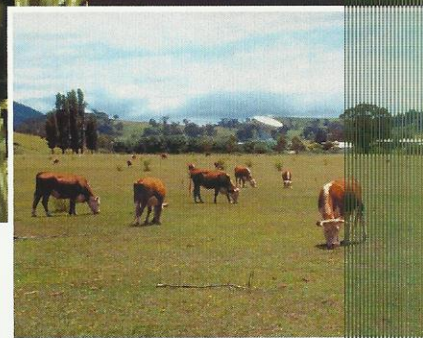
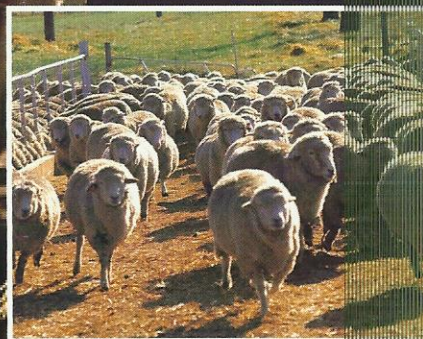
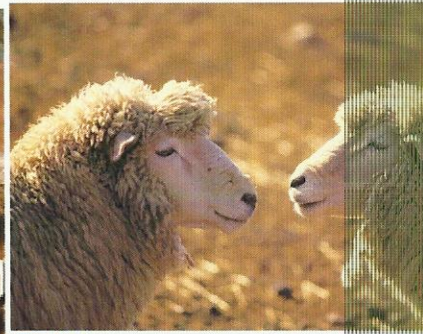
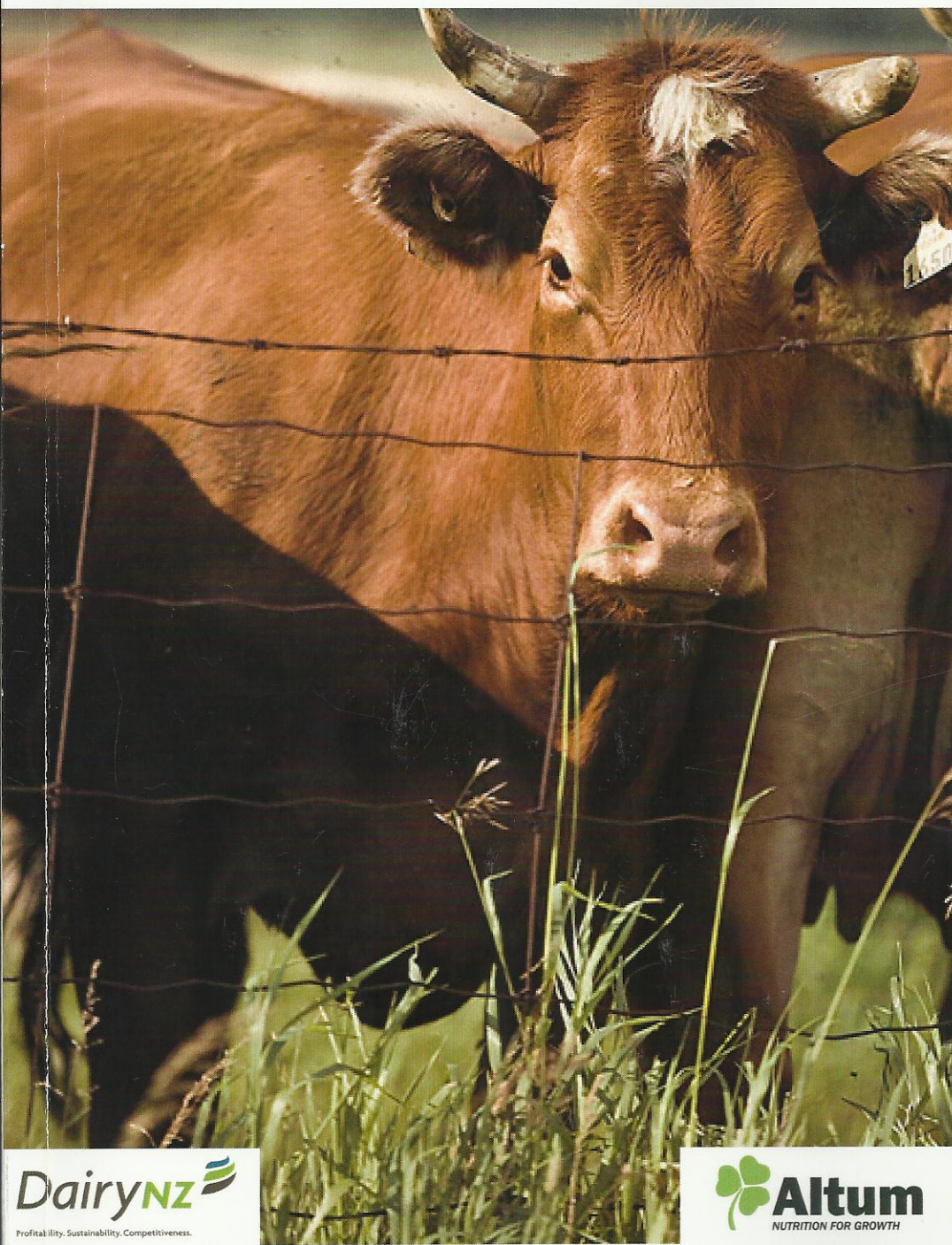




