VISIONARIES, FARMERS AND MARKETS: AN ECONOMIC HISTORY OF NEW ZEALAND AGRICULTURE

Ralph Lattimore and Gary Hawke[1]

Introduction

This paper examines the economic history of New Zealand land based issues with a focus on the future because a number of contemporary agricultural issues have surfaced in the past. The phrase land based is used here to connote people, communities and industries that are strongly linked to the land resource. Accordingly, our fuzzy definition focuses on horticulture and agriculture, and to some extent forestry, mining and smaller industries including rural tourism. We are interested here in what rural people have done with rural resources historically and the challenges facing their future quantum and allocation. The historical review consists of a survey of existing material from studies by Condliffe, Philpott, Hawke, Gould, Bellich, Sinclair, Critchell and Raymond, Belshaw et al., Evans and Ward[2]. This survey has been organised around five broad current agenda items: market led growth, land issues, technology development and transfer, rural people and community development and policy. In a sense, the same story is being told five different ways. In so doing some overlap is inevitable.

The economic history of New Zealand agriculture may be divided as Bellich (1998)[3] suggests into three periods. The first is the colonisation period to 1880, from the arrival of the Maori and European settlers to the beginning of the era of refrigeration. This period includes the introduction of foreign innovation and technology embedded in the Kumara, European grasses and other seeds, livestock, machinery and the know how to produce from them. Key links in the adaptation of this imported technology were missing - breeding for New Zealand conditions, deficiencies of various sorts and management systems that best suited New Zealand markets and the resource base. Exploitation was largely based, initially, on slash and burn methods. Secure lands along the East Coasts and the North were increasingly devoted to sheep and continuous cropping, and fertility was falling. The ownership of the western and central North Island landbase was under dispute. As these disputes abated. the area formally defined as farmland accelerated rapidly to 1917, Figure 1.

The introduction of refrigeration technology changed the focus of New Zealand in fundamental ways. It narrowed the product and market mix and induced the development of comparative advantages which squeezed the available resource base and aimed it at South-Eastern England. It caused a form of Dutch Disease. This effect is reflected in the growing proportion of pastoral exports in the total, Figure 2. This is the period of recolonisation, 1880-1970.

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1 Agmardt Professor of International Trade Policy, Lincoln University and Professor of Economics, Victoria University of Wellington. Invited paper 43rd. Annual Conference of the Australian Agricultural and Resource Economics Society, Christchurch, New Zealand, Jan. 20-22, 1999. The authors wish to acknowledge the valuable contributions of Richard Amor, Dick Lucas and Dr Alastair Nicol. The remaining errors, of course are the responsibility of the authors. This research was sponsored by the Foundation for Research, Science and Technology, grant 98-IER-13-6379.

2 Summarised by Gary Hawke (1985), *the Making of New Zealand.* Cambridge: Cambridge University Press.

3 “Agriculture and its Markets in Historical Perspective”. Paper presented to the Foresight Conference, Wellington, 2 April.

The conclusion of the Second World War put a temporary seal on demand growth in the UK - Europe generally was over-valued. Market developments in the United States, Asia and Australia (finally!), aided by the Korean wool boom, drove technological developments to new heights in the 1950's and 1960's. The end of this period saw spectacular growth in agricultural and forestry output and productivity driven by market stimuli and an acceleration of technological and managerial progress. At the same time, New Zealand was about to lose its biggest agricultural market, the United Kingdom, to the Franco-German commune[4].

These latter events ushered in the third phase of New Zealand's modern history after 1970, decolonisation. In the face of the burgeoning agricultural sector and its markets, the period around 1970 was a chaotic event. The Vietnam war expansion and growing inflation, impending UK entry to the EU, El Nino and agricultural market volatility and the first oil shock conspired to produce large terms of trade shocks for New Zealand. The uncertainty these external events created produced equally significant reactions within New Zealand. Maori grievances resurfaced beginning with the 1974 land march. Government attempted to buffer the negative shocks by increased expenditure on social and industry support programmes financed by inflation taxes and foreign borrowing. This programme proved to be unsustainable in spite of the export market diversification that occurred in the 60's and the relaxation of the foreign exchange market in the 70's[5].

The resulting political landslide in 1984 produced a policy revolution in a number of ways. The Waitangi Tribunal was established to hear Maori grievances, the ANZUS defence arrangement with the United States was broken, a proportional representation electoral system was introduced and extensive economic policy changes were made.

The process of decolonisation will probably never finish unless we become the seventh state of Australia (and it is not clear how historians would brand that event!). There is, however, a full agenda of high level policy issues. The Privy Council is still the highest court of appeal. That is argued to be a remnant of colonisation by some but a mark of maturity by others (arguing that the Privy Council is the best appeal body available worldwide). No formal closure has been imposed on the Waitangi Tribunal. Again, one may see this as the mark of a mature society able to contemplate longterm grievance settlement while others tend to see the lack of closure as a destabilising influence inhibiting the process of moving on. New Zealand is still the recipient of EU tariff quotas, which might mean that the weaning process from Britain has not been completed.

The People of the Land

Maori land use before 1795 was much more complex than was realised for a long time, involving a distinction between exclusive use for some purposes and common resource management for others. What were to become the standard attributes of "ownership" - such as the right to income generated, right to management control, right to alienate in exchange for another asset, and the right to share in residual value on disposition - were divided among rangatira, hapu and whanau. Collectives, whether iwi, hapu or whanau had particular connections with defined areas of land, but these parcels were not necessarily geographically contiguous and mutually exclusive. Especially in areas like Hauraki, each group needed access to both supplies of fish and supplies of forest products, and the means of moving between them. These production systems not only met domestic demands but export demands from Australia and visiting ships for wheat and vegetables prior to the 1870's. With adaptations they have continued to the present and some

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4 Bellich (1998), op cit.

5 Brian Silverstone, Alan Bollard and Ralph Lattimore eds. (1996) *A Study of Economic Reform: The Case of New Zealand.* Amsterdam: North-Holland.

Maori incorporations are amongst the largest farms in New Zealand.

Pakeha who were familiar with the patterns of pre-Napoleonic Continental Europe, contemporary India, or medieval English villages would not have found the Maori land use pattern entirely novel, but most settlers in nineteenth century New Zealand expected "ownership" to be much tidier and had difficulty recognising order among apparent anarchy in Maori society.[6]

English law was carried with them by English settlers. Although there was legislative provision for the enforcement in New Zealand of English law, that was a legal nicety - the important process was that accepted custom remained accepted custom even though settlers were in New Zealand rather than in England. This informal process was strengthened by the notion of a common "English law", which in turn owed much to the idea of English "common law" - the importance of judge-made law in restraining monarchs which became the basis for securing balance between legislative supremacy and devolved decision-making. Only in recent decades has legal detail occupied a central political position, again because of the Waitangi Tribunal process.

There was a genuine radical element in the search for a better social order by European settlers. The radicalism of the New Zealand Company was not the "left wing politics" of a later age, but the desire to establish rural societies free from squires and established churches. This fed into later attitudes - both the secular quality of much public life, and the insistence that while society might be made of various groups, some more wealthy than others, the location of individuals within that society should be determined by their individual achievements and not by their birth. It is ironic that the radicalism of Pakeha society took a form which was opposed to Maori respect for *whakapapa* so that Pakeha society was more unlike Maori society than was English society. (The differences were always matters of degree. Birth did matter among Pakeha and *whakapapa* did not render achievement irrelevant among Maori.)

The same kind of radicalism, which was later reinforced by migrants from Ireland and Scotland, was a desire for land *ownership* - landowners who rented their land were seen as squires. What is often seen as opposition to leasing from Maori[7] was actually part of opposition to leasing. This remained important for a long time in New Zealand. It can be seen in the institutional developments of agriculture in response to refrigeration with the development of sharemilking but still with owner-occupier dairy farms, and with the development of separate fat-lamb farms rather than a delegated-management form of diversified sheep farming. It is not fanciful to see continued influence in the contemporary pressure for "farmer-control" (of dairy and meat companies and marketing boards) and the low debt-equity ratios in New Zealand farming. In this environment, farm numbers grew rapidly from 1869 to the 1920's, Figure 3. Average farm size decreased with intensification following refrigeration and has remained roughly the same since though with a distinctly bimodal distribution marking the optimal sizes of pastoral and cropping farms versus horticultural units.

Rural life developed in usual ways to deal with spatial, information and psychological isolation. Federated Farmers, Women's Division, the Department of Agriculture extension service, A and P shows and Young Farmers Clubs contributed to this support and rural bonding, though with some bias towards males. However, farming loomed larger in society overall than in other high income

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6 The key sources are R. Firth *Economics of the New Zealand Maori* (Wellington, 1959) and T.B. Layton "Alienation Right in Traditional Maori Society: A Reconsideration" *Journal of the Polynesian Society* 93 (1984), pp. 423-40.

7 There were additional complications in leasing from multiple owners, especially given the lack of understanding of Maori notions of ownership as discussed earlier. Classic statements of the problems are to be found in F.E. Manning *Old New Zealand* and W. Guthrie Smith *Tutira.*

countries (today GDP in farming is three times larger relative to the total than it is in Europe, North America, Japan or Australia). Accordingly, farmers were heavily represented in wider institutions including regional, provincial and central government. It was quite a shock to many rural leaders after 1984 to watch this special status of farming reduced through major policy change[8].

The changing status of farmers was not all political, however. In part it is being induced by changes in technology and institutions. Farming has become increasingly commercialised over the last 150 years: higher non-factor inputs and changing demand. Control over product specification rests with consumers and they are increasingly demanding characteristics like traceability, improved safety, environmental and animal welfare standards that tighten the supply chain through finer specifications. At the same time, production technology has become more refined and enabling. The supply chain can respond by "making" or "buying" the necessary changes but limits on contracting possibilities drives integration both vertically and horizontally. In the extreme case of broiler production, farmers have tended to become wage workers who own land. These pressures are likely to increase. A tension is thus created which is manifest in two forms: individual entrepreneurs extending farm operations sometimes well beyond the farm gate and collective action attempting to exert "farmer control" of the supply chain (on the farm, through co-operatives, boards and other mechanisms). Both approaches conflict with pressures on supermarket chains and food product aggregators to tighten supply criteria via vertical integration, backwards.

These attitudes has also tended to divorce the returns to land and the returns to output. The returns to land are driven down by ownership propensities (magnified between 1935 and 1984 by capital market restrictions). This situation has often been misleadingly described as unbusiness-like behaviour. It may in fact be a low risk portfolio management approach to the provision of superannuation in New Zealand.

The changing place of women in society and the workforce has changed their role in agriculture as well, with little lag in the New Zealand case. Most women on farms consider themselves to be farmers today[9] and their participation in off farm employment has increased dramatically. Women have always had the opportunity to think strategically as farming partners because they often took a key financial monitoring role and could separate themselves from manual work on the farm to a greater degree than their male counterparts. Female farmers have also tended to have more formal education and the pairing of teachers (one is even Prime Minister) and nurses with male farmers is legendary. The ratio of at least some school qualification to no qualification amongst male (female) farmers was 78 (106) percent in 1996[10].

The recent changes in agricultural diversification have brought major changes to the rural complexion. Forestry expansion has reduced population density in some areas while lifestyle blocks have increased it in others. Some rural towns have died as others have been resurrected. Commercial agriculture, nonetheless, has remained family firm oriented: in increasingly complex forms. Corporate farming (meaning investor owned firms) has not made major in-roads.

Relative population pressure in the North Island and the continual search for lower cost land (and other resources) has changed the regional composition of agriculture in recent decades. Relatively speaking, sheep and dairy cows have tended to move south and been replaced in the North Island

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8 See for example a farmers description, John Kneebone (1987), "Politics and Agriculture", in *Rural New Zealand: What Next?* Tim Wallace and Ralph Lattimore, eds. Lincoln University: AERU.

9 Alan Deardorff, Ralph Lattimore and Selim Cagatay (1999), "Trade and Factor Market Effects of New Zealand's Reforms", working paper, Lincoln University.

10 Deardorff et al (1999), op cit.

with horticulture, forestry, grapes, lifestyle blocks and, not for the first time this century, a process of destocking harder hill country (this time following the removal of tariff compensation from 1985).

The partial replacement of rainfed dairy country with irrigated pastures has put pressure on water resources adding to needs for improved rationing devices. Resources generally are under added pressure in the expanding areas because more desirable agricultural areas are often more desirable recreational, tourist or settlement areas as well. Scenery, quiet, spray-free air, access and clean water have all become more contestable resource attributes. For all that, rural life and settlement has become more fragmented and perhaps richer in the "have" towns in terms of services, community and sometimes culture. Migration pressures continue in the "have-not" towns. The farm labour force continues to decline but only very slowly from its peak earlier this century, Figure 4.

It can be argued that New Zealand remained a rural society throughout the period of colonisation and recolonisation engendered by the drive to create a strong comparative advantage in agriculture. The sheer relative size of agriculture and its input supply and processing industries bonded urban people to the land. New Zealanders not born in rural areas at least had close relatives who had been, and were still there. Communications, education, health and training in rural New Zealand matched urban standards so that there were, and still are, few mobility barriers. Decolonisation after World War 2 meant urbanisation which increasingly separated rural society. By the 1970's, zoos had to add farm animals to acquaint the young urban generations with the rural sector.

Relative to other countries, there is no distinctive rural society in New Zealand, urban people are not like rural people but rural people are very much like the more entrepreneurial urban people. Their lifestyles are similar in terms of household composition, consumption habits and recreation. Education levels are similar to those found in the rest of the tradeable sector but significantly lower than in the non-tradeable sector of the economy.

