

increased from 3,600 in 1920 to 132,800 in 1945, or from an average of 1 ewe and 1 dairy cow on 24 acres in 1920 to 12 ewes and 4 dairy cows in 1945.

The increased carrying-capacity of the lower country through the use of fertilizers and other intensive grassland-farming methods has tended to mask the regression or stationary position on much of the hill country devoted to extensive pastoral farming. Up to the present the regression generally has not been very serious, but may become so if present tendencies are not halted. Over large areas, especially in the North Island, the application of some of the principles of intensive grassland-farming methods such as the introduction of clovers and light top-dressing, an increase in the proportion of cattle to sheep grazed, and the control of erosion by the stabilization of land in gullies with debris dams and spaced planting to help to control slumping of the land are necessary to conserve and increase the fertility and carrying-capacity of hill-country grazing-lands.

Wheat-production.—During the 1945-46 and 1946-47 seasons surveys have been conducted in Canterbury to collect data on wheat-production practices and yields to determine whether the survey method could be used to measure the mean yields for particular soil types, the influence of prior crop on yield, and the influence of cultivation, rate of seeding, and time of sowing on yields. An examination of the data collected for the 1945-46 season indicates that the period under which the land had been in crop was the most important factor influencing yield; differences in yield due to various rates of seeding, cultivation, and dates of sowing showed no definite trends. It is expected that these surveys of management practices and yields will provide data of great value in elucidating some of the economic problems of wheat-production by providing information on the yields to be expected on each main wheat soil, and the variation in yield depending on the place in rotation and intensity of cropping.

Vegetable-production.—A survey of commercial vegetable-production has been carried out with the assistance of the field officers of the Horticulture Division, and the data are now being tabulated. The survey shows the very specialized nature of commercial vegetable-production, and how the production of even the common vegetables is concentrated in very restricted localities. This specialization in production makes it desirable that land-use policies should be formulated to conserve market-gardening land and prevent it being absorbed in urban development, for, contrary to general opinion, the area of land suitable for vegetable-production, especially for early spring vegetables, is very restricted.

Land Use.—As a preliminary to more detailed studies of land use, work has been done in dividing the Dominion into farming regions and tabulating available data on farming applicable to each region. A preliminary report on this work is now nearly ready for publication.

AGRICULTURAL DEVELOPMENT COMMITTEE

In view of the fact that land development and reclamation works cannot progress at present through lack of many essential materials, the type of work planned for the Agricultural Development Committee has had to be held more or less in abeyance, and the Department, in advising on farm-development policies, has worked through the Farm Advisory Committee of the Rehabilitation Board and the Land Development Board of the Lands Department. Reports on the development of the fruit industry prepared for the Agricultural Development Committee have consequently been passed on to the Farms Advisory Committee. The proposal for bulk distribution of lime outlined in last year's report is being put into operation by the Railways Department, which is erecting a trial silo and bulk handling plant at Winslow (Ashburton) in co-operation with a local firm of cartage contractors.

FARM MANAGEMENT AND ECONOMICS

Considerable field-work has been undertaken in connection with cost-of-production surveys for city milk, wheat and other cereals, and potatoes. In addition, basic