

heads over 2 ft. 6 in. in height, marking the site of droppings from the stock that had been grazed on the area the previous winter. In order to test the effect of top-dressing a definite series of experiments is being conducted on this area, and the results should prove of great value.

SEED-PRODUCTION.

Roughly about 2,000 tons of cocksfoot-seed is sown annually in New Zealand. The majority of this is produced locally, the larger portions being grown in the Canterbury District. When harvested by hand in the Banks Peninsula area it is termed "Akaroa cocksfoot," and when machine-harvested on level ground it is traded as "Plains cocksfoot" and generally contains considerable amounts of perennial rye-grass. When the rye is in large quantities a high bushel-weight is obtained without the amount of blowing necessary to raise a farmers' dressed Akaroa line to the 16-17 lb. standard.

The germination of New Zealand cocksfoot when germinated under the methods adopted at the Department's seed-testing station is often considerably lower than is looked upon as satisfactory in Europe. This is due to the fact that local seed generally contains a large percentage of empty husks. In many cases quite 30 per cent. by numbers of the apparently mature seeds are devoid of kernels. Since 1908, when the price of cocksfoot began to increase considerably, cleaning has not been satisfactory. It is true that the separation of extraneous seeds has improved, but far too many empty husks are left in the average machine-dressed line. So long as the dressed line is comparatively free from extraneous seed and the weight reaches a 16-17 lb. standard no attention is given to the quantity of empty husks remaining.

This is not such a serious matter, so far as local consumption is concerned, provided the buyer purchases on a germination test, but for export the case is very different. At one time New Zealand was one of the main countries exporting cocksfoot to Great Britain, but before the war Denmark was occupying the position previously held by New Zealand in this respect. The reason for this was almost entirely owing to the Danish seed being better blown and freer from empty husks than our local exportations. Before it can be expected that New Zealand shall again occupy the premier position on the London market more care will have to be taken in removing the empty husks from the lines that are exported.

Taken as a whole an average good crop of cocksfoot will yield from 150 lb. to 200 lb. of seed per acre. Of this amount anything from 10 to 20 per cent. will represent weed-seeds and other rubbish lost in the cleaning, so that an average good crop will yield from 130 lb. to 170 lb. of dressed seed. The Danes secure yields far in excess of this, and it was largely due to their large yields that they could afford to undersell New Zealand seed on the London market. In general, the Danish cocksfoot is grown in rows and intercultivated when necessary. The result is that the individual plants grow to great proportions and in consequence yield heavily. Yields of over 6 cwt. per acre are said not to be unusual. As the areas are kept free from weeds, the loss in dressing is not nearly so great as it is in New Zealand. Apart from this, Danish seed is generally larger than that grown here, and the germination is more vigorous. During the past few years very large amounts