Market Led Growth

Prior to 1795, the market for food and related subsistence products was a domestic one. Population growth of the Maori people and the productivity of their labours defined market growth potential, which was met from the exploitation of local plants, birds, and fish and by imported products like kumara, wheat and vegetables. Exports of agricultural products did occur when (if) any canoes returned to the central Pacific and ships of the European explorers required provisions but this would have been minor. However, the arrival of the American and other sealers in the 1790's gradually increased demand from the rest of the world.

Over the period to 1882, the diversity of market demands and the quantity demanded increased rapidly. Domestically, incomes grew based on the production of exploitables and that production in turn reflected export demand for a diverse range of natural resource based products - whale and seal products, native timber, gold, kauri gum, flax, wheat and vegetables. Australia was the most important market at this stage in part because it was able to exert political control over trade at times by virtue of its early administration of New Zealand. The United States (US) and the United Kingdom (UK) were also important along with the Pacific Island Nations (PIN). Figure 5 shows the high Australian market share, which includes re-exports through Sydney.

Export demand from Australia was also a demand for timber and sporadic demands for food to supply increased market demands in that country during the gold rushes. This colonisation period accordingly involved a broadening and deepening of domestic market demand resulting from fast population growth through immigration and export market demands revealed by the increasing introduction of New Zealand into the global economy. A key market focus was fine wool where ready markets were available but a major disequilibrium was involved. Sheepmeat was a non-tradeable in the Southern Hemisphere, with a low value added recovery of tallow from meat rendering works on a significant scale. This was a widespread problem of the colonies. Argentina, Australia and New Zealand all had significant natural grasslands and an existing wool market but insufficient domestic demand for sheepmeat. The demand for chilling and refrigeration technology was immense but breakthroughs came slowly after the first patent in 1831.

New Zealand grabbed at the possibilities opened up by the introduction of ship refrigeration technology. The area around London provided pent up demand for animal protein by the growing middle classes and New Zealand had a consistent animal feed supply (in contrast to Australia), to service the market. UK lamb supplies were available in the northern summer and autumn. New Zealand chose the winter and spring niches. The risks of antagonising the UK farm lobby were less where New Zealand could be seen to be providing non-competing imports. Domestic sheepmeat demand remained, for the most part, strongly oriented towards older heavy lambs and hoggets. The same was not true for beef were New Zealand domestic market tastes in breeds and cuts mirrored that of the UK market. The specialty beef sector of New Zealand farming tended to follow the British pattern.

This choice of export lamb market had important implications for wool marketing because the coarser English breeds, better suited to meat production, meant that the garment markets served by Australian and South African fine wools largely slipped from grasp and were replaced by markets for carpets and other coarser wool users. To some extent that isolated New Zealand from international research and promotional efforts for wools generally which contributed to the eventual breakdown, a century later, of the International Wool Secretariat.

The emerging supply of dairy products was strongly boosted by the opening up of the London butter market. Quality and consistency was important with dairy products, as with meat, and technical assistance from the newly formed Department of Agriculture (1895) was instrumental is assisting to produce standards and quality monitoring systems to aid market development. Assistance was also forthcoming to fight adverse publicity and trade policy threats that inevitably arise in world food markets. In this regard New Zealand's semi-colonial status and associated Whitehall connections were important. Britain increasingly saw New Zealand as an extension of Britain's farm[11].

Over the period from 1882 to 1914, New Zealand agriculture was almost completely reoriented towards marketing animal protein to the British market, Figure 5. The domestic market also continued to grow rapidly as a result of migration and high incomes but the focus was on this single export market. The implications were pervasive. On the demand side, growing demands for the full range of food and fibre products meant a continued heavy reliance on imported products - New Zealand agriculture was quite pre-occupied with wool, dairy products and meat. Secondly, market access issues outside Britain appear to have taken a back seat. Little more was heard of Vogel's proposed (1870's) free trade agreement with the US until 1996.

Australian demand for New Zealand agricultural imports tended to narrow because New Zealand was developing a similar set of comparative advantages as Australia. Complementarities between the near neighbours did exist in vegetables and fruit but here trade relations began to worsen from early in the 1900's as farm lobbies emerged arguing for import protection, particularly in Australia. The emergence of fireblight and other diseases in New Zealand were the excuse for

11 Bellich (1998), op cit.

tightening Trans-tasman agricultural trade but they were clearly excuses[12]. Australia was a natural market for New Zealand's growing export supply of apples but again the import prohibitions by Australia (reiterated again in December 1998) coupled with shipping constraints to the UK during World War 1, impeded export developments in spite of growing technical advances in flavour.

It is difficult to conceive of a more profitable trade strategy for New Zealand at the time. The UK was almost alone in Europe in being open to trade in food as a result of the demise of the Corn Laws in 1846. France and Germany, for example, were individually becoming protectionist in agriculture in the 1880's[13]. The Treaty of Rome in 1957 would merely continue this theme in a bloc. The US was itself highly protectionist throughout the late 1800's with average tariffs of around 50 percent[14] and as we have just seen Australia was becoming more protectionist.

Over the forty year period from the beginning of the First World War, two developments reinforced New Zealand agriculture's focus on the UK animal protein market. The first of these were the `commandeers' during both World Wars which are discussed in detail later. These institutions were intergovernmental agreements by the UK and New Zealand to deliver the export supply of New Zealand animal protein to the UK at prices to be negotiated by the governments. In some cases, the export supply was boosted by rationing domestic consumption in New Zealand. Marketing departments of government ministries took an active role in implementing these agreements and actively marketing dairy products after the original Dairy Board failed in the 1930's.

The second development was the institution of statutory marketing boards in the interwar period but particularly after 1945. The wartime measures were created out of the special food security problems of the mother country and on terms that were very remunerative to New Zealand. New Zealand had developed high market shares in the UK for animal protein and even by the 1950's, the export demand elasticity facing NZ for lamb in the UK was estimated to be 1.4[15]. Even allowing for the possibility that this was an overestimate it is easy to imagine how the view arose that the optimal export tax was very significant. Added to these structural elements was the volatile price environment which followed World War 1 which increased industry pleading for government intervention. The volatility tended to be blamed on a lack of market countervailing power by New Zealand and weak selling by competing New Zealand exporters. There is little evidence to suggest that New Zealand could do anything about these issues unilaterally that would not have a tendency to make matters worse (government failure).

It is easy to appreciate the willingness of government to institute strong interventionist measures given the war cum depression environment. This is reflected in the war-footing that marketing boards were based on in 1947 when the Dairy Board, the Apple and Pear Marketing Board and others were established. For example, one Board, the Raspberry Marketing Council was issued with import and export controls, powers of compulsory acquisition of the crop and control of the sale and resale of all raspberries in the domestic market. Though there is no evidence that all these almost unenforceable powers were used, the fact that they were provided is enlightening.

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12 Keith Sinclair (1972), "Fruit fly, Fireblight, and Powdery Scab: Australian-New Zealand Trade Relations 1919-39". *J. Imperial and Commonwealth History*, 1 pp. 27-48.

13 Michael Tracy (1964), *Agriculture in Western Europe.* New York: Praeger.

14 Douglas Irwin (1998), "Changes in US Tariffs: The Role of Import Prices and Commercial Policies". *Amer. Econ. Rev.* 88(4), pp.1015-1026.

15 Bryan Philpott and Mary Matheson (1965), "An Analysis of the Retail Demand for Meat in the UK". research Report 23, Agricultural and Economic Research Unit, Lincoln college, Canterbury.

Dairy export markets gradually changed after WW2 to encompass milk powders, casein and other non-fat products and more elaborate fat products. Jersey cows gave way to Friesians. This facilitated the capture of a share of the North American beef market from around 1954. North Americans liked grain fed beef cuts but their love affair with the hamburger provided a niche for lean beef, which could be extended with water to add weight. Friesian (or Friesian cross) bulls were well suited with their high water holding capacity meat. They suited producers too because they are fast growing and readily available from the dairy industry. Eventually, both the US and Canadian markets were limited by import quotas, euphemistically known as voluntary export restraints, which survived intact until the Uruguay GATT Round in 1994 began what might turn out to be gradual tariffication. The Millennium WTO Round this year will provide a new insight into the fate of these and New Zealand`s EU tariff quotas.

New Zealand was granted special treatment in the Treaty of Accession of the UK into the Common Market, Protocol 18. New Zealand exports of butter would be permitted on a declining trend. Sheepmeat imports were not restricted initially but a quota was introduced in 1981. Apples were also threatened with quota restrictions by the EU on occasions, part of a growing propensity worldwide since the first oil shock, to use non-tariff trade barriers (NTB's).

The trend in NTB's accelerates and the bases widen. Anti-dumping threats of highly dubious character abound and added to this, concerns over the environment, food quality, biosecurity, animal welfare and safety have spilled over into import targeting. Work is underway to use "sound science" to outlaw zero tolerance as an unreasonable approach and replace it with consistent risk assessments. There are moves to replace regulatory interventions with consumer information. Both are aimed at constraining ad hoc political decision making in the area. At the same time people are questioning the ability and the objectivity of science to solve the problem satisfactorily. There are a number of problems here. Government funded scientists may be actively dissuaded from engaging in research that would prejudice policy positions [a scientist committed suicide in Japan after reaction to his discovery of fireblight in that country and Australian scientists did not know how to test for fireblight when it was discovered in the Melbourne botanical gardens]. Scientists disagree so who can be relied on to produce the "sound science" [international experts have agreed with New Zealand for decades on the low risk of spreading fireblight through mature fruit exports to Australia[16]] and finally, there are high standard errors associated with "the latest" research results which the public has assess to: it is easy to produce another excuse to reinforce the current production or trade policy [the Melbourne fireblight infestation is reported to have a different DNA structure to the New Zealand strains].

The Land

For a long time, the most fundamental issues of New Zealand's economic policy and economic development were those related to land use. New Zealand entered the international economy as a fortuitous discovery of the new stock of the natural resource of land.

There had been a previous land use that of the Maori is explained in an earlier section. However, Maori land use had very little impact on the development of New Zealand except in particular ways. Misunderstanding of it contributed to conflict between Maori and Pakeha in the New Zealand wars of the nineteenth century. It posed legal challenges in the twentieth century. They arose as people sought to find reconciliation between Pakeha legal institutions and processes and the preservation of Maoritanga. Trusts and incorporations of various kinds were used to bridge gaps. And the original misunderstanding came back to central political prominence in the Waitangi Tribunal and claims process.

16 Harvey Smith and Ralph Lattimore (1998), "The Search for Rules for Non-Tariff Barriers: Fireblight of Apples". *Agricultural Science* New Series 11 (2) pp. 26-30.

But it was English legal institutions and processes that governed the incorporation of New Zealand land into the international economy. The central English legal idea was that title to property, especially land, had to be clear so as to permit assured private contracting, and that title to land was demonstrated by documentary evidence of a Crown grant. European feudalism provided the basis for an "indefeasible" title. (It also provided the basis for ownership being something less than absolute; ownership rights remained subject to residues of feudal obligation to the king. There was therefore a basis for asserting a public interest which over-rode individual title. "Allodial title", as existed in some Continental legal systems was never part of New Zealand thinking.)

So establishing settler title to New Zealand land required the intermediate step of acquiring Crown title, and this was the basis of Crown pre-emption as provided in the Treaty of Waitangi. There were some qualifications; mechanisms had to be devised to provide Crown titles for equitable transactions before 1840, and there was a brief period in the early 1840s when individual settlers were allowed to negotiate with Maori subject to satisfying certain conditions. But for the most part, determining land tenure within settler New Zealand began with acquisition of land from Maori by the Crown, and its subsequent distribution with a Crown title to settlers.

Crown pre-emption was more than a mechanism for introducing English law as the basis for New Zealand land tenure. It was also intended to prevent conflict between Maori and Pakeha. Some of those who promoted the assertion of British sovereignty over New Zealand were motivated by paternalism about Maori; some were even anxious to minimise violence (along with drunkenness and other evils) as part of the civilisation of the world; others were aware that Britain would be drawn into conflict involving British subjects and wished to minimise the claim on British taxpayers. In all case, there was a desire to avoid conflict with Maori and Crown pre-emption established officials as a necessary agent between Maori and land purchasers in the interests of peace. (The notion that official participation generates goodwill and peaceful interaction is longstanding. It was probably justified in the case of Crown pre-emption.)

Furthermore, Crown pre-emption had a fiscal motivation. There was intended to be a gap between the price paid by the Crown to acquire land from Maori and the price charged to settlers for land with Crown title. First, the Crown needed revenue, if only to pay for the costs of Crown pre-emption - modern New Zealand was founded on user pays. But the Crown had other costs too and revenue from land sales and customs duties were the only feasible revenue sources. In particular, New Zealand was founded along with an implicit "development strategy", as discussed in the policy section, and this necessitated state expenditure.

This naturally suggests that there was exploitation of Maori. They were paid less than settlers paid for the land. But the issue is less clear-cut than that. There was a difference between the value (in Pakeha terms) of land as it was acquired from Maori and its value in relation to the prospective income stream that it could generate when used in the international economy. That difference required aspects of contemporary civilisation, and in particular it required an expanding settler community. In particular, it required immigrants and they had to be encouraged to come to New Zealand rather than go to the United States. The State was essentially a financing mechanism for the costs involved in taking land into the international economy and society. Fair prices to Maori and to settlers properly diverged.

It remains possible that Maori were exploited (and indeed that settlers were exploited by their predecessors). All that can be established with confidence is that the difference between the Crown's buying and selling prices is not sufficient to establish any exploitation at all. (The distribution of Crown titles could be to Maori and sometimes was; the element which was right in the belief that race relations were unusually good in New Zealand is that Maori could become part of mainstream society merely by living in a “European manner” - even census counters were instructed to count as Maori only those who had not chosen to live in a European manner. The element of race discrimination which New Zealand shared with other countries was that Maori had to live in a European manner - mainstream life could not accommodate continued adherence to Maori culture where there was any conflict. The majority of Crown titles went to settlers.[17])

Crown titles in Britain were evidenced by deeds and complex legal rules and processes had been evolved to determine which deeds were valid. These rules were inherited in New Zealand but the opportunity of their long sea-voyage to New Zealand was taken by Chief Justice Martin and Attorney-General Swainson to simplify English law,[18] and the Torrens registration system removed the complexities of English deeds. (It was not instituted in full immediately, but New Zealand was well ahead of England and most other jurisdictions in providing a central registry for land titles.)

