AN INTRODUCTION TO TARANAKI

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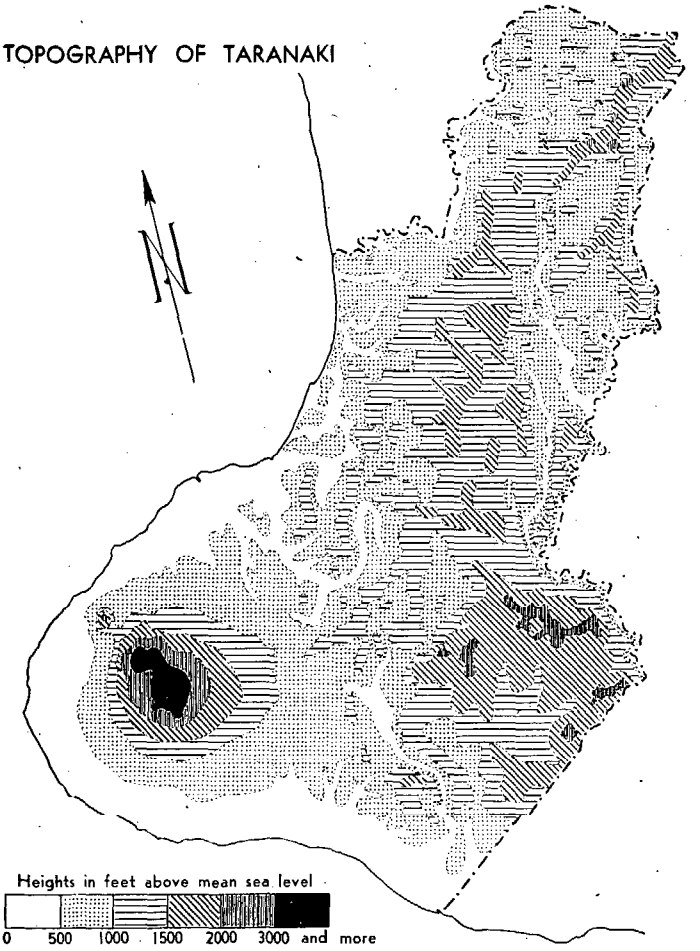
Definition of the area. The Taranaki district, as covered in this paper, comprises the Taranaki, Egmont, Inglewood, Stratford, Eltham, Waimate West, Hawera, Patea, Whangamomona, and Clifton Counties. Dairying predominates in the first seven counties mentioned; in the last three sheep farming is the more important.

Area occupied and production. The total area occupied in the district is 1,440,000 acres, of which 990,000 acres are in grass; 16,000 acres are in crop; 6000' acres are in plantations, etc., while 420,000 acres comprise unimproved land. Altogether about 240,000 cows are milked in the district, and 700,000 breeding ewes are run.

The average size of holdings varies widely between counties. In the Waimate West County, which is an intensive dairy-farming area, there are 439 holdings of an average size of only 114 acres; in the Whangamomona County, which is mainly steep hill country, there are 136 holdings with an average area of 1053 acres. There are approximately 5100 holdings 'in Taranaki on which cows are milked. There are, however, only about 3000 holdings which can be classed as straight-out dairy farms, that is, those on which 40 cows or more are milked. In the Taranaki, Stratford, and Inglewood Counties the greatest number of holdings in any group is that in which from 40 to 50 cows are milked: in the Egmont County by far the largest group is that in which over **100** cows are milked. Today sharemilking is more common in the Egmont County than in any other part of Taranaki.

Topography: For convenience Taranaki can be divided into three topographic regions.

1. North and north-east. uplands: Aithough called uplands, the area is of relatively low altitude, but the broken nature of the surface gives it a very rugged appearance. Inland from, the coast the hills



rise gradually from approximately 700ft. to nearly 2000ft. on the eastern edge of the region which merges into the Central Volcanic Plateau. Some of the hills are very steep and at the base meet in narrow V-shaped valleys; other are of a more gentle slope with some intervening flat areas between the slopes. About 15 to 20 miles inland from the coast the Damper Range forms the eastern watershed of the rivers draining to the west coast; from the eastern slopes tributaries of the Wanganui River drain the eastern part of the region.

