

The amount of hemp graded for the year ended 31st March, 1926, was 87,871 bales, as compared with 93,875 for the previous year, a decrease of 6,004 bales. The quantity of tow graded was 25,445 bales, as against 25,211, an increase of 234 bales. Of stripper-tow 2,079 were graded, as against 2,979, a decrease of 900 bales. The number of bales of stripper-slips graded was 2,629, as against 3,430, a decrease of 801 bales. Of the hemp graded 9·12 per cent. was good-fair, 47·29 per cent. high-fair, and 30·75 per cent. low-fair grade; 12·37 per cent. of the tow was first grade, 67·85 per cent. second grade, and 15·04 per cent. third grade; stripper-tow was 3·36 per cent. first grade, 80·95 per cent. second grade, and 15·58 per cent. third grade; of stripper-slips 53·25 per cent. was second grade, and 46·75 per cent. was below that grade, but of this latter amount 43·48 per cent. was allowed to be exported for use mainly in the manufacture of cheap lashings, for which it has been found useful.

BIOLOGICAL LABORATORY.

Research connected directly with the problems of primary production has been extended during the past twelve months, there being a marked increase in the demand for this class of work. This demand—not merely local, but an outstanding sign of the times throughout the Empire—has called for the visit of notable oversea authorities, and the formation of various scientific bodies to inquire into, advise upon, and provide for the development of scientific and industrial research in New Zealand; considerable monetary provision for this advance has, in fact, already been made. Coincidentally, therefore, with these events arose another highly important feature of the past year's work—namely, the discussion and planning of various methods of reorganization whereby the activities of this laboratory might be wisely extended and improved, properly co-ordinated with those of other scientific institutions, and generally brought to a standard commensurate with the demands of the present time. Pending the settlement of those broader issues such matters as the accommodation of the present staff and the reconstruction of the seed-testing staff have had necessarily to remain in abeyance.

Seed-testing Station.

8,627 seed-samples were tested, showing an increase of 481 over the number for the previous year. With the exception of 111 samples, the whole of the number required germination tests and approximately 20 per cent. an additional purity test. It is obvious, judging by the districts from which samples are received, that most of the testing is concerned with seed production and export, as, with the exception of Auckland, the number of samples received is roughly proportional to the intensity of seed production and export. The bulk of the imported samples, together with about half the retail samples and a small proportion of the export samples, are received from Auckland.

A good standard of quality is being maintained, although there is undoubtedly a considerable amount of poor-class seed yet being sown. Noxious-weed-seed contamination, judging by the appearance of such seed in grass and clover samples, is slightly on the increase.

Following are notes on seed-production for the period under review:—

Rye-grass: Southland and Canterbury experienced unfavourable harvesting weather in 1926, and, while the yield was good and the seed of good appearance, germination was poor. In consequence there has been a large carry-over of second-grade seed into 1927.

Crested dogtail: The 1926 crop in Southland was frosted in the milk stage, and the yield was greatly reduced. The Sandon yield was also below average, so that last year dogtail was the scarcest and dearest of the grass-seeds. This shortage coincided with a European crop-failure, so that in dogtail peak prices were reached the world over. Had the New Zealand crop been normal, excellent export business would have been done. The 1927 crop is a good one, and prices are already reduced.

Chewings fescue: The wet season in Southland in 1926 forced the growers to leave the fescue out for over two months, so that an excellently matured crop resulted. The American demand was particularly good, and both American and British buyers were very pleased with their deliveries. An investigation recently carried out demonstrated the value of thoroughly matured seed for export purposes, and the 1926 crop ably upheld this. The 1927 crop has shown a good yield, but the very dry season "rushed" the crop to ripeness, with the result that little of the seed is as fully matured as in 1926. The carrying-quality will be watched with interest.

Brown-top: Production of brown-top in Southland has increased considerably. Last year good export business was done, and the indications are that this year the combined southern and Canterbury crops will more than meet the export and local demands. The ability of the southern merchants to buy farmers' dressed seed at a reasonable figure has enabled them to deliver fully dressed seed at a fair price, so that the export demand has firmed.

Danthonia: The saving of *Danthonia pilosa* seed commenced in Canterbury last year, and it would appear that the South Island will become one of the chief sources of supply. The Canterbury samples are of a particularly high quality, and are free from the usual high percentage of impurity met with in Hawke's Bay seed.

White clover: Heavy importations of white clover were made during 1926 with a fair export of New-Zealand-grown seed. The New Zealand wild white-clover seed business is still unsatisfactory. In the absence of guarantee the British merchants either do not care to handle New Zealand seed or purchase any New Zealand seed and retail it as wild white.

General: The arrangement whereby analyses for the purposes of the Canadian Seeds Importation Act, 1923, are made at this station has worked smoothly and has been responsible for an entire absence of trouble during entry at Canadian ports.