The Crown titles were mostly freehold titles. Some of the great political debates of the late nineteenth century were about land tenure at a high level of distinctions - freehold versus leasehold, and some ingenious (and some not so ingenious) leaseholds were invented. But the debate was over the “shadow” rather than the “reality” to echo a famous Maori assessment of the Treaty of Waitangi. By the time the great political debates were staged, most of the best New Zealand land had passed into private ownership as freehold.

Oddly enough given that the later debates paired off the distinctions radical/conservative with leasehold/freehold, the original preference for freehold reflected the influence of the radical element among Pakeha settlers referred to earlier. The precise terms of freeholding varied over time. There were attempts to consolidate settlement - the South Island provinces especially tried to get settlers to observe an officially determined order in which land would be settled, with the “hundreds” of Otago reflecting these official decisions. They tended to be ineffective. Provincial governments tried to reflect the balance of interests of first and later settlers, with different prices according to the quality of the land - but information about quality was limited. There was concern about land aggregation but limited ability to influence it. Grey’s last fling of Irish radicalism was to lower the price of Crown titles so as to enable “small men” (sic) to enter into landholding but not for the first time low prices suited the liquid rather than the small - rich as well as poor could buy more at lower prices.

Leaseholds of various kinds were used as transitional devices. When large areas of land had been acquired from Maori beyond the immediate demand for freehold from colonists, there was no point in keeping such land unused. It could be obtained and used on a Crown Pastoral Lease (CPL) until there was a demand for the freehold. Then there had to be some balance between the rights of the temporary occupier and the general preference of leasehold. This provided the possibility (and the actuality) of gaming - the leaseholder could use statutory provisions as aids for spreading out acquisition of the freehold over time. There was usually a right of first purchase for small areas around homesteads or other building improvements, and family members might have a first right to a particular area of lease-holding. Or areas might be freeholded which had the effect of limiting access to larger areas of leasehold or gave exclusive access to water supplies; the leaseholder could then be sure that nobody else would seek the freehold which could be acquired over time and at leisure. All of this provided New Zealand’s limited experience of a wild west. “Spotting”, “dummying” and “gridironing” were various devices whereby the holders of CPLs could secure advantages to themselves in the process of freeholding over time. They were

17 Keith Sinclair (1971), “Why are Race Relations better in New Zealand than in South Dakota?”, *NZ Journal of History,* 2, pp.121-7

18 Earning the comment "a remarkable body of laws" from the permanent head of the Colonial Office.

undoubtedly used, but their effect has been grossly exaggerated since most alleged specific cases prove on enquiry to be indistinguishable from the pattern of freeholding that would follow from the expected process of an optimal purchase over time when prices of land of different quality was held equal. (Furthermore, alleged examples were concentrated in the 1870s as advantage was taken of provincial laws before the consolidation of land distribution consequent on the abolition of provincial governments.) CPLs survived - long enough to become assimilated with "usual" ownership rights, until environmental issues forced renewed consideration towards the end of the twentieth century of the rights of the Crown as owner and lessees as occupiers and holders of customary rights.

The distribution as freehold followed from the desire for ownership accompanied by the community belief that maximum output was desirable and was promoted by owner-occupier farmers. Doubts were generated by the politics of envy of large aggregations, and by political rhetoric which linked urban unemployment to the "locking up" of land in large estates. They were also generated by higher quality thinking about the "unearned increment".

Ricardo's theory of rent was even understood by some New Zealand MPs in the nineteenth century. And Henry George's single tax movement became a significant political force. Essentially, the argument was that freehold ownership might stimulate optimal farmer effort within a given technology, but not result in a fair and optimal distribution of the gains from technical innovation. In a concrete form, land became more valuable if railways were built so as to reduce transport costs, but some land was closer to railways than others, and so gained more. If the land was already in freehold ownership, then windfall gains would accrue to some owners relative to others. If, on the other hand, the freehold title was retained by the Crown, rentals could be so adjusted as to extract the unearned increment for society as a whole (or freehold prices could take account of the impact of railways). Which is true enough - provided leases were flexible enough to be adjusted quickly and accurately to the effect of railways, and there was no other innovation after the sale of freeholds (and assuming that there was no alternative mechanism for the financing of railways which had individuals contributing to the cost in proportion to their expected private benefits). Vogel did have ideas of adjusting land distribution to the effects of his Public Works schemes, but he was no more successful than later academics who designed intellectually admirable capital gains taxes and watched them disappear in the face of political realism. (GST was unusual.)

An enormous amount of time and effort went into designing leaseholds in the late nineteenth century - when most of the unearned increment had already been appropriated anyway. The resulting schemes disappeared when a political party saw the possibilities of simply offering freeholds to those who had secured the advantages of access to land without initial capital raising - which was one basis for the Reform Party's victory in 1911-12 and is not without parallel with the use of National Superannuation as an election device in 1975.

Leases tended to survive only in particular contexts, albeit more often than sometimes realised, as with leases from institutional owners such as Harbour boards and Hospital boards. Leases survived from Maori when the Land Court created trust control of Maori land, especially from the large scale purchase of Maori land in the 1890s.

The current debates over the Taranaki leases from Maori arose from this era where short term "solutions" of retaining Maori ownership while creating perpetual leases became the new political issue nearly 100 years later when unforeseen inflation had made the original leases oppressive.

One argument for leases was that they permitted central control of adjustment to changing circumstances. The argument is not compelling. There is no particular reason to think that centralised decisions will be better than decentralised ones. Secondly, the use of compulsory acquisition powers in response to the perceived need for disaggregation in response to refrigeration showed that “freehold”: was not entirely inflexible. The current Maori lease debate showed that leases were not always flexible.

Once land titles were distributed, decisions about land use were mostly private decisions guided by income maximisation. Land had to be got into use - normally agricultural. Land had to be improved (sometimes as a condition of sale or lease, but normally as part of economic decisionmaking. So fences were required, and then native vegetation had to be replaced with improved European grasses. Outside the natural grasslands, and much of New Zealand was outside the natural grasslands, timber had to be cleared - usually by fire and only later were questions raised about whether total production over time was optimised or would it have been better to bring land into framing more slowly and used more trees for production rather than simply burning it. (In the nineteenth century “conservation” meant to reserve more trees for economic use, not to protect trees from exploitation for economic purposes.) The modern answer of environmental activists is no more compelling than the “development’ view of the nineteenth century, and we have no serious studies of whether there was a significant departure from optimisation over time. There are a lot of myths. A prominent one is of the struggling dairy farmer who cleared the bush regions and maintained a family in penury but eventually generated a modern dairy farm. It is indeed likely that many wives and family members were forced to provide labour input beyond their own preferences, but the farmers usually had high incomes, albeit in the early years in the form of enhanced asset values rather than as a current income stream. The modern parallel is students with a student loan.

There were continued collective influences on land use. First, there have been controls on the land market from time to time. Especially during the second world war, price control was extended to land. It was clearly hard to administer and its main effect was probably to generate incomes for lawyers. More durable have been limitations on sales to foreigners.

Secondly, the Town and Country Planning Act and the whole legislative structure of zoning affected the range of possibilities of landowners. Should farming be a preferable use of land? Most farmers said yes until their land became attractive for urban subdivision. Should framing be a genuine full-time occupation? Most farmers said yes, but that should not apply to the land they wished to subdivided for 10 acre “life style blocks”, especially given that the local school would not survive if more families were not attracted to the area. Does forestry count as farming? Is horticulture, and kiwifruit production in particular, as “respectable” as dairying. The answer generally was no until relative prices were attractive to the local farmer politicians.

The Resource Management Act attempts to provide a new basis for determining such questions. The overriding criterion should be “sustainable management”, and within that decisions about appropriate land use should be as decentralised as possible. Owners should be free to use their land, but when there are spillovers, then private decisions have to be taken within consideration for relevant community interest, and the relevant community can extend as far as the national unit (although so far apparently only for a Stratford power station but perhaps West Coast beech will reach the same status. Rural politics have changed, and changed so as to come closer to the real economic questions about land use, but we have yet to see whether rational analysis has come to dominate prejudice and inherited attitudes.

The administration of the Resource Management Act has raised problems of “sound science” of the same nature as for phyto-sanitary trade barriers and other NTB’s. Spillovers have to identified and defined and then, regulatory measures efficiently devised to counteract them. To date there has been a tendency for councils and planners to be quite vague about the nature of the spillovers (undue subdivision creates a problem of sewerage disposal) and to use very general restrictions (regardless of the soil absorption capacity or topography, the minimum section size will be 10 hectares). Mandated science introduces a new set of problems.

Technology

Reference has already been made to the importation of technology embodied in Maori and European immigrants and in the seeds, tubers and animals they bought with them to New Zealand. Imported technology might be expected to make a greater relative contribution in a small community like New Zealand, on a basis of probabilities, even if a significant quantum of resources are devoted to research at home. It is also likely, on the same principle, that New Zealand research breakthroughs are likely to be valuable overseas before they are valuable at home. At the same time, domestic research by farmers, growers and researchers has made valuable adaptations to improve agricultural productivity at home. Farmers themselves have always been an important source of innovation in New Zealand. They have also been very closely associated with researchers in formal agricultural research institutions both through direct association on their farms and at research stations and through extension programmes. Social barriers to communications between farmers and scientists are low and have always been so perhaps because researchers have been socially beholden to farmers, at least until recently.

The important formal research work successfully carried out initially by provincial and central Government scientists from the 1850's, Lincoln Agricultural College (1878), the embryonic Forestry Research Institute (1895) and the Department of Agriculture (1895), the Cawthron Institute (1919), Massey University (1926) and the DSIR (1926)[17]

European grasses and legumes, fruit trees, crop seeds, livestock and basic horse drawn machinery all entered the country unaltered by the 1820's and facilitated the transformation of northern and eastern New Zealand from native grassland, fern, scrubland and forest into conventional pastures. Material from a wide range of countries was important. Chinese gooseberries were imported from southern China around 1900 and from the 1930's selection was underway which led to the Hayward variety which was the basis of the export industry which began slowly in the 1950's accelerating in the 1970's. Strategically the name was changed to Kiwifruit. Continued competitiveness will depend on new varieties like the yellow or grape-like kiwifruit being tested today.

From around the 1850's farm expansion and intensification accelerated. The land wars were subsiding, the British animal protein market was opened and a host of labour saving machines began to appear. Milking machines were crucial in increasing labour productivity on dairy farms. The back breaking tasks of cropping farms were transformed by the inventions of Cyrus McCormick and others with a heavy reliance on US imports. The first reaping machine was patented in 1831 by McCormick and imported in 1856. Within a few years local copies were being manufactured[18]. In the 1870's this machine was transformed into the reaper-binder by the advent of the knotter (still used on balers) which reduced labour requirements further. Eventually, in the 1920's, this machine had been converted into the first modern header harvester used in New Zealand.

One other machinery example is of special importance. The first modern-type tractor was manufactured in Iowa in 1901 and the first imported into New Zealand around 1907. Local brands have never been manufactured. However, it was not until after WW1 that large numbers of tractors were imported when the much lighter and cheaper Fordson was developed. Tractor

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17 Reviewed by Ross Galbreath (1998), *DSIR: Making Science Work in New Zealand. Wellington: Victoria University Press.*

18 B.L.Evans (1956), *A History of Farm Implements in New Zealand.* Fielding: B.L. Evans.

numbers increased rapidly between the wars with a concomitant reduction in draught horse numbers and the oats acreage required to feed them. Another major tractor advance occurred in 1948 when Ferguson introduced the 3-point linkage and a range of much lighter and standardised implements. These advances greatly increased the usefulness of tractors, especially on smaller properties like dairy farms. Up to this point, the US, Canada, Britain and local manufacturers were the major suppliers of farm equipment in New Zealand but for a time from the 1960's, Australia, Japan and Eastern Europe increasingly become competitive producers (often with a little help from industry policy). More recently, American competitiveness has been regained. The mechanisation revolution in farming thus began in the later 19th century with almost continuous technical improvements thereafter. The changes resulted in considerable labour saving and directly and indirectly aided scientific agriculture between the wars in New Zealand. One reflection of this is in higher wheat yields from about 1920, Figure 6. Farming became more intensive enabling some farm types to get smaller (cropping) and others (dairying) larger.

A parallel revolution was occurring in agricultural processing and distribution technology. On-board refrigeration arrived in New Zealand with the S.S. Dunedin in 1882, some 5 years after the first successful frozen meat shipment across the equator (from Buenos Aires to Marsailles). Such lags are usual for New Zealand but there are benefits associated with getting the slightly improved version. The two major animal protein sectors had to adapt. Merinos were crossbred first with Leisters and then with Romneys to produce a better meat animal. The cross breeding adaptations brought changes in farm structure. Down sires produced earlier maturing lambs which were more complementary to UK domestic lamb supplies but the Romney-Down cross was less suitable for breeding replacement ewes. Breeding units developed, crossing own breed sires to Romney, Halfbred and other ewes and selling surplus female progeny to specialist fat lamb breeders who used Down rams. The specialisation had a spatial dimension - breeding farms on the poorer hill country and fat lamb farms on the better lowland country. Crossbreeding led to inbreeding with the Corriedale (inbred Halfbred) being the first New Zealand breed so popular in the breeding livestock export trade to South America and elsewhere. The Corriedale was followed later by the development of the Perendale, Drysdale, Coopworth and Borderdales in the period through to the 1980's. Breed stabilisation through inbreeding exploded in the 1990's with one quarter Finn's and Texel's and East Friesian crosses. Enter Dolly the sheep.

