

The following are in the press:—

Institute Publication No.	Title.	Author.
70	Estimation of Casein by Formol Titration after Precipitation with Acid..	F. H. McDowall and A. K. R. McDowell.
72	The Cheese Yielding Capacity of Milk and its Relation to the Method of Payment for Milk for Cheesemaking	F. H. McDowall.
74	Studies on the Chemistry of Cheddar-cheese Making : Part 4	F. H. McDowall and R. M. Dolby
76	Timber for Butter-boxes	F. H. McDowall and J. W. Smith.
77	The Estimation of Carbon Dioxide in Biological Fluids, more particularly Milk and Cream	F. H. McDowall.
78	A Burette for Formol Titration, and Specifications of a Burette for Direct Estimation of Casein in Milk by the Walker Method	F. H. McDowall.
80	Observations on the Ripening of Cheeses made from Raw and Pasteurized Milk	I. R. Sherwood.
81	Investigation of Cream Quality	A. M. Stirling.
82	Butter-boxes and Mould-growth	Wm. Riddet and J. C. Neill.

PLANT RESEARCH STATION.

The Plant Research Station located at Palmerston North has continued as a joint activity of the Departments of Agriculture and Scientific and Industrial Research under the direction of Mr. A. H. Cockayne. Towards the end of the year steps were taken to convert the Station into a Bureau, with Divisions located in proximity to the Agricultural Colleges and Cawthron Institute, with the object of bringing into co-ordination all the research and extension activities of the Dominion. The Station has worked in collaboration with the Dairy Research Institute, Wheat Research Institute, and the Fruit Research Scheme.

During the year the Station received the last instalment of the Empire Marketing Board grant, and was also assisted by a substantial contribution from the Carnegie Fund.

The work done has covered a very wide field of agricultural research, and distinct progress is evidenced in the reports which have been submitted.

BOTANICAL SECTION.

(By Dr. H. H. ALLAN.)

Routine work was continued on the lines of previous years. The work of identifying and reporting on specimens, as usual, occupied a great deal of time, full advantage of this service being taken by all sections of the community indicated in previous reports. Well over 3,000 specimens were dealt with. A number of new records of introduced plants were made, the more important of these being dealt with in articles in the *Journal of Agriculture* in the series "Notes on recently observed Exotic Weeds." A paper bringing our knowledge of introduced species up to date and correcting errors of former accounts by various workers was published in the *Transactions of the Royal Society*. Work on the indigenous plants was continued, and a paper dealing with some of the results was published in the *Transactions*, while other papers were contributed to British and American scientific journals. The book on the grasses of New Zealand reached the page-proof stage, and Mr. Zotov has submitted for publication a paper dealing with certain results of his research into the leaf-anatomy of our grasses.

A further botanical examination was made of areas in the Mackenzie country affected by facial dermatitis, particular attention being paid to the following stations: Lake Tekapo, Lilybank, and Mr. Burnett's property adjacent to the southern end of the lake. On all these areas species of *Hypericum* were noted, sometimes in quantity. It was planned to give assistance on the botanical side to experiments to be carried out by the Live-stock Division on the properties of Messrs. Burnett and Murray. In company with Dr. Hopkirk I also visited affected areas in Poverty Bay, where a similar disease is being investigated. *Hypericum* is not a noticeable member of the plant cover of these areas, but a considerable growth of clovers and burr-clovers was observed. These plants have elsewhere been suspected of contributing to such outbreaks, and it appears desirable to have feeding-tests carried out with these as well as with the *Hypericums*. An illustrated article dealing with the various species of *Hypericum* found in New Zealand was prepared for the *Journal*.

Mr. Zotov made a three-weeks study of the grasslands of South Island, and continued this at his own expense during his vacation. Much valuable information and herbarium material were obtained, and we are now in a position to conclude our detailed revision of the grasses of New Zealand. Other minor excursions were made, resulting in considerable accessions to the herbarium. Contributions were also received from a number of European institutions, and a specially valuable set of specimens of marine algæ was presented by Mr. R. M. Laing. In accordance with a request from the Director, sets of specimens are being forwarded as opportunity allows to the Herbarium of the Royal Botanic Gardens at Kew. These will serve to bring up to date the collection of New Zealand plants there, especially of species described by local botanists subsequent to the floras of Hooker.

Preliminary observations were made in the neighbourhood of Te Awamutu, under the guidance of Mr. Melrose, of ragwort-infested areas. Special attention was paid to the area at Terau-a-moa and the Barton Estate. The period of the visit was not suited for extended investigations on the spread of the weed by seed, but preliminary experiments were carried out. These would suggest that although