

THE EFFECTS OF PRE- AND POST-NATAL NUTRITION ON THE MILK PRODUCTION OF AUSTRALIAN FERAL GOATS

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There is no information available on the effects of nutrition on milk production of Australian feral goats raised under improved management. At 60d after conception, 72 unselected feral does were divided into three groups containing equal numbers of twin and single bearing does (Fowler and Wilkins 1982). The first group was maintained on Kikuyu grass pastures (control), the second group was held in individual pens from 120 days post conception until kidding (120-150), and the third group held from 120 days post conception until one month after kidding (120-180). Housed does were offered pelleted rations of cotton seed meal, barley straw and sorghum grain. Four nutritional treatments were applied to groups of six does (50% twin bearing) in each period, high (20.6%) and low (12.2%) protein pellets offered either ad lib (high) or 70% ad lib (low). After supplementation all does were returned to pasture. Milk production was estimated at 23, 55 and 106 days post kidding (Corbett 1968). The effects of supplementation period ($n = 72$) and nutritional treatments ($n = 48$) were separately determined by analysis of variance. The main effects of treatments are shown in Table 1.

Table 1. Influence of period, type and level of supplementation on the yield (ml/d) and protein content (%) of milk from twin and single bearing does

Days after Kidding	23		55		105	
	Yield	% Protein	Yield	% Protein	Yield	% Protein
Supplementation period						
Control	901a ^ø	3.43ab	736	2.81a	304	3.50
120-150	895a	3.27a	809	2.97ab	351	3.50
120-180	1708b	3.52b	717	3.06b	328	3.54
± SD	522*	0.39*	259	0.32*	185	0.50
Birth type						
Singles	1283	3.41	820	2.88	423	3.36
Twins	1322	3.38	744*	3.14*	260*	3.68*
Protein level						
High	1438	3.53	813	2.92	377	3.48
Low	1142*	3.23*	708*	3.12	298	3.56
Energy level						
High	1454	3.49	790	3.06	377	3.45
Low	1151*	3.29	738	2.97	305	3.59
± SD	547	0.39	206	0.36	160	0.51

* Significant difference ($P < 0.05$) between treatment means. ^ø Values within a column with different subscripts differ significantly ($P < 0.05$)

These results show that improved nutrition in early lactation has a major effect on milk production in feral does, and that the maintenance of this high level depends on continuing high levels of nutrition. The effects of improved milk production on kid growth are presently being evaluated.

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