Sheep numbers are illustrated in Figure 7. They show the now familiar rapid increase after 1882 accelerating after 1950 with the extensive hill country developments to their peak under SMP's in the 1980's. Given that agricultural subsidies were biased in favour of sheep, the removal of subsidies after 1984 led to major reductions in sheep numbers recently in favour of other farm enterprises, especially dairying, forestry and horticulture. In the early 1970's, government attempted to arrest declining sheep numbers with the Sheep Retention Scheme (a head subsidy based on 30th June numbers). The graph shows an increase of around a million sheep but this was mainly due to the development of a new farm activity called "retenting"[19](a familiar policy effect).

On the meat processing side technical advances led to developments from solo butchers to chains and more latterly, pre-killing, meat tenderising, chemical extraction and boning and packaging technology which has greatly extended the product range, as it has done with dairy processing. It has not been clear over the decades, though, that the combination of foreign tariff escalation and domestic costs gave New Zealand a comparative advantage overall in processing beyond the farm gate. We do not have long term time series but data from 1960 present a mixed picture, Figure 8. That figure presents the value-added in agricultural primary processing as a percentage of total agricultural value-added (farm and off-farm). Two points stand out. First, off farm value-added rose very sharply in the early 1970's. This is thought to be due to cost increases largely imposed

19 Terminology due to John (Fred Dagg) Clarke.

on the meat processing industries by foreign hygiene regulations, wage escalation and energy cost increases due to the oil shocks. These standards set by the US, EU and other countries were very significant at this time. The second point is that, excluding that period, off-farm value-added has tended to trend downwards. This would seem to indicate that the degree of comparative advantage in primary agriculture is stronger than in agricultural processing overall.

The beef industry quickly selected the Aberdeen Angus and Hereford breeds as the basis for crossbreeding and New Zealand has never produced significant numbers of a domestic breed. Crossbreds with European cattle (mainly Swiss and French) caused another speculative bubble in the 1970’s but it has been the Friesian that currently dominates the selection of terminal beef sires.

Dairy production grew rapidly after 1882 in response to increasing settled land availability in the Waikato and Taranaki (higher rainfall), the introduction of the cream separator, the Babcock butterfat test and the milking machine and the introduction of extension services by the Department of Agriculture. What began as the younger sibling of wool and sheepmeat has become the largest sub-sector of agriculture. In the process Jerseys gave way to higher milk and solids-not-fat (SNF) producing Friesians.

Three of these sector expansions (dairy, sheepmeat and beef) to feed Britain resulted in an increase in farm numbers from 10,000 in the 1860’s to over 80,000 by 1914, a level that has been seldom exceeded, Figure 3.

Farm expansion was not evenly spread, provincially. Much of the central plateau was targeted for pine trees because bush sickness (due to the then unknown cobalt deficiency) affected livestock productivity severely[20]. The hard hill country had to wait for the aeroplane revolution[21]. More generally, the existing system of grass and legumes or cropping had run into technical constraints. Continuous cropping without fertiliser was reducing fertility as shown by the declining or static wheat yields from 1869 to the 1930’s, Figure 6. New Zealand had chosen legumes to supply nitrogen to grass rather than the then more expensive nitrogen fertilisers. But clover required phosphate that is deficient in New Zealand. The problem was solved for flat country when New Zealand inherited a share in Nauru Island from Germany as part of the spoils of the First World War. [Not that the Nauruians had a say in this, or received a market return, till the 1960’s.] This was an important event because high grade phosphate deposits are reasonably rare worldwide and alternate sources required now are much further away in the US and North Africa.

Large areas of the pumice country of the central plateau were progressively planted in Pinus Radiata, a Californian native, Figure 9. New Zealand, Chile and parts of South Africa provided the ideal climate for this species, enabling it to grow most days of the year, and therefore to grow to millable diameter in around 25 years[22] . New Zealand usually doesn’t experience more than 12 degrees of frost for more than 2 hours and temperature drops more than 2 degrees at night. Radiata tree relishes these characteristics. It grows about the same rate per day as other trees but grows many more days per year in New Zealand.

Biological control, soil deficiency corrections (including cobalt, sulphur, boron and selenium), animal remedies (for example, for facial eczema, bloat and ryegrass staggers) and weed and pest control remedies all mushroomed between the wars but the next big spark occurred after WW2.

20 The eventual diagnosis of this illness is an interesting story of competing British, New Zealand and Australian hypotheses based on research funding sources at the time. It was Australian researchers who eventually guessed the truth.

21 According to Professor Sir James Stewart, a “Pinetree Meads-type” worker could distribute one tonne of fertiliser per day on hills, by hand, at the expense of losing all the skin off his forearms and thighs!

22 Pers comm., Dr. Wink Sutton, Rotorua.

Planes were converted to be flown by ex-airforce pilots to apply fertilisers and sprays to the extensive New Zealand hill country. The innovations were not limited to embodied technology. Innovations in management systems played an important part as well: rotational grazing systems and electric fence farming are examples.

In contrast to dairy and sheep and beef farming, New Zealand has a very small area of land suitable for horticultural production like apples and a very small domestic market to support the local industry. Furthermore, new technology in this area is very mobile internationally. If apple production (and many other lines of New Zealand business) is to be internationally competitive, it must keep close to leading technology and change regularly. Pursuing minimum cost longterm for a standard international variety in this environment will result in a gradual loss of competitiveness to larger agricultural producers.

There are a large number of traditional apple varieties. Up to the end of the nineteenth century, none had good keeping qualities so that apples tended to be non-traded goods. At this time, Jonathons were a popular red apple in Australia and New Zealand and Cox's Orange was a popular flavourful early season apple. Around the turn of the 20th century, a Sydney gardener chanced on an apple cross which had excellent keeping qualities[23] . This Granny Smith variety was also different in being green and pleasantly tart if picked at an immature stage. The Red Delicious was also a good keeper but lacked flavour.

In the 1930's a New Zealand nurseryman crossed a number of varieties, the excellent keeper (but bullet-like) Doherty with the flavourful Cox's Orange and the Golden Delicious. He produced the Gala strains of apples that were noticed by DSIR scientists and evaluated for performance over the 1940's and 50's (in part sponsored by the newly formed Apple and Pear Marketing Board). This family of strains would produce the Gala, Imperial Gala and Royal Gala varieties that growers would graft in the 1970's and 80's to replace many of the older varieties in New Zealand (like Granny Smith) whose price premia on the world market had disappeared as their planted area worldwide had expanded. Alongside the purposeful discovery of Gala was a chance crossing in the 1930's in Nelson which produced the Braeburn variety[24] . The Braeburn has similar qualities as the galas. What is important here is the pattern of R&D. Research capacity was still required in the case of Braeburn, not to produce it but to uncover its existence, to test and compare it and to commercialise it. One can expect that significant "research" resources of this monitoring type are required in agriculture. (It is not the paradigm shift that researchers are likely to discover.) The search continues and in the 1970's, breeders developed Pacific Rose which after much trialing and market testing is designed to maintain the comparative advantage of the New Zealand apple industry.

The pattern of influence of technological change is illustrated in growth in agricultural GDP, Figure 10 and labour productivity in agriculture, Figure 11. There would have been very rapid growth in agricultural GDP in the latter part of the nineteenth century and there was very rapid growth after world war 2 - growth that has continued (and perhaps accelerated) after 1984. Labour productivity shows a similar pattern given the slowly declining workforce from 1917. Land productivity would mirror labour productivity because the landbase slowly declined as well, Figure 1.

The economic reform programme has changed old links in the farm technology chain. The extension service has been privatised, the two large government research departments have been split up and corporatised and public research funding is being constrained to encourage greater private participation. Farmer representation now appears through a growing (but still small)

23 Pers comm., Professor Richard Rowe, Lincoln University.

24 Jim McAloon (1997), *Nelson: A Regional History.* Whatamango Bay:Cape Catley.

number of research funding commodity associations and by board appointments. Researchers are being given more responsibility for technology transfer.

Policy

Development Policy

"Visions" and "strategic plans" became common only in the late twentieth century, especially for governments rather than companies and other groups with voluntary membership. Nationalism was a significant influence in European and other cultures from the nineteenth century, but the mobilisation of all national resources to pursue military victory in the Second World War gave a new vitality to the concept of "national purpose". It was maintained for more positive objectives as "economic development" was high on the international agenda and on the agendas of newly-independent former colonies in the postwar world, and it was easily adapted when from the 1970s governments in many countries became more concerned to ensure that public sector resources were used efficiently.

New Zealand shared this general experience. But there was a long history of similar thinking to be drawn on.

The international economy of the nineteenth century was centred on the North-Atlantic. That basic configuration of world affairs was created in the eighteenth century as Europe and its North American offshoot secured a lead in the application of ideas to control the natural world. The "industrial revolution" provided increased wealth and higher standards of living (albeit not without new problems).

Among the most important of the ideas involved was "progress" - not a gradual pilgrimage towards a state of religious grace in another world, but achievement of a wider range of goods and services in this world. "Material progress" was no longer the accidental outcome of the smiling face of nature or the confiscation of the possessions of less fortunate people; it was a purpose of life, and perhaps the overriding collective purpose of nations.

Much more was involved in the intellectual revolution of eighteenth century Europe usually known as the "Enlightenment". On a world scale, the prime place is usually given to the rise of individualism. And as the development of ideas is never unidimensional, there were always underlying reservations about individualism and materialism. A streak of religious utopianism remained, Even more apparent was Arcadian thought, the appeal of a quiescent rural idyll, sometimes with the added mystery of the idea of a "noble savage" uncontaminated by modern industry and sordid technology. New Zealand inherited all of these ideas, just as it remained open to all of their subsequent developments and the complexities which emerged when they were mingled with philosophies from other sources, especially Polynesian and Asian ones. But the strongest of all intellectual influences was material progress.

Pakeha New Zealand began with explorers utilising the new European technologies to increase their knowledge of the natural world. It continued with individuals on the fringe of the main line of development in Europe or explicitly antagonistic to that main line, these being respectively whalers and sealers seeking new sources of supply of some of the minor materials for industrialisation, and Christian missionaries.

The idea of "development" was, however, introduced by neither of these groups. It came with those who intended to settle more or less[25] permanently and to build a "South Britain" in the

[25] More or less because there was always a stream of temporary sojourners in New Zealand, those who intended to make their fortune and then return. Samuel Butler was the best known of these,

Pacific. Such people were determined to build in New Zealand a society which was better than that they had left behind. There were at the time no regular publications of national income aggregates, but there were soon compilations of the value of exports and imports, and they were soon supplemented with censuses of population, measures of railway lines built, output of particular products both agricultural and industrial and so on. These were used to make comparisons between what was being achieved in New Zealand in comparison with the situation in Britain. As in Australia, where TA Coghlan was an even more notable figure in the development of official statistics, New Zealand was early in the creation of primitive national income estimates.[26] Again as in Australia, early estimates showed very high levels of income per capita in international terms. This was not because of high levels of productivity of New Zealanders. Rather it was due to resources still being discovered and exploited so that New Zealand was still in a disequilibrium where rents were available.

In any case, the focus of interest was not on income per capita. "Development" was conceived not as intensive growth but as the building of a larger and more complex society while average living standards were no lower than those available in Britain. 'Extensive" growth loomed larger than "intensive" growth. Statistical compilations were presented in gross rather than per capita terms; more important the largest single element in development policy was provincial schemes for promoting immigration.

Even when the central government succeeded the provincial governments as the principal development agency, extensive growth (with a minimum standard of living) remained the basis of policy. Vogel`s rallying cry was ". the great wants of the Colony are - public works, in the shape of roads and railways; and immigration...."

Development policy became quite sophisticated. Much use was made of the ability of the State to borrow on more advantageous terms than any private individuals. This advantage was essentially because the government's capacity to impose taxes provided creditors with better security than the assets of almost any private individual, although it was also more likely that governments would be returning to the same capital markets so that instruments like the Council of Foreign Bondholders which could control access to those markets gave creditors bargaining power and so provided a kind of security which was preferable to reliance on distant courts, even English courts such as existed in New Zealand. ·But governments went beyond financing to owning and operating. They used their power to act as agent for resident colonists, and give them preference against overseas interests. They sought to mediate among local interests so as to preserve the homogeneity of the settler community[27]

Railways provide an interesting example of all these intentions. The New Zealand government might contract with overseas builders, but within what would now be termed a reasonably tightly specified contract. The government would specify the routes on which railways would be built - local decisions would best suit local producers. (There have been many allegations that railway projects were prioritised by political pressures if not corruption, but given that the building of any railways system takes time, there is no evidence of divergence from a perfectly sensible programme.) Until fiscal pressures became intense, when there was some experimentation with

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but there were many more. Of course, intentions were not always realised, and no doubt many who never made their fortune became permanent migrants. there were also those who found to their surprise that the lure of origins became strong as they aged. "Return" migration was a feature of international migration and not unusual to New Zealand.

26 J.A. Dowie (1966), "The Course and Character of Capital Formation in New Zealand, 1871-1900". *NZ Econ. Papers* 1 38-58 (on Knight estimate).

27 Note, "settler" community - Maori could join it but on Pakeha terms. The public community was also a male one.

American-style land-grant railways, for example, in the link between Wellington and the Manawatu and between Christchurch and the West Coast, government operated railways as well as building them. And in all of this, it acted as a development agency for producers. Railways were to earn a modest return, of 3% and then 2%, and were otherwise to return "excessive" revenue to consumers of transport services. The State was a coordinating mechanism which prevented any conflict of interest between users and shareholders. The users were, of course, primarily *agricultural* producers. (Their use was both moving wool to ports for export, and also carrying agricultural inputs.)

