

## THE REPRODUCTIVE PERFORMANCE OF POLL DORSET AND DORSET HORN EWES

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The reproductive performance of Dorset Horn sheep is handicapped by the high incidence of dystokia (George 1976). Since some breeders of Poll Dorsets claim they encounter little dystokia, have a higher lambing percentage and that the lambs grow better than those from Dorset Horns, the reproductive performance of Poll and Horned Dorset ewes grazed as one flock at Armidale has been compared over a five-year period.

In each of five years (1968-1972) two ewe flocks, one of Poll Dorsets and the other of Dorset Horns, were joined with rams of their own breed, for an autumn lambing. Each year the mean liveweights in the flocks were similar at joining, and the flocks were run together except for the five-week joining period. Lambs were weighed and identified within a day of birth and were weaned and weighed again three months later. Difficult births in evidence between 0800 and 1600 hours were assisted, and evidence of unobserved dystokia, in the form of oedematous lambs and vulvae of ewes that were oedematous and/or lacerated was noted.

Parameters of reproductive performance of the two breeds were similar (Table 1). However, 31.7% of Dorset Horns experienced dystokia compared with 21.7% of Poll Dorsets ( $P < 0.05$ ).

TABLE 1 Reproductive performance of Poll and Horned Dorsets (5 yr mean  $\pm$  SE)

	Poll Dorset	Dorset Horn
Fertility (EL/EJ) (%)	63.9 $\pm$ 11.04	65.9 $\pm$ 22.2
Lambing (LB/EL) (%)	134.5 $\pm$ 7.02	128.4 $\pm$ 8.97
Multiple births (%)	35.1 $\pm$ 6.29	28.2 $\pm$ 8.80
Mean birth weight (kg)	3.75 $\pm$ 0.42	3.76 $\pm$ 0.21
Lambs weaned (%)	72.8 $\pm$ 10.04	61.9 $\pm$ 12.41
Dystokia (%)	21.7 $\pm$ 9.53	31.7 $\pm$ 4.76
Weaning weight (kg)	21.3 $\pm$ 4.29	19.4 $\pm$ 1.90

The study indicates that, contrary to breeders' claims, there are no major differences in reproductive performances between Poll Dorsets and Dorset Horns lambing in autumn, except in the incidence of dystokia. However, it is not clear whether the relative performance of breeds would change with time of lambing; fertility of Dorset Horns at winter and spring lambings was found to be higher than reported here and the incidence of dystokia also differed from the 31.7% found here for autumn lambing (George 1976).

The level of nutrition has been found to be unrelated to the incidence of difficult births in Dorset Horns (George 1976) and Poll Dorsets (Mann 1978). In the study reported here the level of nutrition was common for both breeds yet an unacceptable level of difficult births and lamb mortality occurred in both Poll and Horned Dorsets. If an analogy is made with cattle (Sloss and Johnston 1967) then it is possible that the proportion of lambs weaned would be increased by culling ewes experiencing dystokia.

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