consider, cheaper and with good results in growth. More analysis in carcass and meat quality should be done to determine if the DHA addition improves the quality of the final product.

Preliminary effects of microseaweed addition in the diet on goat immune status.

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Abstract / Resumo:

10 Majorera dairy goats were randomly assigned into two experimental groups according to the diet. Control group (CG) received corn, soy 66, dehydrated Lucerne, and dehydrated beetroot, wheat straw and a vitamin–mineral corrector according to the guidelines of L'Institute National de la Recherche Agronomique. The microseaweed group (MG) was fed with the same diet than CG plus 5 g/day of Chlorella pyrenoidosa. This procedure was used from 15 days before the expected parturition date to 40 days after partum. A blood sample of each goat was obtained immediately before the first treatment and onwards, 1 week after, at partum, 5, 10, 20, 30 and 40 days of lactation. After centrifuged, blood plasma was storage at -80°C until analysis was performed. Milk samples were obtained at partum, 1, 2, 3, 4, 5, 10, 20, 30 and 40 days of lactation and frozen at -80°C until analysis. IgG concentration and the Chitotriosidase activity (ChT) were measured in blood and milk samples by using a commercial ELISA goat kit and fluorimetric assay. No significant differences for blood plasma IgG concentration and ChT activity were observed between groups during the experiment. Blood plasma IgG concentration peaked at day 20 in both groups (17.4 and 17.0 mg/mL, CG and MG respectively) but showed a slightly increase earlier (5 d postpartum) in MG than in CG (10 d). Blood plasma ChT activity ranged from 4896.1 to 5673.5 nmol/mL/hour in CG and from 4362.6 and 5456.4 nmol/mL/hour in MS group. At day 40 after microseaweed inclusion ChT activity was significantly higher than before treatment. A time effect on colostrum IgG concentration was observed in both groups; the highest values were observed at partum (39.3 and 30.1 mg /mL in CG and MG respectively) decreasing along the time. Milk ChT activity peaked at partum in both groups (9253.2 and 10392.0 nmol/mL/hour for CG and MG respectively). These preliminary results suggest that the addition of 5 g of Chlorella pyrenoidosa to the diet could have an effect on the goat immune status; however the concentration of microseaweed added should be revised.

Self-suckling activity in goats: a behavioral approach

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Abstract / Resumo:

Self-suckling is a poor studied behavior in goats. With the exception of few studies including a case report of it occurrence in a feral goat, the description and consequences of this behavior remain unclear. The aim of this study was to measure the frequency of self-suckling in dairy goats and their

effects on udder morphology and milk production. To do that, the self-suckling behavior of 21 Majorera breed dairy goats was recorded daily during 20 minutes at 3 different times, immediately after milking (10:30), immediately after the fed (13:00) and at mid-afternoon (17:00). A total of 27 periods were considered in this study. In addition, goats were milked and the milk production of each mammary gland was measured by using recording jars (4L☐5%). Moreover, the length and width of each goat´s teat were measured using a digital calliper. For the total of goats included in this study, 15 (76%) were observed developing this behavior while self-suckling was not observed in 6 goats (24%). Goats suckled significantly more frequently from their right gland than their left gland probably due to the position of the rumen. Furthermore, the goats suckled their own glands more frequently immediately after milking than during the other periods considered in the study. In addition, significant associations between the morphology of the teat and the frequency of self-suckling were found. Those goats developing self-suckling during more periods had wider teats. Finally, the frequency of self-suckling behaviour of the left gland was significant and negatively associated with the production of milk of this gland. This relationship did not reach significance for the case of the right gland. To our knowledge, this is a first approach to the study of self-suckling behavior in dairy goats which may affect the immune milk status and technological parameters of milk.

Effect of Number and Placement of Cubic Spline Knots in the Lactation Curve of Extended Lactations

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Abstract / Resumo:
Cubic splines have been used empirically to model extended lactation; however, a complexity of cubic splines is determining the number and placement of the knots, which can affect the "fit". The objective of this study was to examine the effect of the number and placement of cubic spline knots for fitting extended lactation curves in dairy goats. Daily milk yields for 69 Alpine does with an average 502 dim, range of 400 to 613 dim, were used in this study. Data were first smoothed before cubic spline analysis. Two methods were employed for determination of the number and placement of cubic spline knots for each doe. The first method utilized the trapezoidal rule. Three tolerance criteria (T; 0.08, 0.14 and 0.40 kg-day) were chosen because they resulted in approximately 3, 5, and 7 knots, respectively. The second method was a heuristic approach, taking the lactation length for each doe and dividing it into equally-spaced intervals. The desired numbers of knots (K) for this method were 3, 5, and 7. The coefficients of the cubic spline for each doe were estimated using linear and nonlinear regression techniques. The error sums of squares (SSE) were generated for both regression techniques. Method 1 resulted in irregularly spaced knots, with more knots concentrated in areas of greater curvature. The average spacings between knots are 44, 60, and 101 dim for T equal to 0.08, 0.14, and 0.40, respectively. Method 2 knots are equally spaced with the value of the first knot being the interval between knots as according the algorithm. Method 1 tended to have an earlier placement of knots that did method 2. About 75% of the knots determined by both methods were within 20 dim of each other. Non-linear regression failed to improve the "fit" of the cubic splines based upon SSE. Increasing the number of knots decreased SSE. Cubic splines were relatively similar as to the number and placement of knots across lactations. Thus, cubic splines can be used to model the curve of extended lactations in dairy goats. The robustness of the cubic spline was relatively indifferent to the