

**A-17: Effect of breed and stage of lactation on milk composition of some goat breeds**

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This study was carried out to determine the effect of breed, stage of lactation and their interaction on milk composition of Jamunapari (improved) 50% and 75% Boer goats kept at Kottukachchiya. Weekly milk samples obtained from

6 replicates during the first 2 months of lactation were analysed for their lactose, milk fat, protein and mineral content.

The mean milk lactose content observed in Jamunapari (improved) (JI) 50% and 75% Boer were  $5.34 \pm 1.09$ ,  $5.00 \pm 0.81$  and  $4.62 \pm 0.60$  respectively. Only the difference in lactose between JI and 75% Boer milk were significantly different ( $P < 0.05$ ). The mean milk fat percentages in JI, 50% and 75% Boer were  $2.67 \pm 1.31$ ,  $2.98 \pm 1.82$  and  $3.10 \pm 1.47$  respectively. The highest percentage of total solids ( $13.66 \pm 5.12$ ) and SNF ( $10.77 \pm 5.39$ ) were observed in JI. The lowest SNF and total solid percentages were observed in 75% Boer ( $9.72 \pm 1.02$ ) and 50% Boer ( $12.64 \pm 1.88$ ). The mean protein percentage of JI, 50% and 75% Boer were  $3.64 \pm 0.74$ ,  $3.77 \pm 0.72$  and  $3.81 \pm 0.60$  respectively. There were significant variations in protein, SNF and total solid content of goat milk with respect to stage of lactation ( $P < 0.05$ ) while no significant variations were observed in those constituents with regard to the interaction between the breed and stage of lactation. The equations that can predict protein, (P%) solid non fat (SNF%) and total solids (TS%) in all 3 breeds studied were  $P\% = 5.012 - 0.595t + 0.056t^2$ ;  $SNF\% = 15.142 - 2.167t + 0.188t^2$  and  $TS\% = 18.687 - 2.613t + 0.245t^2$  ( $t =$  stage of lactation in weeks), respectively.

Milk samples obtained from randomly selected 33 indigenous goats reared at Mahaberiyaatanna Government Farm, were also analysed to determine the composition. The mean percentages of lactose, fat, protein, minerals, SNF and total solids in indigenous goat milk were  $4.64 \pm 1.11$ ,  $9.58 \pm 2.90$ ,  $4.37 \pm 0.69$ ,  $0.80 \pm 0.13$ ,  $9.14 \pm 1.43$  and  $18.73 \pm 3.34$  respectively.