In practice, mainly because of accounting inadequacies and the novelty of having to account for a large element of fixed capital in production costs when the concept of depreciation was not well known, railways did not provide even the intended modest return and controlling the element of public subsidy to railway users was a durable problem for economic policymakers. But the design of the development policy was interesting and clever. It was not unique to New Zealand, being found also in Australia (and in New South Wales early debates about it may have had some influence on Stanley Jevons, then an official of the Mint in New South Wales, and so provided input into the development of marginal economics).

Equally interesting is the development of tariff policy. New Zealand inherited English ideas and the establishment orthodoxy was "laissez faire" meaning that the State should do only those things for which private enterprise was not suited. But in New Zealand, this became something in principle but not in any specific application. The State was merely a convenient instrument for the community of settlers as a whole and the settlers interest remained private enterprise even if they were all involved at once. So in New Zealand, there was no conflict between "laissez faire" and an activist State. This remained characteristic of New Zealand until in the 1980s, people started to take recognition of diversity more seriously.

In any case, the real test of orthodox adherence to English ideas of laissez faire in the nineteenth century was free trade. John Stuart Mill could look at the intellectual puzzle of infant industries but in the practical world, free trade was the orthodoxy. Most nineteenth century public figures in New Zealand subscribed to this belief to the extent of declaring opposition to "protectionism". But, the Government required revenue, and tariffs (along with land dealings) were the major source of revenue. A revenue tariff was clearly not incompatible with a proper understanding of free trade. (Even Gladstone and John Stuart Mill would go along with that.) And then a revenue tariff could not be imposed on everything (simply because that was not thought of). Governments could not impose indirect taxes on food and children's clothes until it was done in the 1980s. Accordingly, there had to be some basis for choosing which imports should be subject to tariffs and how levels of tariffs should vary. Some simple principles were attractive. Tariffs had always been more acceptable on luxuries than on necessities, and surely they should therefore generally be lower on items which were inputs to New Zealand industries - there was no point in loading costs on to productive effort. Agricultural inputs were an obvious candidate for exemption from tariffs. But also imports were obviously closer to luxuries if there was a domestically produced alternative, and so tariffs should be placed on those products for which there was an actual or potential domestic supply. And so a free trade policy was rationalised as compatible with a tariff policy which protected local industry while avoiding at least to some extent a tax on agriculture. All of which was part of an implicit development policy promoting aggregate output while checking that living standards remained higher than in Britain.

From the late nineteenth century, the main boost to New Zealand's economic development came not from government initiative but from refrigeration. Settlers were aware of the potential of refrigeration, and they used the power of the State to offer prizes for the successful transplanting of refrigeration technology to New Zealand. But this was minor relative to exploitation of opportunities to earn private incomes anyway. Similarly, while the exploitation of the technological possibility was not a simple process, government's role was not prominent in the process of adaptation. The key elements were things like the change in sheep breeds to acquire dual wool/meat animals rather than wool-producers, recognition that the British market as for lamb rather than mutton, and the adaptation of dairying from a small farm-based activity producing products for the domestic market to another factory-based export industry, and development policy was not prominent in any of these major trends. Government continued to promote land clearing and land development; its railways served a more varied farming sector - development policy was marked by continuity rather than by initiation of change. There were nevertheless significant modifications to the established implicit development policy. The State facilitated the response to refrigeration even if it did not initiate it or even play a major role.

English orthodoxy was that a major concern of the State was to ensure the rule of law, to facilitate and enforce voluntary contracting - this was even more fundamental than free trade. Very rarely, other public concerns could over-ride it - so that private land could be expropriated (with compensation) for essential defence work, and so on. New Zealand settlers had already shown a willingness to relax the stringency of conditions in which the rights of private property could be overridden for public purpose by the Public Works Act. (There were English precedents in compulsory purchase for the purpose of building railways, and so the relaxation by the settlers was a matter of degree; furthermore, they looked for easy targets, such as Maori land.) This was taken further in that as refrigeration made desirable more intensive use of land, the government took and exercised powers to appropriate land and redistribute it.

While political rhetoric has found its way into some historical accounts in the argument that a radical government attacked land monopolists and forced the disgorgement of land in favour of small farmers, most land redistribution was voluntary and compulsory acquisition was used mostly in unusual circumstances. Nevertheless, we can detect an adaptation of development policy to facilitate more intensive agriculture, similarly, the origins of State Advances in providing government mortgages to individual settlers was at least partly a response to complications in the mortgage market consequent on renewed efforts to promote leasehold rather than freehold and on the introduction of new taxation rules for mortgages.[28] But it also had the effect of facilitating adaptation to the end of a longstanding disequilibrium whereby New Zealand interest rates had provided a premium to overseas borrowers beyond their assessment of the appropriate risk premium. That is, a long process of convergence of New Zealand rates to international levels was coming to an end, as was the transfer of wealth to lenders from borrowers which resulted from consistent underestimation of, or inability of conventional business practice to accommodate, the extent of price deflation between the 1870s and the mid-1890s.

This process of adaptation continued. Nineteenth century financial markets used formal mortgages for large transactions - when compliance costs were small relative to the total transaction - and less formal overdrafts and personal loans for smaller amounts. Dairying in particular generated a demand for loans intermediate in size, especially for milking machines, and legislators responded with provision for "instalment credit" which evolved into hire purchase and was developed especially for motor vehicles of all kinds and not only farm vehicles. Dairying also required attention to the rules about security for co-operative ventures and for share-milking which may have created a general acceptance that dairying necessitated tolerance for legal innovativeness.

We can also observe further important facilitation measures. The Department of Agriculture was in part a kind of agricultural extension service and it might be seen either as an extension of public support for education or as a subsidy to agriculture. It also brought to greater prominence what remains one of the major functions of government, responding to externalities and "spillovers"

28 Quigley, op.cit.

which hinder the operations of private markets. It was often difficult for final consumes to distinguish between the products of individual agricultural producers so that misleading quality signals by one producer impact adversely on all. Establishing and enforcing hygiene requirements and creating branding systems to authenticate quality claims took development policy towards a more modern character.

There was, however, still the sense that the State was a convenient instrument for allowing settlers to act together when they judged it desirable. By the first decade of the twentieth century, the "progressive" movement in the United States had created widespread views not only that local government should be cleared of corruption - a view which had some influence on New Zealand's Public Service Act of 1912 - but also that "trusts" or "monopolies" were distorting a wide range of markets. The big business of the US then included meat companies and New Zealand farmers were aware of these trends in thinking. Furthermore, they gained a fillip by English enquires into the impact of trusts in the years of the First World War (generated by anxieties about the terms on which Britain secured meat supples and by the worries of British firms of how they were faring in competition with US firms in Latin America). So by the 1920s, the natural suspicion of New Zealand farmers about urban interests, fed by unusually sharp fluctuations in agricultural prices in international markets, could draw on international thinking. Marketing authorities were created in several places in an attempt to give agricultural producers more "market power". The New Zealand Meat Board and the New Zealand Dairy Board were the result of New Zealand governments in 1923 and 1924 continuing to use state power to assist farmers but now in the context of a perceived need for countervailing market power.

The Meat Board and the Dairy Board were in fact mostly circumspect in their use of compulsory powers. The Dairy Board did implement a "commandeer" in 1925-27, exercising exclusive powers to export which might be seen in later terms as becoming a single-desk selling operation although in fact it used previously independent dealers in dairy exports - known from a common London location as "Tooley St" - as its agents. The experiment was unsuccessful and single desk selling came not with marketing authorities but with a government Marketing Department from the 1930s which evolved back into producer boards after World War II (again with neither the Wool nor Meat Boards choosing to exercise powers of compulsion as much as the Dairy and Apple & Pear Boards.)

We might wonder whether in the period between the 1870s and the 1930s there was a gradual change of emphasis away from "extensive growth and building a bigger community with standards of living no worse than those of contemporary British towards extensive growth based on supplying agricultural exports to Britain. There was still a place in government encouragement for nonagricultural activities - such as oil although the British Admiralty encouraged the search for oil supplies within the British Empire, or for iron based on West Coast ironsands, but the momentum of success did rather concentrate efforts on agriculture rather than the economy more generally. Extensive growth merely became agricultural output for export - it was still a gross value rather than value added kind of concept which underlay development policy. A.G.B. Fisher wondered whether "back to the farm" was a sensible response to Depression, and whether "drift to the towns" was the right way to characterise the increasingly urban character of what had always been a highly urbanised population (albeit in small towns and with a lot of rural servicing), but his was very much a minority voice.

The first Labour Government's stance from 1935 was characterised as "insulationism" although to the politicians and officials involved it was more ad hoc and less systematic and coherent than such a concept might suggest. There were several elements in it. One was that the prices paid to New Zealand farmers, and so domestic incomes, should be less determined by overseas interests and more by what was needed for a decent standard of living in New Zealand. Nash's "Guaranteed Prices" rested on some such notion. It clearly took to extremes the idea that overseas prices were manipulated by trusts, and indeed is fundamentally anti-market in nature. It was also fundamentally impractical. Nash discovered that the UK government was not interested in joining with him in ensuring that trusts could be outwitted by benevolent governments who would exchange necessary imports for New Zealand's agricultural exports and so permit New Zealand prices to be divorced from overseas market returns. One suspects, however, that such a vision has never entirely departed from New Zealand politics, both farmer and national.

Guaranteed prices, however, became government imposed price smoothing. New Zealand returns remained tied to overseas market realisations but government or quasi government could finance transfers from boom years to lean years. They could also impose cross-subsidisation from one product to another, especially at first between cheese and butter. This was all subterranean during World War II when government bulk purchase did remove markets to a substantial extent; it is the basis of the producer boards of the postwar years.

The second element of insulationism was promotion of domestic economic activity - protection of the New Zealand market for local producers. In origin it was largely a response to the unemployment of the Depression years and although there was a set of nationalistic autarchic industrial ideas behind it, it evolved into something which was much more a social policy than an economic one. New Zealand's development strategy from the 1930s to the 1980s looked to have much in common with import-substitution industrialisation as was widely discussed in international circles and promoted especially by the UN Economic Commission for Latin America.[29] But it differed in that except perhaps very briefly for a minority in the 1930s, and for a few visionaries in the postwar years, industrialisation was never expected to be the main driver of economic growth in New Zealand. It was understood that New Zealand was different - the issue was not getting labour out of relatively low-productivity agriculture and into modern industry, which underlay import-substitution industrialisation. New Zealand had a productive agricultural sector. Industrialisation was to create a more varied and interesting society, and to provide employment for the entire range of skills and aptitudes of New Zealanders. It was industry in general, and not only the later SOEs of railways, post office and forest service, which was an employment sponge. Certainly the basic structure of New Zealand policy thinking was that providing this kind of society meant that the demand for imports always pressed against export receipts. But even import licensing, the key tool, was obviously much more focused on the composition of imports than on their total (as was obvious as soon as one looked at the instrument being used which provided free entry for capital goods and industrial inputs and restricted competing finished products, or looked at trends in import totals and their composition). There was a lot more continuity with the tariff of the nineteenth century than was usually acknowledged.

Insulationism did not stimulate learning and knowledge in the way in the manner infant industries are supposed to. Importables tended to comprise low value-added products and the skill base does appear to have fallen behind other countries from the 1950's. One measure of that has been the very rapid upskilling (in terms of formal qualifications) that has occurred since the economic reforms began[30].

International ideas did have an impact. Attention gradually shifted from extensive growth to intensive growth - for the increased size of the settler community to trends in per capita income. Especially from the late 1950s, the relatively slow growth of New Zealand, in the sense of growth of per capita income - was a matter of policy concern.

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29 Henry Bruton (1998), "A Reconsideration of Import Substitution". *Journal of Economic Literature XXXVI* (June) pp. 903-36.

30 Deardorff et al (1999), op cit.

Ideas die hard - and promotion of agricultural output -extensive growth - remained a target of policies until the 1980s. SMPs (1978-84) were the last fling of the policy stance that had the government building and operating price-controlled railways in the nineteenth century.

Oddly enough, the Government's legal power to borrow overseas remained restricted to borrowing for "development" - and lawyers understood (and understand?) that in the nineteenth century sense.

By then of course, compensations tended to be built on top of one another. So there were subsidies to agriculture not because subsidies were other than evil (when they were used by the EEC especially) but because these subsidies were not subsidies but merely compensated for the implicit tax of tariffs and the tariff equivalent of import licensing. Single-desk selling might be a use of state power to compensate for the way that an overvalued exchange rate imposed cost on exporters. Agricultural growth was central to the development strategy and so "diversification" of markets and
of commodities exported was a principal concern of policy - and whether this was to promote income per capita or to build a bigger agricultural sector was not an issue that needed to be addressed.

The house of cards ended in the 1980s. Development gave way to efficiency and equity - productive use of resources in relation to international consumer demand, and distinct decisions about the redistribution of income. "Foreign exchange constraint" was suppressed as too likely to make people think the world owed New Zealand a living. Promotion of exports gave way to efficient use of resources. Efficient use of resources may, and often will, involve exports, but the end purpose of production was consumption - as Adam Smith had said; it was not production of agricultural output. Many individual farmers, and the Market Development Board, felt diminished, unappreciated and redundant. Some never recovered, but most farmers became better business managers in a particular business and the Market Development Board became the Trade Development Board, Tradenz, and Trade NZ, keeping alive the idea that the role of the State is to provide coercive powers on demand.

Trade Policy

We have become accustomed to half-truths such as "For New Zealand, foreign policy is trade".[31] It was never the entire truth since New Zealand's international diplomacy always had many concerns but it served to undermine any sense that mere trade was less important than matters of high politics. It even understated the case to some extent since for many of the post-Second World War years foreign policy was concentrated not only on trade but specifically on market access.