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Observations on the Productive Performance of Crossbred Kids from Three Mating Seasons in the Semi-Arid Region of Brazil

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This study aimed to measure the productive performance of crossbred kids from three consecutive mating seasons during 2006 and 2007 in the semi-arid region of Brazil. An average of 41 crossbred kids (crossbred Anglo-Nubian and Canindé) were born in each mating season (MS) from an average herd of 58 does. The kids were mothered on and allowed to suckle from the doe herd only at night. They were weaned at 90 days of age. After weaning, kids were kept in buffel grass pastures during the dry season (July to November) while in the rainy season (December to June) they were kept in the Caatinga vegetation. The goats were run as one herd, at a stocking rate of 0.15 Animal Units (AU)/ha.year, calculated by $\text{bodyweight}^{0.75} / 450^{0.75}$. Does were removed from the herd if they did not conceive after two consecutive mating seasons.

Mating season had an effect on weight of kids at birth. The smaller incidence of twinning, and, consequently, a greater number of single births may have contributed to the greater ($P < 0.05$) bodyweight at birth for MS3 (2.8 kg) compared to MS1 (2.3 kg) and MS2 (2.5 kg) (Table 1). In addition, the greater bodyweight of kids at birth, 30 and 90 days for MS3 ($P < 0.05$) was associated with the rainy season (Feb/Mar) and vegetative growth. Moreover, this corresponded with the does gestating during the wet season, with abundant and good quality forage from the Caatinga vegetation. The difference in feeding management after weaning most likely resulted in kids from MS1 and MS3 obtaining higher ($P < 0.05$) bodyweight at 240 days than kids from MS2. A logical explanation for this is that kids born in July and August (from MS1) were weaned in October and November, which is the start of the rainy season. Those kids were then taken to the Caatinga vegetation with abundant and good quality forage on offer. In contrast, kids born in May and June (from MS2) were weaned in August and September, during the dry season, and put on buffel grass pastures.

Table 1. Number of kids (males and females), bodyweight at different ages, total weight gain (TWG) and daily weight gain (DWG) of crossbred kids born in different times of the year following three different mating seasons (MS)

Parameters	MS1 (births in Jul/Aug)	MS2 (births in May/June)	MS3 (births in Feb/Mar)
Total exposed does, n	61 ¹	59 ¹	54 ¹
Number of kids born, n	48	37	40
Kids weaned/exposed does (%)	60.6	52.5	64.8
Twins births, n (%)	13 (37.1)	10 (37.0)	6 (17.6)
Weight at birth, kg	2.3 ± 0.09 ^b	2.5 ± 0.09 ^b	2.8 ± 0.09 ^a
Weight at 30 days, kg	5.2 ± 0.27 ^b	5.3 ± 0.2 ^b	6.3 ± 0.2 ^a
Weight at 90 days, kg	9.5 ± 0.4 ^b	8.2 ± 0.4 ^b	11.0 ± 0.4 ^a
Weight at 240 days, kg	15.8 ± 0.7 ^a	12.6 ± 0.8 ^b	16.3 ± 0.7 ^a
Total weight gain (kg/ 240 days)	13.5 ± 0.7 ^a	10.1 ± 0.7 ^b	13.4 ± 0.7 ^a
Daily weight gain (kg/ day)	0.056 ± 0.003 ^a	0.042 ± 0.003 ^b	0.055 ± 0.002 ^a
Liveweight of kids/ exposed doe (kg) ²	9.1	5.8	9.6

Values with different letters in the same rows are significantly different using Tukey test ($P < 0.05$).

¹The reduction in total number of does was due to culling.

²Number of kids x weight of kids at 240 days/ number of exposed does.

The results from the effect of MS on subsequent birth weights and growth rates of the offspring demonstrate the importance of aligning the reproductive and productive management of goat herds in the north-east of Brazil with the environmental constraints of the system. Data from the present study for bodyweight were similar to those reported by Silva *et al* (2000) who reported bodyweight at birth for crossbred Anglo-Nubian kids from 2.8 to 3.5 kg.

This study suggests that the body weight of kids at 240 days is related to the mating season and the corresponding nutrition during the pregnancy and rearing phases on different vegetation and forage availability. Collectively the three mating seasons suggest it is possible to produce kids for slaughter or for market more than once per year. Goat producers may be able to then capitalise on favourable prices with out-of-season product.

Silva, F.L.R. and Araújo, A.M. (2000). *R. Bras. Zootec.* (Brazilian Journal of Animal Science), **29**, 1028.

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