

The effect of artificial rearing on kid growth and milk production of Damascus goats

Koumas, A.¹ and Papachristoforou, C.², ¹Agricultural Research Institute, Animal Production, P.O. Box 22016, 1516, Lefkosia, Cyprus, ²Cyprus University of Technology, Agricultural Sciences, P.O. Box 50329, 3603, Lemesos, Cyprus; A.Koumas@arinet.ari.gov.cy

Yearling Damascus goats were allocated as they kidded on either natural suckling (NS, 22 goats) or were separated from their kids immediately after birth (24 goats); NS goats suckled up to two kids, while separated kids were artificially reared (AR) on milk replacer. Colostrum was given to AR kids by bottle feeding. All kids were weaned at 49±3 days of age. After weaning, 15 male kids from each NS and AR groups were fattened for 70 days. AR goats were milked twice daily. NS goats were milked once daily before, and twice daily after weaning. Birth weight of kids in both groups was similar (4.1 kg). NS kids had a faster ($P<0.01$) preweaning growth rate than AR kids (223 VS 191 g/day) and were heavier ($P<0.05$) at weaning (14.7 kg) than AR kids (13.8 kg). After weaning, males of both groups had similar growth rate (AR: 291, NS: 270 g/day). Final weight at 120 days of age of AR (36.0 kg) and NS kids (35.1 kg) was similar. Milk yield of AR goats (118 l) during the preweaning period was higher ($P<0.05$) than NS goats (31 L). Fat and protein content of milk was 3.69 and 3.71 for AR goats and 3.23 and 3.30% for NS goats, respectively. Post weaning milk yield (142 days) of both groups was similar (NS: 301 L, AR: 273 L). No differences were observed in milk fat and protein content (%) between suckling and non suckling goats (fat: 4.02 and 4.16, protein: 3.96 and 4.03, respectively). Total milk yield (190 days) was 392 L for AR and 332 L for NS goats. These results indicate, that artificially reared kids had satisfactory preweaning growth, slightly lower though than that of suckling kids; however, both groups reached the same final weight at 120 days of age. Goats on zero suckling, produced more commercial milk over the whole lactation than suckling goats. In dual purpose breeds as the Damascus, artificial rearing may increase farmer's income.

Goat milk technological parameters evolution through transition from colostrum to milk

Sánchez-Macias, D.¹, Castro, N.¹, Moreno-Indias, I.¹, Capote, J.² and Argüello, A.¹, ¹Las Palmas de Gran Canaria University, Animal Science Unit, Fac. Veterinaria, Transmontaña s/n, 35413, Arucas, Spain, ²Instituto Canario de Investigaciones Agrarias, Carretera el Boquerón s/n, La Laguna, Tenerife, Spain; aarguello@dpat.ulpgc.es

The aim of present study was to evaluate the technological parameters changes during the transition from colostrum to milk. 30 Majorera goats were milked once a day during 90 days after partum and milk samples were obtained at partum, 1, 2, 3, 4, 5, 15, 30, 60, and 90 days. Density, pH, dry matter (DM), titratable acidity (TA), ethanol stability (ES) and rennet clotting time (RCT) were measured. Time after partum was used as main factor in the ANOVA model. Goat milk density, DM, TA and RCT significantly ($P<0.001$) dropped during the experimental time. pH and ES significantly ($P<0.001$) increased during the experimental time. Density ranged from 1026 to 1062 g/l, DM ranged from 125.3 to 288.8 g/l, TA ranged from 0.1 to 0.6% lactic acid, ES ranged from 30 to 92% water vs ethanol and RCT ranged from 2 to 35 minutes. In conclusion, technological parameters on goat milk spent more than 15 days to become stable.