

Fowl Cholera was diagnosed in North Otago in the virulent form for the first time in New Zealand. Treatment with sulphonamides, which has proved successful overseas, gave disappointing results.

Moniliasis.—This disease was diagnosed in poultry for the first time. The crop was usually involved and, though no serious mortality occurred, it probably had some adverse effects on chick-raising.

Diverticulosis in Pigs.—A substantial loss in one Waikato piggery was found to be due to the presence of diverticula in the small intestine which in a proportion of cases became infected with subsequent rupture, leading to fatal peritonitis.

RESEARCH WORK

Sheep-breeding Projects

Inheritance of Count.—Three years' experimental results are available from the breeding experiment in which the object was to test claims made as to the high inheritance value of count of wool. In each year two groups of 50 ewes were selected for strong wool and fine wool respectively from a flock of approximately 1,000 ewes. Half of each group was mated to a strong-woolled ram and the remaining half to a fine-woolled ram. Mean count of fleeces for both ewes and rams was:—

Strong ewes	..	..	44's	Strong rams	..	..	40's
Fine ewes	..	..	50's	Fine rams	..	..	48's

Differences between the progeny of the two types of ram were not significant in any year: in the year when differences were greatest the progeny of the strong-woolled ram carried finer fleeces.

Ewe effects were generally greater, and strongly-significant differences occurred in progeny fleeces in the second year. In all years the count of wool of the progeny followed the count of the ewes, but with much smaller differences between progeny groups than between ewe groups. A difference of four count intervals in the ewes produced a difference of one count in progeny. The results indicate that progress in breeding for strong and fine wool as judged by "count" can be made by straight selection on the one side, but that strong regression to the mean must be expected. Improvement through selection of individual rams is likely to be erratic, since the actual count of the individual ram fleece may not be expressed in his progeny.

Influence of Ram on Weight and Quality of Fat Lambs.—In an intensive investigation, including complete dissection and chemical analysis of carcasses, the fat-lamb progeny of eight breeds of rams have been compared for three successive years. The following table shows the average carcass weights of the lambs produced by each breed of ram when crossed with Romney Marsh ewes which were run together from the end of tupping until drafting:—

	Mean Carcass Weights.		
	1946-47.	1947-48.	1948-49.
	lb.	lb.	lb.
Southdown	32·6	34·1	35·9
Ryeland	36·1	32·6	36·7
Dorset Horn	38·8	37·1	38·6
Suffolk	40·0	38·4	41·2
Border Leicester	38·8	36·7	40·9
English Leicester	36·7	34·4	39·1
Cheviot	36·3	35·3	35·7
Romney	36·4	34·0	35·1