*Chemical Weed Control*

Studies in chemical weed-control methods were commenced in May, 1945. The following months were spent in acquiring data relating to previous local work and subsequent overseas developments. In the course of this work many papers have been studied and abstracted and a fairly comprehensive index system of references has been instituted.

In August plans for herbicide trials on ragwort were drawn up. Inability to secure a suitable ragwort-infested area and delay in the arrival of materials resulted in considerable modification of the proposed programme. A start was made in December on an area in Awatere Avenue, No. 1 Bridge, where a fairly extensive stand of ragwort existed. Much of the area was also infested with blackberry, making it possible to conduct trials with this weed concurrently with those on ragwort. Certain disadvantages in the choice of this type of infestation became apparent with the need for the expenditure of much time in the manual control of blackberry. The presence of many other weeds and of a few plants of gorse on the area was also availed of in carrying-out the trials.

The plots are located on an area of very light sandy loam. The prolonged drought and exceptional temperatures produced conditions unsuitable for growth, and the value of the interim results so far secured from the various treatments is therefore open to question. Restricted stocks of certain herbicides have been conserved pending the advent of autumn rains and a resumption of plant growth.

Work has not proceeded far enough to furnish any detailed reports, but these will be published in due course.

A number of trips have been made through local districts and to Rotorua and Te Kuiti to investigate weed conditions. The Railways Department's weed train was accompanied from Frankton to Cambridge and to Te Aroha.

Cape tulip, poa aquatica, nassella tussock, and kikuyu grass infestations have received special study, and a comprehensive kikuyu grass eradication trial has been established at Dargaville in collaboration with the Instructor in Agriculture.

Not the least valuable outcome of the year's operations is the practical experience gained in the planning, laying-down, and conduct of these field trials; much has been learnt which will be invaluable in conducting future operations. Due largely to the novelty of the work and to conditions during these early stages in the development of the Station, the year has been one of strenuous but intensely interesting work.

FERTILIZERS

*Rationing.*—The rationing of phosphatic fertilizers was continued during the year with certain modifications in the basis of allocation. For top-dressing, the allowance of 1 cwt. of superphosphate or its equivalent per dairy cow milked was discontinued and the percentage of allowance of the quantities used in the two base years ended 31st May, 1941, was increased from 28 per cent. to 42 per cent.

The allowance for such crops as wheat, root, and fodder crops was increased and fertilizer was available for sowing down to grass. Additional quantities were granted as a result of reopening the appeal procedure, and returned servicemen have again procured supplies as recommended by the district Fertilizer Committees of the National Council of Primary Production.

*Importations.*—For the fertilizer year July, 1945, to June, 1946, the imports of phosphate rock are scheduled to be 50,000 tons more than for the previous twelve months. Supplies from Nauru and Ocean Islands are expected to begin from July, 1946, but it will be several years before the pre-war tonnages from these sources are procurable.

Importation of limited quantities of nitrogen and potassic fertilizers continued.

*Serpentine Development.*—Work on the locating and reporting on deposits of serpentine rock in New Zealand was continued. The North Island superphosphate companies have installed suitable plant to dry and grind serpentine and to manufacture serpentine-superphosphate on a substantial scale. This should enable a good supply of a satisfactory product to be made available to farmers. To date over 500,000 tons of serpentine-superphosphate have been used on Dominion farms, and its use in the post-war period is likely to continue on a large scale.