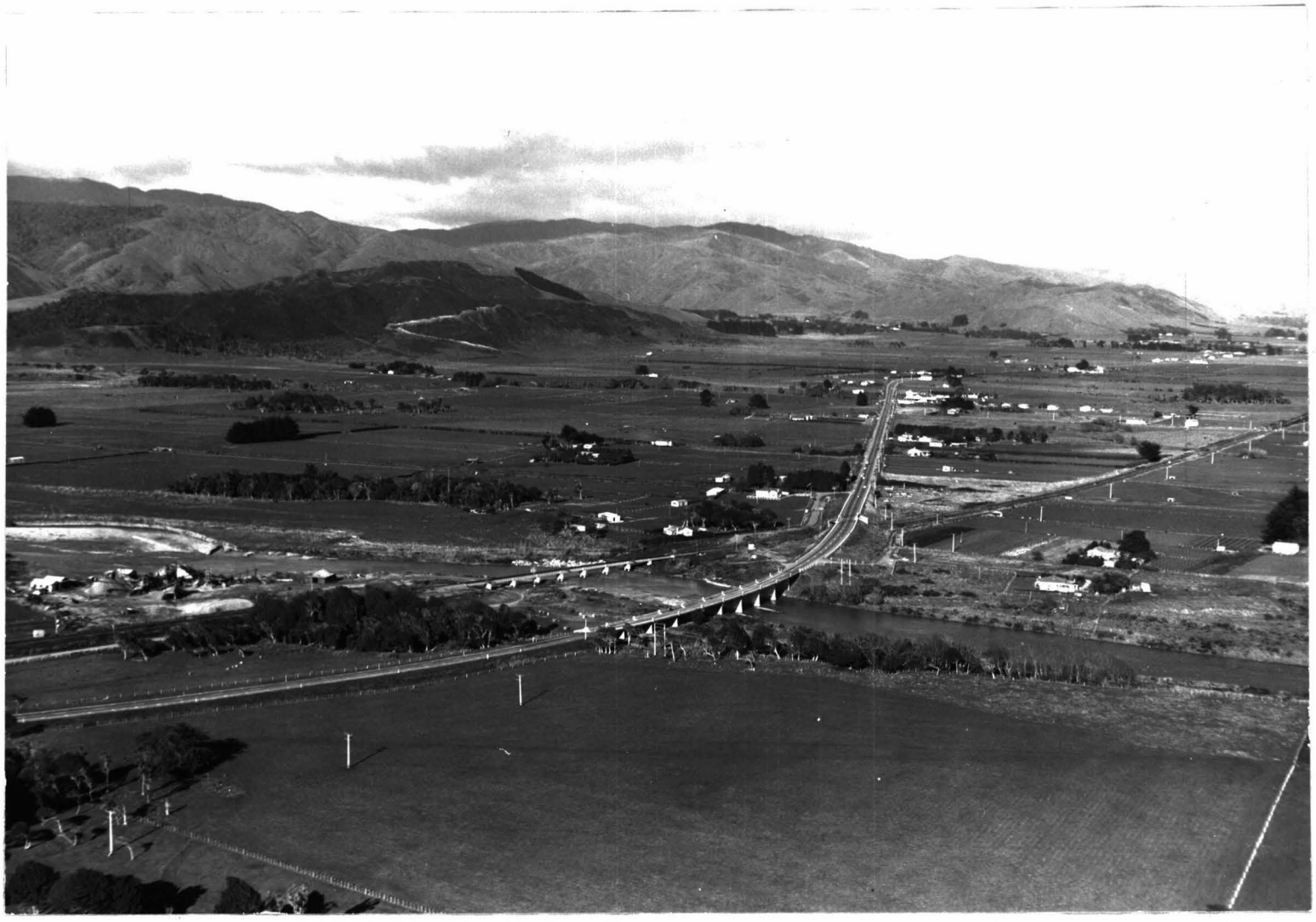

FRONTISPIECE

Central Kuku - looking south to Wellington city.
Ohau River in foreground.

Source:
National Publicity Studios

JOHN RODFORD WEHIPEIHANA

SEQUENT ECONOMIES IN KUKU
A STUDY OF A RURAL LOCALITY
IN NEW ZEALAND

SUBMITTED FOR THE DEGREE OF

MASTER OF ARTS

IN

GEOGRAPHY

VICTORIA UNIVERSITY OF WELLINGTON

NEW ZEALAND

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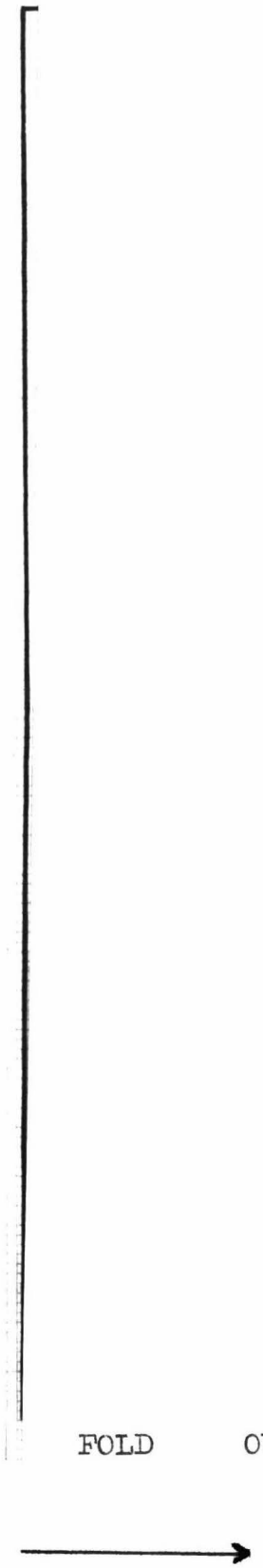
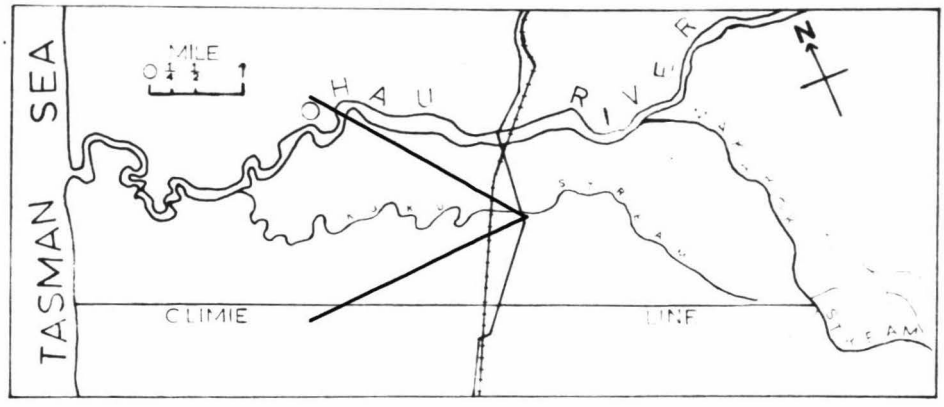
<u>Note</u>: Sketch maps accompanying photographs indicate (where applicable) point from which each photograph was taken.


FOLD OUT

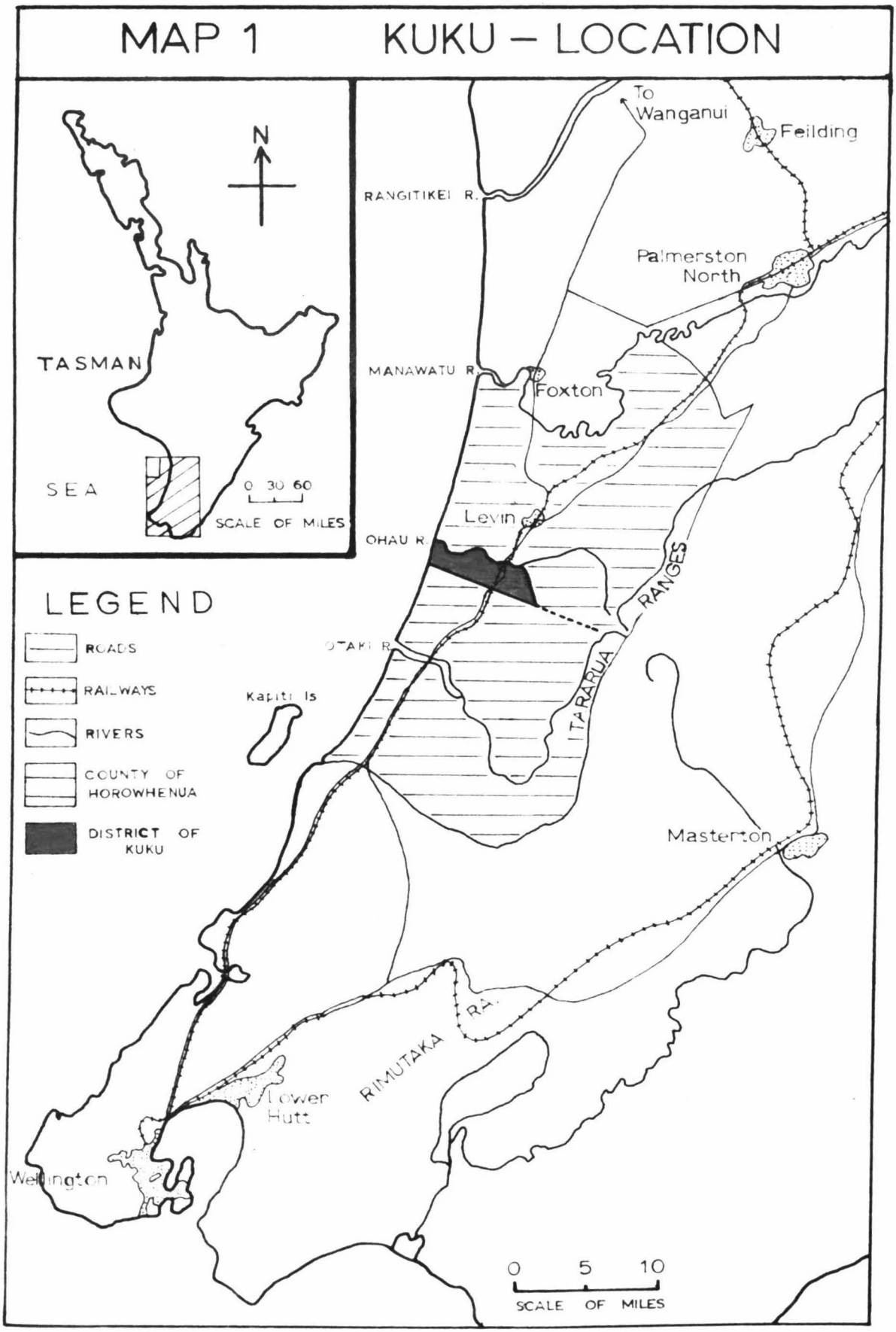
INTRODUCTION

Today, the majority of travellers journeying in the North Island of New Zealand, from Wellington to points north, e.g. Palmerston North or Wanganui, travel the length of the Horowhenua coastal plain, which sole routeway is bordered by the Tararua foothills to the east and by the Tasman Sea to the west. At a point some 52 miles north of the capital city and approximately 4 miles south of Levin, the motorist passes over a white bridge near which stands a dairy factory, and at a distance, a Maori meeting house. At the end of the mile-long stretch of State highway, an elevated by-pass affords a view of fenced paddocks, closely-cultivated fields, a railway line and a river. (See frontispiece.) As such scenes are common on many lowland pockets of the North Island of New Zealand, they mean little to the average traveller who crosses the Ohau River and pursues his northward course.

But to the 412 inhabitants (1961 census) of the closely-knit farming district of Kuku - area 11.8 square miles - See Map 1 (Location map, p.1a) such features are of great significance. To the 130



Economic focal point of Kuku - the dairy factory in front foreground. Note the adjacent workers' houses and the coast-line in the distance.


MAP 1 KUKU – LOCATION
N
TASMAN
SEA
0 30 60
SCALE OF MILES
To Wanganui
Feilding
RANGITIKEI R.
Palmerston North
MANAWATU R.
Foxton
Levin
OHAU R.
RANGES
ITARARUA
OTAKI R.
Kapiti Is
LEGEND
ROADS
RAILWAYS
RIVERS
COUNTY OF HOROWHENUA
DISTRICT OF KUKU
Masterton
RIMUTAKA RA.
Lower Hutt
Wellington
0 5 10
SCALE OF MILES

COMPILATION DATA AND NOTES ON MAP 1
(KUKU - LOCATION)

Source: N.Z.M.S. 19 Sheet 4 1951
Scale: 1:500,000
Cook Strait. 2nd Edition.

To the north, Kuku is bounded by the Ohau River; to the east by the Makorokio Stream and the foothills of the Tararua Ranges; and to the west by the Tasman Sea. The boundary to the south is artificial. It appeared on the first surveyed map of the district Climie (1879) has remained unchanged since that date, and is henceforth referred to by the author as "the Climie line". This boundary was recognized by both Maori and European when it was laid down, and has continued to be accepted by both races. It was taken as a mesh block boundary by the Department of Statistics in 1911 and has been retained despite all other mesh block changes. The line marks the southern boundary of Whirikino Riding of Horowhenua in which county the Kuku district is located. Residents of the Manakau district to the south, both Maori (Wehi-Wehi sub-tribe) and European, regard this line as their northern boundary.

The term "Horowhenua" as used in the text refers to the low-lying land between the Tararua Ranges to the east; the Tasman Sea to the west; the Manawatu River to the north; and to the south, from an arbitrary line extending from Kapiti Island inland to the Tararua Ranges. (See map.) Although it is a county, the "Horowhenua" is considered locally to be as much a geographical expression as an administrative unit.

Maori residents (1961 census) the Maori meeting house is a symbol of social solidarity, while to the 32 dairy farmers (5 of whom are Maori) the dairy factory represents the focus of their economy - dairying for town milk supply. See diagram 1. (Cross-section of land use in relation to soil types p.2a.) The dairy farmers realize, as do the 12 Chinese operators whose closely-cultivated fields are devoted to market gardening, and the 2 Maori and 5 European sheep farmers the majority of whose Romney-cross flocks graze the Tararua foothills, that the productivity of the district is due chiefly to the fertility of the local river-borne silt, and to the mild, moist climate of the district. (Levin, a township four miles north of Kuku, experiences a mean January temperature of 61°F, a mean July temperature of 47°F and receives approximately 43.1" rainfall annually; compared with the respective figures for Wellington of 61°F, 46°F and 49.2".) [1] Natural advantages of Kuku are enhanced by excellent road and rail links to nearby markets.

Such cultural features of the present landscape provide a clue to the past. In this study of changing economies in Kuku, it was observed that the

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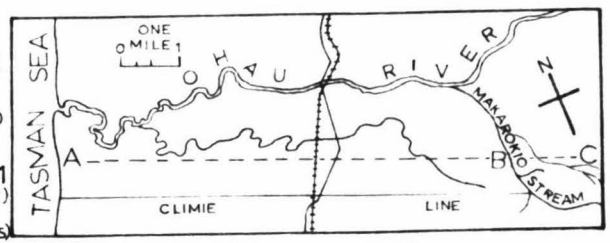
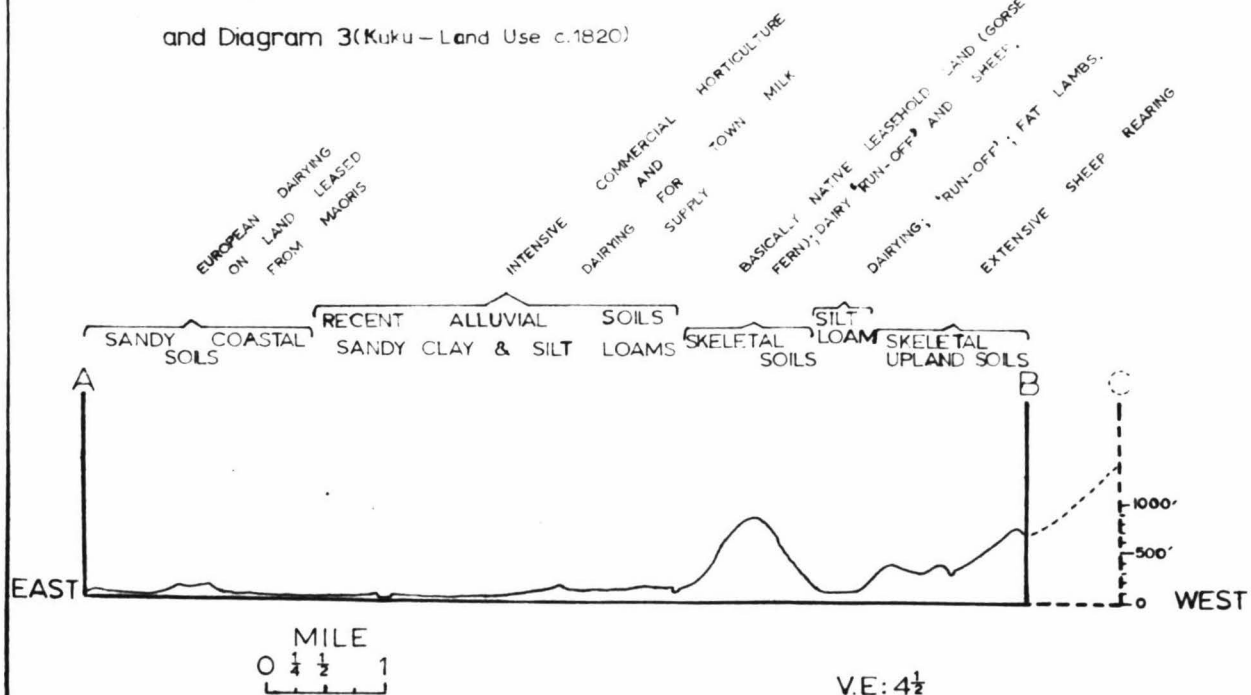
[1] Source - New Zealand Meteorological Service, Wellington.

DIAGRAM 1

KUKU LAND USE IN RELATION TO MAJOR SOIL TYPES

N.B. The line A----------B---C on the accompanying sketch map is the horizontal base for Diagram 1 (below) for Diagram 2 (Kuku-Geological features) and Diagram 3 (Kuku – Land Use c.1820)





district experienced many of the phases through which much of rural New Zealand has passed. The extensive subsistence economy of the early nineteenth century indigenes was changed by four successive phases of European influence. The first of these was represented by the post-1820 introduction of new crops, particularly the potato. This hardy, high-producing food plant gave a decided technological advance to traditional native agriculture.

The second phase, initiated by the construction of the Wellington-Manawatu railway line through Kuku in 1884, witnessed a further change in the basis of resource utilization in the district. The sawmillers, bushmen, contractors, labourers and farmers who accompanied and followed the railway brought with them axe, saw and a bush-burn technique - and an attitude to land based on European commercial farming attitudes and practices.

The third phase - the application of refrigeration and of refrigerated transport in the 1890s, inaugurated for New Zealand a prosperous period. In this phase of semi-extensive farming, production was oriented towards a now-accessible United Kingdom market. Progress in New Zealand was encouraged by an end-of-century Government which provided scientific advice, also State credit, e.g. the "Advances to Settlers Act" 1894.

In the period prior to, and immediately following the First World War, the "500-600 acre" bullock and sheep-farming estates which had been developed in Kuku, were sub-divided. This was the fourth phase of European influence, beginning because sub-division led to a change to a more intensive form of land utilization, that of dairying. In 1913 a creamery was established - the era of dairy farming had arrived.

Since the 1920s, closer settlement in Kuku of houses and farms, improvements in the quality of stock carried, and the increased use of fertilizers, have served to quicken the pace of land utilization. Contributing factors were the advent of a water-race system which enabled stock to be watered, the inauguration of herd-testing and the introduction of electricity. Constant improvements in agricultural machinery and improved strains of grasses and clover seeds enabled further intensification of land use. But the final phase, although one largely of consolidation, was not without modification; for the mid-1920s, and more particularly, the depression of the 1930s, witnessed in Kuku the introduction and temporary expansion of Chinese market gardening. Today, Kuku has its agriculture geared closely to the demands of the New Zealand urban consumer.

But the influence of local markets on the Kuku economy is tempered by the fact that two-fifths of the district is communally owned by Maoris. The results of multi-ownership which face the native owners and the European lessees of Maori-owned land in Kuku is not solely a local phenomenon, nor are its problems confined to New Zealand, as is evidenced by the parcellement of France, the minifundia of Italy and the ejido system of land holding in Mexico. Highsmith (1961 ii). Kuku, while it has developed with the rest of New Zealand, has not responded to the full, because of the retarding effect of this communal tenancy and land fragmentation.

Kuku, a small, little-known district of 7,557 acres, is not well-documented as are Wairarapa, Taranaki and other well-known major New Zealand districts. The writer has had to rely largely on the technique similar to that of the historian Petersen (1956), that is, by interviews and mapping in the field. Chapter one is based on Maori tribal information handed down by word of mouth to selected successors. This section of the thesis had to be interpreted from legend as well as fact. The author has been closely associated for a period of eighteen years with the people of Kuku, the native population of which comprises a hapu (extended family group). It is to the credit of these people, whose immediate ancestors settled in the district in

1822, that the information they gave, and the location of tracks, settlement, cultivation and orchard sites which they pointed out in the field to the author, were corroborated by early newspapers (e.g. New Zealand Journal 1941); accounts of early travellers through the district (e.g. Wakefield 1845); the original survey map of those parts of the Waitohu and Waiopehu survey districts which comprise the Kuku area (Climie 1879 - scale 20 chains to an inch); the brief field notes of surveyors (A.J.H.R. of N.Z. 1879); the published reminiscences of early settlers in nearby districts, e.g. Bevan (1907) and McDonald (1929) and the interpretation of Maori place-names and their geographic background (Adkin 1948).

Although contact with whalers and traders occurred in the early-to-mid 1820s, Kuku was not settled by Europeans until 1880 - a date late even by New Zealand standards. Since the introduction of the railway in Kuku (i.e. post-1884) developments are within living memory. The writer endeavoured to mitigate inconsistencies as far as possible by interviewing individuals separately and at intervals of several months. Further checks were made from such sources as the local newspaper Levin Chronicle (1918-1921) and from settlers' letters and files on the Kuku district, which

documents have been held since 1918 by the Horowhenua County Council.

