

APPENDICES.

I. REPORT OF THE PLANT RESEARCH STATION, PALMERSTON NORTH.

THE activities of the Station have been well maintained during the year (1931-32), and a large amount of valuable work has been performed, as is indicated in the appended reports of the individual Sections.

The work has been carried out partly in co-operation with the Department of Scientific and Industrial Research.

A. H. COCKAYNE, Director.

AGRONOMY SECTION.

J. W. HADFIELD, Agronomist.

I. CROP CERTIFICATION.

The certification of seeds has been extended during the 1931-32 season to include (1) cocksfoot, (2) Montgomery red clover, and (3) Kentish wild white clover, while the basis for certification of New Zealand white clover has been altered from one of "age" to one of "type." Other crops subject to certification are (1) perennial rye-grass, (2) potatoes, (3) brown-top, (4) wheat, (5) beans.

RYE-GRASS.

There has been a considerable increase in the quantity of rye-grass handled during this season. The following table allows comparisons to be made of the acreages entered in the last three seasons :—

Class of Seed.	1929-30.	1930-31.	1931-32.	Percentage Increase of 1931-32 over 1930-31.
	Acres.	Acres.	Acres.	Per Cent.
Mother	1,074	2,300	110
Permanent pasture (eligible as mother) ..	2,383	3,092	3,700	12
Permanent pasture only	279	1,000	260
First harvest	64	1,197	1,800	64
Total passed	2,447	5,642	8,800	55

The testing of rye-grass seed by screened ultra-violet ray, for determination of type, has been introduced by the Seed Analyst, and should to a large extent replace the method of plot-testing hitherto adopted. With the ultra-violet-ray test reports are available in a very short space of time, and a highly satisfactory standardized technique has been developed.

A standard of purity with regard to weed seeds has been adopted during the past season for lines of mother seed rye-grass. Only a few lines have failed to reach the required standard, and these have been regraded to the permanent-pasture class.

POTATOES.

A further increase in the quantity of potatoes finally inspected and tagged was experienced in the 1930-31 season. The figures, together with those for the two previous seasons, are given below :—

Variety.	1930-31.	1929-30.	1928-29.
	Tons.	Tons.	Tons.
Auckland Short-top	390	176	85
Dakota	113	174	96
Auckland Tall-top	73	50	14
King Edward	46	30	2
Epicure	37	13	..
Other varieties	99	68	51
Total	758	511	248

	1929-30.	1930-31.	1931-32.
Crops inspected	363	347	302
Crops rejected on account of rogues	84	23	11
Crops rejected on account of virus	88	26	30
Crops passed field inspection	191	298	261
	=52 per cent.	=85 per cent.	=76 per cent.

BROWN-TOP.

Twenty-five thousand acres of brown-top was certified as free from red-top, and a large area was stripped, producing nearly 200,000 lb. of seed. The excellence of New Zealand certified brown-top is now well recognized overseas, and practically all this seed was exported. It is satisfactory to record that there is still a demand for certified brown-top, despite the introduction by the United States of America (our main purchasers) of a very high tariff on brown-top. On the other hand, there has been a decline in the quantity of uncertified seed exported during 1931.