

THE REPRODUCTIVE PERFORMANCE OF THREE GOAT BREEDS IN A CROSSBREEDING PROGRAM DIFFERED IN AN OUT-OF-SEASON MATING

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A method of maximising the number of kids produced in a goat meat production system is to reduce the mating interval so that there are three kiddings every two years (Skinner and Hofmeyr 1969). However maximum sexual activity in most breeds of goats occurs in autumn with a nadir in spring (Greyling and van Niekerk 1987). If three kiddings are to occur every two years, then at least one mating must be in spring. The reproductive performance of Saanen, Angora and Feral does, using natural unassisted mating was examined at Gatton for a six week period in spring (September to October) 1996.

Saanen, Angora and Feral does (n = 44, 47, and 49 respectively) were mated to Boer bucks (n = 10), Angora and Feral does (n = 46 and 49 respectively) were mated to Saanen bucks (n = 6), and Feral does (n = 49) were mated to Feral bucks (n = 6). Does were randomly allocated to groups according to liveweight and age. Two bucks were introduced weekly to each mating group. At kidding each doe and kid were identified. The birth date, birth weight, kidding type (single or multiple), sex and cause of death of each kid were also recorded.

Chi square analysis indicated that the six mating groups could be divided into two sub-groups. The first sub group comprised Boer bucks mated to Saanen does and Feral does, and Feral bucks mated to Feral does. This group had a lower number of kids than the second group which was made up of Boer bucks mated to Angora does and Saanen bucks mated to Angora does and Feral does ($P < 0.05$). There were no significant differences between the number of births within the sub-groups (Table 1).

Table 1. Births data for six goat genotypes from an out-of-season mating

Genotype	No births	Single births	Twin births	Number of does
Boer x Feral	42	5	2	49
Boer x Saanen	30	6	8	44
Feral x Feral	32	11	6	49
Saanen x Angora	16	22	8	46
Saanen x Feral	19	25	5	49
Boer x Angora	15	20	12	47

The data indicate that a low number of kids can be expected in an out-of-season mating. The data also indicate that the Boer x Angora, and Saanen x Angora or Feral goats will produce higher numbers of kids. The reasons for the differences in birth numbers are not known, but it is hoped that further research currently being undertaken will answer this question.

GREYLING, J.P.C. and VAN NEIKERK, C.H. (1987). *S. Afr. J. Anim. Sci.* **17**, 147-9.

SKINNER, J.D. and HOFMEYR, H.S. (1969). *Proc. S. Afr. Soc. Anim. Prod.* **8**, 155-6.