From the outset it became obvious that the map would be of paramount importance in illustrating the changes in the land use pattern and hence largely the economy of the Kuku district. A base map (scale approximately 40 chains to an inch) was drawn. On it were marked such features as roads and streams by which local farmers could orient themselves. A dozen outline maps were drawn on tracing paper and placed in turn over the base map. Although only a limited number of Kuku farmers could remember property boundaries, size of holdings, crops grown or type of stock carried, many of them were knowledgeable of a certain phase in the development of the district, or could contribute detailed information on the history of their own farms, and, usually, those of their neighbours. Prompted by details from early survey maps e.g. Climie (1879) Martin (1889) Brodrick (1913) one farmer could remember the area where he had been told stockyards had been built for breaking in wild horses; another farmer was reminded of the remains of a wooden sawmill tramway. Another, a soldier settler on part of a former beef cattle estate, could recall that a neighbouring farmer

was one of the first to lease land to the Chinese market gardeners. As each point was mapped, the pattern in time was established.

Thus the basic source of information about this closely-knit farming district was its people, whose fore-fathers had helped tame the land in the era following the railway - land which they themselves worked on, defended overseas in two World Wars and upon which many of them are still settled. Such interest explains for example why one farmer retained a map of the sub-division of the Soldier Settlement in 1913; also a copy of the first report and balance sheet of the Kuku Co-operative Dairy Company in 1916. Many farmers' fathers were also community leaders, e.g. School Committee and Dairy Board Members before them, and in the preservation and recording of the history of their district, these people have a deep and personal interest.

CHAPTER I. 1822-1892.

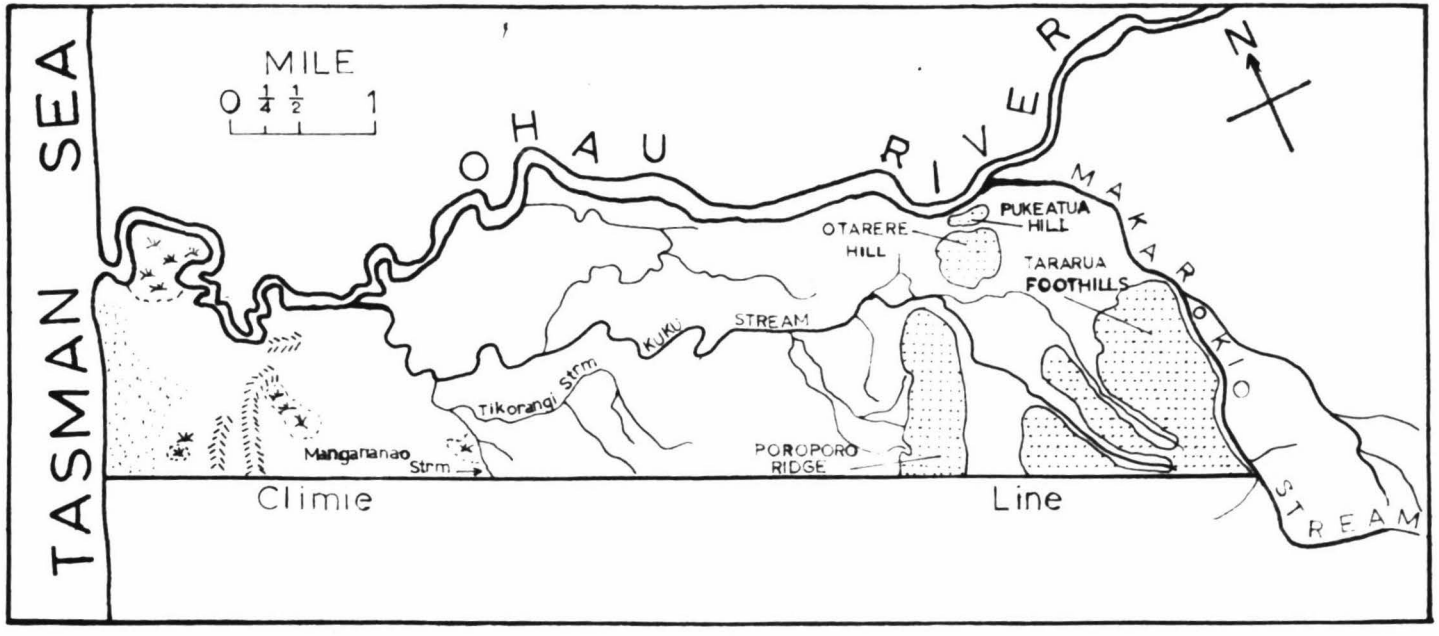
THE MAORI AND THE COMING OF THE EUROPEAN.

(i) Kuku prior to 1822.

The earliest occupants of Kuku of whom there is any trace or record [1] were the ancient Waitaha - or Moa-hunters - who presumably migrated to the Horowhenua long before the coming of the fleet (c.1350). These people may have been attracted to Kuku by the natural advantages of the district, the mild moist climate, the numerous streams and lagoons (see map 2 - relief and drainage features, p.9a) and the native rainforest which abounded with wild-life. The geological history of the area Adkin (1910) Cotton (1918) Oliver R.L. (1948) and its rich alluvial soils (see diagram 2 - cross section of Kuku showing major geological features, p.9c) would, to the Waitaha, have been of little import, for they were "hunters and food-gatherers rather than cultivators of food, and, apart from the flesh of the 'moa' they were dependent on the products of forest and sea, the molluscan fauna of the latter being largely drawn upon." Adkin (1948) p.115. It is probable that "occasional or perhaps periodic seasonal expeditions were made (i.e. inland) by way of good routes (e.g. Ohau River) to obtain forest products or species of birds not available within the coastal region." Adkin (1950) p.3.

Kahikateas predominated but there was also a "graceful indigenous growth of cabbage trees, tree ferns and . . . plumed toi-grass . . . pretty light bush mingled here and there with karaka trees." Bevan (1907) p.11.

MAP 2
KUKU – MAIN RELIEF AND DRAINAGE FEATURES



LEGEND

Coastal Flats

Hill Country

Sand Dunes

Swamp Areas

COMPILATION DATA AND NOTES ON MAP 2 - KUKU - RELIEF AND DRAINAGE.

Source: N.Z.M.S.1. Sheet N152. Scale 1: 63,360.

Levin.(2nd Edition) August 1961 served as an adequate base map, but was deficient in contour lines for the coastal zone of which Kuku is a cross-section. The only indication of height was that of the trig. station of Poroporo (806'). That for Otarere was also marked, but no height was given. Measured barometer stations were taken from Oliver (1948) (Map) while an approximation of relief features was sketched from aerial photographs (Runs 230 and 231 11th February 1942) obtained from the Department of Lands and Survey. Adkin (1948) yielded names of local relief features (See also Appendix Map No.V) and of Pukeatua (p.313). (See also Appendix Map No.VI). The same source yielded information on the location of the coastal Okaka dune ridge (p.265). On the Climie map (1879) indication was given of the extent and shape of the Tararua foothills (hachured) and of the direction and extent of coastal sand dune ridges. Poroporo ridge and Pukeatua hill were also marked and named.

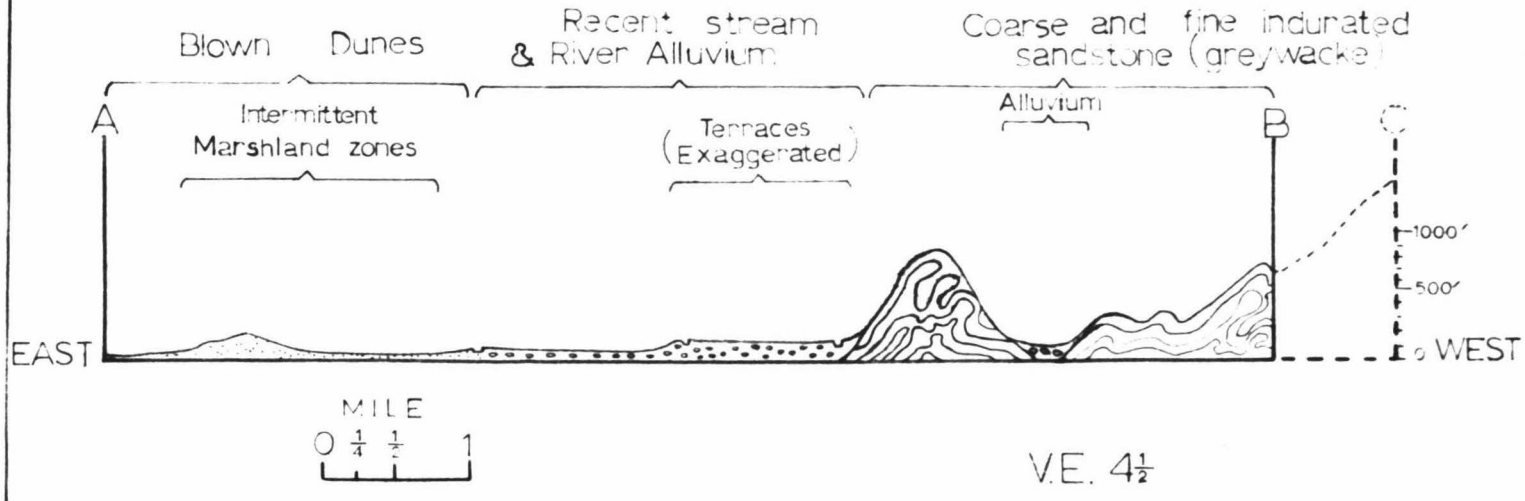
Although NZMS1 Sheet N152 (1961) (See above) recorded the main drainage features e.g. Ohau River, swamp zones and the Kuku and Makarokio streams, greater detail was necessary, for even minor drainage features were of importance to indigenous land use in this small district of 11.8 square miles. (So, too, when the land was later to be drained by European farmers.) Many features, because of their small relative size, are not reproduced on Map 2 but their significance is great. For example, the all-purpose flax (harakeke)grew in such ill-drained areas as the "deep flax swamp" Climie (1879); the Katihiku lagoon Adkin (1948) p.180; the Moutere deltaic island Adkin (1948) p.241 (see also Appendix Map No.VI); the zone of overflow from the Waikawa River to the Ohau River via the Mangananao Stream Adkin (1948) p.218 and p.386; and the area of "reedy ox-bow lagoons" Adkin (1948) p.427. The many minor streams e.g. the Manga-nanao Adkin (1948) p.218; the Tikorangi Adkin (1948) p.367. (See also Appendix Map No.IV); the Te Awa-a-Tamati Adkin (1948) p.144 and the Waikokopu Adkin (1948) p.392 (See also Appendix Map No.VI) yielded fish, e.g. kokopu - a species of fresh-water trout.

Note: The term "coastal belt" referred to in the text is the area extending some 1¼ miles inland from the Tasman Sea. The eastern boundary of the belt is demarcated approximately by the inner margin of the sand dunes. (See Map 2).

DIAGRAM 2

CROSS SECTION OF KUKU SHOWING MAIN GEOLOGICAL FEATURES

Based on maps appended to Adkin (1910); Oliver R L. (1948).



The successors of the Waitaha were the Ngati-Mamoe who are believed to have entered the territory and driven out the Waitaha more by over-running the habitable areas than by actual conflict. Of smaller stature and of a much more inferior culture, they were essentially foragers rather than agriculturalists. Tillage in Kuku was first associated with the Ngati-Muaupoko, an aggressive, partly pre-fleet people of mixed origin, who drove out the larger numbers of Ngati-Mamoe, many of whom took refuge in the Tararua ranges.

It is generally accepted Best (1942) and Firth (1959) that agriculture in pre-European New Zealand was limited to small isolated pockets, of which Kuku was one. "The settlements and cultivation areas of the Muaupoko people were situated in the forest glades of the lower course of the (Ohau) river and on the open dune belt adjacent". Adkin (1948) p.262. The cultivated food plants of the Muaupoko people were typical of those of the classic Maori, whose origin was (traditionally) the Polynesian island of Hawaiki. Of the small range of sub-tropical crops, only two appear to have survived in Kuku - the kumara (sweet potato) and taro (fleshy tuber).

At the price of constant care and attention, and of much ritual and ceremony, the kumara (which is still grown by the Kuku Maoris today) yielded an annual crop, while the taro (which was still grown by the local

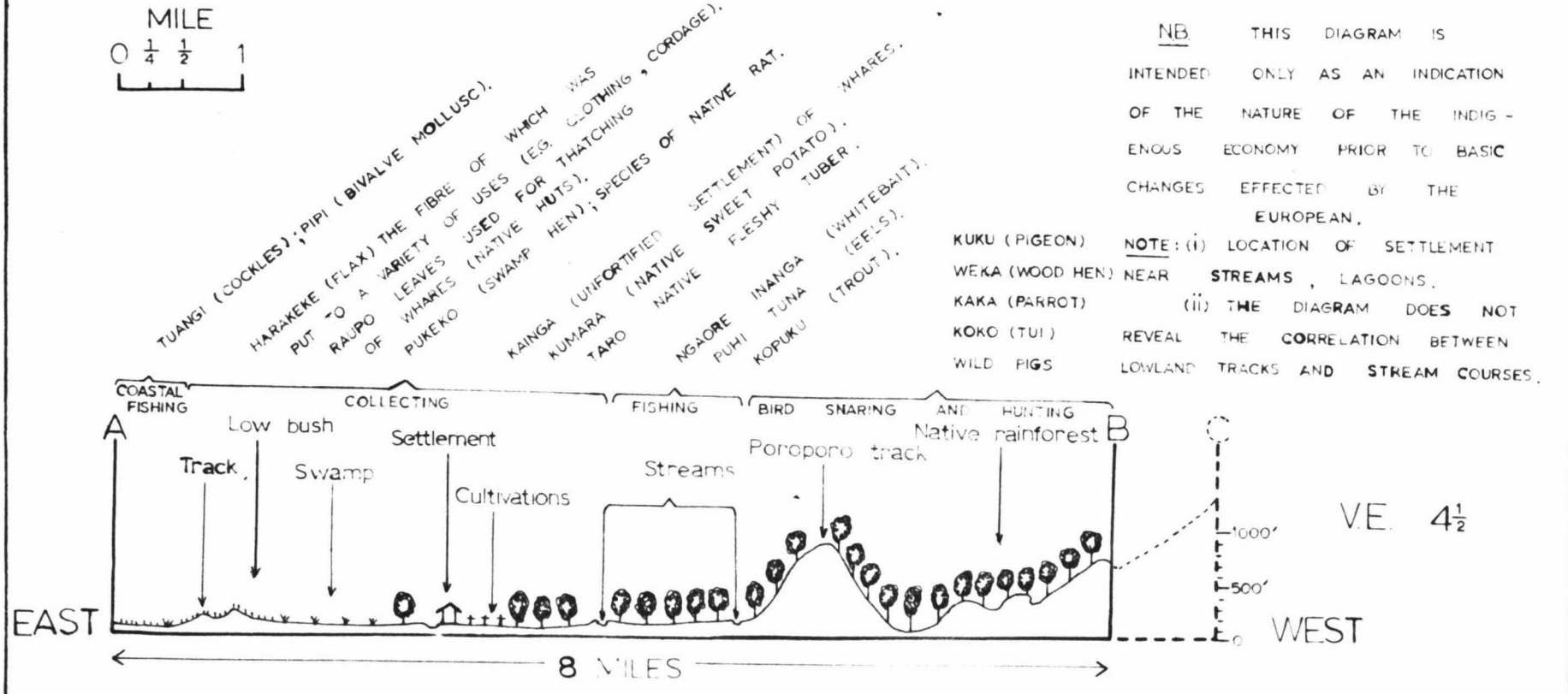
Maoris in the early 1900s) was found to be suited to the sandy yet moist conditions of the swamp margins. The high sugar content of the kumara - the main crop - precluded prolonged storage. The most dependable, disease-free, non-seasonal, all-weather food was the aruhe (edible root of the bracken fern) - which was the "staff of life" Best (1925) p.148. The Ngati Muaupoko and their successors were therefore forced to utilize the forest, sea and stream for hunting, snaring, collecting and fishing. (See diagram 3 - cross-section of land use in Kuku c.1820, p.11a).

Of the bird-life, particularly prolific was the kuku (native wood pigeon) which frequented the banks of the main stream of the district to which the Maori gave its name.[2] The birds fell easy prey to the native snare. Pigs, introduced into New Zealand in the early 1770s by Captain Cook [3] ran wild in Kuku and were eaten by the Maoris. But it was the introduction, in the late eighteenth century, of the potato, which was to have the most far-reaching effect on the economy of the New Zealand Maori. This high-yielding European-introduced food-plant replaced the bracken-fern root, and not only released the Maori from dependence on a narrow range of traditional Polynesian crops, but allowed a food surplus, so that, with pigs and flax, the

This is a kuku (native wood pigeon) snare. Thirsty after feeding on the miro berry, the bird would come to drink at this typical three-foot-long drinking trough (side view) over which flax nooses had been lain. Note the perching rails placed on both sides of the trough.

DIAGRAM 3

CROSS SECTION OF KUKU SHOWING GENERALISED FEATURES OF LAND USE c. 1820



NB. THIS DIAGRAM IS INTENDED ONLY AS AN INDICATION OF THE NATURE OF THE INDIGENOUS ECONOMY PRIOR TO BASIC CHANGES EFFECTED BY THE EUROPEAN.

NOTE: (i) LOCATION OF SETTLEMENT NEAR STREAMS, LAGOONS.

(ii) THE DIAGRAM DOES NOT REVEAL THE CORRELATION BETWEEN LOWLAND TRACKS AND STREAM COURSES.

potato assumed commercial significance as an item of trade with Europeans. This development took place in the 1820s - a period when such pakeha itinerants as whalers were visiting the New Zealand coast.

(ii) 1822-1882. The Trading Period.

According to a "population-flow" map incorporated in Cumberland (1949) p.411 the "Horowhenua" (see compilation data accompanying Map 1 - Kuku location, p.1b) was one of the densest "traffic" routes of Maori New Zealand. In Maori history, the routeway of this coastal plain has seen many tribal migrations southward, away from the wars of the populous north. Similarly, in 1822, it was the route taken by the war chief Te Rauparaha who migrated from the native coastal settlement of Kawhia (near Hamilton). With his musket-armed Ngati-Toa warriors, he routed the Ngati-Muaupoko from the Ohau River district. After his initial victories, Te Rauparaha succeeded in persuading some relatives of his mother to join him. His mother was the daughter of a prominent Ngati-Raukawa chief of the Waikato. One of the main allies of Te Rauparaha was Rangiwhakaripa, a

member of the Ngati Raukawa (tribe) and fighting chief of the Ngati-Tukorehe hapu (sub-tribe) to whom Te Rauparaha ceded the territory now known as Kuku. Te Rauparaha himself settled on the left bank of the Waikawa River half a mile south of the "Climie Line" [5] (see compilation data accompanying map 1 - Kuku location, p.1b). "A pa was built large enough to accommodate the whole party, while the ground was cleared for cultivations in which the potato was planted presumably for the first time on this coast." Buick (1903), p.68.

The introduction to the western world of the potato, a native of South America, has been termed by Salaman (1949) p.142 as "one of the major events in man's recent history". Writing of the Irish peasant in the sixteenth century Salaman commented (p.125): "In the potato, the weary and harassed cultivator had to his hand a food which was easier to prepare than any of which he had experience." There seems little doubt that to the New Zealand Maori, the introduction of the potato in the late eighteenth century [6] occasioned something approaching an "agricultural revolution" Cameron (1961) p.2. A high-yielding, hardier plant than the kumara, it needed less care in cultivation and had a shorter growing season. Although more demanding in its soil requirements, heavier crops could be grown

for less labour than for the kumara. The introduced crop was grown on a much larger scale than any Polynesian vegetable had been, and potato gardens became more widely dispersed than previous cultivations. Ibid (p.4). Bush was felled and burnt and potatoes planted, the tree roots often still being in the ground. The native cultivated area probably never at any time rose above 1% of the total area of Kuku, but the aruhe (fern root) of the native had been superseded by the potato of the white man - an event which was the first of four phases of pakeha influence.

Since Kuku lay across the only practicable north-south overland route of the western North Island, and since "the Ohau river ran into the Waikawa making it a large river and convenient for sailing vessels" Bevan (1907) p.124 the potato gained importance to the Ngati-Tukorehe as an item of trade. Pigs, which were kept and bred by the Kuku Maori, were also traded with such pakeha itinerants as whalers, some of whom had been stationed since the 1820s on nearby Kapiti Island. (See map 1 - location map, p.1a).

The year 1839 was a turning point in the development of Kuku (as it was for the whole coast) for it was then that the Rev. Octavius Hadfield took up his appointment as priest at Waikanae - a settlement 16 miles south of the "Climie line". This European

missionary won the confidence of Te Rauparaha who exercised "absolute authority over all southern parts of this (North)island". [7] In May 1844, Hadfield, accompanied by Te Rauparaha and a party of Maoris, visited Kuku [8] and supervised the felling of a stand of totara trees. These were floated down the Ohau River and brought through the surf to Otaki to serve as the structure for a Maori church (which is still in active use today). Te Rauparaha showed interest in the church and was responsible for naming it - Rangiatea. Such an example of co-operation was to stand the Horowhenua in good stead, for it is to be noted that the district was not involved in the Maori wars of the Wellington province in the early 1840s; in the Taranaki Maori wars of the 1860s nor in the belligerent Hau Hau movement [9] which in the late 1860s spread southwards from Taranaki and the Waikato.

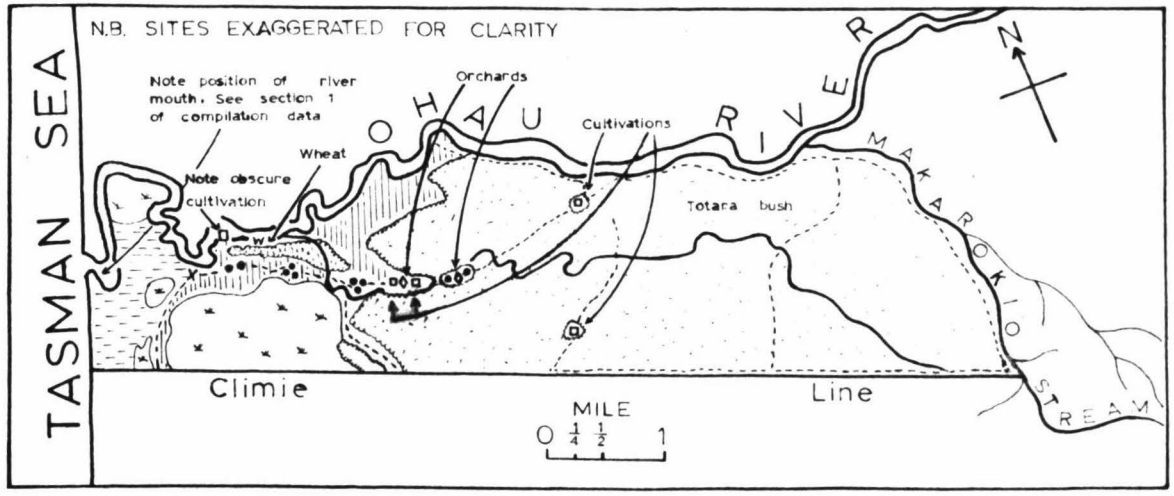
The New Zealand Company settler ship "Tory" landed the first settlers at the port of Wellington in August 1839. This new settlement was to create a market for the produce of the Maoris of the west coast of the North Island, including the Ngati-Tukorehe of Kuku; and to acquaint them further with the concept of a commercialized economy. Local pigs were driven down the coast and were sold in Wellington. Itinerant white traders assumed the role of middlemen between the Maoris

and the colonists. Expeditions sent north from Wellington to assess such resources of the country as would be useful to colonists passed through Kuku. Settlement here was based on the pa which was "said to have covered 14 acres . . . . on the left bank of the Ohau River, three quarters of a mile from the coast". Adkin (1948) p.279. The site was recorded by Climie (1879) who mapped an "old pa" site in that position. (For locality of the pa, see map 3 - land utilization in Kuku c.1852, p.16a). Climie did not distinguish between a pa (fortified village) and a kainga (unfortified settlement). Adkin (1948) p.279 states: "To what extent it (i.e. the pa) was fortified is not remembered . . . (there were) numerous whare." These one-roomed dwellings were also mapped by Climie (1879).

