

591 PERFORMANCE of lactating Alpine and Brazilian does under different management systems C.A.Zometa, W.C.da Silva, E.A.P.Figueiredo\*, M.Shelton, and Oneida A,Lima. SR-CRSP/TEXAS A&M University, San Angelo and Estação Experimental Pendência, EMEPA-Pb. Brazil.

Twenty four recently kidded German Alpine (GA) and Sem Raça Definida (SRD) does and their kids were equally and randomly assigned for a 42-day period to the following treatments: T1, Nursing continuously, but milked two times once a week to estimate milk production; T2, nursing 12h and milked once a day, and T3, milked twice a day, not nursing. The purpose of this study was to evaluate milk production and kid development under non-traditional methods. Thornless cactus (*Opuntia* spp.) was fed ad libitum plus 0.6, 0.8 and 1.0 Kg/day of a 17.5% crude protein ration for T1, T2 and T3 respectively. Cactus and ration were fed individually on T3; GA does consumed more (P .01) than the SRD's (7.57 and 0.97 vs. 3.57 and 0.40Kg/day). Kid mortality was not different ( $\bar{x}$ =18.3%) between treatments or breeds. Results indicate a depression in performance and no advantage in total or partially running kids and does together for extended nursing. Other results are summarized as follows:

PARAMETER	T1, Nursing only		T2, Nursing+Milking		T3, Milking only	
	GA	SRD	GA	SRD	GA	SRD
Milk, Kg/day	0.941 <sup>a</sup>	0.219 <sup>b</sup>	0.518 <sup>c</sup>	0.201 <sup>b</sup>	1.116 <sup>a</sup>	0.4507 <sup>c</sup>
Doe weight change, Kg	-2.55 <sup>a</sup>	-1.40 <sup>a</sup>	0.23 <sup>b</sup>	-0.58 <sup>c</sup>	2.300 <sup>d</sup>	-0.6 <sup>c</sup>
Cactus Intake, Kg/day		5.597		5.755		5.568
Ration Intake, Kg/day		0.501		0.689		0.678
Kid weight change, Kg	1.60 <sup>a</sup>	0.53 <sup>b</sup>	1.66 <sup>a</sup>	0.71 <sup>b</sup>	2.01 <sup>c</sup>	2.16 <sup>c</sup>

a b c d Values across rows with different superscripts, differ ( .01)

KEY WORDS:

Dairy Goats, *Opuntia* spp., Kid rearing, Tropical breeds.

592 Nutritive value of total mixed rations with various energy sources fed to lambs, in Northeast Brazil. N. N. Barros\*, J. R. Kawas, L. C. L. Freire, W. L. Johnson and J. W. dos Santos. Brazil National Goat Research Center (EMBRAPA), University of California, Davis and North Carolina State University.

Twenty-five Santa Ines cross-bred male lambs were randomly assigned to, and fed ad libitum, one of five total mixed rations (TMR) during a 21-day digestibility trial. The basal TMR (BR) was comprised of ground (10 mm) corn stover and *Clitoria ternatea* (CT) (51% and 48%, respectively), and 1% salt. All other TMR contained either corn grain (CG), milo grain (MG), whole cassava meal (WCM) or algaroba pod meal (APM) which replaced 20% CT of the BR. Analyses of the TMR for neutral and acid detergent fiber, crude protein and K<sub>Mn</sub>O<sub>4</sub> lignin were: BR, 64.8, 41.3, 9.4, 8.2; CG, 58.3, 39.2, 7.5, 8.6; SG, 61.1, 40.9, 7.1, 9.6; WCM, 56.6, 38.4, 7.4, 8.4, and AMP, 59.8, 41.8, 7.6, 9.6. Total feces and urine were collected during the last 7 days. Treatment means for body weight (BW), voluntary intake (DMI) and apparent digestibility (DDM) of dry matter, digestible DMI (DDMI) and nitrogen balance (NB) are shown in the Table. DDM was increased by substituting forage from the BR with any of the energy sources. However, DDMI was not significantly improved by the substitutions.

Energy Source	BW (kg)	DMI (g/kg <sup>.75</sup> )	DDM (%)	DDMI (g/kg <sup>.75</sup> )	NB (g)
BR	19.5	82.1 <sup>a</sup>	46.2 <sup>b</sup>	37.9 <sup>a</sup>	2.6 <sup>a</sup>
CG	22.5	80.1 <sup>a</sup>	54.5 <sup>a</sup>	43.7 <sup>a</sup>	3.3 <sup>a</sup>
SG	22.8	72.5 <sup>a</sup>	53.4 <sup>a</sup>	38.7 <sup>a</sup>	2.1 <sup>a</sup>
WCM	22.3	71.8 <sup>a</sup>	56.1 <sup>a</sup>	40.3 <sup>a</sup>	4.1 <sup>a</sup>
AMP	21.9	85.1 <sup>a</sup>	52.7 <sup>a</sup>	44.8 <sup>a</sup>	3.5 <sup>a</sup>

Means in the same row with different superscripts differ (P < .05, Tukey's test).

KEY WORDS: Energy sources, cassava, algaroba, digestibility, intake, lambs.

593 Effect of slaframine on rumen function I. Motility patterns in sheep and cattle. M. A. Froetschel\*, W. J. Croom, Jr., W. M. Hagler, Jr., R. A. Argenzio, J. A. Liacos, North Carolina State University, Raleigh and H. P. Broquist, Vanderbilt University, Nashville, TN

The effects of purified slaframine (SF, 1-acetoxy-6-aminooctahydroindolizine), a parasympathomimetic secretagogue isolated from *Rhizoctonia leguminicola*, on rumen motility were investigated in cattle and sheep. In Trial 1, four rumen cannulated wethers fed a pelleted concentrate/hay diet were injected IM with 0, 12, 24 and 48 µg SF/kg BW in a 4x4