

Hormone Weed-killers.—A number of experiments with the new hormone weed-killers, 2-4 dichlorophenoxyacetic acid (known commercially as 2-4D) and derivatives have been laid down. These weed-killers are very selective in action and are well tolerated by most grasses, whereas they are very toxic to a number of dicotyledons. A number of weeds common in lawns can be very readily controlled and also pasture weeds such as buttercup. Incomplete experiments with perennial weeds such as Californian thistle, convolvulus, blackberry, and gorse are showing considerable promise. The indications suggest that complete control may be obtained with three treatments.

Nitrogenous Metabolism of Green Leaves.—Our work on nitrogen metabolism which was discontinued during the later years of the war has been resumed with the same object as before—viz., a more accurate characterization of the constituents of the green leaf and their variation under different environmental conditions. The investigation is one of considerable complexity and will extend over a long period of time.

Antibiotics.—The Director spent five months in the United States of America studying the new field in chemo-therapy opened up by penicillin, and as a result authority has been granted for the establishment of an antibiotic unit within the organization of this Laboratory. Microbiological work will be done at Plant Diseases Division in Auckland, while a pilot-scale fermentation plant of 100-gallon capacity, together with the necessary chemical plant for the extraction and purification of the active materials, will be established in Palmerston North. The professional staff has been appointed, and it is hoped that the plant will be in operation by October, 1946.

Special attention will be paid to those materials which appear to have particular value against plant and animal disease.

Conservation of Pasture.—The Grasslands Division has now completed seven consecutive years' work on silage making, and this Laboratory has collaborated by carrying out the numerous analyses required for determination of losses, feeding value, &c. The high losses in digestible nutrients occurring under the best conditions warrant a fuller investigation of the changes which take place during the process.

PLANT RESEARCH BUREAU

Plant Research Bureau Committee.—Mr. A. H. Cockayne (Chairman), Sir Theodore Rigg, Professor E. R. Hudson, Professor G. S. Peren, Mr. E. J. Fawcett, Mr. R. B. Tennent, Dr. E. Marsden, Mr. C. A. Marchant, Mr. Alan Grant, and Mr. F. R. Callaghan (Secretary and Chief Executive Officer).

The Plant Research Bureau Committee at its forty-ninth meeting on 21st February, 1946, recommended to the Council of Scientific and Industrial Research that "the Plant Research Bureau Committee be disbanded and the Chief Executive Officer be held responsible to the Council for all recommendations regarding funds and programmes and conduct of plant research." At a meeting of the Council of Scientific and Industrial Research held on 22nd February the recommendation of the Plant Research Bureau Committee was approved.

The Plant Research Bureau comprises five Divisions, viz. :—

Name.	Location.	Director.
Agronomy Division ..	Lincoln	* Mr. R. A. Calder (Acting-Director).
Botany Division ..	8 The Terrace, Wellington ..	Dr. H. H. Allan.
Entomology Division ..	Cawthron Institute, Nelson ..	Dr. D. Miller.
Grasslands Division ..	Tiritea, Palmerston North ..	Mr. E. Bruce Levy.
Plant Diseases ..	Owairaka, Auckland ..	Dr. G. H. Cunningham.

* Mr. J. W. Hadfield, Director, was seconded to Linen Flax Section, Industries and Commerce Department, as from 1st June, 1940.

Participating in the Bureau have been (1) the Department of Scientific and Industrial Research and its several research sections; (2) the Department of Agriculture and its various Divisions; (3) Massey Agricultural College; (4) Canterbury Agricultural College; and (5) Cawthron Institute.