On the border line of development policy and trade policy was government interest in building the infrastructure for trade and other communications. Nineteenth century New Zealand governments were active in arranging for mail and telegraph communications.[32] It is not often realised that New Zealand distinctiveness from the Australian colonies emerged early and owed a lot to the simple geographic point that communication between New Zealand and the UK was often simpler via North America while for the Australian colonies the simpler connection was via Suez. And it is easy to forget how important communications were, for both social and economic life.[33] And it

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31 Attributed to Prime Minister Muldoon and many others, and no doubt said by most of them but always in the form of light-hearted banter rather than as the conclusion of a careful process of policy formulation.

32 Keith Sinclair, "Australasian inter-government negotiations 1865-80: Ocean mails and tariffs" *Australian Journal of Politics and History* 16 (1970), pp. 151-76.

33 The classic account is the record of the significance of English mails to Auckland, in W. Swainson *Auckland, the Capital of New Zealand* (originally 1853, facsimile edition, Auckland:

is sometimes overlooked how even in Free Trade England, the notion of subsidising mail services was readily accepted.

Infrastructural development is still closer to development policy than to trade policy although it clearly overlaps with both. We reach something closer to trade policy alone when we encounter Vogel's efforts to develop reciprocal tariff concessions with other Australian colonies and with the USA.[34] The UK government attempted to persuade the colonial governments that free trade was optimal so that reciprocal concessions were unnecessary, but it conceded that the colonists should make up their own minds and removed legal barriers to colonial autonomy in the Colonies Duties Act, 1873. However, the various Australian colonies could not reach agreement, and Vogel was no more successful in his endeavours to get free entry for New Zealand wool to the US.

Trade policy was a minor activity in the nineteenth century because there were few barriers to the trades which were important to New Zealand. Developing exports was therefore a matter for private business. What happened to the whale oil and seal furs was hardly a matter of concern to residents of New Zealand; gold was subject to an export tax as a revenue device but a gold standard world cannot impose tariffs on gold; wool and later refrigerated products were destined for a free trade Britain. There was no call on government to provide market access services.

The issue could have become more significant as the Australian colonies moved towards Federation. A key issue was the compromise to be struck between "free trade" New South Wales and "protectionist" Victoria - although even then political rhetoric and journalistic labels were not necessarily a good guide to policy issues and the gap between NSW and Victoria was one of degree. Furthermore, it was not hard to discern that a Federal tariff would eventually be a compromise one. New Zealand exported a lot of timber to "protectionist" Victoria, especially during the 1880`s building boom in Melbourne, and there was therefore apparently little to fear from a Federal tariff (and certainly less than from dwindling wood supplies).

Impetus towards trade policy still tended to come from "development issues". Towards the end of the century "imperial preference" was on the agenda of what would now be called strategic studies. Colonies were taking an interest in the management of the Royal Navy and Britain was keen to get colonial funds for naval expansion, and Chamberlain was departing from the British consensus on Free Trade and prepared to think in terms of "Fair Trade" as a means of justifying preferential treatment for the Empire. Some New Zealand politicians were even willing to contemplate Imperial Federation - no doubt with dreams of moving from the village to centre stage, more or less as British officials and politicians dreamed about leading Europe once they joined it. "Imperial preference" found its way into the New Zealand tariff schedule - more as "British preference" than "imperial" because of disputes with Australia,[35] but little was achieved by New Zealand governments to assist their own exporters.

Wilson & Horton ,n.d.), pp. 73-9.

34 Sinclair, "Ocean mails and tariffs"; Key documents are summarised and quoted in G.R. Hawke, "Law and Economic Development: The Case of New Zealand" *VUW Working Papers in Economic History 83/1* (March 1983), pp. 17-20. See also Angus Hawkins and John Powell *The Journal of John Wodehouse, First Earl of Kimberley for 1862-1902* (London: Royal Historical Society, Camden Fifth Series Vol 9, 1997), p. 266 for the Colonial Secretary's view that "Gladstone, Lowe and Cardwell make no secret of their colonial policy, namely to get rid of the colonies as soon as possible; and Cardwell thinks the Australian demands as to tariffs a good occasion for bringing matters to a point! I am quite persuaded that the Australian colonies & Canada will become independent States: but to drive them into independence seems to me the utmost folly. Let it come of itself if it must, but I for one will be no party to any step which shall make them separate in anger. At present they have no wish to separate, & tho' the Australian colonies pursue a policy which is going straight in that direction, they would indignantly resent our casting them off. The telegraph will bring them somewhat closer for a time."

35 Keith Sinclair (1972), op cit. and Harvey Smith and Ralph Lattimore (1998), op cit.

Government concern with market access received an enormous boost during the First World War. Submarines and shipping shortages were far more influential than the dreams of politicians and the ambitions of some officials to be trading tycoons. The commandeer meant that government was concerned in the prices and quantities in New Zealand's major export markets in Britain - wool, meat and dairy products. Furthermore, confidence in markets was declining internationally, especially because of worries about the "Meat trust" in the US and its influence in Latin America.

The world environment changed markedly with the failure of the attempt to revive the international gold standard in the 1920s and the retreat to trade barriers and trade blocs in the 1930s. Market access was then a matter for governments. Especially important for New Zealand in this context was the withdrawal of Britain from Free Trade, hinted at during the First World War (but wartime emergencies justify many temporary deviations), suggested by McKenna duties and flirtations with trading preferences in the 1920s, but realised only with the formal departure from the Gold Standard in 1931. Imperial preference was suddenly on the agenda, most notably in the Ottawa Conference of 1932.[36] The idea was that Empire countries might be able to raise prices for all their exports, but that was always futile and the outcome was a preferential trading system. New Zealand revised its tariff, raising some rates so as to be able to insert preferential imperial rates. But the major outcome was that New Zealand governments became involved in negotiating terms of access to Britain. The Coalition Government in office between 1931 and 1935 immediately became unpopular by agreeing that New Zealand would have to accept restraints on dairy exports. But a principal objective of the Government in the 1930s was to get Britain to exclude Danish butter to make more room for New Zealand, and to get Britain to exclude Argentine beef to make more room for New Zealand meat. (There would probably have been comparable efforts against Canadian cheese and Australian meat and dairy produce, but realism prevailed, especially given all the contemporary talk about "imperial preference".)[37]

Walter Nash would have liked to develop the idea of trade blocs and sought an overall barter of New Zealand produce against New Zealand needs as part of his hopes for a "guaranteed price", especially for dairy farmers. But the logic of markets prevailed, although market access was top of governments' agendas for 50 years.

It assumed a new form when the UK government did sign "bulk purchase" agreements as part of its war strategy. The UK government took ownership of New Zealand produce in New Zealand courts (so that Britain bore the risk of submarines). Shipping capacity was the effective constraint so that mechanisms were devised to stockpile what could not be accommodated - and hence the Wool stockpiles and new ways of disposing of apples. The choice between butter and cheese was determined administratively according to whether strategists thought fat or protein most needed. "Marketing" found new meanings - and the idea that economic nirvana rested on processing (reasonably efficiently) what was produced was given a firm endorsement, the effect of which lasted much too long.[38]

Government officials became deeply involved in negotiating prices, including adjustment when the UK realised that initial levels were unduly high.

Aspects of "bulk purchase" lasted for several years after World War II as the British government attempted to manage the British market for foodstuffs especially in the light of a disequilibrium

36 I.M. Drummond, *British Economic Policy and the Empire* (London: Allen & Unwin, 1972); I.M. Drummond, *Imperial Economic Policy* (London: Allen & Unwin, 1974); I.M. Drummond, *The Floating Pound and the Sterling Area* (Cambridge: CUP, 1981).

37 F. Capie "Australian and New Zealand Competition in the British Market 1920-39", *Australian Economic History Review* XVIII (1978), pp. 46-63.

38 Into the 1980s in the case of Watties, according to David Irving and Kerr Inkson *It must be Wattie's! From Kiwi Icon to Global Player* (Auckland: David Bateman, 1998).

between sterling and the US dollar. And although there was rhetoric about a return to free marketing in the 1950s, there was never any intention of relaxing the grip of the producer boards and they were a (if not the) key element of the "corporate" state whereby politics was a matter of mediating among interest groups and trade policy was a matter of assisting the producer boards with their external marketing.

By the ultimate end of the bulk purchase agreements, the problem of market access had assumed a new form. The European Common Market, soon to be the European Economic Community, and eventually the European Community and then the European Union was in place, and it was moving to bring to an end centuries of Franco-German rivalry and to do so by creating a "Common Agricultural Policy" where national rivalries were buried in a common interest of subsidising European farmers! In a sense the Bismarckian response of "iron and rye" and protection as a response to cheaper wheat imports in the 1870s was revived in a modified form by the combination of France and Germany, as noted earlier. The US was more interested in seeing European rivalries ended so that Europe could relieve US taxpayers of some of the cost of military preparedness against the Soviet Union, and it protected the CAP from challenge under the rules of GATT. (It nevertheless soon asserted its national interests against European protection for chickens and wheat but did not extend this to a general assault.)

Protection of Continental European markets was a nuisance; competition from subsidised EEC products in third markets was a real cost[39], and the prospect of Britain joining the EEC and applying its rules was a prospective disaster for New Zealand from the time of the Treaty of Rome in 1958. De Gaulle vetoed the first application for membership (and was the subject of annual toasts at the NZ Association of Economists until memories faded); another British application failed in the mid-1960s as the Continentals asserted, surprisingly to many, that they could manage their affairs without Britain, and saw no need to change their rules to accommodate a late-comer). And eventually Britain joined the existing institution with little modification in 1973.

Throughout the 1960s, New Zealand trade policy was dominated by the need for special status and exceptional treatment should Britain join the EEC. There was a remarkable success in the New Zealand Minister of Overseas Trade sitting outside while the British Minister negotiated with the six and even vetoed a British desire to settle. NZ played the sentimental card of the dead in Flanders for all it was worth, and also the notion of "kith and kin" and what might happen in a British general election if the NZ government campaigned against a betrayal. And yet there is still a case for wondering whether the effort was worth the cost. The eventual arrangements were only transitional, and perhaps too much was hoped for - especially from dairy products if not from sheepmeat.

Certainly, there was a mistaken emphasis on the notion that the problem was the EEC. Even as the saga was played out, it was understood by officials and perceptive observers that the underlying problem was the relative slowness of British economic growth. Coupled with its increasing desire to protect its own farmers - for reasons of sentiment, legitimate concern with the countryside of "merrie England" and environmental concerns, the political influence of the National Farmers' Union especially with the Conservative Party, and the likelihood of joining the EEC eventually and wanting a basis for claiming on the funds available through the Common Agricultural Policy, Britain was not a market which could expand at the rate which New Zealand wished its exports to grow to provide the increased living standards which were expected and which were required to maintain international living standard relativities. Britain used "deficiency payments" to support its farmers. These were explicit subsidies rather than border controls, and the switch to the EEC mechanism was damaging to New Zealand (and other) traders. But it was the slow growth of

39 Over a period, the EEC was transformed from the world's largest beef importer to world's largest exporter.

Britain which was the underlying problem.
So throughout the 1960s, the key to New Zealand trade policy was "diversification" - diversification of markets and diversification of export composition. This was not just a response to the EEC claim that New Zealand was not a "natural" competitor in European markets and should find alternative markets elsewhere - it was the response to the inability of the British market to support the desired rate of growth. Diversification was very successful in the 1960s, although it was really a matter of all markets growing relatively because of a diminished concentration on Britain.

Trade policy was a simple matter of maximising exports, and maximising exports by gaining access to new markets and enhanced access to existing markets. Politicians were travelling salesmen or PR specialists arguing for mutual interest in enhanced market access. (New Zealand was not unique in this; a Japanese prime minister of the 1960s has recorded how it was decided that it was not beneath the dignity of a Japanese PM to promote trade although he was still surprised 20 years later to find that his successor was essentially a car salesman - and so was President Bush.) New Zealand diplomats tell how their briefing before taking up foreign posts was essentially visiting the producer boards to find out what expanded market access they were expected to provide.

All of this occurred in a world where tariff reduction was the core of international economic relations. GATT had begun as an institution promoting non-discriminatory trade - its essence was the "most favoured nation" concept where trade barriers could be retained but they should apply to everyone. (This was based to a considerable extent on US detestation of imperial preference, which nevertheless was allowed to persist in a constrained manner. It was more sensible as a response to the costs of trade blocs such as those formed in the 1930s.) GATT then developed the institution of "rounds" in which sets of bilateral agreements on reduced tariffs were negotiated - essentially reciprocal concessions of entry to national markets. Rounds through the 1950s, 1960s, and 1970s had a significant impact on the general level of tariffs on industrial goods.

New Zealand participated in the GATT Rounds, but in a somewhat schizophrenic manner since tariffs were reduced but imports were controlled (or at least the composition of imports if not their aggregate value was controlled) through import licensing. New Zealand's policy was essentially to demand access to markets overseas but to deny access to New Zealand markets, at least in the case of markets for consumer products if not for industrial inputs and capital equipment.

If it was suggested that there was some inconsistency in this, the reply was that it was necessitated by the concentration of tariff reductions on manufactured goods. And it is true that, led by the EEC, GATT excluded agriculture from its liberalisation until 1994. There were developments in other areas; as tariff levels were reduced, alternative barriers to trade became significant. Government purchasing procedures for example often preferred domestic producers. (State, provincial and even metropolitan regulations could frustrate international trade whether against the intentions of national governments or as national governments found convenient ways of liberalising market access without upsetting their own producers.) Investment regimes frustrated apparent access - especially as international trade in services became more than an insignificant supplement to trade in goods. Specification of standards also became important in making access to markets effective. New Zealand watched all these developments, and participated in the creation and application of international disciplines, but agriculture remained mostly excluded, and import licensing remained. There were breaches in the inward-looking nature of industrial policy and the way it confined trade policy, first in the New Zealand Australia Free Trade Agreement of 1965, and then, a much more substantial change in the Australia New Zealand Closer Economic Relations Trade Agreement (CER) in 1983. But production of agricultural products for export and use of political and official resources to secure market access remained the core of New Zealand's trade policy.