2. Egmont or Western Taranaki : Here Mount Egmont (8260ft.) is the dominating and central figure. Circling it and the Puakai Range there is a ring plain. This plain covers the main dairying land of Taranaki. However it must not be likened to such flat areas as the Canterbury or Heretaunga Plains, for it is gentle to easy rolling country, varying considerably in altitude, and very broken by streams. These streams, which flow down from Egmont and the Puakai Range, form a radial pattern which is a distinctive feature of the country.

Between Mount Egmont and the sea in a northerly direction are the Puakai and the Kaitaki ranges.

From south of Okato to Opunake a dominating physical feature is the large number of conical hills, ranging in height from a few feet to approximately 40ft. and with a number of swampy hollows in between.

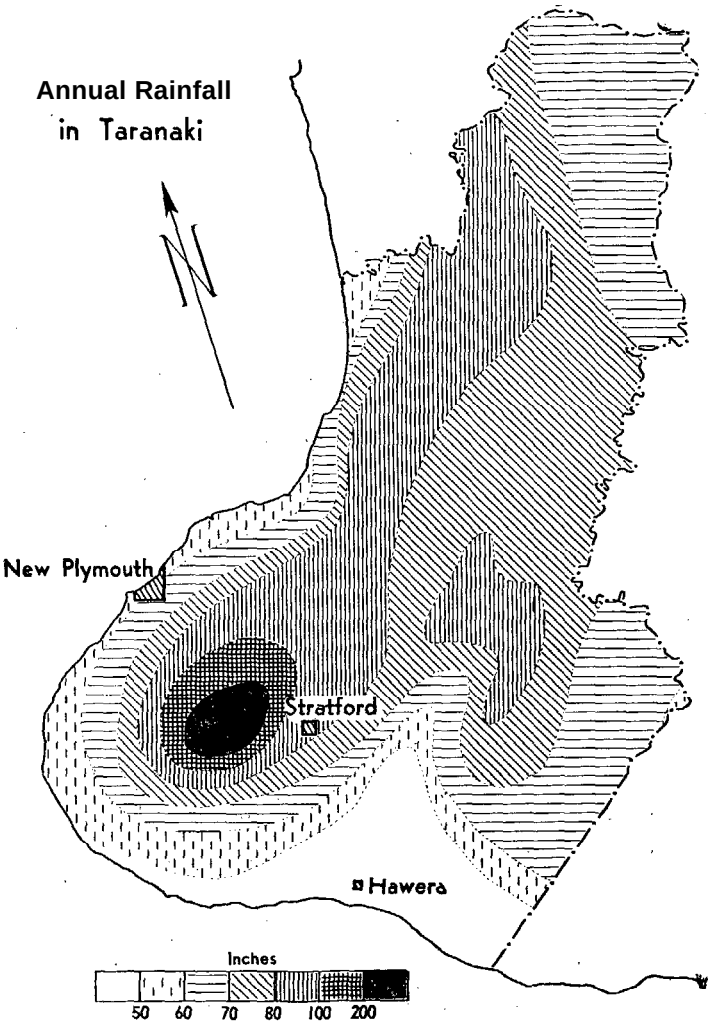
3. Eastern and south-eastern upland: This is the highest of the Taranaki back-country, practically all of it being between 1000ft. and 2000ft. altitude, while some is over the 2000ft. mark. It is very broken, much of it is still in bush and the area is deeply dissected by streams.

Climate: Taranaki has a maritime climate, being directly exposed to the prevailing north-westerly winds coming in from the Tasman Sea.