In the vicinity of the pa, light bush had been felled, and in the clearings, pig-rearing and cultivation was practised. The potato was still the main crop, although kumara and taro were still grown. A large pataka (storehouse) was located at the pa. Ibid, p.279. Land use was becoming intensive. A surveyor in an expedition to Taranaki in 1841 reported: "I went some distance inland through the potatoe grounds of the natives . . . . for pigs and potatoes which the natives of that place brought us from their potatoe

MAP 3

c.1852 LAND UTILIZATION IN KUKU



LEGEND

- SPINIFEX—COVERED FLATS AND DUNES
- RAUPO BORDERED FLAX SWAMPS
- DUNES CLOTHED WITH MANUKA, FERN, NATIVE GRASSES AND TOI-TOI
- LOW BUSH
- BUSH LINE BOUNDARY
- MIXED RAINFOREST — RIMU, MATAI KAHIKATEA.
- CLEARINGS
- CULTIVATIONS — BASICALLY OF EUROPEAN POTATO, BUT WIDE RANGE CROPS GROWN
- ORCHARDS (APPLES AND PEARS)
- PA (FORTIFIED VILLAGE)
- KAINGA (UNFORTIFIED SETTLEMENT)
- TRACKS

COMPILATION DATA ON MAP 3 - LAND UTILIZATION IN KUKU c.1852.

1. MOUTH OF THE KUKU RIVER

A. Adkin (1948) noted that the Ohau River and the Waikawa River mutually converged and had a common mouth. In support of this statement he quotes (p.388);
Wakefield (1845) p.269:
"The Ohau River . . . is joined by the Waikawa about a mile from the sea."
Bevan (1907) p.24:
"In 1852 . . . the Ohau River ran into the Waikawa."
McDonald (1929) p.33:
"Until the early '70s when it broke out to the sea the Ohau River ran south into the Waikawa inside the line of sandhills."

B. The above claims are strengthened by the observations of Stokes R. Assistant-Surveyor to Captain Smith Surveyor General in his Report of the Expedition to Taranaki - "The Waikawa and the Ohau . . . unite near the beach and flow to the sea in one channel". New Zealand Journal (1841) October 16. No.46 London.

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2. SETTLEMENTS

A. New Zealand Journal (1842) July 9. Vol.III No.65 London. Excerpt from "Report on the country lying between Wellington and the Manewatu*(River)."

(i) "Most persons resort to this place (Kuku) to trade with the natives. Some whalers also live here."
N.B. The settlement described by this northward-travelling expedition from Wellington (See Fig.1 - Location Map p.1a) is on the south bank of the Ohau River.

* Manawatu

B. Adkin (1948).
Following textual references - see also Appendix Map No.VI.

(i) Whareo site (of Ngati-Tukorehe), p.427-8.
(ii) Tahamata (Paharakeke pa of Ngati-Tukorehe), p.279 and p.349.
(iii) Waiwherowhero site (of Ngati-Tukorehe) p.411.

(iv) Anga-Kakahi Kainga (hamlet) p.137.
(v) Katihiku kainga p.180.
(vi) Muaupoko kainga p.243.

C. Climie (1879) Map. Scale 20 chains to an inch.
Ohau No.3.

Several interesting points arose from a study of this map.

(i) Perhaps lacking the terminology, Climie did not distinguish between pa (fortified village) and kainga (unfortified settlement). Thus the Muaupoko kainga of Adkin (see above p.243 and Appendix Map No.VI) was represented by Climie as the Muaupoko pa. Climie also pin-pointed groups of whares (one-roomed native dwellings with earthen floors and raupo-thatched walls and roofs).

(ii) Climie (1879) also observed that the "pa" nearest the coast was abandoned. This foreshadowed future developments, for even prior to the inland "shift of gravity" of coastal settlement with the coming of the railway (1884) kainga were being shifted progressively inland, a move possibly occasioned by the need for the renewal of sites for shifting cultivation and to permit "recuperation" of forest areas used for hunting, gathering and bird-snaring.

N.B. The correlation of settlement, clearing and cultivation sites indicated by Adkin with those mapped by Climie are the more significant in that Adkin did not consult the Climie map. (He makes no reference to it in his list of reference maps pp.434-5.)

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3. CULTIVATIONS

A. Adkin (1948)

(i) "Rich alluvial flats . . . . utilized for the extensive cultivation of the kumara and other crops." p.411.

(ii) Takapu-o-pahoka. Cultivation of "crops - kumara etc." p.354. See also Appendix Map No.VI.

(iii) Taupuku. "Former cropping ground of the Ngati Tukorehe" p.364. See also Appendix Map No.VI.

(iv) Tutangata-kino. P.375. See also Appendix Map No.VI.

N.B. In the following two references, the cultivations described by the northward-travelling expeditions from Wellington City (See Fig.1 - Location Map p.1a) are on the south side of the Ohau River.

B. New Zealand Journal (1841) October 16. No.46. London. Report of the Expedition to Taranaki by Stokes R. Assistant Surveyor to Captain Smith Surveyor-General

(i) "The potatoe grounds (i.e. of the natives) . . . are situated on the banks of the (Ohau) river."

C. Wakefield (1845) p.226.

(i) "About six miles * up the fertile valley of this (Ohau) river, passing through rich cultivations all the way, we reached the residence of the chief in his favourite garden."

* ($4\frac{1}{2}$ miles as the crow flies, but Wakefield would probably have been following the banks of the meandering river.)

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4. ORCHARDS.

A. Climie (1879) Map.

Claims to authenticity of location of fruit plantations by tribal elders were verified by the apple and peach orchards marked on this map.

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5. CLEARINGS

A. Adkin (1948). Following textual references - see also Appendix Map No. VI.

(i) "Open flats along the Ohau River and certain artificial and natural clearings on the adjacent plains." P.383.

(ii) "Expanse of arboreal vegetation . . . broken only by open spaces for the most part natural openings along the (Ohau) river . . . but in some cases due to the agency of primitive man."

(iii) Tikorangi clearing. Pp.367-8.

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6. TRACKS

A. Climie (1879) Map.

(i) The map shows a discontinuous native track along the southern bank of the Ohau River, yet Adkin (1948) p.411 claims that "a native track which long served as the main road . . . until . . . the late 1890s followed the left bank of the Ohau River from its mouth . . . to . . . the present railway bridge and beyond." (Underlining by the writer.) This contradiction may be explained by the track having crossed over to the northern river bank for some distance. Such a theory is supported by tribal elders.

(ii) A track along Poroporo and Otarere ridges and down to Pukeatua survey camp Climie (1879) (Map) on the banks of the Ohau River may have been one of those used by the natives on their bird-snaring expeditions. Adkin (1948) p.306. However, the surveying party apparently made such use of the track that they called it "Climie's Track".

B. Adkin (1948).

(i) P.411. (See above reference.)

(ii) "A native track ran . . . to Tikorangi clearing where Takapu-o-Pahoka cultivation was situated and then on to the Ohau River near the present railway bridge."

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7. VEGETATIVE COVER

(a) General

A. McDonald (1929) p.3; p.24.

B. Adkin (1948) p.4.

C. General Survey of the Soils of the North Island, New Zealand (1954). Notes on vegetation which possibly "covered the soils in pre-European times. Dominant species (of each soil type) shown in parentheses."
Incorporated in Extended Legend pp.61-216.

(b) Specific vegetation cover and associated features.

E. Climie (1879) Map.

(i) Totara bush
(ii) Low bush
(iii) Raupo-bordered flax swamps
(iv) Gorse fence (the relative size of which precludes reproduction on accompanying small-scale map).
(v) Sand flats
(vi) Dunes

F. A.J.H.R. of N.Z. (1879)

Return of field work executed by Staff and Contract Surveyors of N.Z. July 1, 1878 to 30 June 1879. Wellington Provincial District. Marchant W.A. Chief Surveyor.
Field notes (a) Climie J.D. and Cadet (Waitohu) - "Mostly rough bush."
(b) Struthers G. (Waitohu) "Rough bush".
(c) Baber I. (Waitohu) "Rough bush."

(Kuku comprises parts of both the Waitchu and Waiopehu survey districts).

grounds . . . situated on the banks of the (Ohau) river". [10] A similar party, sent in the following year to report on country between Wellington and the Manawatu River noted: "Most persons resort to this place (i.e. Kuku) to trade with the natives. Some whalers also live here."[11]

It is strange that none of the expeditions through Kuku commented on the native growing of wheat which European crop was reputed to have been introduced in the early 1840s by Hadfield on several of his early expeditions up the coast from Otaki. The location of the wheat-fields (<u>see Map 3 - land utilization in Kuku c.1852</u>, p.16a) at a bush-screened bend in the river, away from the normal fording place (i.e. nearer the coast) may have accounted for this puzzling omission. It is known, however, that at this time (i.e. early 1840s) wheat was being grown by the Maoris.[12] near Foxton, a township only 10 miles north of Kuku and 16 miles from Otaki. It is likely that wheat was grown by the Kuku Maoris by the mid-1840s, or at the very latest by 1852. <u>Bevan</u> (1907) p.25. As "apparently the Maori never appreciated bread as much as he did . . . . the <u>kumara</u> and the potato" <u>Best</u> (1925) p.153 the presence in Kuku of wheat, although small in acreage, is important, for it indicates the extent to which the economy of the <u>Ngati-Tukorehe</u> was becoming influenced by the European.

In this connection may be noted the observations of Wakefield (1845) p.289 who stated (c.1844): "Mr. Hadfield thoroughly appreciated the advantage of introducing among the natives a more permanent and profitable employment than the rude cultivation of potatoes and the rearing of pigs, in both which pursuits they would soon be outrun by the white settlers themselves, and both which tended to supply a market very fleeting and uncertain in its demand. He had early taught them how to cultivate wheat; and he gladly used his best endeavours to support the establishment of the flax trade. Such was the revolution produced by it (flax) in a few months, that the natives would no longer drive pigs to Wellington, or sell them at a low price to traders who travelled the coast for them. They soon found how great a share of the luxuries of the European they could receive at their own doors by the moderate but steady toil with a muscle shell". Wakefield, an Englishman on a short visit to New Zealand, was obviously referring to the mussel - a marine bi-valve mollusc - the shell of which was used by the Maoris as a scraper to expose the flax fibre - a process known as "rough dressing".

It appears that by 1849, the Ngati-Tukorehe were engaged in a reasonably regular flax trade. In August of that year, a north-bound traveller from Wellington noted that "the natives of the district

(i.e. Kuku) prepare or rather rough dress a quantity of flax, which they dispose of to small trading vessels and to a rope maker who lives in the village of Ohau[13] and who sends his rope to Wellington".[14] From 1852 onwards, the Kuku Maoris also negotiated with a trader in the Manakau district, a mile south of the "Climie line". The settler Bevan (1907) p.24 wrote of the Ngati-Tukorehe - "We carried on a large trade with them, buying flax and other produce; keeping stores of various kinds to supply their requirements. . . . All the flax was prepared by hand, the phormium leaves scraped patiently bit by bit with mussel shells; yet by this primitive method, working hard all day in the flax swamps, they would produce hundreds of tons of fibre". That the Kuku natives were acquiring business acumen is suggested by the following excerpt from the same author: "Hundreds of baskets filled with potatoes or flax would be piled in long rows, and a smart man of business . . . would attend to the checking as accurately and expeditiously as the most experienced tally clerk." Ibid. pp.24-25.

The Ngati-Tukorehe continued to fowl - two to three days' snaring on Poroporo ridge Adkin (1948) p.306 sufficing to secure several weeks' supplies. Fishing was also of great importance. As an early settler noted: "They would go out in large fishing canoes and return laden with hapuka and snapper." Bevan (1907) p.25. But by this time (c.1852) the Ngati-Tukorehe were less

dependent than formerly on natural resources of the sea and forest, for by now they had acquired an extensive range of European crops. "Their farm and garden produce included honey, pumpkins, melons, marrows, cucumbers and other gourds, onions, wheat and maize; they grew choice varieties of fruits, quinces, apples, cherries, grapes, peaches." Ibid. p.25. The cultivation and orchard areas (exaggerated for clarity) in Map 3 (Land use in Kuku c.1852, p.16a) nevertheless give an indication of the "restricted and fragmented nature of the agricultural landscape" which Cumberland (1949) p.406 wrote as being typical of the early New Zealand scene. Although the beginnings of a commercialized economy had come to Kuku, most of the land area, as elsewhere in the North Island, was still covered with native rainforest.

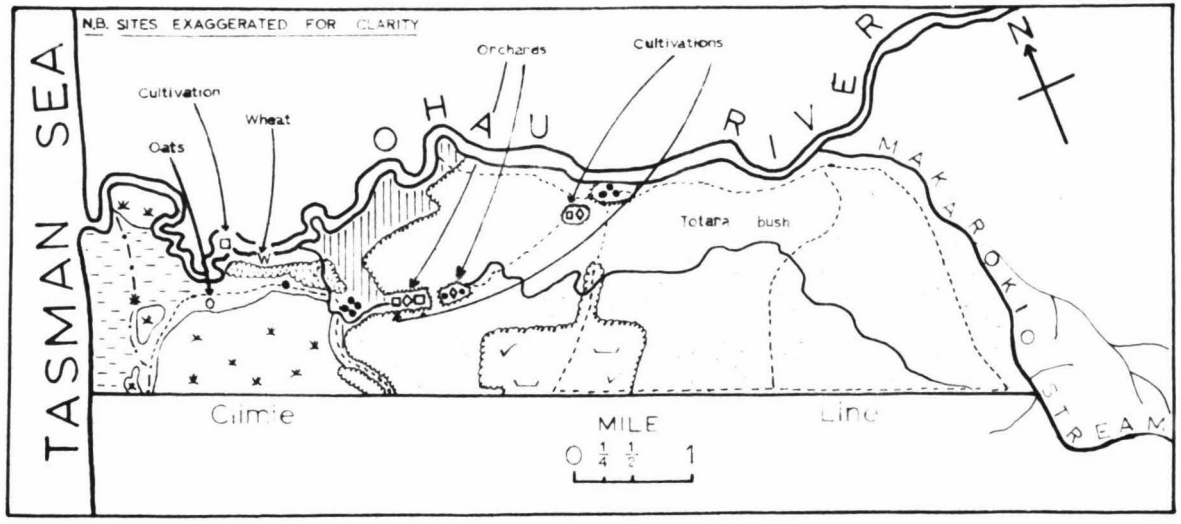
After twenty years of organized European settlement, the normal New Zealand mode of travel (coastal ship) was being superseded by land travel. In the Horowhenua, as elsewhere, this development was due as much to the acculturation of the Maori (e.g. his trading with the European) as to the pull of big settlements such as Palmerston North, New Plymouth and the like. The late 1850s witnessed the inauguration of a coach service from Wellington to the Manawatu by Cobb and Company. McDonald (1929) p.33 records: "At the Ohau River it was customary

in flood-time to wait until the tide was in, when the coach could be swum across in 'dead' water." It is not certain when the inn known as the "Travellers' Rest" was erected on the left bank of the Ohau River (See Map 4 - Land use in Kuku c.1883, p.21a) but it was probably some time after 1865. A newspaper clipping affixed to an undated map[15] in the archives of the Department of Lands and Survey, Wellington, reads: "Cobb and Co's coaches will, after the 15th December 1865, run at least twice a week between Wellington and Manawatu."[16] The erection of a hotel is important for it marks the beginning of a consistent flow of predominantly European traffic through Kuku. Trade between Maoris and travellers increased. The location in Kuku of the hotel further acquainted the Ngati-Tukorehe with the European and his money economy.

Despite the volume of "through traffic" European settlement in the Horowhenua district was extremely fragmentary. "In the early sixties, six white men only leased the land from Otaki to the Manawatu[17] from Maoris whose occupation of the country was based on conquest and whose tenure had been continuous since that time . . . . (the Maoris) . . . . were the landlords of the soil to which the pakeha was admitted only on sufferance." McDonald (1929) p.2. But the white man was admitted - and without bloodshed. The memory of

MAP 4

c.1883 PRE-RAILWAY LAND UTILIZATION IN KUKU



LEGEND

- SPINIFEX-COVERED FLATS AND DUNES
- BUSH BOUNDARY
- ORCHARDS (APPLES AND PEARS)
- COACH ROUTE
- RAUPO-BORDERED FLAX SWAMPS
- MIXED RAINFOREST — RIMU, MATAI, KAHIKATEA.
- SHEEP AND BULLOCK FARMING (EXTENSIVE)
- FERRY INN
- FERN, TOI-TOI, MANUKA AND NATIVE GRASSES (SOME MARSH)
- CLEARINGS
- KAINGA (UNFORTIFIED SETTLEMENT)
- LOW BUSH
- CULTIVATIONS — BASICALLY OF EUROPEAN POTATO, BUT VARIETY CROPS GROWN.
- (PREDOMINANTLY NATIVE) TRACKS

COMPILATION DATA AND NOTES ON MAP 4.
PRE-RAILWAY LAND USE IN KUKU c.1883.

N.B. References to features duplicated in Map 4 have been omitted.

1. EUROPEAN SETTLEMENT AND COMMUNICATIONS.

A. New Zealand Journal (1842) July 9. Vol.3. No.65 London. Excerpt from the "Report on the Country lying between Wellington and the Manewatu (River)."

(i) "Some whalers . . . live here (Kuku)."

B. New Zealand Journal (1849) August 11. Vol.9 London. Excerpt from "Journal of an Excursion from Wellington to Manewatu."ø

(i) "A small river called the Ohou* close to which and near the beach there is a small house of refreshment."

* Ohau
ø Manawatu

C. McDonald (1929) p.33.

(i) "At a spot a mile and a half north of the Waikawa (River) and three quarters of a mile in a direct line from the sea, there was a small ford across the Ohau (River) and here a small hotel was situated.

N.B. McDonald was not a resident of Kuku, but farmed territory some 6 miles to the north. Establishing himself in 1869, he became the first white settler in this part of the Horowhenua.

D. Climie (1879) Map.

(i) Inn and stables.

(ii) Coach route.

the amicable relationship of Hadfield and Te Rauparaha was still strong. "The tribes had no wrongs, or at any rate but little, to avenge. On the contrary, they had lived with perfect amity with the few white settlers and traders in their midst.". Ibid. (P.116.). Despite their inter-tribal wars the Maoris made it a policy never to molest Europeans during a purely native quarrel. Because of this perhaps, the settlers "whilst by no means indifferent to the dangers involved . . . . maintained a detached indifference." Ibid.(P.152).

The "King Movement" (a Maori nationalistic organization aimed at achieving inter-tribal unity) of the 1860s and the Hau Hau movement (a relatively small but dangerous anti-white Maori extremist group) in the same decade, did not touch the Horowhenua. A Maori deputation sent to this district from Taranaki (the head-quarters of the Hau Hau movement) to recruit members met with a reserved reception in Horowhenua. "Many of the Maoris were openly hostile to the movement, while most of the others maintained an open mind." Ibid.(P.116). Matene te Whiwhi, a leading fighting chief then resident in the coastal plain district of which Kuku is part, refused to join the Hau Hau movement and ruled that there should be no fighting south of the Wanganui River. Ibid. (P.29). (This river marked the southern boundary of the Taranaki district some 56 miles north of Kuku). The Maori troubles of 1860-70 thus by-passed Kuku.

No European settlers were established in Kuku although many European travellers traversed the western margin of the district, for the beach was still the artery of transport, trade and commerce. Along this route passed Maoris on foot, the coaches of Cobb and Company and drovers of Australian-imported sheep on their way to the settlements of Wanganui, Taranaki and Palmerston. There is no evidence of the Ngati-Tukorehe having acquired sheep at this date, but wild stock of other types of animal seem to have been plentiful. "The natives had large numbers of horses and cattle running wild on their tribal lands." Bevan (1907) p.25. A settler farming land 4 miles to the north of Kuku recorded that on his property "the wild cattle would lie hidden until the stockmen actually stumbled upon them." McDonald (1929) p.24.

European settlement did not establish in Kuku until approximately 1880 when at least four Europeans[18] entered the district and acquired areas of leasehold land from the Ngati-Tukorehe. These settlers cleared land and practised extensive pastoralism based on sheep and bullocks. (See Map 4 - land use in Kuku c.1883, p.21a). As was typical of the Horowhenua, these developments took place peacefully. The examples of Maori-European co-existence in districts to the north of Kuku, e.g. Levin and to the south, e.g. Manakau led the Ngati-Tukorehe to accept the pakeha with whom he had been associated since the early 1820s. Neither

race, however, could have been fully aware of the economic changes of the next decade. The whole focus of economic activity in Kuku was to move from the predominantly Maori settlements and cultivated plots of the coastal margin to the centre of the district, to which would come the main trunk road and railway. The subsequent introduction into Kuku of European farming practices and attitudes to land use was to effect considerable changes in the resource utilization pattern of the district.

(iii) 1883-1892. The Railway Era.

