

Pampas-grass.—Interest is still being maintained in this subject, and a quantity of seed heads have been collected by the Fields Officer at Whangarei for threshing in the laboratory.

Denaturing of Sugar used for Bee-feeding.—In order to permit sugar for winter feeding of bees to be imported under specially favourable Customs conditions it was recommended that a very small quantity of methyl-violet be added to the sugar to render it objectionable for human consumption. Trials carried out by the Apiarist showed that sugar treated in this manner had no unfavourable effect on the bees.

Branding-fluid.—Damage to sheep-pelts due to irritation set up by the use of a branding preparation led to an analysis to discover whether any harmful substances were present. The preparation was found to consist principally of rosin oil and no corrosive substance could be detected. The possibility that carcinogenic agents might be present could not be ruled out.

Standards Institute.—During the year I was appointed to represent the Department on the Chemical Divisional Committee of the New Zealand Standards Institute and have attended all the meetings so far held. Many specifications of a more or less routine nature affecting apparatus or methods used in agricultural chemistry have been considered in detail and a number of British Standards adopted as New Zealand Standards. In addition, a number of draft standards directly concerned with the analysis or composition of primary products have received very careful consideration and have been circulated to all interested parties. The possibility of introducing standards for meat-meals, pig-meals, and pollards to suit the requirements of the pig and poultry industries without unduly interfering with existing manufacturing practice is being explored. As a preliminary step a representative series of samples of these materials as offered for sale on the New Zealand market have been collected and are in course of analysis.

Routine testing of meat-marking fluids, cattle-dips, and preparation of glass-marking ink for Government Departments have been continued.

CHEMICAL CONTROL OF RAGWORT.

An extensive series of experiments have been carried out by Mr. F. B. Thompson, using principally individual plants grown in garden soil, to determine the relative toxicity to ragwort of various chemicals, and of various strengths, methods of application, and modifications in pH of sodium chlorate solutions. The minimum toxic dose of sodium chlorate for a ragwort plant of twelve to sixteen leaves covering a total ground area of 40 square inches to 60 square inches and not showing a flower stem was determined to be in the vicinity of 0.1 gm.

The information gained from these experiments is being co-ordinated with that of other workers on the problem of ragwort control, through the agency of the committee set up and operating under the direction of Dr. H. H. Allen, Botanist of the Plant Research Station.

SAMPLES RECEIVED FOR ANALYSIS DURING THE YEAR.

Soils	498	Bloods	67
Limes	129	Fertilizers	40
Dips	17	Leaves for zinc deficiency	32
Licks and medicines	4	Sugar beet	31
Thyroids	27	Pasture samples, Fields Division Plots	182
Waters	16	Pastures	12
Toxicological specimens	261	Miscellaneous	67
Limonites	65		
Stock foods	26		
			1,474

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