

cords were disinfected, and they were weighed and randomly distributed into two groups (n=10) according to the treatment. Control goat kids group (CG) was fed with frozen-thawed goat colostrums, receiving a total of 150 ml per kg of birth weight by bottle-feeding at 2, 14 and 26 hours of life. The experimental group (Se-G) was fed with colostrum plus 3 ppm of sodium selenite following the same management than CG. From 36 hours of life all animals received milk replacer twice daily until the end of the experiment. Blood samples were obtained from the jugular vein every 24 hours from day 1 to day 5 of life. After centrifuged, blood plasma was frozen at -20°C until subsequently analysis. Blood plasma IgG concentration was determined by using a commercial goat IgG ELISA kit . No significant effect of the sodium selenite addition on blood plasma IgG concentration was found. IgG concentration ranged from 14.34 to 9.57 and 11.80 to 7.11 in CG and Se-G respectively. IgG concentration peaked at day 2 of life in both groups (14.34 and 11.80 in CG and SE-G, respectively) decreasing after that until the end of the experiment (9.57 and 7.11 in CG and SE-G, respectively). Increase in hydration animal status and physiological degradation of colostrum IgG and the fact that goat kids are unable to produce immunoglobulins by themselves may explain the decrease of IgG levels throughout the experiment. In conclusion, according to our preliminary results, the addition of 3 ppm of Sodium Selenite to goat colostrum did not improve the newborn goat kids IgG immune passive transfer; however more experiments should be necessary.

The use of Glycerol and Propylene glycol as additives during pasteurization reduce the microbial population in colostrum goats.

Morales-delaNuez, A., Ruiz-Díaz, M.D., Moreno-Indias, I., Sánchez-Macías, D., Hernández-Castellano, L.E., Castro, N., Argüello, A.

1. ULPGC, Universidad de Las Palmas de Gran Canaria
amorales@becarios.ulpgc.es

Abstract / Resumen:

The aim of this study was to evaluate the use of Glycerol (Gli) and Propylene Glycol (Pro) at different concentrations as additive during goat colostrum pasteurization. Eleven goats of Majorera breed were milked, using a bucket milker, immediately after partum. After removed the whole available colostrum, that was aliquoted (50 ml) and subsequently frozen at -20°C until treatment. Sampled colostrums were allotted into nine different groups according to treatments with different additives. In control group (CG) 14% of Phosphate Buffer Saline (PBS) was added to colostrum, while in experimental groups colostrum was complemented with different doses of PBS plus diverse percentages of Glycerol or Propylene Glycol. All additions to colostrum were standardized to 14%. After each addition, colostrum samples were heated in a water bath until reach 56°C; after that, the samples remained for 1 hour more into the water bath at 56°C. Subsequently samples were transferred to ice water for fast cooling and storage at 4°C until microbiological analyses were performed later on. Colostrum microbiological population was quantified according to standard procedures on Plate Count Agar. No significant differences between Glycerol and Propylene glycol addition were found at any concentration tested. However, colostrum microbial population was significantly higher in CG samples than in all Glycerol and Propylene glycol groups. As Glycerol or Propylene glycol concentration added was increasing a significant reduction of the microbial population was observed, although no significant differences between groups were observed when 10 or 14% of Glycerol or Propylene glycol was added. In conclusion, according to the preliminary results, the addition of Glycerol or Propylene Glycol before goat colostrum pasteurization is an effective

method to reduce the colostrum micro biota. Further studies on the effect of these additives on the different microbial populations will be necessary.

Morphological measurements as a tool to support molecular genetic analyses: a field study

Morales-delaNuez, A.2, Castro, N.,2, Hernández-Castellano, L.E.2, Moreno-Indias, I.2, Santana-Cruz, M.M. Reyes-Chacon, R.J.2, Niño, T. Rodriguez, C.2, Argüello, A.2, Capote, J.3

2. ULPGC, Universidad de Las Palmas de Gran Canaria. 3. ICIA, Instituto Canario de Investigaciones Agrarias.

amorales@becarios.ulpgc.es

Abstract / Resumen:

In order to complement DNA previous studies, 81 domestic goats, belonging to Majorera Breed (MB) and 31 Feral Goats (FG) were used, both populations coexist in the same area (Fuerteventura, Canary Island, Spain). These two populations were previously differentiated using microsatellites analysis. In the present study, 13 morphological measurements were recorded, zoometric indexes and correlations were calculated and profile and coat colour evaluated through the side picture. According to morphological measurements such as weight (23.52 and 55.62 Kg, FG and MB respectively) and height at end of neck (54.42 and 70.94 cm, FG and MB respectively) FG were significantly smaller than MB. Zoometric indexes showed that FG were lighter and shorter in relation to the thoracic circumference and height, suggesting an environmental adaptation long time ago. In general, correlations between morphological measures were higher in FG than in MG goats, as between height at end of neck and height to the croup (0.880 and 0.740 respectively), probably indicating a superior body balance to adapt to ultra extensive conditions with higher natural selection. With respect to the frontal profile, the most FG goats presented a subconcave profile (66.7%) on the contrary only 6.8% of MG goats presented this profile. Finally, FG coat colours presented a higher frequency of colour combination of black and white hair and less combination of black, white and red hair than MB. In conclusion, morphological measurements could be a tool in order to complement molecular genetic studies

Influence of seaweed addition in the dairy goats diet on milk chemical composition.

Torrez-Pizarro, C.M.3, Hernández-Castellano, L.E.1, Moreno-Indias, I.1, Argüello, A.1, Morales-delaNuez, A.1, Sánchez-Macías, D.1, Castro, N.1

1. ULPGC, Universidad de Las Palmas de Gran Canaria. 2. ICIA, Instituto Canario de Investigaciones Agrarias.. 3. UCH, Universidad de Chile.

lhernandezc@becarios.ulpgc.es

Abstract / Resumen:

The effect of *Chlorella pyrenoidosa* seaweed inclusion in the dairy goat diet on milk fatty acid composition, atherogenicity index, fat and protein percentage were evaluated in the present study. For the development of the experiment, 10 pregnant goats belonging to Majorera breed were used. The animals were fed with corn, soy 66, dehydrated Lucerne, dehydrated beetroot, wheat straw and vitamin-mineral corrector in accordance with the guidelines issued by L'Institut de Recherche Agronomique. Goats were allotted into two groups (n=6) based on the diet; the control group received a standardized diet (0 g *Chlorella pyrenoidosa*) and animals of the experimental group (seaweed