Mount Egmont has a dominating influence on the climate of the district. The annual rainfall is indicated on the map, which shows up clearly the increased fall on the upper slopes of the mountain where the fall exceeds 200in. The annual rainfall on the coastal section of the district is between 45 and 60in.; at New Plymouth it is 60.6in. and at Cape Egmont 56.7in. Hawera receives an average of 45in. In the northern and eastern upland the annual fall ranges from 60in. on a narrow coastal section to between- 70 and 100in. over the remainder of the area.

Rainfall is well distributed. February generally is the driest month; May, June, and July are very wet, with a falling off in August. This decline is checked in spring owing to rains brought in by the westerly winds which are frequent at that season. These heavy and frequent spring rains are very important in getting the pastures away to a good start. Summer rainfall is not so reliable, but there are seldom severe droughts.

At New Plymouth the mean daily temperature ranges from 48.6 degrees F. in July to 62.7 degrees F. in January.



Frosts are not severe and few are recorded here in a year. In inland districts the mean temperature range is much greater and severe winter frosts are common.

The prevailing winds are from the north and north-west. Southerlies and south-easterlies are also fairly frequent. These winds bring rain to the southern section of the area as far north as Stratford, but the remainder of the district, including the coastal area

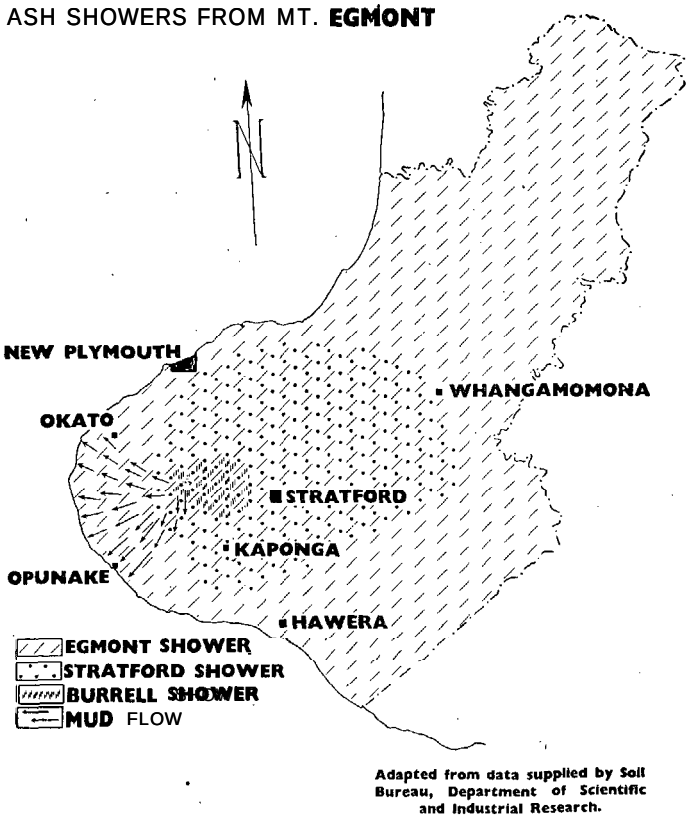
north of Opunake, , seldom receives rain from this quarter. However? these winds are very cold and frequently give a decided check to pastures and are thus an important climatic factor affecting production. A temperate climate with adequate, well-distributed rainfall has been a major factor in the development of Taranaki as one of New Zealand's major dairying districts.

Soils: The soils of Taranaki can be divided into two broad groups:-

(1) The volcanic soils of Western Taranaki.

(2) The steeper papa-sandstone country of Eastern Taranaki. ,

The volcanic soils are derived from ash erupted from Mt. Egmont, and three main ash showers are recognised.



Adapted from data supplied by Soil Bureau, Department of Scientific and Industrial Research.

(a) The Egmont Shower, which covered the whole of the Taranaki Province.

(b) The Stratford Shower, which overlies the Egmont Shower for about 25 miles north, east, and south of Mt. Egmont. It extends less than 10 miles to the west, no doubt owing to the prevalance of the westerly winds during the eruptive period.

