

MINISTER'S STATEMENT

THE year has seen an intensification of work in all branches of the Department. Increasing assistance in an extremely wide range of problems has been sought by farmers, industrialists, and State Departments. This is but a natural development in view of the extent to which science is entering into every phase of life and industry, and in view of the increasing recognition of the part which research is capable of playing in all aspects of the national welfare and progress. The Department has experienced difficulties in meeting the demand on account of limitation in the number of qualified scientists available and through lack of suitable accommodation, problems which, however, will ultimately be overcome. Anxiety to provide assistance as widely as possible has therefore led to the extension of scientific man-power resources to their uttermost limit, with the result that progress in dealing with some problems has not been as rapid as it would have otherwise been. Nevertheless, the record of achievement in all branches of research activity has been good, and sound progress has been made.

In view of the importance of the world food shortage, research fundamental to the development of the farming industries has been actively pursued. Regional soil surveys have been completed over extensive areas in the South Island and more intensive surveys undertaken for special purposes in portions of the North Island. This work also has been related closely both to soil-conservation and land-utilization problems requiring almost immediate attention. It has been found possible to extend pasture research to hill-country areas and to intensify this work on flat country towards securing higher returns from our grassland resources. Distinct progress has been made in pasture-management research and in the understanding of the nutrition requirements of ordinary pastures. The results of this work when applied in farm practice give promise to enabling still higher yields to be secured from grasslands. In the sphere of arable farm crops, selection and breeding work is proceeding which enables improved strains to be developed and the maintenance of a high-quality standard of seed. The new wheat variety, "Hilgendorf," has provided the Dominion with a grain of exceptionally high protein quality with no loss of yield. A comprehensive study of frost damage has been inaugurated in fruit and horticultural crop areas with a view both to bringing about improvements in frost forecasting and to devising better methods of reducing injury to crops.

Soil and manurial investigations are helping materially in the extension of the tobacco crop and improving its yield. Pioneer work in methods of kiln curing has indicated that distinct improvements are in prospect. Chemical studies of tobacco leaf correlated with quality tests are throwing much useful light on the complex question of smoking quality of New-Zealand-grown tobacco. Research for the hop industry was commenced during the year and a survey of the growing and curing problems of the industry has been made. The resourcefulness shown by tobacco and hop growers in promoting research in their respective industries is to be highly commended and is likely to place these industries on an increasingly sound basis. In the phormium industry, while no new results can be reported upon yellow-leaf disease, which is now the subject of intensified research, much useful new knowledge has been gained on the propagation and management of phormium areas. Unfortunately, through lack of continued study of this valuable native fibre plant in past years, there is a great dearth of sound information now available.

A thorough investigation of new European processes of manufacturing butterfat, in which churning is dispensed with, is being undertaken by the Dairy Research Institute in collaboration with the Department of Agriculture and the New Zealand Co-operative Dairy Co. Fundamental research on the nature of butterfat and changes in its composition during various seasons of the year is yielding much information of real value to the industry.