The years 1882-4 marked the beginning in Kuku of the second phase of European influence. On the 20th of March of the former year (i.e.1882), a contract was negotiated between "the Queen and the Wellington-Manawatu Railway Company (Ltd.)[19] in which agreement it was stated that a railway line between Wellington and a point in the Manawatu was to be completed "with all convenient speed and within a term of five years."[20] All expenses were to be borne by the company which was granted the right to purchase, and later to re-sell land adjacent to the agreed route. Even before 1884 when the line reached Kuku (a station was constructed at a point north of the

Ohau River) numbers of railway surveyors, labourers, surfacemen and technicians had entered the district. Many were accommodated in a camp on the south side of the Ohau River at a point close to the present railway bridge. Construction gangs were swelled by the recruitment of local labour, both European and Maori, which was employed in felling the bush for railway sleepers, in laying the track and in helping construct the railway bridge over the Ohau River. The Ngati-Tukorehe sold potatoes, wheat, maize and pigs to the railway construction gangs, and so became more involved in a cash economy.

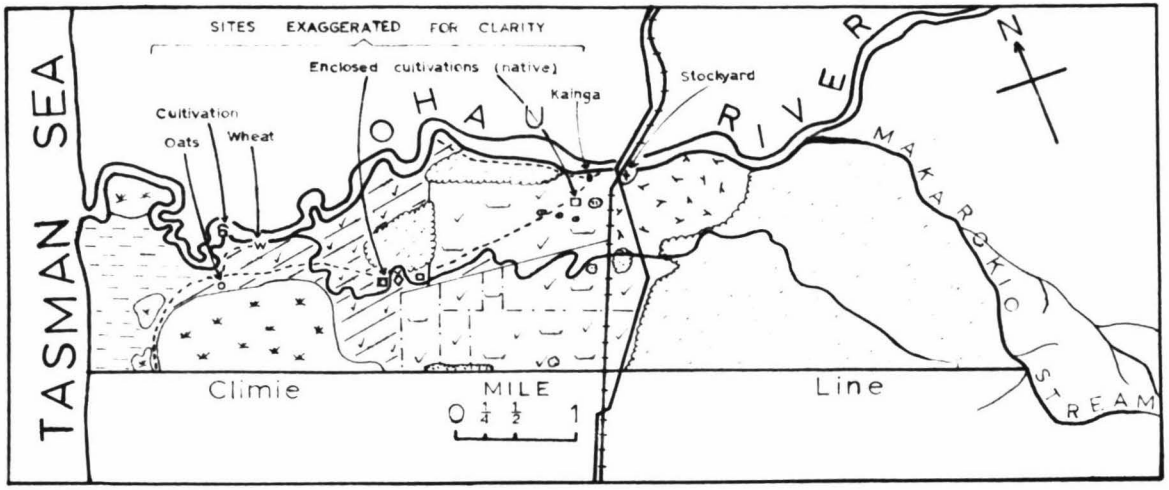
By November 3, 1886 [21] some months ahead of schedule, the whole railway had been completed. The race against time had meant in Kuku, as in the other districts to the north and south, the bush adjacent to the railway had been felled rapidly. Table 1 (forest cover removal and swamp drainage in Kuku 1840-1963, p.27) illustrates the result on the Kuku bush-line of a company working under contract. The figures for 1883 and 1893 are not strictly confined to railway work, as there had also been several years of felling by individual farmers; but the estimates are useful as an indication of the extent of forest clearance in the railway era 1883-1890, as contrasted with that of succeeding decades when the forest was cleared for farmlands. The latter occurrence was to be due chiefly to

the increased profitability of farming occasioned, in the years following 1882, by the development of refrigeration; the effects of which were to be felt in Kuku, as in other North Island districts in the mid-1890s. The Kuku bushline boundary in 1890 is shown on Map 5 (Land Utilization in Kuku in 1890, p.26a).

But the effect of the construction through Kuku of the railway was not restricted to the clearing of almost half of the native bush of the district. (Compare the figures for 1883 and 1890 in Table 1 (Forest clearance and swamp drainage in Kuku 1840-1963, p.27). Writing of the Horowhenua, Adkin (1948) p.5 stated: "With the advent of the Wellington-Manawatu railway, which was opened for traffic in 1886, the 'centre of gravity' of the district was abruptly shifted, with far-reaching results. Naturally the coast-wise route fell into desuetude . . . . A general migration of both Maori communities and the scattered Europeans - settlers, inn-keepers and others - took place eastward, i.e. inland, homesteads and whole kainga (villages) shifting to positions handier to the artery of life, carriage and trade."

MAP 5

c.1890 LAND UTILISATION IN KUKU



LEGEND

- SPINIFEX – COVERED FLATS AND DUNES
- SWAMP
- MIXED RAINFOREST RIMU, MATAI, KAHIKATEA.
- FOREST FELLED FOR RAILWAY SLEEPERS
- CULTIVATIONS – BASICALLY OF EUROPEAN POTATO, BUT WIDE VARIETY CROPS GROWN.
- ORCHARDS
- SHEEP AND (EXTENSIVE) BULLOCK FARMING
- LIGHT DENSITY OF STORE SHEEP AND RUN CATTLE
- STOCKYARD
- KAINGA UNFORTIFIED NATIVE SETTLEMENT
- (PREDOMINANTLY NATIVE) TRACKS
- CRUDE FENCES AND UNSURVEYED ROADS
- MAIN ROAD
- MAIN RAILWAY

COMPILATION DATA ON MAP 5 - LAND USE IN KUKU IN 1890.

1. COMMUNICATIONS

A. Climie (1879) Map.

(i) Surveyed road Otaki to Foxton.
(ii) Surveyed route of Wellington-Manawatu Railway.

B. Martin (1889) Map.

Shows only small central portion of the district, but confirms the existence of

(i) Main Trunk Railway.
(ii) Main Highway

as outlined by Climie (1879). See above.

TABLE 1

Table showing forest cover removal and swamp drainage in Kuku 1840 - 1963.

	1840	1883	1890	1914	1920	1930	1963
Forest	73.8%	66.5%*	38.5%	10.0%	1.0%	1.0%	1.0%
Swamp	9.7%	9.3%	9.3%	9.3%	7.0%	2.5%	2.5%
Miscellaneous (including streams, dunes, sand-flats, fern, native grasses etc.	16.0%	14.2%	12.0%	10.9%	5.9%	4.8%	4.6%
Cleared Land	0.5%	10.0%	40.2%	69.8%	86.1%	91.7%	91.9%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
		Railway era		Refrigeration era.		Dairying era.	

This table is based on estimates from the land use maps appearing in the text and are expressed as a proportion of the total land area of Kuku.

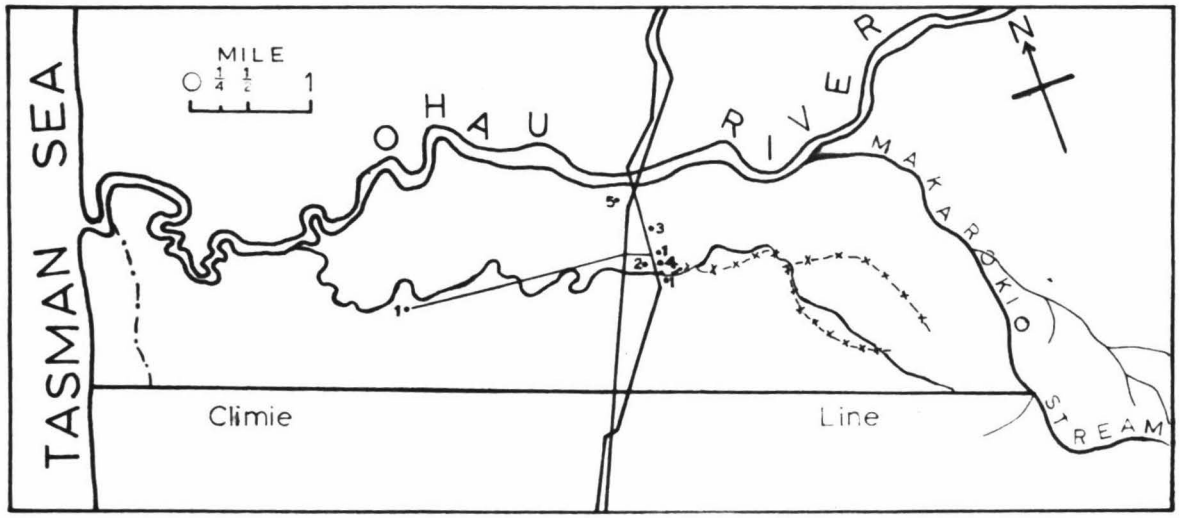
* The change in the course of the Ohau River in the early 1870s (compare Map 3 - land use in Kuku c.1852, with Map 4 - land use in Kuku c.1883) resulted in the addition of approximately 312 acres to the area of Kuku.

As planned, in February 1888, to defray the costs of construction, the Wellington-Manawatu Railway Company opened Kuku and surrounding districts to settlement. Within a few weeks, over fifty settlers, bushmen, contractors, labourers and farmers arrived at Kuku. This secondary phase of European influence was stimulated by the simultaneous throwing open for settlement of the government-purchased Horowhenua block four miles to the north of Kuku. This made imperative the formation of access roads from the railway; one of the first contracts to be let being that along the damp, heavy flats between Kuku and Ohau (a township a half a mile north of the Ohau River). This road was the main North-South highway marked on the map by Martin (1889).

The post-1888 advent of "outsiders" into Kuku was followed immediately by an era of saw-milling and flax-processing - a typical extractive industry phase of pioneering in New Zealand. The influence of the newly-opened road and railway on the siting of industrial establishments (See map 6 - End of century industrial land use in Kuku, p.28a) was symptomatic of the wider population shift in land from the old coast road, now little used. To the European farmers, the presence in Kuku of the flax and timber industries represented an opportunity of earning cash. Potatoes, surplus butter and eggs "sold" to the local store had served merely to offset debt incurred by the purchasing, on a credit

MAP 6

c.1900 END-OF-CENTURY INDUSTRIAL LAND USE



LEGEND

NOTE THE INLAND LOCATION OF THE FLAX AND TIMBER MILLS. THE SITING OF THESE ESTABLISHMENTS (AND OF HOUSING IN GENERAL) WAS NOT INFLUENCED BY THE 'OLD COACH ROAD' IE. THE BEACH, WHICH WAS NOW LITTLE USED, BUT BY THE CONSTRUCTION, IN THE MIDDLE AND LATE 1880s, OF THE MAIN TRUNK RAILWAY AND THE MAIN HIGHWAY RESPECTIVELY.

- •1 Sawmills
- •2 Flaxmill
- •3 General Store
- •4 Native owned and operated co-operative store
- •5 Butchery
- Roads
- Main railway
- Sawmill tramway

basis, of goods unable to be produced domestically, e.g. tools and items of farm equipment. This money was needed to buy implements to clear the farms of bush (forest-felling was essentially a part-time occupation) and to purchase grass seed, fencing materials and stock.

To the Ngati-Tukorehe wanting the goods of the white man, these flax and timber mills gave opportunity for cash employment. But the Kuku Maoris were not all mill labourers. They still grew commercial, or had a realisable commercial surplus of, potatoes, oats and wheat. The latter crop, cut and flailed by hand, was sent to a flour mill at Otaki. (From this township, some six miles to the south of the "Climie line" the flour was sent to Wellington). In addition to building and operating a stockyard, the Kuku Maoris ran sheep - on communal land - while Taharape, the father of the present chieftain, ran 25 cows - again on communal land. Although the land which comprised Kuku had been handed down to him by his grandfather, Taharape was merely the nominal owner. Everyone in the sub-tribe, including children, were "share-holders". This Maori communal system of land holding is still practised today.

The Ngati-Tukorehe were also active in the cultural life of the district. Due to their efforts and contributions, a Catholic Church was built in 1891. Although the building was intended originally for only

Maori adherents of this faith, it was characteristic of the amicability existing between Maori and European that both races were soon worshipping here. In the same year (1891) a school was opened in the nearby township of Ohau. Kuku children of both races attended the establishment, the roll of which was approximately 75% Maori. In 1893, European and Maori co-operated to build the whare-hui (meeting house) of the Ngati-Tukorehe.

These developments were of considerable local importance, but greater events, taking place outside Kuku, were to be of greater economic significance in the development of the district. In 1882, the year in which the Wellington-Manawatu Railway Company signed a contract with the New Zealand Government, witnessed also the first shipment of frozen meat from New Zealand to England. The success of this venture, together with subsequent improvements in refrigerated transport, was of great economic importance to New Zealand, then experiencing a depression. From now on, pastoral produce could be shipped to the United Kingdom market. To the New Zealand farmer, reliant upon a restricted local market, such developments meant that sheep could be grazed for mutton as well as wool. The influence of refrigeration on farming was felt first in the South Island, and over a decade later, in the North Island.

FOOTNOTES.

1. Adkin (1948) p.265. "The southern end of Okaka dune ridge . . . . a conspicuous land mark on the dune belt between the lower courses of the Ohau and Waikawa Rivers .*. . . has furnished important additional evidence * of the ancient inhabitants of the district, the Waitaha, by the finding there of a typical interment and of a specimen of triangular adze." See also Appendix Map No.IV.

   * Finds of triangular adzes in the vicinity of Okaka dune ridge had given, in the opinion of Adkin, "proof beyond any reasonable doubt that the ancient Waitaha had once inhabited that locality." Ibid. p.76.

   _____ (1950) p.5. Discovery of a similar adze was made at a site "on the lower slopes of the foothill ridge behind outlying Poroporo ridge (i.e. near the Makarokio Stream). Relatively easy access to the spot would . . . (have been) via the Ohau River . . . . In early times the river ran . . . . through dense forest, but numerous open glades occurred along its course and afforded a means of progress to the Tararua foothills not elsewhere available."

   _____ (1952). See Map p.42.

2. "Kuku" is also the name for sea-mussel, but this does not apply, for the district has a sand beach. There were, and are no "rock-shell-fish" (e.g. paua, mussell and the like) on the sandy Kuku coast.

3. Beaglehole J.C. (Ed.) 1961.

4. The term refers to a foreigner, usually of European descent.

5. Adkin (1948) pp.294-6. See also Appendix Map No.IV.

6. Best (1925) p.152 records potatoes having been planted in Queen Charlotte Sound by Captain Cook in 1773.

7. Government Printer (1960) Letter of Governor Hobson to Major Bunbury H.M. 80th Regiment. Paihia 25th April 1840.

   Note: The respect Te Rauparaha commanded among the North Island Maoris helps explain the eagerness with which Governor Hobson sought the signature of this Maori chief to the Treaty of Waitangi (1840).

8. Ramsden (1951) p.153.
   Also Adkin (1948) p.332.

9. A violently anti-European movement akin to the cargo cults of New Guinea and to the Mau Mau movement in Kenya.

10. New Zealand Journal (1841) October 16. No.46 London. Excerpt from "Report of the Expedition to Taranaki". Stokes R. Assistant Surveyor to Captain Smith, Surveyor General.

11. New Zealand Journal (1842) July 9. Vol.3. No.65. London. Excerpt from "Report on the Country lying between Wellington and the Manewatu* (River)."
    * Manawatu

12. Buick (1903) p.41.

13. On the northern side of the Ohau River, and serving Kuku.

14. New Zealand Journal (1849) August 11. Excerpt from "Journal of an Excursion from Wellington to the Manawatu." Beamish R.

15. "Sketch Map of Land in the Manawatu District".
    Scale: Two miles to an inch.
    Stewart J.T. District Surveyor.
    Provincial Government of Wellington.

16. The announcement was signed "A. Follett Halcombe. Provincial Secretary. Provincial Secretary's Office. Wellington. October 10, 1865."

17. A distance of approximately 22 miles.

18. T. Hilliard, J. Hurley, J. Hall and a man named Glover whose initial present-day Kuku farmers were unable to recall.

19. A.J.H.R. of New Zealand (1882) D7.

20. Ibid.

21. New Zealand Times (1886) November 5.

CHAPTER II. 1893-1928.

FROM BUSH TO FARM.

(i) 1893-1912. The Influence of Refrigeration.

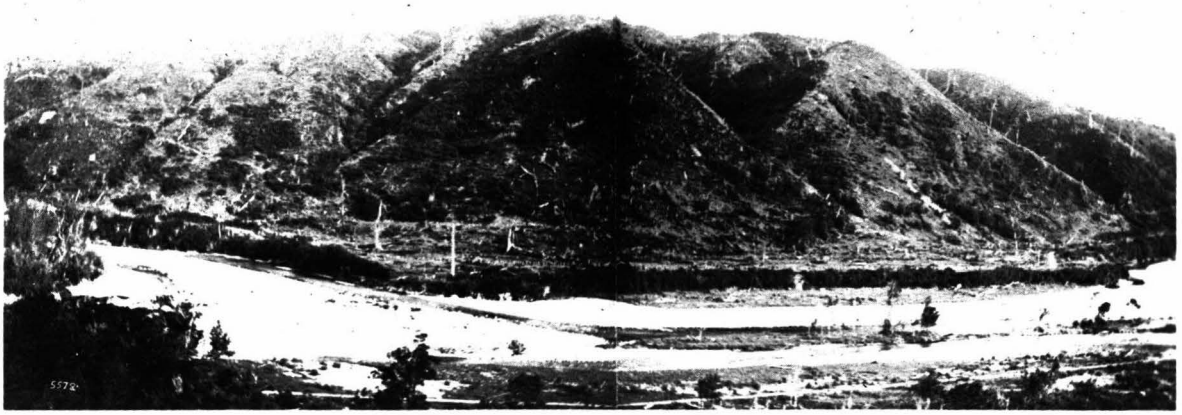
To New Zealand, as to Australia and the Argentine, refrigeration and accompanying developments in transport, gave access to overseas markets. This was realized by the New Zealand Government which, between 1892-4, passed land legislation encouraging the small farmer. The Government bought land from the Maoris and offered it to settlers, and it made available some technical advice. In an effort to overcome the basic problem of the lack of farming capital, there was instituted a system of state credit, e.g. the "Advances to Settlers Act" 1894. Thus the government did much to encourage the small farmer and to develop an export trade in primary produce. By the mid-1890s, refrigeration was well established, while in 1896 there was a welcome rise in the prices for farm produce.

The partially-cleared property on which the Kuku farmer has grazed sheep and cattle, and which had hitherto yielded but a modest livelihood, now became a more profitable concern. There was now an incentive to clear more land (See Table 1 p.27 for the accelerating effect of refrigeration upon forest clearance in Kuku); to farm more intensively; to improve the

breeds of stock; and to attempt to cater to a now-accessible overseas market - the United Kingdom. Such developments were chiefly the result of refrigeration, the effects of which marked in Kuku the third phase of European activity.

Availability of state credit had, for the European farmer, partly solved the problem of ready cash to meet initial farming expenses. But "credit which the Liberal Government lavished upon the European settler (in New Zealand) was not readily available to the Maori. His undecided or shared title was not acceptable (for loan purposes) to either private credit agencies or the State." Oliver W.H. (1960) p.253. With the first two phases of European influence (i.e. the introduction of the potato and the trading in flax, pigs, wheat and potatoes) the Ngati-Tukorehe had been able to adjust themselves, but this new development, that of government aid, they did not fully comprehend. A communal form of land usage (rather than land ownership) plus difficulties in securing credit, slowed the progress of Maori pastoralists; the general productivity of whose farms, from the mid-1890s, was to fall further and further behind that of their European counterparts.

One of the first noticeable repercussions of refrigeration and its accompanying developments was the expansion of pastureland at the expense of forest.



THE OHAU VALLEY

The Tararua foothills in 1910.
Second growth asserts itself after
a "bush burn."

Source: Adkin (1910)
Plate facing p.497.

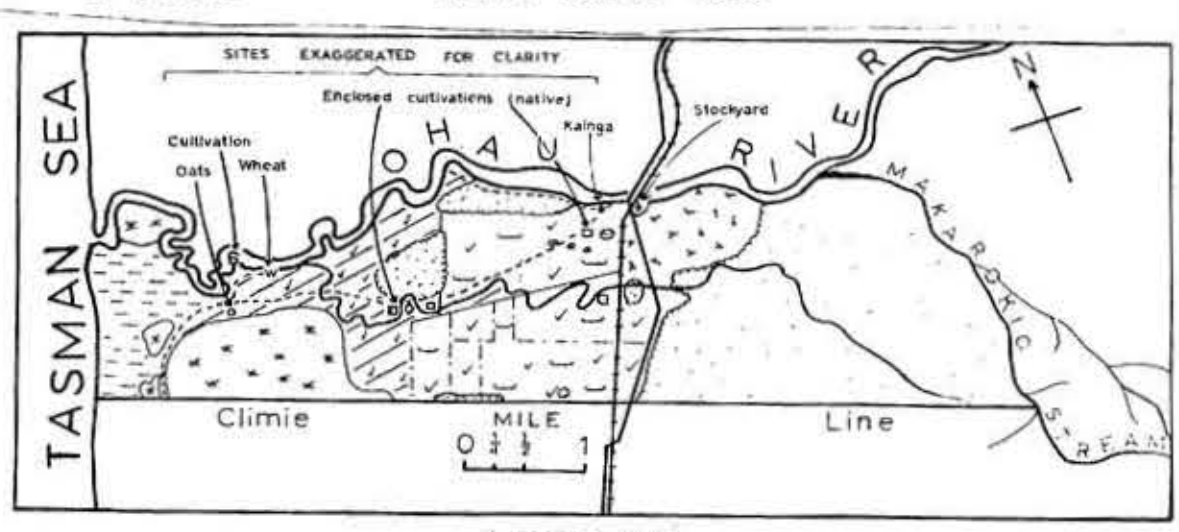
Reproduction by courtesy of -
Alexander Turnbull Library.

In 1914, the area in Kuku under bush was only one quarter what it had been in 1890. Trees were felled and burnt and the ashes sown with English varieties of grass e.g. cocksfoot, clover. Swamp drainage, an extensive and expensive undertaking, was not carried out in Kuku in the first part of this period. The fact that the swamp zones were owned by a group of impecunious, easy-going Maoris helps to explain this lack of economic development.