(c) The Burrell Shower covers the Stratford Shower for 8 to 9 miles east and south-east of Mt. Egmont and is estimated to have been erupted less than 500 years ago.

In addition to differences due to the parent ash shower, soil differences arise from variations in vegetation or climate. For example, along the coast the native vegetation was fern and coastal scrub and the soils are black. Further inland where native forest covered the land soils formed from the same material are brown. In higher rainfall areas soils are more leached and form separate types from those where rainfall is lower.'

In the area from Okato to Opunake the ash fell on the hilly and hummocky land formed by gigantic mud-flows which had come from the mountain and during soil formation some of the underlying material has become mixed with the ash to produce bouldery soils.

In the east of the district there is a belt of easy rolling country covered with a thin layer of soil derived mainly from Stratford ash. This gradually extends eastward into steep hill country, only on the easy slopes of which is there any volcanic soil.

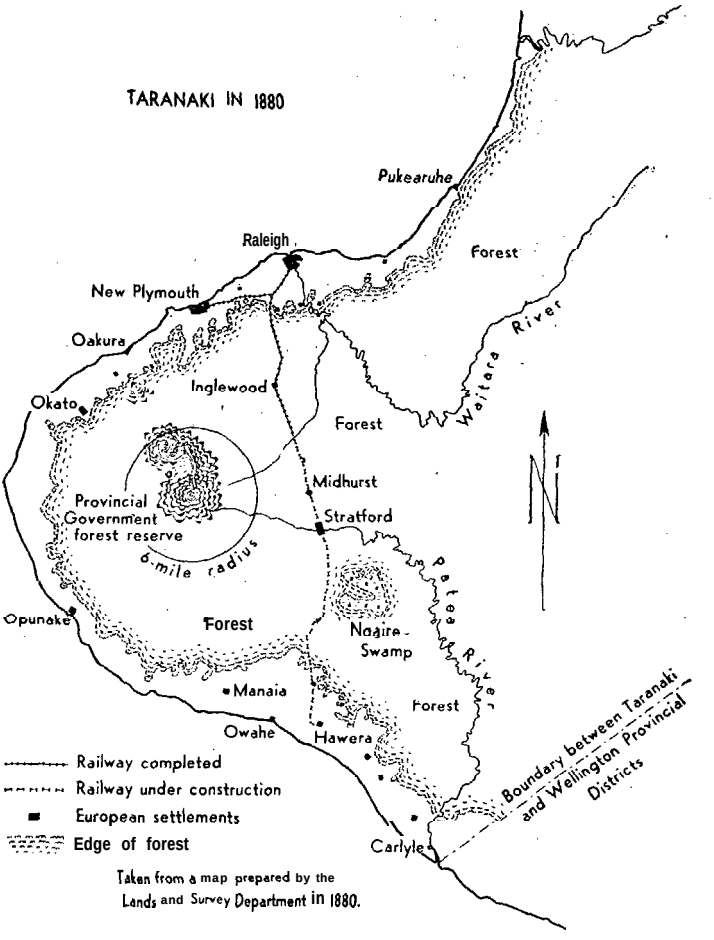
The steeper hills are mainly composed of papa or sandstone. Soils on the valley flats have been formed from material washed off the hills and deposited by streams.

In the Tariki, Stratford, and Eltham districts there are areas of peat soils with a permanent high water-level. They are formed from a mixture of partly decomposed organic material and volcanic ash.

The subsoil of most of the volcanic soils is quite porous and the soil is therefore naturally well drained. Exceptions are the peat soils just mentioned and the heavy swamp soils in the Rahotu-Oaonui, Pihama-Kapuni, and Tariki-Inglewood areas. Extensive iron pans occur in these areas 2 to 3ft. below the surface.

HISTORY AND DEVELOPMENT OF FARMING IN TARANAKI

First Settlement: The first settlers arrived at New Plymouth on 31 March 1841, and they immedi-



ately commenced to clear the scrub and bush and establish their homes.

