

Trials of the Carrying-capacity of Pedigree V's H1 Rye-grass.—This trial was stocked with in-lamb ewes at the rate of three ewes per acre at the end of May. Pasture establishment on all plots has been good and pasture-production high. A notable feature of the Short-rotation rye-grass pastures has been the considerably higher production in the winter and early spring in comparison with pedigree rye pastures. These latter, however, have since September surpassed the Short-rotation pastures. Differences between rotationally grazed plots and set stocked plots are, however, not very well defined.

MUTTON AND WOOL IMPROVEMENT

R. WATERS

The collection of data and compilation of the progeny test of 24 sires based on 453 ewe hoggets of 1943 was completed. Eleven sires and a considerable number of their progeny were culled on this test, and 3 sires gave sufficiently promising results to warrant special mating. Matings for these 3 sires have been arranged. In addition, 22 new rams have been selected for progeny testing, including 15 sons of 203 and 213. Several of these have produced very promising lambs and give good expectation of being worth closer study.

The usual field-work for collecting data for the progeny tests for rams used in 1944 and in connection with the 1945 lambing season is being carried out.

Investigations on the distribution and variation of hairiness in New Zealand Romney Marsh sheep from four months to five years old have been completed.

The first two papers on this subject have been published in the *New Zealand Journal of Science and Technology*. These are as follows: "Distribution of Hairiness in the Fleeces of New Zealand Romney Marsh Ewe Hoggets"; "Yearly Changes in Hairiness in New Zealand Romney Marsh Sheep."

The last two are in the hands of the editor. These are as follows: "Growth of Hairiness in New Zealand Romney Marsh Lambs"; "Relation between Fleece Hairiness and Fleece Weight in New Zealand Romney Marsh Sheep."

"Quantitative Inheritance of Hairiness" is now in the course of preparation. Preliminary results indicate that hairiness is much more strongly inherited than previous results (McMahon) would suggest, hence the possibility of discontinuing hairiness in the progeny test must receive consideration.

Much useful data has been accumulated by the Department in the course of its progeny-testing experiments, a statistical investigation has been commenced in stud flock composition, production, reproduction, and vital statistics of which there is at present a lack of adequate knowledge. These investigations will be carried out with special reference to progeny testing.

PIG RESEARCH

WM. RIDDET

Research work on the inheritance of carcass length in Tamworth and Crossbred pigs commenced in 1937 and has been continued during the year, the complete carcass measurements of College-bred baconer pigs now totalling approximately six hundred. The original intention was to select two distinct strains, one short, the other long, from within the Tamworth stocks in possession. Progress was made during the initial phases, but from 1940 an increasing tendency towards smaller litters was noted among the inbred short strain. An attempt was made to correct this by an outcross, but a high mortality rate during the war years has resulted in the short strain being almost eliminated. There are in possession, however, a gilt and a young boar of this inbred strain with which the family will be perpetuated.