Brief Communication

WOOL PRODUCTION OF EXOTIC × ROMNEY SHEEP

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As part of the evaluation of the four exotic sheep breeds introduced into New Zealand in 1972, wool production data from 189 F_1 Finnish Landrace × Romney (F × R) and 135 F_1 German White-headed Mutton × Romney (G × R) were compared with those from 243 Romney (R) ewes.

The ewes born at Mana Island in 1974 were transferred to the Crater Block after mating in June 1976; those born in 1975 were transferred from the island to Crater after hogget shearing in October 1976; those born in 1976 were born at Crater.

The hoggets were shorn in October after being shorn as lambs the previous December. Midside wool samples were removed at hogget shearing and clean scoured yields of these samples used to derive clean fleece weights from greasy values. The 1976 2-year-old ewe data were from fleeces removed in October after 12 months' growth, while the 1977 ewe data represent 9 months' growth (March to December). All ewes were run together throughout the year.

Table 1 shows the clean fleece weight and clean scoured yield for the three breeds of hoggets in each of the three years. The clean fleece weight data indicate interaction between breeds and years. In two of the three years (1975, 1977) the G × R had the

TABLE 1: CLEAN FLEECE WEIGHTS (kg) AND CLEAN SCOURED YIELD (%) OF HOGGETS

	1975	*1976*	*1977*
Clean fleece weight			
Romney	1.32	2.82	2.99
Finn × Romney	1.38	2.28	2.50
German × Romney	1.58	2.73	3.23
RSD	0.32	0.40	0.40
Clean scoured yield			
Romney	77.9	78.5	84.0
Finn × Romney	79.0	78.4	80.7
German × Romney	79.2	78.5	82.4
RSD	3.4	3.8	3.7

heaviest fleece weights, while the Romney had the heaviest fleece weight in 1976. The F × R had the lowest fleece weight in two years, while in 1975 this breed and the Romney had similar fleece weights.

In 1975 the Romney had a significantly lower clean scoured yield, while in 1977 the Romney had a significantly higher yield than the other breeds, but differences were small.

Table 2 shows mean greasy fleece weights of the ewes corrected for lambing status. In both years the G × R produced more wool than the R, which in turn produced more than the F × R.

TABLE 2: EWE GREASY FLEECE WEIGHTS (kg)

	1976	*1977*
Number of animals	172	149
Romney	3.29	2.25
Finn × Romney	3.11	1.86
German W.M. × Romney	3.68	2.40

Ewes rearing single lambs produced more wool than those rearing twin lambs in both years. In 1977 the dry ewes produced significantly more than those with single lambs. The difference (0.77 kg) between dry ewes and those rearing twin lambs was considerably greater than that of 0.34 kg reported by Hight *et al.* (1976) for Border Leicester × Romney mixed-age ewes, and of 0.06 to 0.18 kg reported by Bigham *et al.* (1978) for five breeds of mixed-age ewes, perhaps due to the age differences.

These data indicate that the F_1 G × R would produce 5 to 10% more wool than the Romney, which in turn would produce 5 to 10% more than the F_1 F × R. It is doubtful that the interbred G × R would maintain this wool growth advantage in the light of the results from other crossbreeding studies (Pattie and Smith, 1964; McGuirk, 1967; Hight *et al.*, 1976) where production has declined with interbreeding.

The F × R wool was approximately 2 μm finer than that of the Romney and was considerably softer in handle. A high proportion (up to 30%) of the F × R fleeces showed staple unsoundness. There were no differences in the price received for the hogget wool. However, the wool was binned from each flock before sale, and as small numbers of animals of each breed were involved each year, any differences between the wools may have been lost owing to mixing with wools from other growers.

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