The Maori Wars: Relations between the white settlers and the Maoris were quite good and development was carried out systematically and smoothly until 1860, when war broke out as a result of disputes over land titles. Peace finally came to the province in 1869.

The Maori wars caused a serious setback in the early development of the district. Settlers had lost their homes and stock and people were still nervous of further Maori attacks. Heavy confiscations of

native lands followed, however, and the major development of Taranaki began at this time. From about 1869 the occupation of land advanced both from north and south along the railway line being built between New Plymouth and Hawera. The site where Inglewood now stands was opened up and the first sections sold in 1877. The first public sale of land on the Waimate Plains was held in Hawera in October, 1880. Prices at that time ranged from £4 per acre for open land to £1 10s. to £2 per acre for bush land. The railway from New Plymouth to Hawera was officially opened on 20th October **1881,** and the line from Wanganui to Hawera was opened in March 18.85.

From these early beginnings the development of, Taranaki soon began to proceed fairly rapidly.

THE DEVELOPMENT OF THE DAIRY INDUSTRY

The first cow in Taranaki was owned by' Mr W. Henwood in 1842, but it was not until the 80's that dairying really became established. In the early years of settlement the main cattle were a dual-purpose type and the Shorthorn breed was the most popular, its influence being felt until well into the present century. The popularity of the, Jersey breed increased with the growth of the dairy industry.

The industry had a perilous beginning. Before the establishment of factories butter was made on the farm and was not sold for cash, but had to be exchanged for goods at the local store. It is therefore interesting to recall that it was fungus and not dairy produce which provided the means of keeping many Taranaki dairy farmers on their holdings between 1875 and 1885. A Chinese, Chew Chong, recognised the fungus growing in the bush as similar to an edible fungus greatly prized in China as a vegetable. He therefore established a trade in fungus (known as "Taranaki wool'!) with his native land and this in the year 1885 brought in $72,000 to the province-more than the total value of butter shipped in that year.

Dairy Factories Established: The first dairy factory in Taranaki was established in 1882 or 1883 when Mr Alfred Brake opened a private factory at Lepperton. Mr Brake collected the milk himself from nearby farmers.

The Moa Dairy Company's factory at Inglewood was the first co-operative concern of its kind in Taranaki, and it commenced operation in May 1885. The Opunake Dairy Company also opened a factory in

1885. -Although Taranaki was fairly late in the field with dairy factories, it later became for many years the leading dairying district.

Decline in Fertility: Within a- few years of the clearing of the bush and the establishment of dairying, farmers noticed with concern that the pastures they had established and which flourished in their early stages were beginning to open up and allow flatweeds to come in, with consequent reduced production.

The second phase in the development began with the stumping, logging, and ploughing of the land. The ash from the burning of logs and stumps gave the grass the added stimulus required to once again establish good pastures. Deterioration again became evident after a few years and artificial fertilisers were used in an effort to arrest this. Bone dust, blood and bone, and later basic slag and imported superphosphate were used with outstanding success.

Cropping became popular as logging, stumping, and ploughing proceeded, and although virgin land produced excellent crops without the use of fertilisers, it was soon found that a dressing of 1cwt. per acre of phosphate greatly increased the yield of crops.

Although. the depletion of fertility was to some extent arrested by the use of fertilisers, weeds such as blackberry, ragwort, and flatweeds began to invade pastures and gained a ready foothold around stumps and logs and along banks of creeks. This problem increased, to an alarming extent on the lighter, wetter parts of the district, more especially in North and Central Taranaki. The farmer's ability to 'cope with this problem has depended largely on prices received for his produce.