Change came in the 1980s. First, there was marked change in economic policy. It was recognised that frustration about lack of access to markets for what New Zealand happened to produce was hard to distinguish from a plaintive belief that the world owed New Zealand a living. The emphasis was changed to identifying what markets New Zealand could serve and making the best possible use of New Zealand resources in doing so. From production to marketing, from "vent for surplus" to "doing international business", from export maximisation to efficient use of New Zealand resources.

Market access remained important, but as a supplement to an outward-looking stance of resource allocation. The Market Development Board, formed as a private sector trade consultancy service as trade policy officials from the Department of Trade & Industry were brought into the Ministry of External Relations and Trade, was confused; it thought its job was export maximisation and now it seemed to be told that exports were unimportant. It eventually learned that exports which resulted from an efficient use of resources were as important as ever - and became the Trade Development Board.

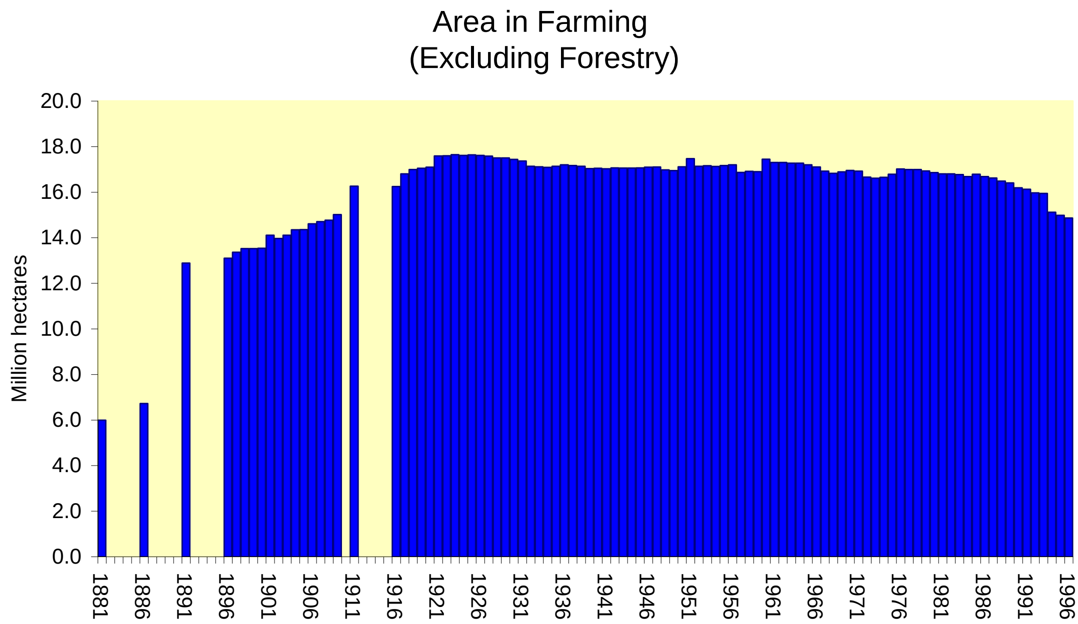
Secondly, the Uruguay Round of 1986-94 greatly deepened the GATT disciplines - on tariffs and non-tariff barriers, and it applied them to trade in agricultural products. One might doubt the wisdom of the political and official assets devoted to continued negotiations with the EEC about market access, but New Zealand's participation in the Cairns Group of agricultural traders was well repaid. The OECD had promoted the old idea of a Producers' Subsidy Equivalent, eventually got it permitted in political discussion among OECD governments, and gradually disseminated understanding of how costly agricultural protectionism was. New Zealand and other would be agricultural traders looked less like suppliant applicants for the privilege of participating in European and other protected markets, and more like sources of welfare for the consumers in those markets. New Zealand could make its case with rather more conviction given the changes which had occurred in New Zealand itself. But it was self-interest, which drove the eventual application of GATT rules to agriculture. So barriers to agricultural trade were to be quantified in a process of "tariffication" and subjected to reduction - the mere publicising of the levels of protection could be expected to generate further domestic pressure towards reductions. Subsidies were to be subject to discipline, and careful mechanisms designed to distinguish environmental instruments from disguised protection. Quarantine regulations had to be justified by "sound science" - a concept which could be the equivalent of PSEs in the next stage of international discussion although this has yet to be tested and there are plenty of examples of cynical manipulation of science for protective reasons, including in New Zealand in the case of trout.

Thirdly, the whole basis of international economic diplomacy may be changing. When GATT was established, the economic case for free trade was put to one side. National markets were accepted, and GATT was a matter of exchanging concessions - rights of access to national markets. A great deal was achieved in the Uruguay Round but the WTO which replaced GATT as a result of it still owed more to the mercantilist notions believed by lawyers than to an economic conception of the mutual benefit from trade.

However, the Asia Pacific Economic Cooperation community (APEC) was developing a new approach. It looked on economic integration as led by business with government responding to business needs - not politicians and officials opening access to "their" markets. It worked on consensus and mutual self-interest rather than binding agreements drawn up by lawyers. There was properly scepticism about whether this could be as effective as the clear rules which had been developed by GATT - although North Americans in particular were fond of arguing for "rules-based" trade, implicitly arguing for the superiority of the use of "government of laws not men" against the tyranny of Eastern monarchs, the issue was never whether trade should be "rules-based" but what should be the content of those rules and who should decide that. But while such debates went on, the really significant change was that there was a move - slow and incomplete - away from the idea of trading market access to recognition that market access was a matter of self-interest and international agreement was about mutual assurance to governments that they could respond to indignant national producers that they also had opportunities to export.

New Zealand trade policy adapted to these changes. It came to have four components, unilateral, bilateral, regional and multilateral. The first was the most important; New Zealand should get its domestic economy in good shape, and reduce barriers to overseas competitors in its own self-interest. There could hardly be a more dramatic change from the stance of promoting market access elsewhere while excluding goods from New Zealand markets with import licensing. Bilateral trade policy was mostly a matter of nuts and bolts, sorting out particular problems with major trading partners; the biggest change was in who those partners were with Australia as most important, Japan, Korea, China and the US all outranking the EC let along Britain. Regional trade issues were directed above all to APEC, but there was a general belief that outward-looking trade agreements would promote multilateral objectives rather than undermine the idea of most favoured nation and nondiscrimination. New Zealand formally announced that it was ready to form free trade agreements with anybody provided the agreement was outward looking and in compliance with international rules, and genuinely covered substantially all trade, especially agricultural goods. CER was a model - but it has so far remained close to unique. The multilateral aspect of New Zealand’s policy was support for the deepening and strengthening of the WTO.

Market access has ceased to be a matter of a gateway in the border barrier. Just as important is the ability to compete for consumers inside the borders. So New Zealand policy is to participate in the development of international understanding of how to create and maintain competitive markets. Trade policy is gradually giving way to the international aspects of competition policy.



Area in Farming
(Excluding Forestry)
Million hectares
20.0
18.0
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
1881
1886
1891
1896
1901
1906
1911
1916
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1926
1931
1936
1941
1946
1951
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1961
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1976
1981
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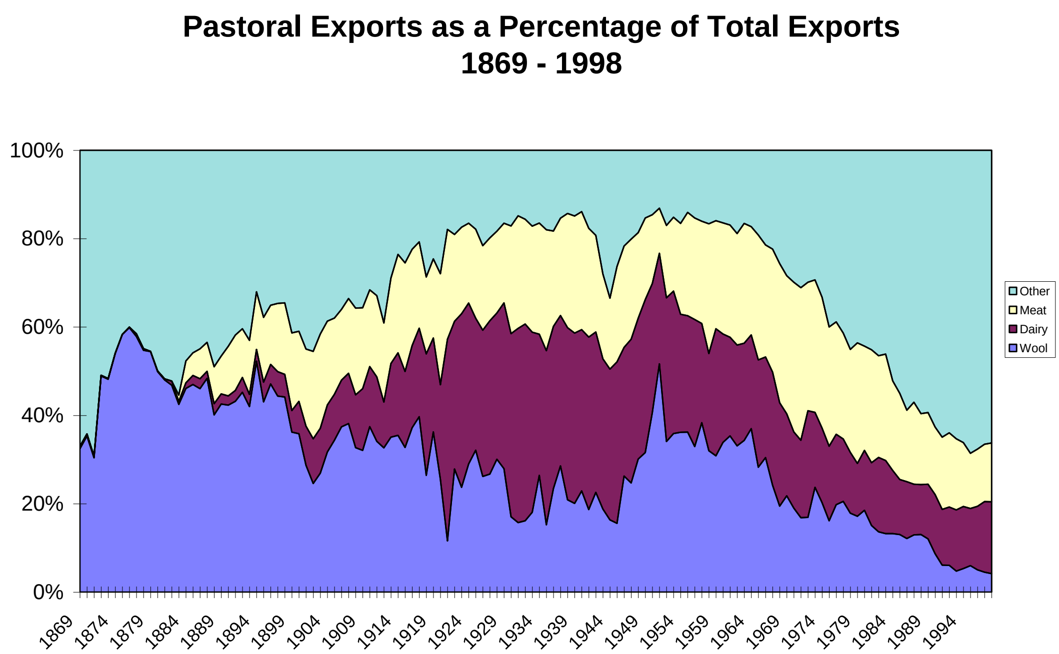
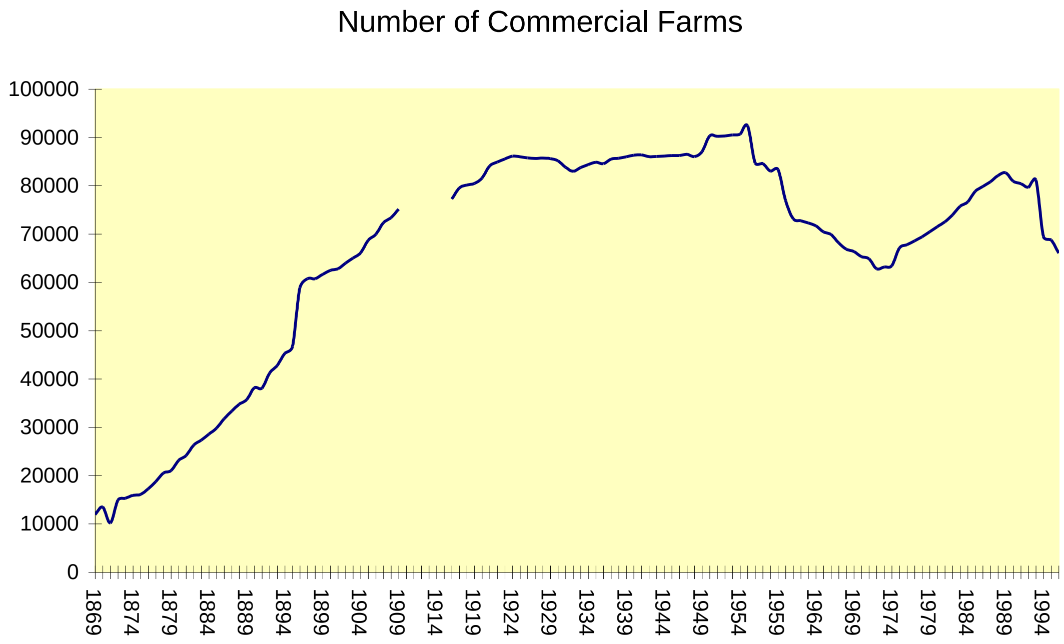
1991
1996



Pastoral Exports as a Percentage of Total Exports
1869 - 1998
100%
80%
60%
40%
20%
0%
1869
1874
1879
1884
1889
1894
1899
1904
1909
1914
1919
1924
1929
1934
1939
1944
1949
1954
1959
1964
1969
1974
1979
1984
1989
1994
Other
Meat
Dairy
Wool



