

on environments varying from tussock to irrigated pasture were visited. The results suggest that shearing before lambing has certain advantages. Arrangements are being made to carry out trials in Canterbury during the coming season.

Intensive Investigations.—The intensive nutritional experiment with Romney and Corriedale sheep which has been running for the past two years has concluded. Much material has yet to be examined, but in general the results are in accord with breeders' observations that the fine-wool breed produces the better wool where plane of nutrition is low.

Some indication of the importance of nutrition in wool-production is given by the following table, showing fleece weights at different periods from the same sheep :—

Breed and Tag No.	Period June, 1943, to June, 1944.		Period March, 1945, to March, 1946.	
	Treatment.	Fleece Weight.	Treatment.	Fleece Weight.
		lb.		lb.
Romney 206	High plane ..	20·2	Low plane ..	7·8
Romney 218	Low plane ..	5·6	High plane ..	13·6
Corriedale 208	High plane ..	22·0	Low plane ..	7·9
Corriedale 215	Low plane ..	5·6	High plane ..	14·0

Approximately three hundred wool samples from the Kirwee experimental area have been graded and scoured. Statistical analysis of live-weight data in connection with feeding and other trials has been carried out and a statistical study on the growth rate of successive lambs of individual ewes is in progress. Fleece data will later be correlated with the growth data.

Wool Metrology.—Sets of tops calibrated for fineness have been prepared and are available on request. Attempts to prepare corresponding sets of calibrated raw greasy-wool samples have been abandoned owing to gross anomalies between appearance and measured fineness.

Wool-manufacture.—Non-medullated and slightly medullated wool of 56's–60's quality is now being processed in co-operation with the New Zealand Woollen Mills' Research Association and the Kaiapoi Woollen Manufacturing Co.

A preliminary investigation of the relations of unlevel dyeing to conditions of wool-production is being carried out.

This laboratory has co-operated with the New Zealand Woollen Mills' Research Association in the design of a trial to study the possibility of felting occurring in scoured wool during ocean transport from New Zealand.

A detailed analysis of greasy-wool production for the 1943–44 clip has been completed and circulated to interested parties. The information on which this analysis is based was made available by courtesy of the New Zealand Wool Buyers' Association and the Export Division of the Marketing Department.

MASSEY AGRICULTURAL COLLEGE

N-TYPE SHEEP RESEARCH

F. W. DRY

Breeding experiments have been carried out on the Massey Agricultural College farm and at the Ruakura Animal Research Station with the valued assistance of the Animal Research Division of the Department of Agriculture. The breeding-work, in addition to maintaining stocks, has been chiefly concerned with the following problems :—

- (1) The genetic relationship between Dominant-N and Recessive-N, these two genes, together with Non-N, seeming likely to form a series of multiple allelomorphs.
- (2) The significance of horns, the presence or absence of which enables us, perhaps nine times out of ten, to distinguish homozygous from heterozygous Dominant-N ewes.