At the turn of the twentieth century, the basis of the Kuku economy was sheep farming. Breeds varied, but Romney-cross predominated. On some properties, bullocks were grazed in conjunction with sheep, while second-class country, such as the fern-infested "coastal belt" (See 'Note' at foot of compilation data accompanying Map 2 - Relief and Drainage of Kuku, p.9b) was used for grazing run-cattle. The raising of fat lambs (compare the railway-sleeper-felled area in Map 7 fig.(a) (1890) with the corresponding fat lamb area of Map 7 fig.(b) (1914) p.33a) reflected a growing catering to the United Kingdom market. Yet, by pre-First-World-War years, bullock fattening had proved a more economic proposition than sheep farming in some parts of Kuku. On the rich river flats of the district, beef-cattle holdings ranged from 300-600 acres, and densities of one beast to the acre were not uncommon. A farmer of 60 years' experience in Kuku estimated that, each year, 2,000 bullocks were

Fig (a)

c 1890 KUKU – LAND USE

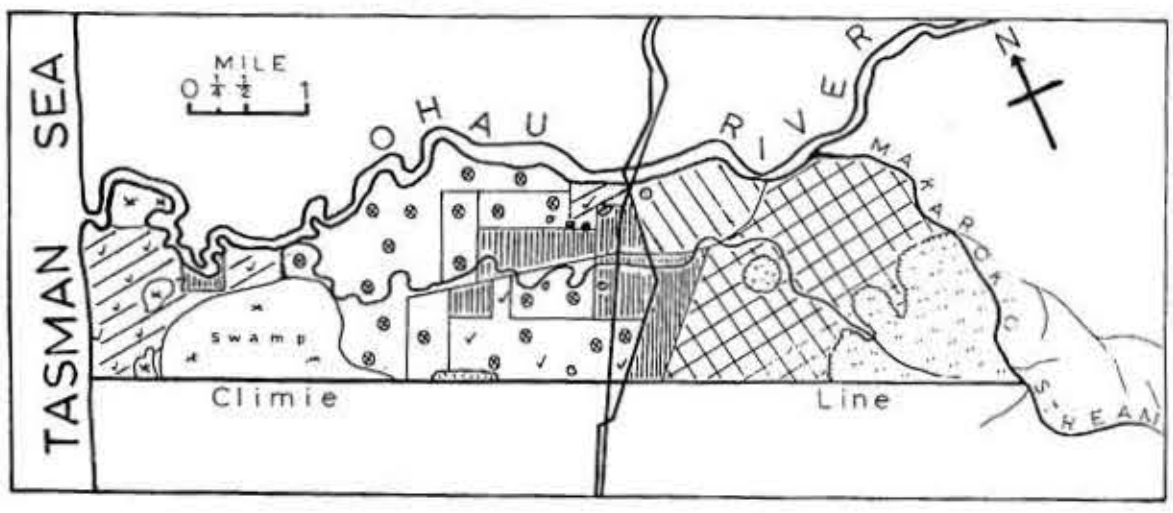


LEGEND

- SPINIFEX – COVERED FLATS AND DUNES
- SWAMP
- MIXED RAINFOREST RIMU, MATAI, KAHIKATEA.
- FOREST FELLED FOR RAILWAY SLEEPERS
- CULTIVATIONS – BASICALLY OF EUROPEAN POTATO, BUT WIDE VARIETY CROPS GROWN.
- ORCHARDS
- SHEEP AND (EXTENSIVE) BULLOCK FARMING
- LIGHT DENSITY OF STORE SHEEP AND RUN CATTLE
- STOCKYARD
- KAINGA UNFORTIFIED NATIVE SETTLEMENT
- (PREDOMINANTLY NATIVE) TRACKS
- CRUDE FENCES AND UNSURVEYED ROADS
- MAIN ROAD
- MAIN RAILWAY

Fig (b)

1914 KUKU – FARM TYPES



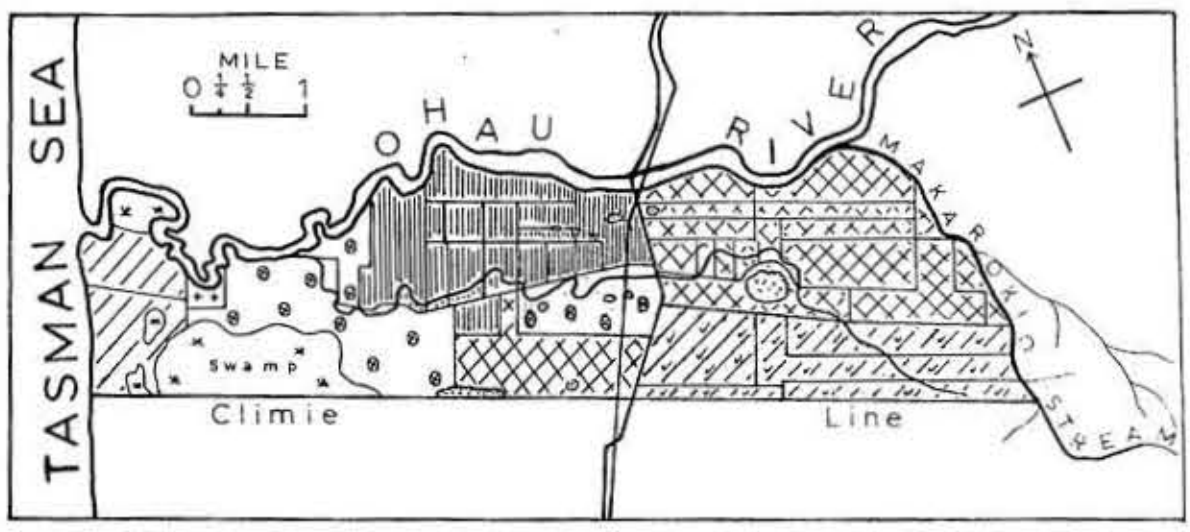
LEGEND

- DAIRYING
- FAT LAMB FARMING
- STORE SHEEP AND RUN CATTLE FARMING
- FAT LAMB AND RUN CATTLE FARMING
- BULLOCK FATTENING
- BULLOCK FATTENING AND SHEEP FARMING
- NATIVE BUSH

NOTE: THESE MAPS WERE COMPILED FROM INFORMATION SUPPLIED BY LOCAL FARMERS. 1914 BOUNDARIES BASED ON —— BRODRICK (1913) MAP.

Fig (c)

1920 KUKU FARM TYPES



LEGEND

- DAIRYING
- STORE SHEEP AND RUN CATTLE FARMING
- FAT LAMB AND RUN CATTLE FARMING
- BULLOCK FATTENING
- DAIRY 'RUN-OFF'
- RUN CATTLE FARMING
- NATIVE BUSH

sent from the district to the Wellington butchers.

Most of the European farmers ran cows, but breeds were not pure (e.g. Shorthorn-Jewsey cross or Friesian-Jersey cross) and production was mainly for home consumption, as no creamery had been established in Kuku. The cows run by the Ngati-Tukorehe on their communal land were also grazed chiefly to satisfy family and local demand for butter and cheese, but the standard of the herds was lower than that of the European farmer. The Kuku Maori continued to cultivate potatoes, wheat and oats, which cash crops still found a ready local market; (e.g. potatoes were sold to the local store) to tend his orchards and to breed pigs and horses. But, like the European, he was soon to become aware of a quickening in the tempo of economic activity in the district.

Between 1820 and 1913, Kuku had experienced three phases of European influence - the introduction of the potato; the Maori trading with the European in wheat, potatoes, pigs and flax; and the development of refrigeration. In 1913, the fourth and most intensive phase of European influence began, for in this year a 300-acre beef-cattle property was subdivided, cut into small farms and sold. This reduction in farm size began a more intensive form of land use.

(ii) 1913-1928. Sub-division and the Rise of Dairying.

In 1913, the Hall Estate [1], a 300-acre beef-cattle property, was sub-divided by the owner into 50-acre farms and sold at £52 an acre. The introduction to New Zealand of the more intensive form of land use, that of dairying, made possible this reduction in farm size in Kuku.

It was recognized amongst the farming fraternity that a man could "set himself up" in dairying with less capital than in sheep or beef-cattle farming, as he could begin in a small way and gradually build up his herd. "A man with 50 acres and 25 cows could make a gross return of £600 a year. He could not make that off bullocks and besides, he would want a much bigger area to carry on the fattening business."[2] The majority of non-dairy farmers, both European and Maori, were already running house cows; and the requirements of dairying suited family labour - a force which had not been fully utilized in the preceding phase of semi-extensive pastoralism. On many of the dairy farms, women helped with the hand-milking, while on the larger farms, children fed the boilers of the wood-burning, steam-driven milking machines, which, after the First World War, were replaced by petrol-driven models.

In 1913, the "Fresh Food and Ice Company", of Wellington city, established a creamery in Kuku.

This provided an added incentive to take up dairying, for now it was to be possible for even the part-time farmer to have a regular, if small, monthly income. This development was of great economic importance to the small holder trying to establish himself as a dairy farmer, for he could ill afford to wait for the seasonal cheque of sheep and beef-cattle farming. The creamery was later converted into a cheese factory and the raising of pigs, which were fed on a by-product - whey - became a profitable supplement to dairying.

In August 1915, the cheese factory was purchased by the settlers and called the "Kuku Dairy Company" (not, as might have been expected in New Zealand, the "Kuku Co-operative Dairy Company"). An incentive to increase cheese production was provided at the beginning of the 1915-16 season by the signing of a cheese contract between New Zealand and the United Kingdom. In October 1915, the dairy factory was burnt out and replaced in 1916 by the "Kuku Co-operative Dairy Company Limited." Of the nine directors of this company, two were resident Maori farmers. Cheese production was resumed, although with the signing by New Zealand of an Imperial butter contract with Britain in October 1917, butter production (i.e. in addition to cheese) was commenced at the Kuku dairy factory.

The First World War (1914-18) broke out before the potential of dairying could be realized and it was not until the Soldier Settlement and other post-war subdivisions that renewed impetus was given to this new pastoral industry. The demand for dairy products in nearby centres was symptomatic of the world-wide food demand. Levin, a township four miles north of Kuku had a population of 1,979 while Palmerston North (population 20,107) and Wellington (population 103,687)[3] were also growing centres.

The effect of the demand for milk by Wellington city was felt in Kuku and the other southern North Island farming districts. By 1918, a small amount of winter milk was already being sent from Kuku to Wellington. At a general meeting of the Kuku Co-operative Dairy Company Limited the secretary noted that "considerable discussion took place over . . . 'town suppliers' who sent their milk to Wellington in the winter and to the cheese factory in the flush of the season."[4] A piecemeal winter quota system was now beginning to operate. Farmers who, on the basis of past production figures, could prove their reliability as a source of winter "town milk" entered into a monthly contract with the Kuku dairy factory, which, in turn, negotiated with the controlling body (the Wellington City Council).

The increasing tempo of economic activity in Kuku and particularly the clearing of bush (Table 1 - forest cover removal and swamp drainage in Kuku 1840-1963, p.27) is exemplified by the progress, in a little over 12 months, of the returned servicemen in Kuku, who, with but one exception, had taken up dairying. "During the year the settlers have left their mark on the land. There has been an immense amount of toil necessary including clearing up, burning fallen timber, rushes and other useless growth, fencing, draining and other work incidental to a new settlement." [5]

The extent to which the post-subdivision dairying phase influenced land use in the 1913-1920 period is best illustrated by a comparative study of Map 7 (p.33a). Fig.(a) (1890) shows the type of semi-extensive farming practised prior to 1913; fig.(b) (1914) the changes reflected in the changeover to smaller farms and the establishment of a creamery in 1913; and fig.(c) (1920) the spread of dairying at the expense of beef cattle fattening. Note also the swamp reclamation and the effect of the introduction of dairying upon the bush-line. The bush, by 1920, had retreated to its present-day limits, a mere 1% of the total land area of Kuku.

In the immediate post-war years, the economic climate was favourable to the small dairy farmer. Four miles to the north of Kuku, in the growing market

township of Levin, it was noted that - "The present season (i.e. 1920) with its fancy prices induced quite a number of residents to go in for a few cows, and these form quite a proportion of the suppliers to the Levin factory." [6] The residence in the Kuku district of one of the foremost Jersey stud breeders in the Dominion indirectly stimulated local farmers to improve their blood-lines. Kuku Herd-Testing Association estimates for 1921 show, on the basis of the 14 herds surveyed, an average butterfat yield per cow of 230 lbs, a figure slightly in excess of the Dominion average at that time. The average herd size of 24 would indicate a carrying capacity of one cow to two acres - about the national average. The influence of internal markets stimulated further development - it was reported by an unidentified writer in the Levin Chronicle (1920) July 17 that the Wellington City Council was negotiating with Levin farmers to increase production of winter milk.

The influence of the British market on New Zealand dairy production is illustrated by an excerpt from the Levin Chronicle (1921) March 1 in which an unidentified reporter noted that several Taranaki dairy companies which had "gone over to butter" in 1917 were reverting to cheese again when the Imperial butter contract terminated at the end of the month. (March 1921). In that same year, the Kuku Co-operative Dairy Company

Limited received word that its first cheese shipment to the "home market" (Britain) had realized high prices. [7]

In central Kuku, dairying continued to expand at the expense of beef-cattle fattening, store-sheep farming, lamb-fattening and run-cattle grazing. But the mid-1920s witnessed an additional type of economic activity in the district. A number of Chinese market gardeners commenced leasing small areas of both European and Maori land for short periods (3 - 5 years). A variety of crops e.g. cabbages, peas were raised, but the most widely-grown crop was the potato. The Chinese lived approximately four to a one-roomed dwelling and worked a small area of garden each. It seems certain that the Chinese were established in Kuku by 1926, for in January of that year, a present-day local dairy-farmer recalls that he spent the afternoon of his first-year wedding anniversary digging potatoes for sixpence an hour in a Chinese market garden.

The number of Chinese in Kuku fluctuated during the 1920s, and their numbers cannot accurately be estimated. Of the importance of their presence, however, there is little doubt, for it provided opportunities for Kuku residents; and Europeans and Maoris of both sexes worked in the market gardens. Local European residents observed that from the late 1920s onwards, the Ngati-Tukorehe, in preference to continuing their two-to-three day expeditions to the beach for pipi and toheroa (marine bi-valve molluscs),

puhi-tuna (eels) and ngaore-inanga (whitebait), were able to purchase an increasing proportion of European foods, notably tinned goods.

But this was the era of dairying - and of closer settlement of farms and housing. The introduction into Kuku of a water-race system which enabled stock to be watered, the improved types of grass and clover seeds and the increased use of fertilizers were also contributing factors to development. Of major importance to both European and Maori dairy farmers in Kuku was the introduction of electricity into the district in the mid-1920s (late by North Island standards - but telephones had been installed in Kuku in 1921) and the improvement in agricultural machinery. As elsewhere in New Zealand, mechanization was the key aid to a more intensive resource utilization pattern. The electrically-driven milking machine displaced the petrol-driven model, hand shears were replaced by petrol-driven and later electrically-driven machinery, and the tractor ousted the horse. In addition, the advent of the automatic pressure pump enabled the water reticulation of an entire farm. These were the formative years - by 1929 dairying had reached a high standard of development.

In the period which followed and which was marked by the commencement of a world-wide depression

the economy of lowland pockets in New Zealand became increasingly oriented towards the urban consumer. Kuku, from the early 1930s onwards, experienced two major phases of land use. The first was the temporary expansion of leasehold commercial horticulture; the second, the progressive consolidation of the type of farming which was ultimately to become the focus of the Kuku economy - dairying for town milk supply.

FOOTNOTES.

1. The property of J. Hall, one of the "original four" settlers of the district who had since purchased the 300-acre holding he had been leasing from the Maoris.

2. The validity of this statement from the Levin Chronicle (1920) October 4 has been confirmed by contemporary Kuku farmers.

3. 1921 census. No statistics available for Maoris at this date.

4. Unidentified reporter for the Levin Chronicle (1918) June 30.

5. Unidentified reporter for the Levin Chronicle (1920) May 22.

6. Unidentified reporter for the Levin Chronicle (1920) December 16.

7. Unidentified reporter for the Levin Chronicle (1921) March 1.

CHAPTER III.

1929 - 1963. THE LAST 35 YEARS.

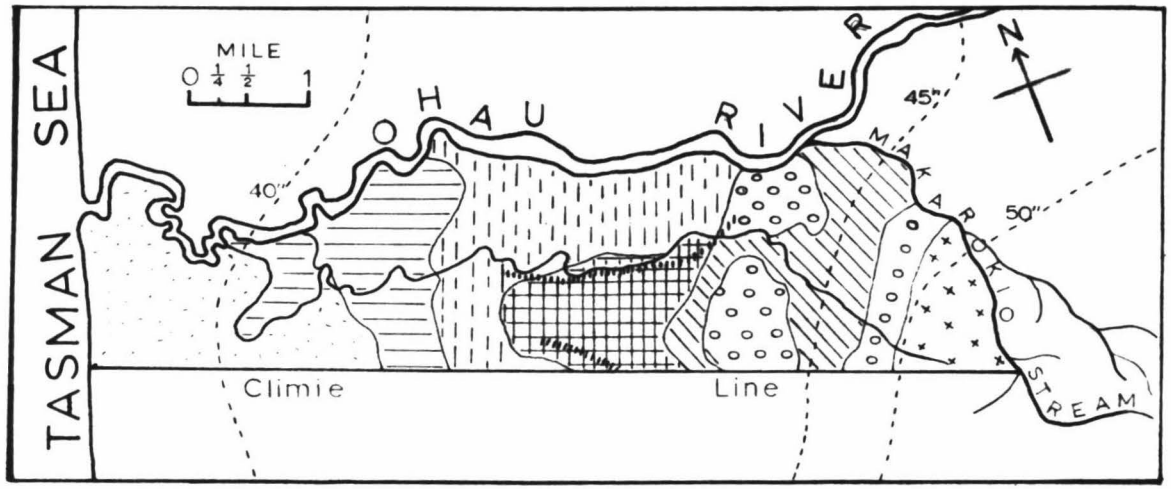
(i) 1929 - 1957. The temporary expansion of market gardening.

The year 1929, which marked the beginning of the depression period, witnessed in Kuku not only the attainment of a high standard of dairying, but the gradual expansion of commercial horticulture. To such an industry the well-watered alluvial soils and the largely frost-free climate of the district were well suited. (See Map 8 - major soil types in Kuku, p.43a). Leaving Wellington city because of the encroachment of urban housing upon agricultural land, Chinese operators leased small acreages in Kuku (on a 3-5 year basis) from both European and Maori owners. This reduced further the area of Ngati-Tukorehe communal land which had been steadily leased and bought, over a period of nearly fifty years (i.e. up to 1929), by the European.

The economic adversity of the period led also to the amalgamation (on the 10th September 1936) of the Kuku Co-operative Dairy Factory Limited with the factory in Manakau, a township just south of the "Climie Line". The "Kuku-Manakau Co-operative Dairy Company Limited", as it now became known, was situated at Kuku, which was also the brand-name agreed upon for its export butter (later changed to the "Ohau" brand). The company

MAP 8

KUKU MAJOR SOIL TYPES



LEGEND

- SAND DUNE SOILS — BEING PROGRESSIVELY RECLAIMED BUT SALINITY INHIBITS INTENSIVE UTILIZATION
- MANAWATU SANDY LOAM AND SILT LOAM FERTILE MARKET GARDENING SOIL BUT SUBJECT TO STREAM SCOURING & FLOODING
- KAIRANGA SILT LOAM
- HERE-TAUNGA SILT LOAM

  POOR NATURAL DRAINAGE BUT HIGH NATURAL FERTILITY PLUS ABILITY TO WITHSTAND CONTINUAL GRAZING MAKE THESE ALLUVIAL SOILS SUITED TO MEET THE YEAR ROUND DEMANDS OF TOWN MILK DAIRYING
- SKELETAL SOILS — PRONE TO SECOND GROWTH OF GORSE AND FERN, ADAPTED TO EXTESIVE SHEEP FARMING BUT IS RAPIDLY ASSUMING SIGNIFICANCE AS WINTER RUN OFF FOR THE TOWN MILK DAIRY FARMER
- LEVIN SILT LOAM. REQUIRES HEAVY FERTILIZATION BUT ITS FREE-DRAINING QUALITIES (NOTE CORRELATION WITH RIVER TERRACES) RENDER THIS NATIVE-OWNED ZONE POTENTIALLY VALUABLE FOR COMMERCIAL HORTICULTURE *

* PERSONAL COMMUNICATION — MR. I.J. POHLEN, SOIL BUREAU, D.S.I.R.

COMPILATION DATA FOR MAP 8. - KUKU - MAJOR SOIL TYPES.

1. Soil Types.

   Gibbs (1957) Map.

2. Terraces.

   A. Oliver (1948) Map.

   B. Adkin (1948) Appendix Maps V and VI.

   C. Climie (1879) Map.

   (Along the banks of the Makarokio Stream are shown cliffs 30 feet high which correspond approximately with terraces indicated by Adkin (1948). See above.)

3. Isohyets.

   A. New Zealand Meteorological Office (1962) Map.

4. Accompanying Data.

   A. N.Z.D.S.I.R. (1953) Soil Bureau Bulletin (N.S.) No. 5.

   Extended legend pp. 61-216 and supplementary notes pp. 219-272.

   B. Personal communication. Pohlen I.J.

   Government Soil Bureau D.S.I.R.
   Taita, Wellington.

commenced activities with a butter and cheese factory, but largely because of the preferences of the British market, production was directed towards butter-making. (See Table 2 below.)

TABLE 2

Table showing production figures of the Kuku-Manakau Co-operative Dairy Company Ltd. 1936 - 1961.

Season	Tons of Produce		
	Butter	Cheese	Dried Milk Powder
1936-37	651	202	
1937-38	808	181	
1938-39	677		
1939-40	692		
1940-41	707		
1941-42	362	539	
1942-43	478		
1943-44	351		
1944-45	496		
1945-46	493		
1946-47	512		
1947-48	441		
1948-49	492		
1949-50	642		
1950-51	547		
1951-52	513		
1952-53	561		
1953-54	516		126
1954-55	595		167
1955-56	538		142
1956-57	504		208
1957-58	417		236
1958-59	575		210
1959-60	502		200
1960-61	419		208

Between 1922-23 and 1936, the annual average rent for dairying land in Kuku was £2.10.0 an acre. The market gardener Chinese offered £9 to £10. It

became evident that land in Kuku was to have a dual value i.e. a dairying value and a market gardening value. It is estimated that the number of Chinese leasehold operators and labourers in Kuku during the early 1930s was in the vicinity of 70 adults.[1] The Chinese, although growing a variety of crops, including carrots, onions, peas, lettuce, cabbages and tomatoes, showed a distinct preference for the remunerative cauliflower, which, ideally, they would have preferred to crop intensively for two to three years prior to moving on to fresh (i.e. grassed land). First-year cropping on such ground produced heavy yields of cauliflowers, but whereas in the following year, heavy applications of lime were necessary, in the third, grass growth was the only payable proposition to avoid "club root".

This disease, which affects both cauliflowers and cabbages, is caused by a fungus which exists in the soil and which sometimes attacks the roots of the plants, causing them to swell and eventually decay with a very unpleasant odour. To prevent this, applications of lime in excess of two tons per acre per annum were made by the Kuku Chinese gardeners. However, if "club root" became established in the soil, liming did not, as a rule, produce an immediate cure. The Kuku Chinese, therefore, preferred temporary grass growth which they considered to be a more effective and a more economic proposition than liming.

