

PERFORMANCE AND FEED CONVERSION EFFICIENCY OF SUCKLING CALVES FROM FOUR DIFFERENT DAM GENOTYPES

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Forty cows from four different genetic groups and their respective calves were individually fed from postpartum to weaning (15-210 days). Nellore (NE), Canchim x Nellore (CN), Angus x Nellore (AN), and Simmental x Nellore (SN) were randomized in blocks of 4 animals by calving date. Crossbred cows were bred by Canchim bulls and the Nellore females by Nellore bulls. Milk production estimated by weighing calves before and after suckling. 40 days of age calves had access to a pelleted diet (50:50 roughage:concentrate, 13% CP and 65.7% TDN all on a DM basis). Feed intake by calves wasn't different ($P > 0.05$), 1.2 kg/d for $\frac{1}{4}$ AN, 1.2 kg/d for $\frac{3}{4}$ CN, 1.1 kg/d for $\frac{1}{4}$ SN, 0.92 kg/d for NE. These had lower weaning weight than crossbreds ($P < 0.05$), 150.4 \pm 16.2 kg vs 242.3 \pm 13.3 kg for $\frac{1}{4}$ SN, 233.3 \pm 14.2 kg for $\frac{1}{4}$ AN, $\frac{3}{4}$ CN was intermediary. This difference seems to be related to either the lowest milk production ($P < 0.05$) of Nellore cows (669.8 kg vs. 1406.8 kg for SN, 1158.6 kg for AN and 1033.0 kg for CN) or lowest NE calf growth. The efficiency in converting digestible energy to weaning weight (Mcal DE/kg) wasn't different among calves ($P > 0.05$), 6.3 Mcal DE/kg for $\frac{1}{4}$ AN, 6.1 Mcal DE/kg for $\frac{3}{4}$ CN, 6.5 Mcal DE/kg for $\frac{1}{4}$ SN, 5.6 Mcal DE/kg for NE. Crossbred cows mated to Canchim bulls produced more milk and weaned heavier calves than Nellore cows bred to Nellore bulls. Because total DE intake by NE calves was lower, feed efficiency was not change.

GENETIC AND ENVIRONMENTAL PARAMETERS ESTIMATION OF GROWTH TRAITS IN AN ARABIC SHEEP FLOCK

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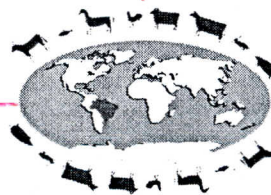
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Genetic and environment parameters of growth traits in an Arabic sheep flock in Ramin farm were investigated. Heritability 0.09, 0.20, 0.24, 0.19 and 0.11 for birth, weaning, 3, 6 and 9 month weight were estimated. Genetic and phenotypic correlation of birth and 3 month weight, birth and weaning weight, birth and 6 month weight and birth with 9 month weight were (0.63 and 0.77), (0.51 and 0.61) and (0.45 and 0.58) were estimated. Genetic and phenotypic correlation between 3 month weight and weaning, 6 and 9 month weight, 3 and 9 month weight were (0.80 and 0.77), (0.98 and 0.52) and (0.95 and 0.46) were estimated. These correlation coefficients also between weaning and 6 month weight, weaning and 9 month weight, (0.85 and 0.70), (0.78 and 0.82) were estimated. The results show that 3 month weight could be a selection criteria for lamb growth rate in the flock. Key words: Growth traits, genetic correlation, Heritability and Arabic sheep

ESTIMATES OF BODY RESERVES IN THE SAHEL AND DJALLONKÉ GOATS

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Fourty seven adult goats, 24 Sahel and 23 Djallonké goats, were divided in 2 groups within each genotype (SH, SL for the Sahel, and DH, DL for the Djallonké goats). SH and DH were ad libitum fed during 3.5 months and restricted feeding, 75% of the level of ad libitum consumption was used to achieve differences with SL and DL. Goats were monthly weighed and their body condition scored using a 6 points (0-5) scale. They were slaughtered at different stages of the trial for body composition measurements. The left side of each carcass was separated and the shoulder (s) cutted and analysed. The level of feeding has significant effect ($p < .05$) on the weight of the sternum adipose tissue (7.6, 8.1, 7.5, and 17.5 g in SL, SH, DL and DH, respectively) and on its lenght (17.3, 20.4, 15.6 and 19.1 cm in the respective lots). At a similar level of feeding, the gain in BW (6.7 vs 1.3 kg) and in BCS (1.6 vs - 0.2 point) was higher ($p < 0.01$) in the Djallonké (DH) than in the Sahel goat (SH) through the trial. In Djallonké goats, body lipids (g) = -188.5 - 21.4130 ash(s) + 5.2566 proteins(s) + 5.8206 lipids(s), $r^2 = .92$, $rsd = 1.1$. In the Sahel goats, body lipids (g) = -452.9 + 7.0565 ash(s) + 0.0114 proteins(s) + 5.3824 lipids(s), $r^2 = .88$, $rsd = 2.0$.



DIFFERENT FEEDING ALTERNATIVES TO FEMALE CALVES FROM SOUTHERN BRAZIL AND ITS IMPACT ON BLOOD BIOCHEMICAL PROFILE AND DAILY WEIGHT GAIN

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Blood biochemical profile is an useful instrument to study growth and nutrition. The objective of this work was to relate blood biochemical indicators of energy, protein and minerals with growth and daily weight gain in female calves raised in Rio Grande do Sul State (Brazil). Data were collected from four genetic groups: Hereford, 1/2Hereford-1/2Nellore, 1/4Hereford-3/4Nellore, 1/2Hereford-1/2Angus. The calves were fed for 114 days with four diets before they went to a cultivated pasture during 72 days. The diets were: (SU68) native pasture plus 1.5% live weight (LW) energy-protein supplementation containing 14% CP and 68% TDN; (SU75) native pasture plus 1.5% LW energy-protein supplementation containing 14% CP and 75% TDN; (SUPAS) oats, white clover and ryegrass plus 0.5% LW corn supplementation; and (CONF) feedlot with corn silage plus concentrate in a 4:1 ratio. During six months blood metabolic indicators were evaluated in 44 animals. There were found no differences on metabolic profile concerning diet or genetic groups. Mean metabolic values were: glucose 3.71 \pm 0.69 mmol/l, cholesterol 3.13 \pm 0.86 mmol/l, total protein 75.89 \pm 8.80 g/l, albumin 35.67 \pm 2.23 g/l, urea 5.06 \pm 1.07 mmol/l, inorganic phosphorus 2.13 \pm 0.36 mmol/l, calcium 2.37 \pm 0.28 mmol/l and magnesium 0.89 \pm 0.12 mmol/l. Daily weight gain during initial treatments were 500; 479; 697 and 777 g/day, respectively for SU68, SU75, SUPAS and CONF. Daily weight gain during cultivated pasture phase were 559; 604; 655 and 443 g/day, respectively. Weight gains were statistically different between treatments in both phases of feeding.