During the last 25 years the butterfat production of Taranaki has increased from 40,000,000lb. in 1924-25 to 66,000,000lb. in 1949-50, an increase of 65 per cent. Here, as in most dairying districts of the North Island there has over this period been a decrease by half in the area sown in crops. At the same time the quantity of artificial fertilisers applied has increased by over 100 per cent. and there has been nearly 100 per cent. increase in the area cut for hay and silage.,

More recently further increases in production have resulted from more intensive grassland farming, by the use of small paddocks for normal grazing and the extensive use of the electric fence for rationing grass in the early spring.

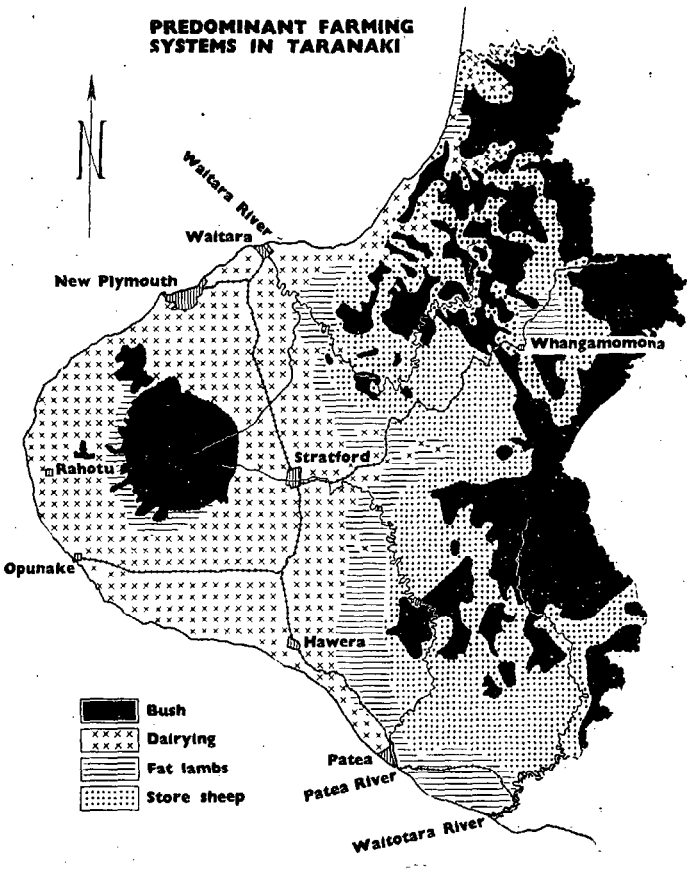
The development of the hilly country to the east of the Taranaki "plain" did not commence until about 1895, and its progress was slower and the difficulties of settlement were many.

It is interesting to note that the early surveyors of, this vast, very broken, densely bush-covered area followed the old Maori tracks. The most northerly of these left the coast just north of the White Cliffs and followed an easterly direction along the forest ranges, coming out on to the Wanganui River at Koiro. About 1882-84 this route was reopened by the Government surveyors. Another track ran from Urenui to Tikorangi and Tarata, following what is now the Junction Road to Purangi, thence to Matau, and east to the Wanganui River.

The first surveys in the country east of Stratford began about 1888, but it was not until 1892 that the town of Toko was formed with a store, blacksmith's forge, and a hotel. By 1895 the East Road had reached Pohukura, and three years later it was taken over a difficult saddle into the Whangamomona township, where. in 1895 the first ballot for sections had been held.

The Whangamomona area was subdivided and settled originally under the Whangamomona Improved Farm Settlement, sections being given to men with limited capital who felled and cleared their sections and worked. on the roads. Settlement preceded road access and settlers had to get in to their holdings by means of bridle tracks through dense bush. The settlement of'other areas in the back country followed a similar course. There were naturally many disappointments and many failures, but the achievements of farmers in the, back country of Taranaki have shown how well they. did their job in the face of untold difficulties. Those early settlers who are still alive have a great faith in' the future of the country.

