special reference to pH and titratable acidity. pH was significantly higher on SU than NSU cisternal milk but that differences did not reach significance on alveolar fraction (P=0.08). Titratable acidity was significantly lower on SU than NSU cisternal milk however no differences were observed in alveolar milk. In sum, selfsuckling behavior observed in intensive management affect the immune milk status and technological parameters overall in cisternal milk. These effects must be investigated in relation to mastitis susceptibility and cheese quality.

Effect of different treatments on colostrum antimicrobial activity

Ruiz Díaz, M. D.1, Morales-delaNuez, A.1, Torres, A.2, Moreno.Indias, I.1, Sánchez-Macías, D.1, Castro, N.1, Argüello, A.1
1. ULPGC, Universidad de Las Palmas de Gran Canaria. 2. ICIA, Instituto Canario de Investigaciones Agrarias.
loli_vet@hotmail.com

Abstract / Resumo:

The aim of the present study was to evaluate the effect of different pasteurization methods and different technological treatments as skim or rennet on the antimicrobial activity in goat colostrum against Escherichia coli. The first postpartum colostrum from ten dairy Majorera goats was collected by a milker bucket. The obtained colostrum was divided in six aliquiots (50ml) and storage at -80°C until analysis were performed later on. Colostrum samples were defrosted and heated at 37°C in a water bath and, after that, the different treatments were applied, except on control samples. The pasteurization was performed using three different methods, at 56°C during 1 hour, 63°C during 30 minutes and 72°C during 15 seconds. Another colostrum aliquot (50ml) was skimmed by using a commercial skimmer. The final aliquot was clotted by using commercial rennet and colostrum whey obtained was recovered after centrifugation. Ten microlitres of each sample were imbibed in a sterile antibiogram disk and let to dry. Sterile saline serum and Enrofloxacin (250 microgram) were used as negative and positive control, respectively. Two hundred microliters of E. coli (ABS 600 nm = 3) were plating into Petri dishes with violet red bile agar medium. In each Petri dish, 4 antibiogram disks (positive and negative controls and two samples to test) were located and incubated at 37°C for 24 hours. After that, halos were measured using a digital scanner. A Proc Mixed procedure was performed by SAS statistic package. Assuming positive control as 100% of antimicrobial activity and negative control as 0% of antimicrobial activity, the percentages of the different samples were as follow: control samples (without treatment) 14.78%, pasteurization at 56°C during 1 hour 12.28%, pasteurization at 63°C during 30 minutes 14.48%, pasteurization at 72°C during 15 seconds 9.71%, whey colostrum 6.35% and skimmed colostrum 16.22%. As preliminary conclusion, pasteurization (at 56 and 63°C) and skimmed did not affect significantly the colostrum antimicrobial activity, although pasteurization at 72°C and colostrum whey decreased the antimicrobial activity of goat colostrum.

Effect of milking frequency and genotype on udder morphology and milk quality

Torres, A.1, Sánchez-Macías, D.2, Capote, J.1, Argüello, A.2, Hernández-Castellano, L.E.2, Moreno-Indias, I.2, Castro, N.2
1. ICIA, Instituto Canario de Investigaciones Agrarias. 2. ULPGC, Universidad de Las Palmas de Gran Canaria.
aletor80@yahoo.com

Abstract / Resumo:
The effects of once (X1) vs twice (X2) daily milking on milk yield, milk composition, somatic cell count (SCC), and udder morphology were studied in 30 dairy goats from three different breeds (10 Majorera 10 Tinerfeña and 10 Palmera) in middle lactation period. Each goat was milked X1 or X2 at 10 and 14 hours intervals (left or right mammary gland respectively), during 6 weeks. The udder morphology was evaluated (cisternal height, nipple height and distance between nipples). Milking frequency affected cisternal height, decreasing significantly in X1 and X2 in Majorera goats (4.10% vs 3.42%), Tinerfeña goats (11.82% vs 8.81%) and Palmera goats (6.96% vs 2.81%). The differences in morphological parameters were due to X1 animals had stored more milk after 24 hours than X2 goats after 14 hours. However, no significant differences were observed for nipple height and distance between nipples. X1 milk yield was lower than X2 by 8.73% in Majorera goats, 14.87% in Tinerfeña goats and 25.53% in Palmera goats. This wide variation in yield losses between the studied breeds under X1 management may be due to differences in level of production and individual udder morphological characteristics of each breed. Yields of fat, protein, lactose, total solids and solids non fat tended to be higher for X2 than for X1 in Majorera and Tinerfeña goats but significant differences were found only for Palmera breed. Milk somatic cell count did not differ between treatments (P= 0.182) which is important because it has become an important quality index in goat milk. In conclusion, milking frequency had effects on udder morphology without negative effects on milk quality.

Effect of milking frequency and genotype on milk partitioning and milk quality

Torres, A.1, Hernández-Castellano, L.E.2, Morales-delaNuez, A.2, Castro, N.2, Argüello, A.2, Sánchez-Macías, D.2, Capote, J.1
1. ICIA, Instituto Canario de Investigaciones Agrarias. 2. ULPGC, Universidad de Las Palmas de Gran Canaria.
aletor80@yahoo.com

Abstract / Resumo:
30 dairy goats of three Canary breeds (Majorera, Tinerfeña and Palmera) in middle lactation period were milked to evaluate udder compartments (cisternal and alveolar), milk yield and milk composition of each milk fraction. Left mammary gland were milked once daily (X1) and right mammary gland twice daily (X2) at 10 and 14 hours intervals during 3 weeks. Before milking goats an intravenous injection of an inhibitor of oxytocin (Atosiban®) was administered to evaluate the cisternal milk yield. After cisternal milk removal, goats were intravenously injected with 2 IU of oxytocin, and then milked again in order to collect the milk contained in the alveoli. No significant differences were found in the percentage of cisternal and alveolar milk on total milk produced in X1 and X2. Nevertheless, the Majorera breed had higher average yields of cisternal milk (54.79 ml/h and 58.57 ml/h for X1 and X2, respectively), than Tinerfeña breed (50.63 ml/h and 57.88 ml/h for X1 and X2, respectively) and Palmera breed (42.22 ml/h and 52.73 ml/h for X1 and X2, respectively), and consequently those goats had a 13.55% and 20.58% more cisternal area than Tinerfeña and Palmera breed, respectively. Cisternal milk of X1 goats contained similar percentages of fat (3.70 vs 3.65%), protein (3.65% vs 3.56%), lactose (4.83% vs 4.85%), total solids (12.90% vs 12.76%) and solids non fat (9.19% vs 9.10%) than cisternal milk of X2 goats. However, alveolar milk of X1 goats contained higher percentages of fat (6.31% vs 5.43%) and total solids (15.27% vs 14.42%) than alveolar milk of X2 goats. Although, there were breed by frequency interactions in the cisternal milk yields (P= 0.032), no interactions for the