But market gardening was not the only branch of economic activity in Kuku to be experiencing change. Dairying, which, prior to the mid-1930s, had been oriented towards butter and cheese production, was becoming more responsive to the demand for milk, especially in the winter months, of the Wellington urban area. The piecemeal winter quota system which had been operating in Kuku since the First World War, had gradually been extended. The controlling body (the Wellington City Council), gave strict priority to town milk supply areas in accordance with their relative proximity to the capital city. The Kuku factory, because of its geographical position on the northernmost outskirts of the Wellington collecting area, was the last factory to be called upon. Hence, supplying town milk only when requested to do so [2] by the Wellington City Council, the Kuku factory occupied the role of a "balancing station" rather than that of a constant supplier.

In Kuku, then, dairying and market gardening existed side by side. It gradually became apparent that a symbiotic relationship was developing between these two branches of land use. With the expansion in Kuku of the Chinese market gardeners, some of the town milk dairy farmers took advantage of the

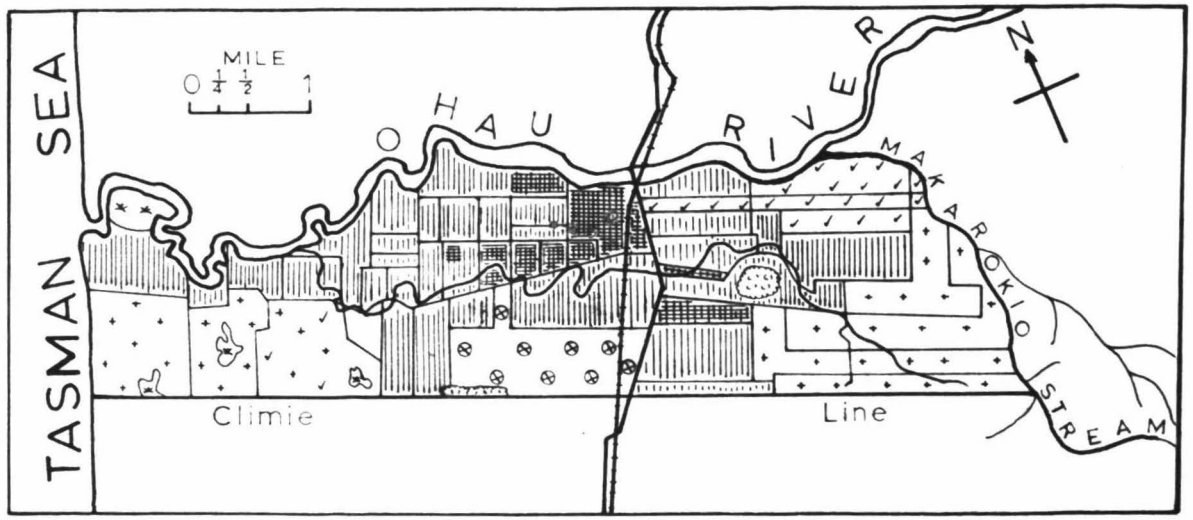
opportunity to have part of their farmland cropped and regrassed. Accordingly, several of them negotiated agreements with Chinese seeking "fresh" soil. In one instance, 14 acres of dairying country were leased for 4 years by a Chinese market gardener in exchange for his own cropped property of 17 acres. Thus the market gardener obtained his much sought-after "new" ground, while the town milk farmer reaped the benefit of fresh pasture for the duration of the lease. It was written into the terms of the agreement that the Chinese lessee was to grass the property at the expiration of the lease period.

The influence of the Kuku Chinese on land use i.e. the temporary encroachment of market gardening on what had been dairying land, is illustrated by Map 9 - Farm types in Kuku - 1930, p.47a. This map does give an impression that market gardening occupied a considerable acreage. It must be pointed out, however, that the Chinese were operating on short (3 - 5 year) leases and that market gardening, up to and during the 1930s, was alternating with dairying in the areas indicated by cross-hatching on the map.

After the depression, the acreage in Kuku under Chinese market gardening declined. The main factor appears to have been the increased profitability of town milk dairying as opposed to income received from land rents from the Chinese. European and Maori land-

MAP 9

1930 KUKU—FARM TYPES



N.B.

THIS MAP GIVES A FALSE IMPRESSION, FOR MARKET GARDENING IS INDICATED AS OCCUPYING A CONSIDERABLE ACREAGE. IT IS TO BE REALIZED, HOWEVER, THAT MARKET GARDENING IS BEING OPERATED ON SHORT 3-TO-5-YEAR LEASES, AND THAT UP TO AND DURING THE 1930s, COMMERCIAL HORTICULTURE WAS ALTERNATING WITH DAIRYING ON THE AREA INDICATED BY CROSS HATCHING ON THE MAP. NOTE ALSO THAT THE EXPANSION OF DAIRY 'RUN-OFF' HAS BEEN SECURED AT THE EXPENSE OF STORE SHEEP AND RUN CATTLE COUNTRY. SEE MAP 7 FIG(C) 1920.

LEGEND

- MARKET GARDENING ALTERNATING WITH DAIRYING ON 3-TO-5-YEAR LEASES
- DAIRY 'RUN-OFF'
- BULLOCK FATTENING
- DAIRYING
- SHEEP FARMING & DAIRY 'RUN-OFF'
- SHEEP FARMING
- SWAMP
- NATIVE BUSH

owners therefore resumed the farming of land previously leased to the market gardeners. Many of the Chinese, having exploited a number of plots on short-term (3 - 5 year) leases, moved out of the district in search of fresh cropping territory. But the Ngati-Tukorehe were not consistent in their use of the land they regained from Chinese tenants. The Maoris practised dairying for short periods, but the small cowsheds which they erected often fell into disuse when the "co-owners" leased the land again - either to the European dairy farmer or to the Chinese market gardener. In some cases, the Ngati-Tukorehe, rather than lease their land, practised sheep or store-cattle farming. More commonly, however, they left the district and sought work in the cities, particularly Wellington.

A further development, which, by the late 1930s, had become apparent was the "reversion" - the appearance of second-growth native vegetation e.g. fern, scrub and introduced lupin - on native-owned and leased farms in both the "coastal belt" and the hill country. In many instances, this deterioration was the result of the exploitive practices of the short-term (5 - 8 year) European lessees. Little effort was made by the tenants to maintain the land or improve it. Gorse and fern on the hill country; lupin, rushes and tall fescue in the "coastal belt" were often permitted

to spread unchecked. At the conclusion of a lease period, many of the improvident Ngati-Tukorehe lacked the cash or incentive to pay for any improvements which might have been carried out on the communally-owned property. As a result, the hill ridges of Poroporo, Otarere and Pukeatua (See Map 2 - Relief and Drainage of Kuku, p.9a), the Tararua foothills and the "coastal belt" deteriorated into second-class country, and are still so today.

In January 1938, the cheese factory of the Kuku-Manakau Co-operative Dairy Company Ltd. was totally destroyed by fire. A new building was erected but only butter was made - a measure influenced not as much by the preferences of the British market as by the wishes of the majority of the company directors who felt that the cost (in excess of insurance cover) of erecting a new cheese plant was not warranted, particularly in view of the existence of the butter-making section of the factory. The Kuku dairy farmers now could separate their milk on the farm and send only the cream to the factory. In the winter months, however, the whole milk was sent to the factory where the quantity of milk required for "town supply" was chilled and railed to Wellington. Butter, made from the cream from separated surplus milk, was also sent city-wards. For most of the year, skim milk was still available for pig-feeding, but

in the winter months, the growing of supplementary crops e.g. sugar beet, pumpkins became necessary for pig-feeding.

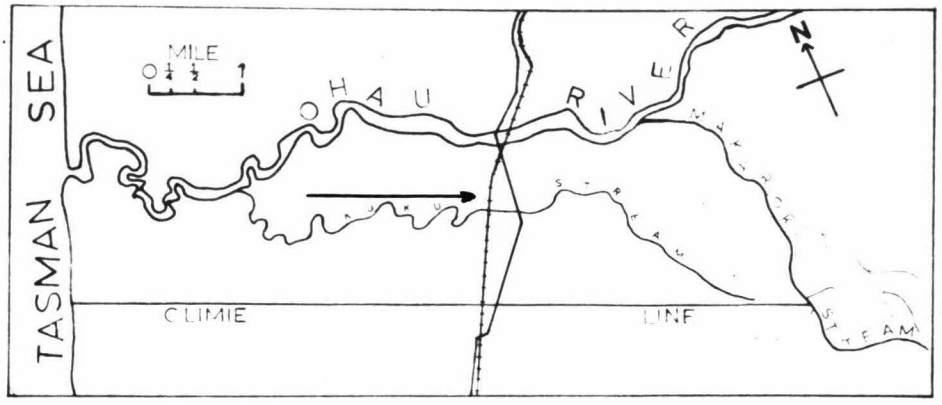
In May 1939, just before the outbreak of the Second World War, it appeared that economic change in Kuku was to be accelerated by an outside force. At this time, shortage of building space in Lower Hutt (a residential and industrial area some 10 miles north-east of Wellington city) had led the government to announce its appropriation of central Kuku as a resettlement site for market gardeners (many of whom were Italians) displaced by a state housing scheme from Taita, a residential suburb of Lower Hutt. The intended appropriation aroused nation-wide publicity and indignation. The settlers, who later referred to the incident as the "Kuku War", prepared to defend their properties, even threatening armed force. However, the Kuku residents formed a deputation and went to Wellington where Mr M.J. Savage assured them that their land "would not be touched by the Crown as long as (he was) Prime Minister." [3]

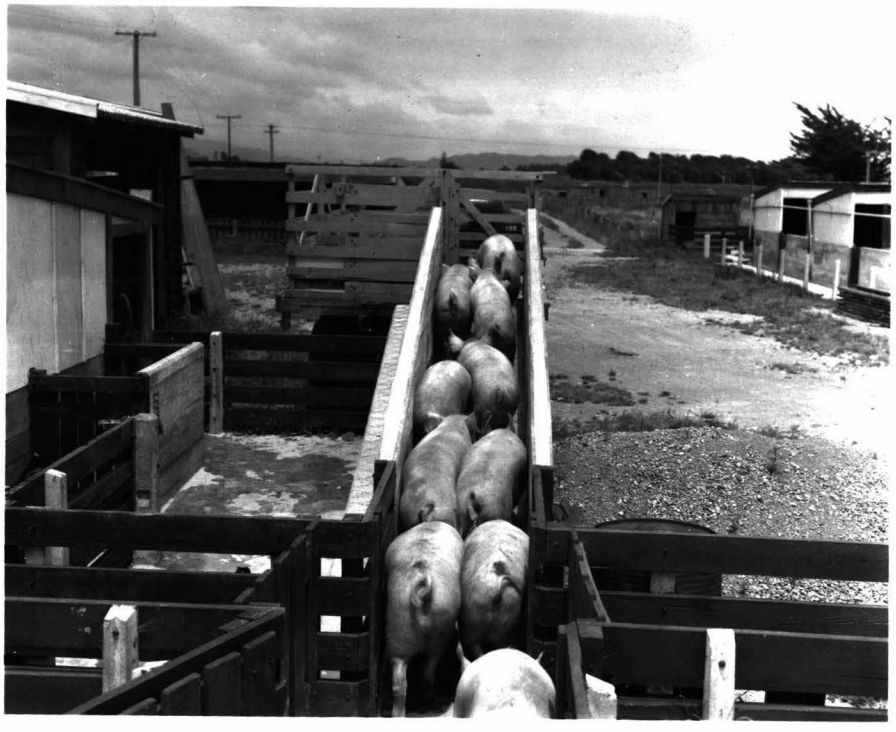
Although it caused a labour shortage on both farms and market gardens, the Second World War had little immediate effect on the Kuku economy. In 1942, at the request of the New Zealand Government, the area in Kuku under vegetables was extended for one season in an effort to help sustain American troops stationed some

30 miles north of Wellington (and 22 miles south of Kuku). Both cultivation and farming were intensified as a contribution to the war effort. The Kuku dairy factory was called upon by the government to make cheese during 1941-42, but the state-financed building which was erected served as a cheese factory only for one season before the emphasis was again placed on butter making.

The post-war years were a prosperous period for the New Zealand farmer, for, as in the years after the First World War, the United Kingdom demand for primary produce rose markedly. But to the Kuku dairy farmer, one of the most noticeable post-war changes was the increase, by the Wellington City Council, of the town milk quota, both in duration and in volume of supply. One noticeable consequence of this increased milk quota was the increased demand for "run-off" i.e. second-class country on which cows are spelled during their "dry" period e.g. until they are capable of resuming milk production. The effect of this demand may be gauged by an examination of Map 9 - Farm types in Kuku in 1930, p.47a. Note that the expansion of "run-off" has been secured at the expense of store-sheep and run-cattle country shown in Map 7 fig.(c) - Farm types in Kuku in 1920, p.33a.

In 1945, because of the difficulty of disposing of buttermilk, the Kuku dairy factory established a piggery. Farmers now ceased to separate





The dairy-factory-run piggery helps ensure the profitable utilization of waste products.

Reproduction by courtesy of -
Department of Agriculture.

milk on the farm and sent the whole milk to the factory. In 1948 a milk-chilling depot was commenced, the old cheese factory building being used as premises. The depot was a great advantage to the dairy farmers who previously had to have the milk ready to catch a train to Wellington. Milk was now collected at the farm gate by factory-hired trucks and taken to the factory where the milk was bulked and chilled before being transported to Wellington by specially-designed road-tankers. As before, surplus milk was separated and the cream used to make butter. Any buttermilk unable to be utilized by the piggery was sent to a casein factory at Oroua Downs (a small township 22 miles north of Kuku). To cope with surplus skim milk, the Kuku dairy factory established in 1953 a dried-milk powder plant in the rear half of the former cheese factory building.

1953 also saw the failure of negotiations for clearing gorse infestation on Poroporo ridge. (See Map 2 - Relief and drainage map, p.9a). In this area was a hilly 200-acre block, all Maori communal land but for 50 acres. Afforestation was considered by the Horowhenua County Council (responsible for control of noxious weeds in the area) to be the most economic and effective solution, but the large number of Maori owners involved seemed certain to entail protracted negotiations. A field officer of the Department of Maori Affairs was consulted. The officer agreed with the afforestation

policy, but realized that the solution of the problem of ownership, occupancy, and possibly the organizing of owners into a discussion group, would require the backing of his Head Office.

An extract from the letter he[4] wrote to his Department serves to illustrate the problem of much Maori land.

"(1) Approximately 200 acres, mainly hilly country, are infested with dense heavy gorse and are practically non-productive.

(2) The country is too steep to allow the operation of agricultural machinery.

(3) The farming value of the land is so low that the clearing of the gorse by any known method is uneconomical.

(4) The infested area is a menace to the good fertile flat country which surrounds it.

(5) The problem is further complicated by reason of numerous titles of multiple ownership of the affected area: also the incidence of one European title may create a problem to the final solution."

A private Wellington timber firm (Odlin Timber and Hardware Company) was approached, but negotiations collapsed when the 30/- per acre offer by the firm was declined by the Ngati-Tukorehe. The latter were leasing the land at £2 an acre - as "run-off" to

the latter date, whole milk was being sent to Wellington only in the cold months (April to August). For the remainder of the year, the demand of Wellington for milk could be met by dairying areas closer than Kuku to the capital city. However, both the period of supply and the volume of town milk sent from the Kuku dairy factory to Wellington, was to double with the inclusion of the Kuku district in the National Milk Scheme.

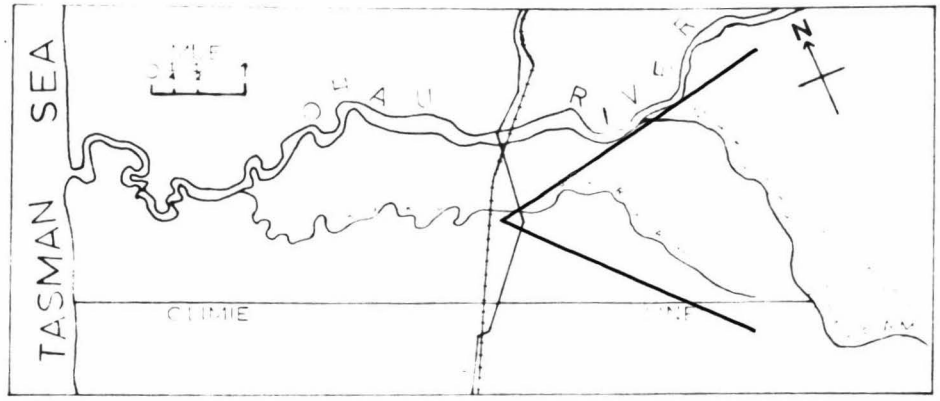
(ii) 1958 - 1963. Town Milk Supply Dairying.

In 1954, sales of town milk in the Wellington district (comprising Wellington city, Hutt Valley and west coast townships as far north as Levin) totalled 8,116,632 gallons. By 1958, sales had increased steadily to 8,909,107 gallons.[5] Increased demand for milk threw a greater strain on town milk supply areas close to Wellington, and the milk supply area for the city was extended northwards. By September 1958 (see reference in section above) Kuku was included in the National Milk Scheme. Local dairy farmers now received monthly an annually-fixed price per gallon in return for which they guaranteed, at the risk of financial penalty, to fulfil daily their allotted quota. Although participation in the scheme was

optional, only two of the 32 Kuku dairy farmers declined to become contributors. The farmers still supplied milk to the factory but were paid on the basis of the butter-fat content of their milk. The town suppliers were paid on a gallonage basis.

The town milk quota became part of the individual farm organization - if the property was sold, the quota had to accompany the sale. Value of "town milk" farms increased, and every effort was made by most farmers to secure from the Kuku factory as high a quota as they could constantly fulfil. The Wellington City Council notified the Kuku dairy factory of its annual quota, and the factory allotted gallonage to Kuku suppliers on the basis of such considerations as herd size and year-round reliability of milk production. From being a "balancing station" i.e. an area called upon by Wellington for milk only in winter time, or in times of unforeseen shortage, the Kuku dairy factory, as from September 1958, became an almost full-time supplier of whole milk to Wellington. Only in the "flush period" i.e. in the spring and summer months of October, November, December and January was cream sent instead. During this time, town milk supply areas close to Wellington could cope with the milk demands of the capital city.

Today, most Kuku town milk farmers have completed a herd changeover (commenced in 1957, when twelve months' notice of the implementation of the



Information to accompany photograph overleaf.

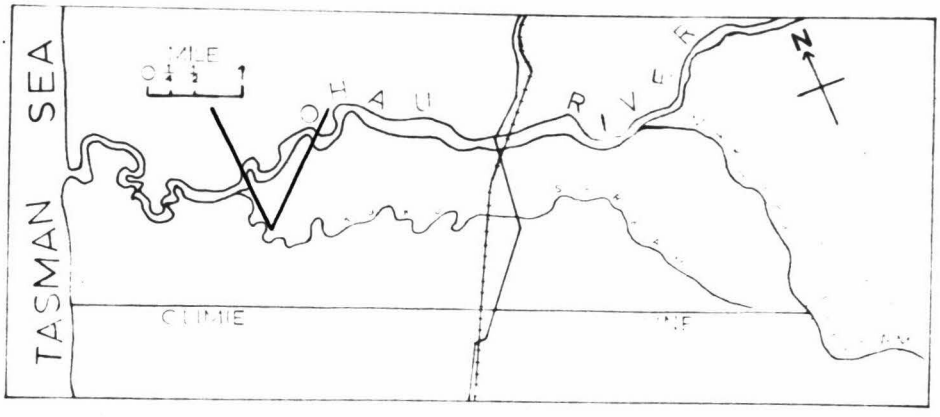
The programme of this Town Milk Producers' Field Day in Kuku (Feb.1959) dealt mainly with problems associated with the changeover from factory supply to all-year-round milk production. Note the characteristically fern-reverting pastures of the Tararua foothills in the background - typical of the second-class country leased by dairy farmers for "run-off".

Note: The hills in the background constitute the relief features seen in the eastern third of diagram 1 - p.2a.

Reproduction by courtesy of -
New Zealand Milk Board.

National Milk Scheme was given to the farmers) from the Jersey, noted for the quality of its milk, to the higher-yielding, heavier-framed Friesian, although some town milk farmers retain some Jersey stock. 75% of the average herd is Friesian, but replacements are bred, not bought, for as in most town milk supply districts, stock are expensive.

On the average-sized Kuku dairy farm of 50 acres, the most important crop is, of course, grass - which must be utilized to the full, for "whether it is a growing crop or a supplementary feed all grass is potential milk to the town milk producer." Harris (1962) p.31. Of the supplementary crops, the chief are hay and silage, although electric fence break-feeding, especially of chou-mollier, has become common farming practice over the last 5 to 6 years. Staggered calving has become necessary, as a guarantee of winter milk production by the farmer was a pre-requisite for qualification for the town milk quota. Year-round milking is hard on both the farmer and the land, but it is more profitable than butter-fat production. On an average, the production of a cow assessed on a gallonage basis is worth approximately £60 per annum. For production of a cow assessed on the butterfat content of the milk, the equivalent figure is £40. [6]

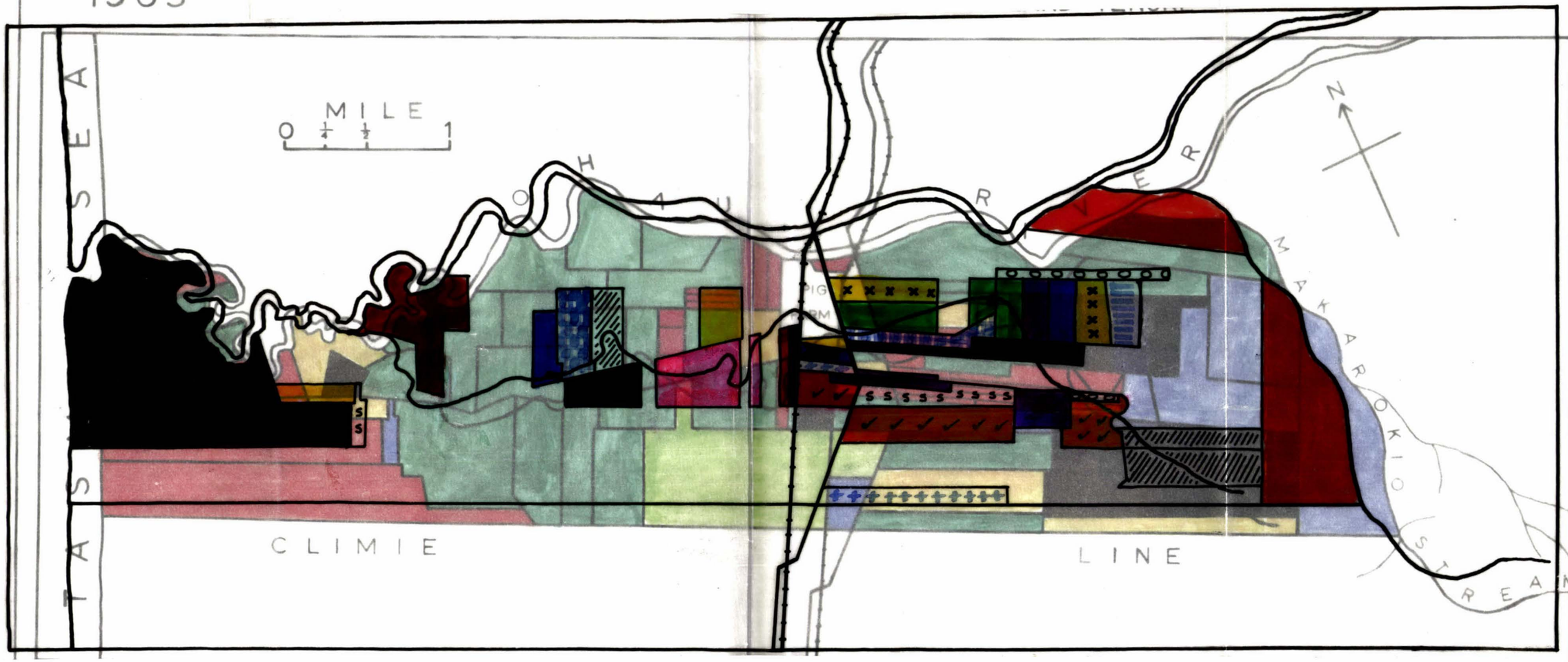


75% of the average herd is Friesian. These calves are being bred as replacements, as stock are expensive in a town milk supply district.

