goats, 10 Nubian dairy gaots and 22 Saanen dairy goats. The weight of first milking colostrums was recorded for the dairy goats. Colostrum samples were diluted 1:5 in PBS and the immunoglobulin G (IgG) concentration was determined using single radial immunodiffusion (sRID).

Similar to studies in cattle, our data showed a significant difference in the colostral IgG concentrations between meat and dairy goats, with meat goats having a higher concentration. However, unlike dairy cattle, there does not seem to be any correlation between the weight of first milking colostrums and colostral IgG concentrations in dairy goats. Similarly, in dairy goats, there is no relationship between parity and colostral IgG concentrations. Other variables we explored were the age of the doe and the number of kids in the litter, both of which had no significant impact on colostral IgG concentrations.