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WOOL PRODUCTION OF SHEEP BREEDS ON HILL COUNTRY

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Gross income from the ewe flock on hill country depends in part on the quantity and quality of wool produced. Financial returns from wool may account for up to half of the gross income from these ewe flocks. Wool is, therefore, a major source of income on North Island hill country.

The main alternative sheep breeds used to the predominant Romney are the Coopworth and Perendale. Data on wool production and financial returns from wool for these breeds and the Cheviot were obtained from the breed comparison study undertaken at the Whatawhata Hill Country Research Station. Each breed was represented by approximately 200 ewes, selected originally from a wide genetic source with the assistance of the respective breed associations who have also selected the six rams used each year.

Lambs were born in August-September and shorn at weaning (November-December) at approximately 12 weeks of age. The hoggets were shorn the following September-October when approximately 13 months of age. Shearing of the mixed-age ewes took place once each year at weaning. The hoggets were grazed together from birth on hill country as were the mixed-age ewes, except during the mating period. The fleece wool minus the belly wool was sold separately for each flock to permit calculations of returns per kilogram of wool and per sheep.

Least-squares means for greasy fleece weight for all breeds are shown in Table 1. The hogget data were collected over a period of five years and the mixed age ewes, six years.

TABLE 1: FLEECE WEIGHT (kg) BY BREED

	Romney	Coopworth	Breed Perendale	Cheviot
Hogget	2.59	2.66	2.44	1.79
Mixed-age	3.59	3.43	3.20	2.17

As hoggets the Romney and Coopworth had similar fleece weights but Romney mixed-age ewes had heavier fleeces than the Coopworth. The Perendale and particularly the Cheviot had lighter fleeces than the Romney and Coopworth.

Prices received per kilogram of wool and greasy fleece weight determine returns per animal and Table 2 shows mean returns both per kilogram and per sheep for the hoggets and mixed-age ewes over the period of the trial. Belly wool is not included in these calculations. Financial returns per sheep from wool were similar for the Romney, Coopworth and Perendale. Between years, however, there was considerable fluctuation in price per kilogram and per sheep. Over the 6 years the Perendale wool received a price premium above that of the Romney which varied from -1% to +22% for the hoggets and from 1 to 12% for the mixed-age ewes. Cheviot wool also received a price premium, but because of the low fleece weight of this breed, returns per sheep were always lower than for the other breeds.

TABLE 2: MEAN RETURNS PER KG OF WOOL AND PER SHEEP

	Romney	Coopworth	Breed	Cheviot
Hoggets:			Perendale	
c/kg	118	117	128	124
c/sheep	250	260	258	170
Mixed-age				
c/kg	121	121	130	130
c/sheep	323	322	331	218

These data indicate that changing from the Romney to the Coopworth is unlikely to influence the returns from the sale of wool per sheep. For the Perendale to return as much as the Romney and Coopworth, a price premium of at least 8% above the price received for Romney wool is required to compensate for the lower fleece weight of the Perendale. Factors other than wool production per sheep may therefore be of greater importance in deciding the change from the Romney to the Coopworth or Perendale breeds.