the paddocks and provide sufficient feed to carry stock through to the end of May and roughage for a runoff from the turnips. The most critical period of the year is the month of September, when there is sometimes a break between the last of the turnips and the start of the spring grass growth. Usually there is good sheep feed towards the end of September and good cattle feed about a fortnight later.

The annual rainfall varies from about 50in. along the coastal area to 35in, around Winton and is fairly equitably distributed. The climate, in general, is one that favours stock farming. If it should let the farmer down at one season, it usually compensates him later.

Southland land cannot stand prolonged dry weather without the feed position suffering. Ideal summer conditions are experienced when there is just enough rain to keep the grass growing and sufficient sunshine to harden the growth for the fattening lambs.

## Dairying Season

The dairy factories open on September 1 in the Edendale district and usually about a fortnight or three weeks later in less-favoured districts. Supplies are small in the first month, as usually there is not much grass growth for cows before October.

The production per cow in Southland as compared with that of the South Island as a whole and the per cow production of cows in the North Island are shown in table III.

 TABLE III—PER COW PRODUCTION

 IN SOUTHLAND, NORTH AND

 SOUTH ISLAND, AND DOMINION.

|                | 1940-41.<br>Ib.<br>butterfat. | 1941-42.<br>Ib.<br>butterfat. | 1942-43.<br>Ib.<br>butterfat. |
|----------------|-------------------------------|-------------------------------|-------------------------------|
| Southland      | 215.4                         | 215.5                         | 212.0                         |
| North Island   | 234.9                         | 217.4                         | 207.6                         |
| South Island . | 206.0                         | 208.0                         | 203.0                         |
| Dominion       | 232.1                         | 216.6                         | 207.2                         |

## Winter Feeding

The dairying season usually ends about the end of May, or early in June, after which special feed must be provided to carry stock through the winter and early spring, up to the end of September. The basis of winter feeding in Southland for cattle, as well as for sheep, is the swede and yellow turnip crop, with some chou moellier, kale, and soft turnips. Swedes grow exceptionally well in Southland; in fact, one might almost say too well, because in the past the practice has been, and still is on many farms, to take advantage of the facility and the cheapness of growing this crop, to rely solely on the swedes, with a run-off for winter feeding.

An increasing number of farmers, however, are discovering that an unbalanced turnip diet, supplemented with nothing better than a run-off on roughage, is not sufficient foundation for the high production that can be expected from the province's stock and pastures.

The following data sets out the winter feed position for the 1941-42 season in the Southland and Wallace Counties:—

| Swedes      |     | 31,832 | acs. | Other gro | en |        |      |
|-------------|-----|--------|------|-----------|----|--------|------|
| Turnips     |     | 59,194 | acs. | fodder    |    | 167    | acs. |
| Mangolds    |     | 270    | acs. | Hay       |    | 31,158 | acs. |
| Kale and ch | iou |        |      | Silage    |    | 583    | acs. |
| moellier    |     | 11,067 | acs. |           |    |        |      |

The winter feeding practice in Southland is fundamentally different from the standard North Island practice, which depends largely on hay and silage. On the basis of two tons of hay per acre, the amount of hay saved in Southland is sufficient to provide a ton of hay for every dairy cow, leaving nothing for the young replacement stock and nothing for the province's 2,635,288 sheep. It is probable, however, that most of the straw from the 18,000 acres of oats threshed is used for cattle fodder in the earlier part of the winter. Over the war period there has been a large increase in the use of hay-making machinery, and, as Southland is pre-eminently a grass-farming province, it can confidently be expected that the use of such machinery will extend and that the saving of hay will become an increasingly popular feature of farming practice in Southland.

It will be noticed also what a small part silage plays in saving the province's surplus spring grass growth for periods of scarcity. Although often enough at hay-making time in December the weather is rather unsettled and favours ensiling rather than haying, a factor which must be accounted in some measure, at least, responsible for the usual belated adoption of hay-making, silage is not likely to increase in popularity. This is because hay rather than silage is required as a complementary feed to the turnips and that, because of the much larger provision of winter feed in the form of roots necessary in Southland and the relatively smaller spring-time flush of pasture growth in the southern province as compared with North Island dairying districts, it is not possible to enclose as large a proportion of the pasture area to provide both silage for the maintenance of autumn production and hay for winter feed.

## Edendale Dairying District

The Edendale district, widely known as the stronghold of the dairying industry in Southland, is situated in the Mataura River valley, on the west side of the river between Ota Creek on the main highway, 2 miles north of Edendale, and Seaward Downs, about 41 miles south of Edendale. On the west it is bounded by the low chain of hills running in a southwesterly direction two miles west of Edendale township, which is the thriving centre of the district, with an important industry of its own in the Dairy Products Company, which draws the whey supplies from a group of six cheese factories.

In its widest sense the Edendale district is usually taken to include the smaller district of Menzies Ferry as well. A strip of land of similar type lies across the river around Wyndham, south of which, down the