The increased demand in Kuku for run-off has been a contributing cause in raising the value of marginal hill country hitherto considered capable of carrying one sheep to the acre. Land prices have been rising continually throughout the Dominion, and Kuku is no exception. One local 112-acre property, bought for £1,800 in 1956, was purchased seven years later as "run-off" by a dairy farmer who paid £2,644 for the section. Such opportunity could possibly cause the 7 sheep farmers in Kuku to sell or lease their partly-hill properties, thus creating uniformity of pastoral stocking in this dairying district. The extent of the uniformity may be assessed by an appraisal of Map 10 - Kuku farm types 1963, p.58a. This map gives the appearance of a multitude of farms. However, as the overlying tracing sheet (showing multiple farm units) suggests, fragmentation is largely responsible for the network of holdings which is due in part to the leasing to European town milk dairy farmers of pockets of Maori communal land as "run-off" (shaded black on the map).

All 5 Kuku Maori dairy farmers (there are also 2 Maori sheep-farmers) participate in the National Milk Scheme and their farming practices are basically the same as those of the European. However, as Oliver W.H. (1960) points out, the farming background of the Maori differs from that of the European. Speaking of New Zealand as a whole, Oliver states (p.248-9) - "To the

1963 KUKU FARM UNITS



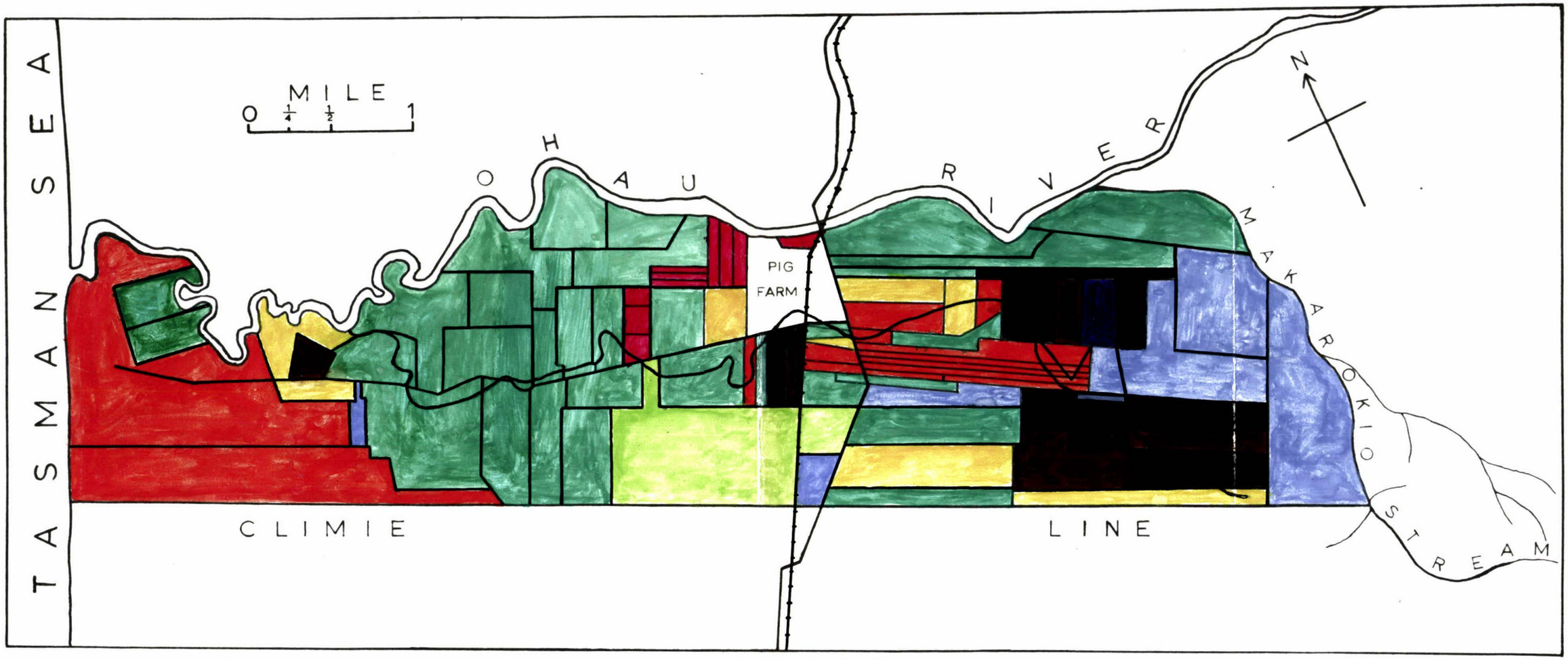
THE MAP OVERLEAF GIVES THE APPEARANCE OF A MULTITUDE OF FARMS. HOWEVER, AS THIS TRACING OVERLAY SUGGESTS, FRAGMENTATION IS LARGELY RESPONSIBLE FOR THE NETWORK OF HOLDINGS, WHICH IS DUE IN PART TO THE LEASING, BY EUROPEAN TOWN MILK DAIRY FARMERS, OF POCKETS OF MAORI COMMUNAL LAND AS 'RUN-OFF' I.E. SECOND-CLASS COUNTRY ON WHICH COWS ARE SPELLED DURING THEIR DRY PERIOD. ON THIS OVERLAY, THE SECTIONS COMPRISING A FARM UNIT ARE SHADED IN THE ONE COLOUR OR HATCHING.

FOLD OUT MAP AND TRACING OVERLAY TOGETHER

MAP 10

1963

KUKU — FARM TYPES IN RELATION TO LAND TENURE



LEGEND

COMPILED FROM —
(1) FIELD NOTES AND NOTES DRAWN BY THE AUTHOR IN COLLABORATION WITH LOCAL FARMERS
(2) BOUNDARIES BASED ON
(a) INTERVIEWS
(b) VALUATION ROLLS (1960)

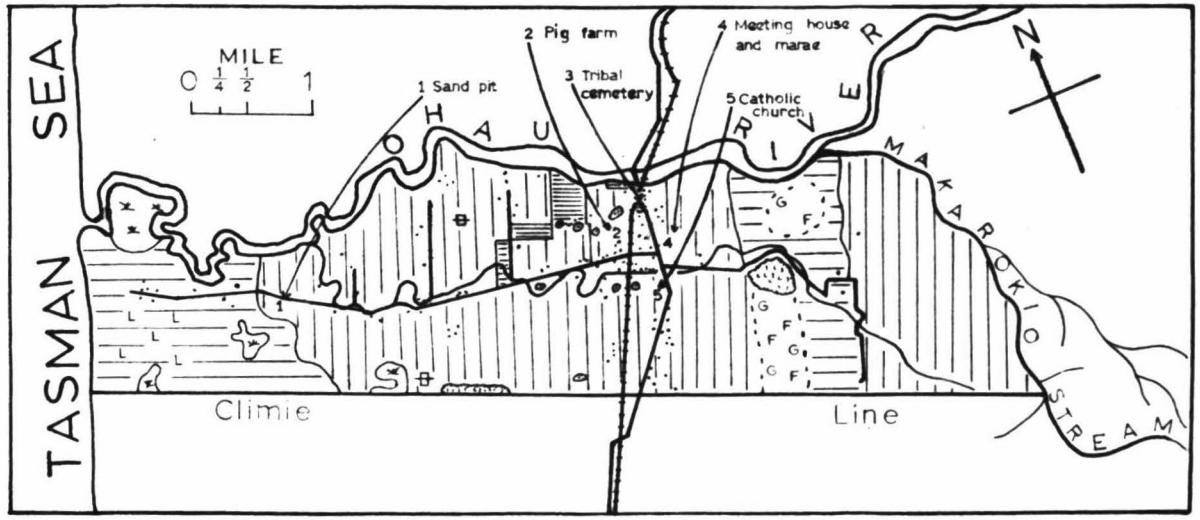
- EUROPEAN FREEHOLD DAIRYING
- EUROPEAN FREEHOLD SHEEPFARMING
- CHINESE FREEHOLD MARKET GARDENING
- MAORI DAIRYING ON MAORI COMMUNAL LAND
- MAORI SHEEPFARMING ON MAORI COMMUNAL LAND
- EUROPEAN DAIRYING ON LAND LEASED FROM MAORIS
- EUROPEAN FREEHOLD 'RUN-OFF'
- EUROPEAN RUN OFF ON LAND LEASED FROM MAORIS
- MAORI COMMUNAL 'RUN-OFF'

(individual) Maori farmer with his eye on butterfat returns, the communal attitude of his kin to the land and its products may be a barrier to efficiency; the social virtues of the tribe may have become an uneconomic waste of time. To Maoris less intent on profit, the progressiveness of the careful farmer may be a betrayal of essential Maori-hood, the improper Europeanisation of a tribesman."

On the alluvial soils of central Kuku, Chinese operators practise a contrasting type of economic activity - that of commercial horticulture. The cauliflower remains the most widely-grown vegetable, although peas, tomatoes, parsnips, lettuce, cabbages, onions, silver beet and carrots are also cultivated. But today the character of market gardening in Kuku has changed. The Chinese community numbers 47 (cf. 70 adults in the early 1930s) and of this total, over half are children. Compared with the leasehold gardening of the depression period, there are now only 155 acres devoted to commercial horticulture, but of this area 92% (143 acres) is Chinese freehold land cultivated by 8 owner-operators whose holdings average 18 acres. The natural reaction of a minority group, plus the co-operative purchase of former dairy farms of 50 acres followed by sub-division among the Chinese, helps explain the contiguous grouping of market gardening holdings shown in Map 11 - 1963 Land Utilization in Kuku, p.59a.

MAP 11

1963 KUKU – CONTEMPORARY LAND UTILISATION



LEGEND

- MARKET GARDENING
- SWAMP
- G F L — GORSE FERN LUPIN
- NATIVE BUSH
- RUSHES
- NATIVE PASTURE
- INTRODUCED GRASSES E.G. COCKSFOOT
- RESIDENTIAL FARM BUILDINGS ETC.
- ROADS
- MAIN TRUNK RAILWAY

COMPILATION DATA FOR MAP 11 - CONTEMPORARY LAND UTILIZATION IN KUKU. (1963).

Compiled from -

A. Field notes and maps drawn by the author in collaboration with local farmers.

B. The extent and location of market gardening, gorse, fern and bush zones was checked, approximated and sketched from aerial photographs obtained from the Department of Lands and Survey.

(a) Runs 230 and 231 11/2/1942.
Approximately 20 chains to an inch.

(b) Foxton-Wellington Motorway 15/1/1957.
Survey No.1005 Run B7.

(c) State Highway 1. 1961 District 9B.
Survey No.1388.

C. Communications, residential and swamp areas taken from N.Z.M.S.1 Sheet N152 Scale 1:63,360. Levin (2nd Edition) August 1961.

Information to accompany photographs overleaf.

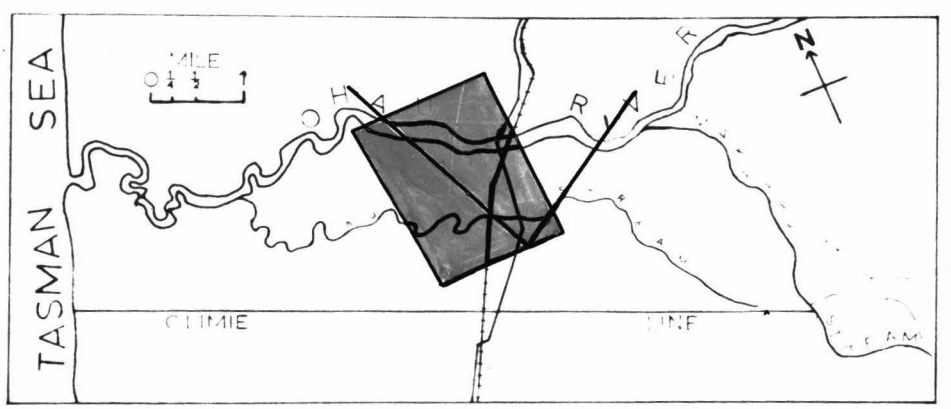
The changing patterns of market gardening in Kuku are illustrated by these two aerial photographs.

Note: (a) The differing scales and angles from which they were taken (see sketch maps below).

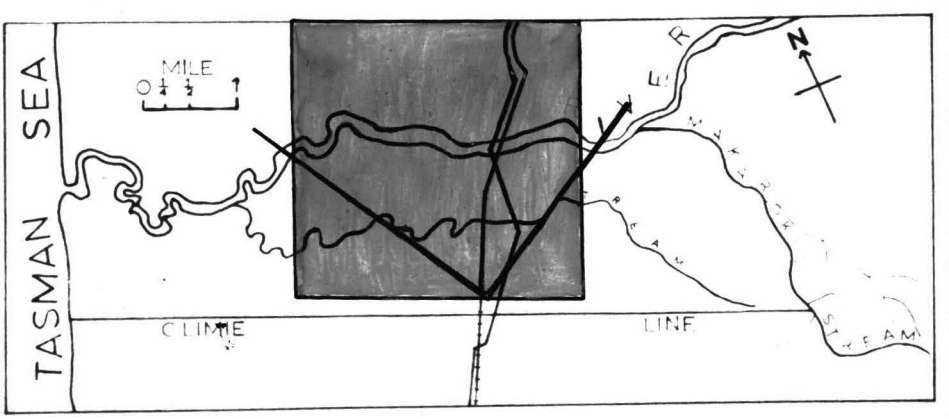
(b) The Indian-ink marked boundary (shaded grey on sketch maps) represents an approximately equal area on both photographs.

(c) Both photographs were taken at similar times of the year, thus eliminating differences due to seasonal cropping.

(d) Atypical extent of market gardening in 1942 (Photograph - 9(i) -) Affect of American troops stationed to south. See text pp.50-51.



- 9(i) -
Feb.
(1942)



- 9(ii) -
Jan.
(1957).

Feb. (1942)

Scale: Approximately 20 chains to an inch.

This photograph, and that immediately following, was reproduced by courtesy of - Department of Lands and Survey.

- 9(ii) -

Jan.(1957)

Scale: Approximately 33 chains to an inch.

Scattered plots averaging 3 acres each in size and worked by 4 bachelor lessees, are not shown on the map.

A noticeable development in Kuku as in other market gardening districts in the Horowhenua e.g. Otaki, Shannon , has been the increase in the number of freehold properties, especially in the last 7-8 years. Of the 8 Chinese owner-operators in Kuku, 5 have built new homes in the last 10 years. The Chinese are settling in the district. While the statement of one farmer "Once Chinese have bought the land for market gardening, it remains Chinese for the simple reason that the dairy farmer can never buy it back" is an exaggeration, there appears little doubt that the Chinese are exerting influence on land use in Kuku. Their combined purchasing power is strengthened in some cases by financial backing from Wellington auctioneering firms. One 50-acre property, previously a dairy farm, sold for £13,500 - an average price of £270 an acre.

The specialist produce of market gardening is particularly sensitive to changes in demand. The speed of road, rail and air transport enable such perishable vegetables as tomatoes to be sent up to 500 miles to a temporary market. Kuku produce has been sent to Palmerston North, Rotorua, Christchurch and Wellington, although the latter city is the main market. The position in Kuku, as in other market gardening areas

e.g. Pukekohe is complicated further by external factors, namely that districts in New Zealand possessing the soil, climate and transport facilities demanded by commercial horticulture are not merely strictly limited - they are shrinking in area. A recent writer notes of Otaki (a township approximately 6 miles south of the "Climie line") -

"Although it is ideally suited to market gardening this land is threatened by the rising tide of rapid urban encroachment and, at the present rate of growth, Otaki will soon go out of market garden production completely except for house plots, following similar land in the Hutt Valley." Pegler (1959) p.140. The process of displacement by urban sprawl of market gardeners from Wellington to Otaki could well be repeated on a smaller scale from Otaki to Kuku as market gardeners seek favourable areas of "fresh" (i.e. grassed) territory.

The influence on Kuku of external markets is modified by internal factors of which the most important is the system of land-holding. Of the seven and a quarter thousand acres which represented the gift of Te Rauparaha to the Ngati-Tukorehe, approximately 3,000 acres, comprising two-fifths of Kuku territory are still "co-owned" by the 130 Maori resident - and innumerable absentee - members of the extended family group. The effect of this communal land ownership may be gauged from the following table:

TABLE 4

KUKU - Value of Improvements and Types of Tenure by Racial Tenure Groups.

	Average percentage value of improvements. *	Acreage of Kuku.
European leasehold	70%	399
European freehold	59%	3,675
Chinese freehold	59%	155
Maori communal land	49%	2,523
Maori freehold **	42%	346
	Total:	7,098

* The figures in this column, calculated from data contained on land valuation slips, express the improved value (including clearing, grassing, fencing, drainage, cultivation, dwellings, other buildings and "other improvements" (Government code) as a percentage of the capital value of each section. To exclude purely residential holdings, properties of under 5 acres are omitted.

** Land registered in the name of a single Maori owner.

As an index to the farming standards of any given tenure group, the table has definite limitations. Considering the value of crops and newly-built homes, the figure of improvement for Chinese market gardening seems

very low. A significant relationship is apparent between low improvement values and Maori land but the cause is difficult to determine. After exhaustive attempts at correlating various factors with farmer efficiency, one Government official of the Department of Maori Affairs concluded that: "In Panguru (a small rural settlement in Northland) and probably in most Maori communities, the personal element plays so large a part in determining the effectiveness of farming that other factors such as access, top-dressing, numbers employed and so on are submerged and have no discernible effect on production." Booth (1953).

In Kuku, as in Panguru and other Maori tribal areas in New Zealand, the greatest barriers to the effective utilization of Maori land are the excessive partition of (already uneconomic) holdings; the complexities of Maori multi- (and absentee-) ownership; and the attitude of the Maoris themselves towards their land - and its use. In Kuku, the expressed wish of any sub-tribal member for a section of land, however small, and for whatever purpose, necessitates the prior approval of all those who claim a share in the land. A meeting is usually held, at which the tribal committee presides. If an agreement is reached, a deputation approaches the Native Land Court and requests permission for partition. The application may be refused on the recommendation of

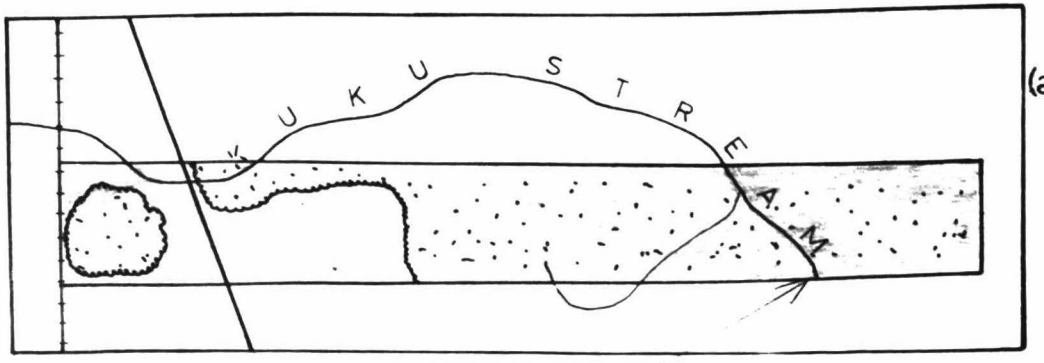
the planning department of the Horowhenua County Council, which is endeavouring to halt fragmentation of holdings.

The effects of sub-division of Maori land in Kuku is illustrated by comparative maps in Map 12, p.64a. - (A Kuku Maori land block in (a) 1889 (b) 1956). In order to secure a title to the land (and hence become entitled to collect rent) a potential section owner must prove his right of access to the property. This factor accounts for the long narrow strip-like farms facing the main highway in Map 12 (b) 1956. (See also aerial photographs). Such fragmentation lends strength to the claim of the Maori Affairs Department that "multiple ownership (of Maori land) obstructs land utilization" and that "atomization of land ownership too often . . . inhibits the profitable use of land altogether." [8] So well known is the mapped native land block (Map 12 (b) 1956) in Kuku, that it is referred to locally as "the fiddle-string sub-division."

