

CATTLE-DIPS.

An examination of samples from the public cattle dips of the tick-infested districts was undertaken in conjunction with the Live-stock Division. It was shown that many of the dips are in an unsatisfactory state, in some cases the dipping-fluid being far below the correct strength. Arrangements have been made by which samples from every dip will be sent to this Laboratory each month during the busy season, and each alternate month during the off season. It is proposed to appoint an officer whose duty it will be to visit and test the dips periodically and collect the samples for the Laboratory.

LIME AND LIMESTONES.

Fifty samples of limestone were examined and reported on during the year, and advice has been given as hitherto on the best methods of utilizing deposits.

FERTILIZERS.

Included in the samples of fertilizers received during the year were thirty-four unofficial samples forwarded by officers of the Department, and twenty-three samples received from farmers and from other sources. One sample of "fertilizer" received from a Waikato farmer proved to be mainly ground limestone, with traces of phosphate and a very small amount of organic nitrogen. Unfortunately, the sample was not sent in until some months after purchase, and on inquiry it was found that the vendors (who had not registered under the Fertilizers Act) were no longer carrying on business. At the suggestion of the Board of Agriculture, field experiments have been instituted to test the effect of finer grinding of Nauru phosphate, the material used being of such fineness that all but a trace passes a sieve of 120 meshes to the linear inch. The tests are being carried out at the Mamaku and Wallaceville Farms, and on experimental areas under the control of the Fields Division.

TOXICOLOGICAL.

An unusual number of cases of poisoning or suspected poisoning of stock have been dealt with during the year. Several cases of poisoning by sheep-dips came under notice. In one instance the use of too strong a solution of an arsenical sheep-dip as a wash for lice resulted in the death of five out of six valuable plough-horses. Difficulty has been experienced in dealing with many cases of suspected poisoning of stock owing to senders forwarding inadequate samples, or samples not properly packed.

WORK FOR THE DIVISIONS.

For the Dairy Division many analyses have been made of butters, milks, cheese, casein, &c. A number of proprietary substances offered to the dairy industry for various purposes have been examined and reported on, and samples of parchment paper have been examined for substances which might have an injurious effect on butter. A complaint of "soda flavour" in butter was investigated, and suggestions were made as to its cause and remedy. Assistance has also been given to officers of the Dairy Division in connection with various chemical problems affecting the industry. For the Live-stock Division, the meat-marking ink required for branding inspected meat has been prepared. Medicinal preparations required for the bush-sickness experimental work have been made, and the manufacture of licks in brick form has been carried out at the Wallaceville Laboratory. Other medicinal preparations required for experimental work on stock have also been prepared as required. The top-dressing experiments for production of mutton have been continued at Wallaceville. For the Fields Division samples of soils have been examined, and samples of fertilizers used on experimental areas have been analysed and reported on.

SUMMARY OF SAMPLES RECEIVED DURING THE YEAR.

These were as follow: Soils, 305; fertilizers, 62; reputed fertilizers and phosphate rocks, 34; limes and limestones, 50; toxicological specimens, 40; wheats, 37; flours, pollards, and brans, 6; cheese, 10; milks and creams, 58; butters, 18; caseins, 19; waters, 29; fodder plants, 26; sheep and cattle dips, 71; spraying materials and insecticides, 5; miscellaneous, 74; feeding stuffs, 3; total, 847.

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