Of the first year's progress of the Whangamomona Improved Farm Settlement, the annual report of the Lands and Survey Department for 1895-6 states: "948 acres felled in 1895 is now in grasses, None of the selectors have as yet erected houses, but some are prepaiin'g to build. No stock has as yet been taken on the land and the settlers, being all poor men, will. have' difficulty in providing stock for their clearings." The next year's annual report stated : "64 houses have been built, valued at $1,370" . . . "also a large number--over



three hundred head-of stock. is now running on the settlement, a fair proportion being cows."

Store sheep and cattle have been the main support of the settlers in this eastern hill country, but some have milked cows as well, and have had good results from milking on the fertile flats along the main road and in the valleys. Fat-lamb raising has been developed to an important industry in the easier country bordering on the dairying country to the west.

MISCELLANEOUS

Farmers in Taranaki are well supplied with facilities for disposal of their produce, and communications are good.

There are two large freezing works, one at Waitara and one at Patea; there are two bacon factories at Hawera and Eltham. The total output of these works is approximately 45,000 beef carcasses, 192,060 calves, 176,000 sheep, 667,000 lambs, and 98,000 pigs.

There are 104 dairy factories producing 53,000 tons of cheese and 13,000 tons of butter. A sugar of milk factory at Kapuni produces as a by-product of the dairy industry about 1,500 tons of sugar of milk annually and, a rennet factory at Eltham is one of the largest of its kind in the world and supplies a world market with its product.

A fertiliser works at New Plymouth produces 120,000 tons of superphosphate annually.

For all these facilities a well-developed system of communications is necessary. Roads generally are good, although poor access for back country farmers has been responsible for the abandonment of a considerable area of quite good land over the years.

A railway line from Wellington to New Plymouth and Waitara and a line from Stratford to Taumarunui give the district ample contact with outside areas. New Plymouth is an important coastal and overseas port, handling over 360,000 tons of shipping annually. The development of the port has been carried on side by side with the development of the farming industry in Taranaki, as can be seen from the fact that the bulk of the export tonnage is dairy produce and that more cheese is exported from New Plymouth than from any other port in New Zealand.

The conversion of thousands of acres of dense native forest to fertile dairy farms calls for a-tribute to the fortitude of the/early Taranaki settlers and their monument is the present production of nearly 53,000 tons of cheese, which is 48 per cent. of the Dominion cheese production, and 13,000 tons of butter and a production per cow of 2691b. of butterfat, higher than that of any other land district in the Dominion.

DISCUSSION

Q. Can you explain the rapid rise in production tip to 1940-41 and the smaller increase in the period 1941-51?

A. Up to 1935 topdressing was increasing rapidly. Owing to the better prices being received, farmers were able to spend more money on fertilisers, and by 1940 fertility had been built up to a high level. Also up until that time labour supply on farms generally was good. When war came, supplies of phosphate became very short and potash was in very short supply;

labour became scarce also. Production therefore dropped considerably and as it is necessary to apply four to six hundredweight of phosphate per acre to build up fertility and one hundredweight of potash, it was difficult to catch up with pre-war production. Production is again rising more rapidly however.

Q. Is full use being made of pedigree grasses and clovers, especially in sheep country?

A. During the past 4 to 5 years there has been a marked increase **in** the area ploughed and sown in new pastures, using improved strains of grasses and clovers. However, this could not be attempted on. a large scale without ample fertiliser as it was generally recognised that ploughing and resowing without ample fertiliser was largely a waste of time and money. The sheep population of Taranaki is increasing and sheep farmers are making use of new strains in their mixtures.

Comment from Mr C. Iversen: Referring to the downward trend -of production in the last 10 years: in Canterbury the trend is the same. It is said that some of our dairy land could produce 5001b. of fat per acre. It is our duty to increase production to help reduce a world food shortage. There should not be a decline in production in view of the availability of fertiliser and machinery and we should examine the reason for lack of progress in the past 10 years.

Comment from audience: Sheep numbers have increased in Taranaki even though dairy production has declined slightly. I think it is a matter for concern that the stock mortality rate in all districts of the North Island appears to be rising rapidly.