Several factors have contributed towards post-Second-World-War sub-division of Maori tribal land in Kuku. The first of these has been the increased availability, since the early 1950s, of finance for housing. This scheme, qualification for which is purely residential, is operated by the Department of Maori Affairs. A further factor influencing partition has

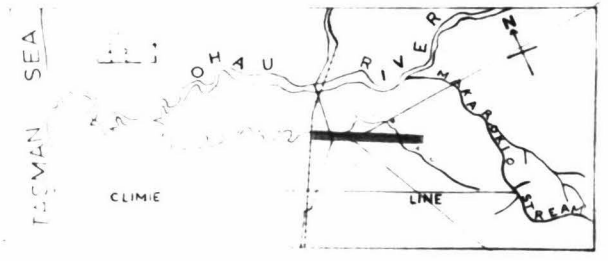
MAP 12

AN EXAMPLE OF PARCELLEMENT



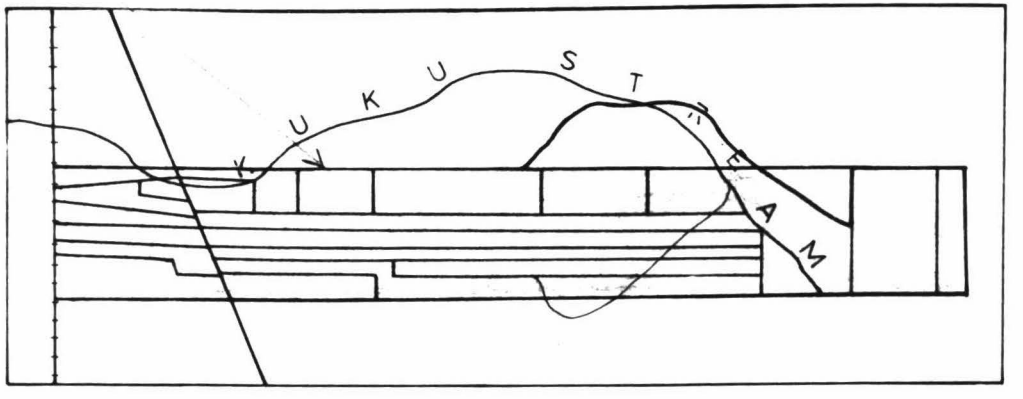
(a) 1889

A KUKU MAORI LAND BLOCK



CHAINS
0 5 10

(b) 1956



MAIN TRUNK RAILWAY

MAIN HIGHWAY

NATIVE BUSH

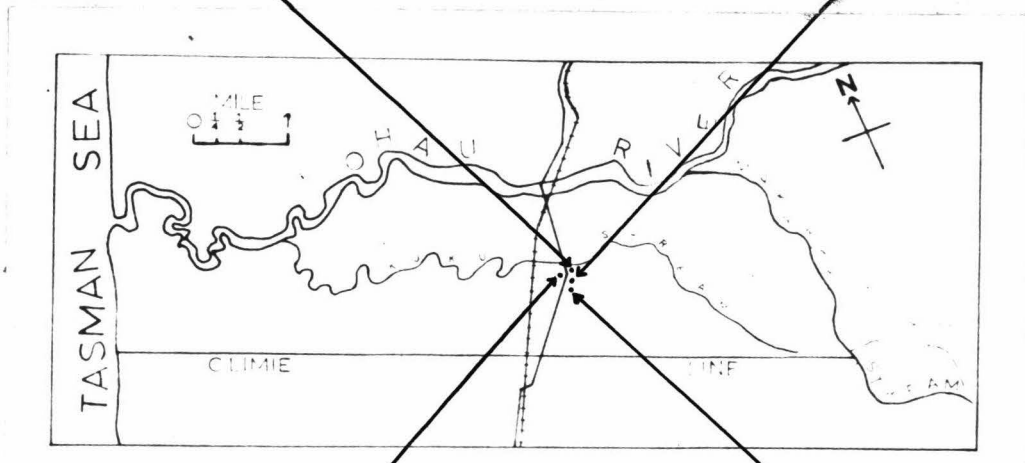
NATIVE LAND BLOCK

COMPILATION DATE FOR MAP 12.

A KUKU MAORI LAND BLOCK - SAMPLE AREA SUBDIVISION.

A. Martin (1889) Map.

B. Plan Record Map (1956 - October).



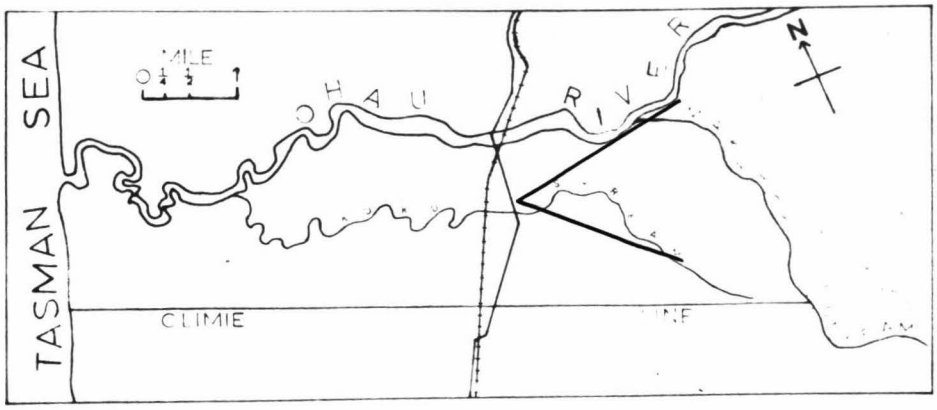
These whares have been abandoned for approximately 16 years. The death of elderly family members was the major cause. New houses have been built nearby under the auspices of the Maori Affairs Department using as security, the land rents of the native owners, who, in the last 5 years have followed the European example and capitalised on the family benefit scheme * for the purposes of home-building.

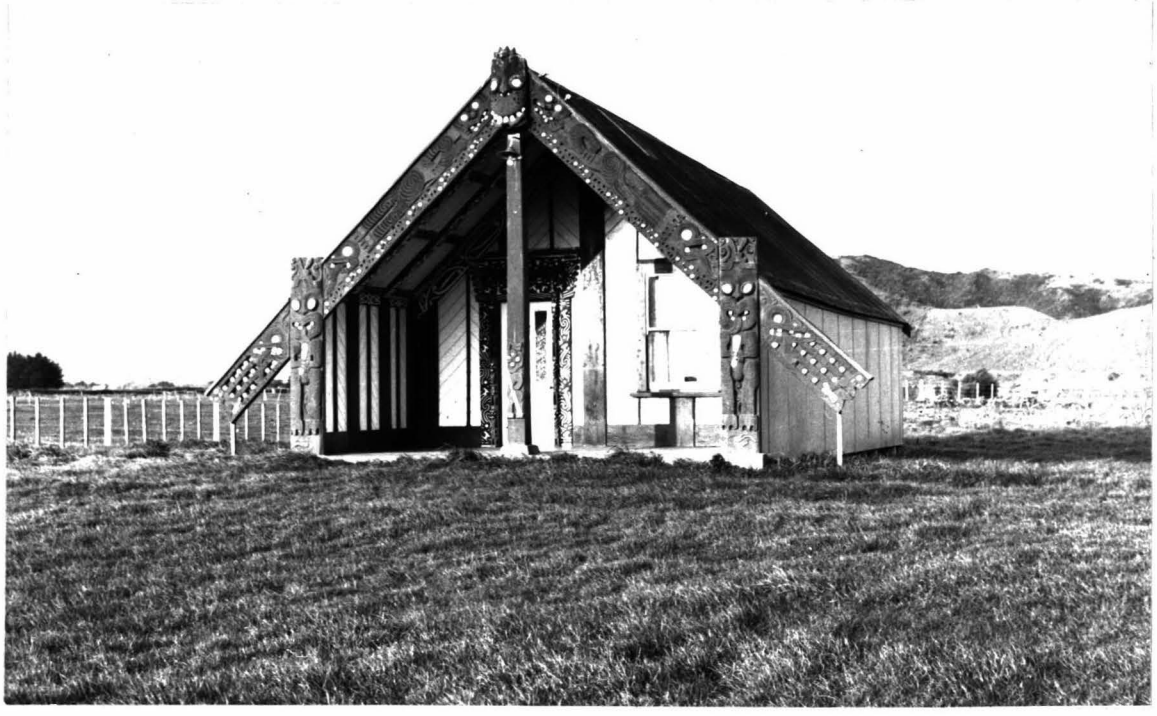
* Government award payable to parents on behalf of school-children up to the age of sixteen.

been the desire of some Maoris to be Europeanized and to have their own plot land (as opposed to an indefinable part of communally-owned land). Finally, there exists in Kuku a Maori minority who wish to farm the land on their own account. But to do so without the consent of "fellow owners" would be tantamount to converting the latter into shareholders in improvements effected to the property.

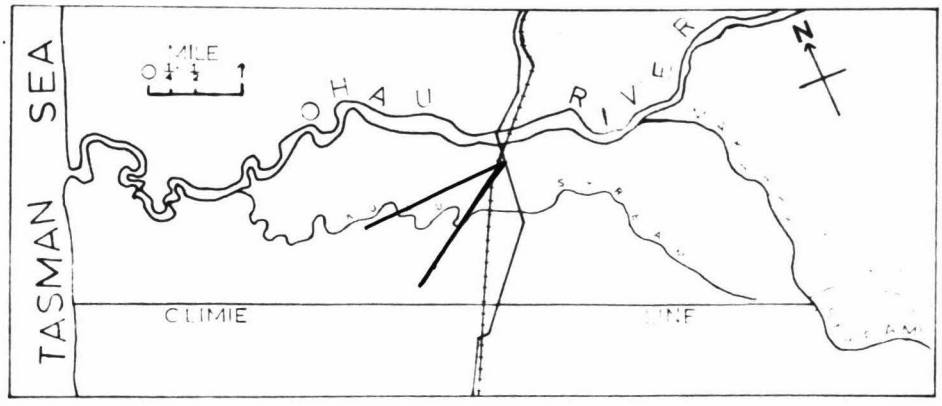
Of the many intangible factors which influence the Maori use of land, the European can never be fully aware. To the younger members of Ngati-Tukorehe, land means little - it is a place where their parents' home is built. The opportunities of urban employment are more attractive than the ties of home. Some of the Ngati-Tukorehe work in Levin and Otaki, but many more have gone to the cities, especially Wellington.

But to the older Maoris of Kuku, land means much. To them, it serves a dual use, for it is not only a source of revenue - it is the origin of their emotional, social and spiritual well-being. This attitude, of which turangawaewae (right, by virtue of proprietorship, to speak on the tribal marae) tangata whenua (locally-recognized land-owner) and whakapapa (genealogical table) are strong components, is partially reflected in the landscape. The whares, or single-roomed dwellings which, even when deserted (see photographs) are





The Native Land Act 1931 states (Sec.117) that "Alienation of (customary) land to private persons is . . . absolutely prohibited, and this prohibition now extends to the Crown." It would thus appear that such integral facets of the personality of the Kuku district as the marae and whare-hui (meeting house) will long remain distinctive features of the landscape.



A Native Land Act reinforced by strict tapu * renders this urupa (sub-tribal burial ground) virtually immune to change.

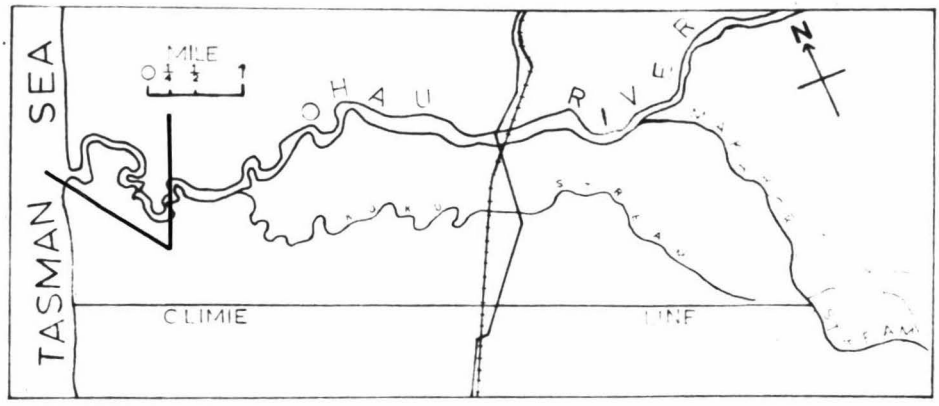
Note: In contrast to the pakeha (European) the Maori feels it is no indication of a lack of respect for the dead if the cemetery is untidy.

* taboo

still the resting place of family spirits and must remain standing until the elements have taken their toll; the urupa (tribal cemetery); the marae (grassed area on which orators stand) and the whare-hui (meeting house) - these are visible expressions of the Maori community spirit.

The Maori ownership of land is a complex web of inter-relationships. A Native Land Court official of twenty years' experience informed the author: "It is no exaggeration to say that the study of Maori land ownership is a life-time's work." The writer intends only to indicate briefly some of the land use problems associated with Maori communal land ownership in Kuku. For example, tribal elders often die without revealing the identity of those entitled to succession. The reasons cannot be given, but the practical implications of such a situation may be gauged from the fact that in one instance it took a government official two years to locate an absentee local Maori land-owner, who, when traced, was unaware of his proprietorship.

Too, the fees payable and the protracted negotiations necessary to secure a legal title to Maori land; together with the costs of fencing the newly-acquired property, often discourage the Kuku Maori from claiming his share in communal land. Hence he often



The reversion to rushes and tall fescue illustrates the problems of farm management in this section of the native-owned European-leased "coastal belt."

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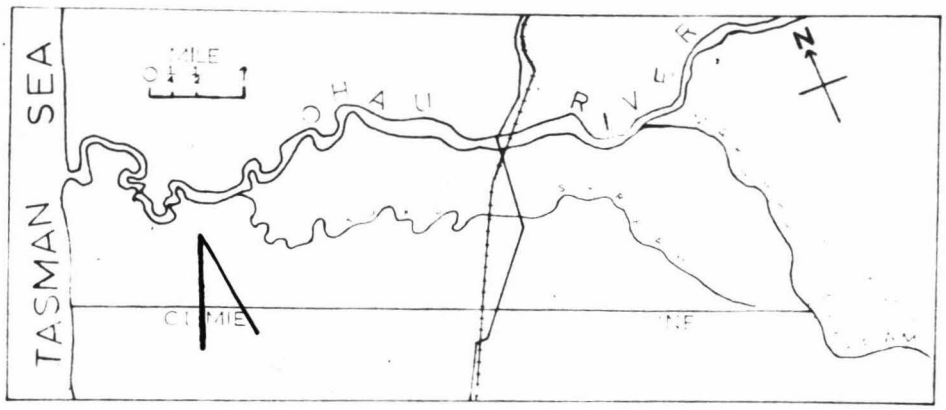
arranges "rights of usage", "grazing-rights" and other informal agreements with fellow tribesmen. Such practices make it difficult for European farmers wanting to lease or buy Maori land, to identify authentic Maori land owners. European officials attempting to serve rate demands or to enforce the clearance of noxious weeds from Maori tribal land encounter similar difficulty.

The Maori-owned, European-leased "coastal belt" of Kuku presents additional problems - mainly in farm management. Drainage (particularly after-flood) difficulties are imposed by the peripatetic Ohau and Waikawa rivers. The nearby Waikawa River, which is particularly prone to overflow, has now been effectively channelled by the Manawatu Catchment Board, but this body has yet to implement its plans to straighten the course of the Ohau River. On the extreme western margins of the "coastal belt", cereals and mangolds, which display a high degree of salt resistance, have been cropped, and the private planting of pines contemplated, but the development of this "reversion"-prone zone (especially to lupins and tall fescue) is a difficult and costly process.

But it is not in the coastal belt that the wealth of Kuku lies, nor is it in the second-growth covered hill country to the east. As in the



Floods such as this one eight years ago should not occur again; as the course of the offending Waikawa River * has been modified by the Manawatu Catchment Board.

* Just south of the"Climie line".

remainder of the Horowhenua, agricultural production is concentrated on the intermediate alluvial belt. Even here, the problem of multi-ownership of Maori land inhibits fully intensive land utilization in some areas, and to this problem there appears no immediate solution. However, eighty years of European occupancy have reduced by three-fifths the acreage of Maori land in Kuku, and it is possible that this trend may continue in the next few decades.

But, irrespective of further land ownership changes, one thing is certain. Future economic patterns in Kuku will continue to be influenced by the increasing demand for fresh milk and vegetables of nearby city markets. In the increased production of these commodities - particularly milk - lies the economic future of the Kuku district.

FOOTNOTES.

1. Personal communication from Kuku residents. Estimates ranged from 70 to 100.

2. Invariably in the winter months, when pasture growth was restricted and milk was in short supply.

3. Evening Post. (Wellington) (1939) July 11.

4. W. Romminger, Field Supervisor, Department of Maori Affairs, Levin. Letter dated 7.8.1953.

5. Figures supplied by Mr. R. Taylor, New Zealand Milk Publicity Council.

6. Figures supplied by Mr. E. Findsen, manager of the Kuku-Manakau Co-operative Dairy Company Ltd. from 1938-1963.

7. Hunn (1961) p.52.

8. Ibid. p.13.

SUMMARY AND CONCLUSION.

In this study of changing economies in Kuku, it was observed that the district experienced many of the phases through which much of rural New Zealand has passed. Too, the tempo of national development is reflected in the pace of economic change in Kuku. Chapter I of the study covered a 70-year period (1822-1892) and Chapters II and III dealt with only 35-year periods (1893-1928 and 1929-1963 respectively). Yet each of the last two chapters witnessed more economic changes than did the first. This in itself is a commentary on the mildly accelerating tempo of change true of New Zealand as a whole.

The hunting, fishing and gathering practices of the Waitaha and the Ngati-Mamoe (c.1350) and the subsequent extensive subsistence economy of the Ngati-Muaupoko was changed, from the early nineteenth century onwards by four successive phases of European influence. The first of these was the post-1820 introduction of new crops, particularly the potato, which brought about a virtual "agricultural revolution" among the Kuku Maoris. Capable of yielding a food surplus, the potato replaced the aruhe (edible root of the bracken fern) as the staple food, and, together with the

European-introduced pig and the native flax, became an important item of trade with whalers and early colonists.

The establishment in 1839 of the European settlement of Wellington created a market for the produce of the Ngati-Tukorehe of Kuku, and further acquainted them with the concept of a commercialized economy. The Kuku district, situated at the mouth of the then-navigable Ohau River, also became a trading centre for small coastal vessels and for European overland expeditions to the developing settlements of Taranaki and Wanganui. By 1852, the Kuku Maoris were cultivating a considerable range of European crops including (in addition to the potato) wheat, pumpkins, onions and a variety of fruits, particularly apples and peaches.

In the late 1850s Cobb and Company inaugurated a Wellington-Manawatu coach service and approximately in the late 1860s an inn was established on the left bank of the Ohau River. Trade between the Ngati-Tukorehe and travellers increased. The location in Kuku of a hotel further acquainted the local Maoris with the ways of the European and his money economy. Gradually increasing contact of the Ngati-Tukorehe with the European culminated in approximately 1880 with the arrival in Kuku of at least 4 European settlers, who, after leasing blocks of communally-owned Maori land, practised extensive pastoralism based on sheep and bullock rearing.

The second phase of European influence was initiated in 1884 by the construction through Kuku of the Wellington-Manawatu railway line, an event followed by the arrival in Kuku of bushmen, contractors, sawmillers, farmers and labourers. Such men brought with them an attitude to land based on forest clearance by axe, saw and fire, so that the Kuku district bush-line was progressively destroyed.

The third phase - that in the 1890s - was the effect on farming of refrigeration and of refrigerated transport. An era of semi-extensive farming based on sheep rearing took place, with production being oriented towards a now-accessible British market. Scientific advice and rural credit were provided by an end-of-century government. In the next few years, bullock fattening gradually displaced sheep farming in parts of central Kuku, the rich river flats proving particularly suitable for the grazing of fat stock.

The fourth phase of Europeah influence was initiated in Kuku by the sub-division of the "500-600 acre" sheep and bullock estates in the years prior to and immediately following the First World War. Sub-division, followed by the establishment by a Wellington firm of a creamery in Kuku, marked the beginning of semi-intensive dairying. Further forest clearance, the advent of swamp reclamation, the beginnings of "town

milk supply" dairying and the deterioration, under short-term (5-8 year) European lessees of Maori communal land were features of the post-First World War period.

The 1920s witnessed in Kuku closer settlement of houses and farms, improvement in stock breeds and in pasture strains, the introduction of a water-race system which enabled stock to be watered, the advent of herd-testing, the increased use of fertilizers, the introduction of electricity and constant improvements in agricultural machinery. But the fourth phase of land use change was modified in Kuku in the mid-1920s by the appearance of a Chinese market gardening community, which, in the early 1930s reached an estimated 70 adults, who rented much land in central Kuku. With the resumption by the European and Maori owners of their property at the expiration of the 3 to 5-year leases - a move prompted by the increased profitability of town milk dairying - plus the threat of club root in cauliflowers, many Chinese left the district. Today, the remaining 12 Kuku Chinese operators, most of whom are on freehold properties, together with the 32 town milk dairy farmers, are engaged chiefly in catering to the demands of nearby urban consumers.

But the influence on the Kuku economy of local markets (notably Wellington) continues to be hampered by the communal ownership of Maori land. In 1822, all the territory comprising the Kuku district was owned by a <u>hapu</u> (extended family group); today, although only

two-fifths of the total Kuku land area is communally held by the Ngati-Tukorehe, everyone in the sub-tribe, including children, are still "co-owners" and have an undefined share of all communal land (which is now only part of Kuku). The leasing of such land to Europeans is more common than its use by the Kuku Maoris, many of whom work in nearby townships. Furthermore, "rights of usage" and "grazing rights" are usually verbally agreed upon among Maoris, the protracted proceedings necessary to establish individual Maori proprietorship having so far deferred many Ngati-Tukorehe from pressing ownership claims. Land tenure and attitudes to land will undoubtedly figure strongly in any considerations of future economic development in Kuku.

A key factor to the prosperity of the Kuku district will be the increasing demands for food of Wellington city. Ultimately, if as is the aim of the Kuku dairy factory, local milk is accepted by the Wellington City Council all the year round, the butter manufacturing section of the Kuku factory will cease to exist. Meantime, however, other developments may have taken place. In Kuku, as in other New Zealand town milk districts e.g. Feilding, the year-round availability of calves has led to dairy-factory experiments with "white veal" i.e. the chicken-like meat of milk-fed broiler calves. Such a product may find favour in such Asian

markets as Singapore and Japan, and token shipments to these destinations have already been planned (October 1963) by the Kuku dairy factory.

Such a scheme, however, is in its infancy, and it is on the production of town milk, and to a lesser extent, of fresh vegetables that the immediate future economy will be based. Certainly the Kuku district, linked to local markets, especially Wellington city, by excellent road and rail services, seems geographically favoured to fulfil its potential role as a minor satellite food-basket of the central and southern cities of the North Island of New Zealand.

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