Number of Commercial Farms
100000
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
1869
1874
1879
1884
1889
1894
1899
1904
1909
1914
1919
1924
1929
1934
1939
1944
1949
1954
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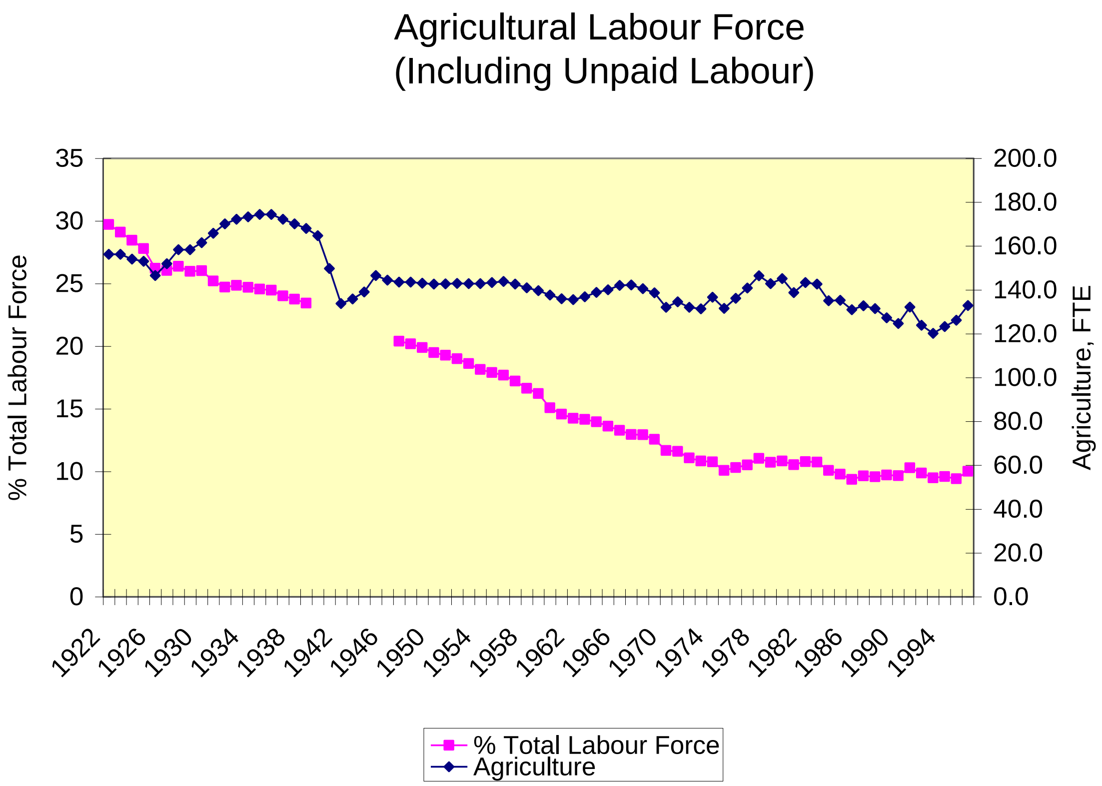
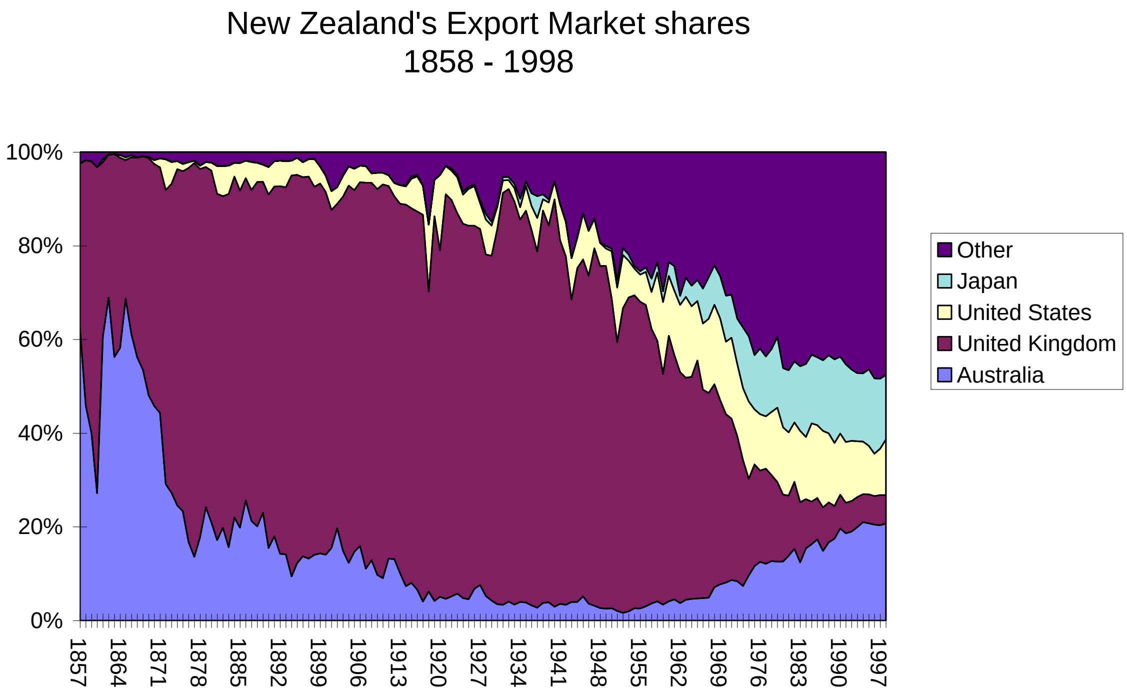
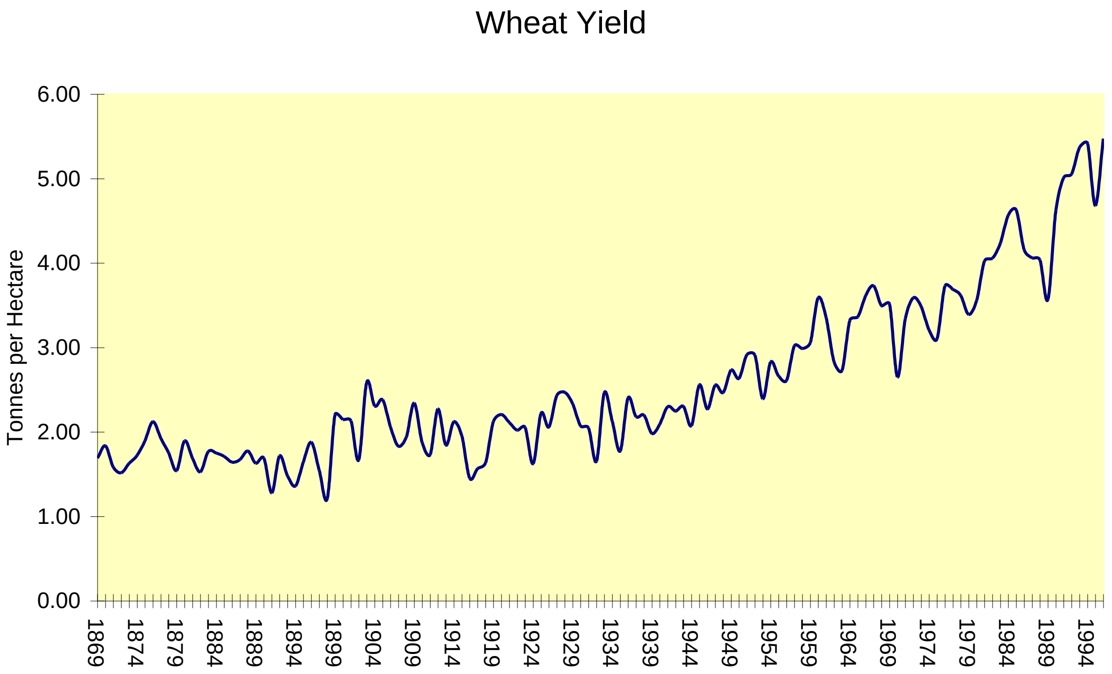
1974
1979
1984
1989
1994



Agricultural Labour Force
(Including Unpaid Labour)
% Total Labour Force
35
30
25
20
15
10
5
0
200.0
180.0
160.0
140.0
120.0
100.0
80.0
60.0
40.0
20.0
0.0
Agriculture, FTE
1922
1926
1930
1934
1938
1942
1946
1950
1954
1958
1962
1966
1970
1974
1978
1982
1986
1990
1994
% Total Labour Force
Agriculture

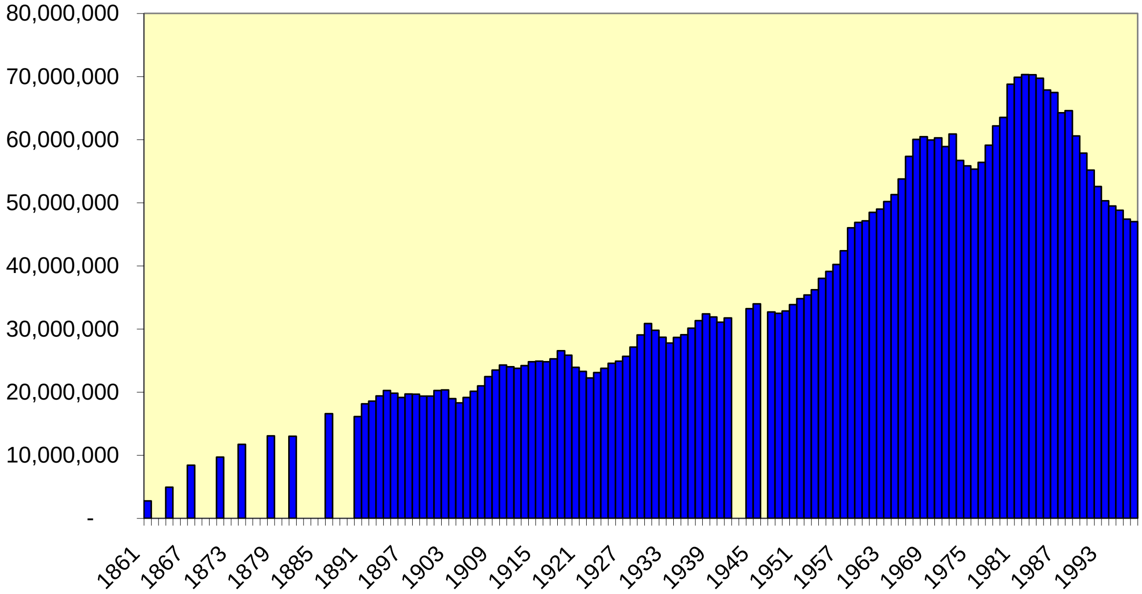


New Zealand's Export Market shares
1858 - 1998
100%
80%
60%
40%
20%
0%
1857
1864
1871
1878
1885
1892
1899
1906
1913
1920
1927
1934
1941
1948
1955
1962
1969
1976
1983
1990
1997
Other
Japan
United States
United Kingdom
Australia

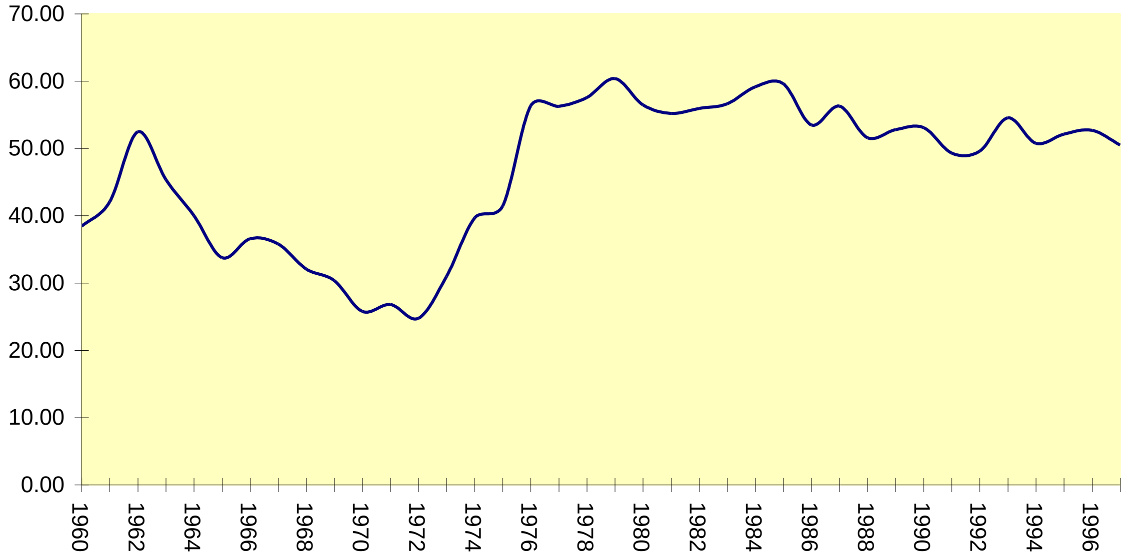


Wheat Yield
Tonnes per Hectare
6.00
5.00
4.00
3.00
2.00
1.00
0.00
1869
1874
1879
1884
1889
1894
1899
1904
1909
1914
1919
1924
1929
1934
1939
1944
1949
1954
1959
1964
1969
1974
1979
1984
1989
1994

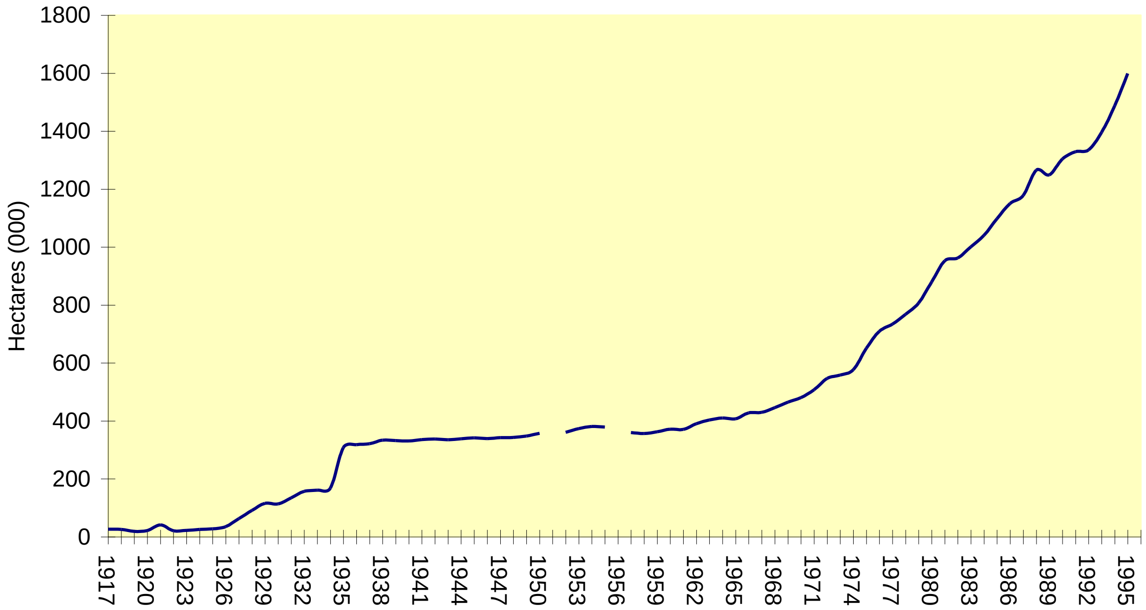
Sheep Numbers



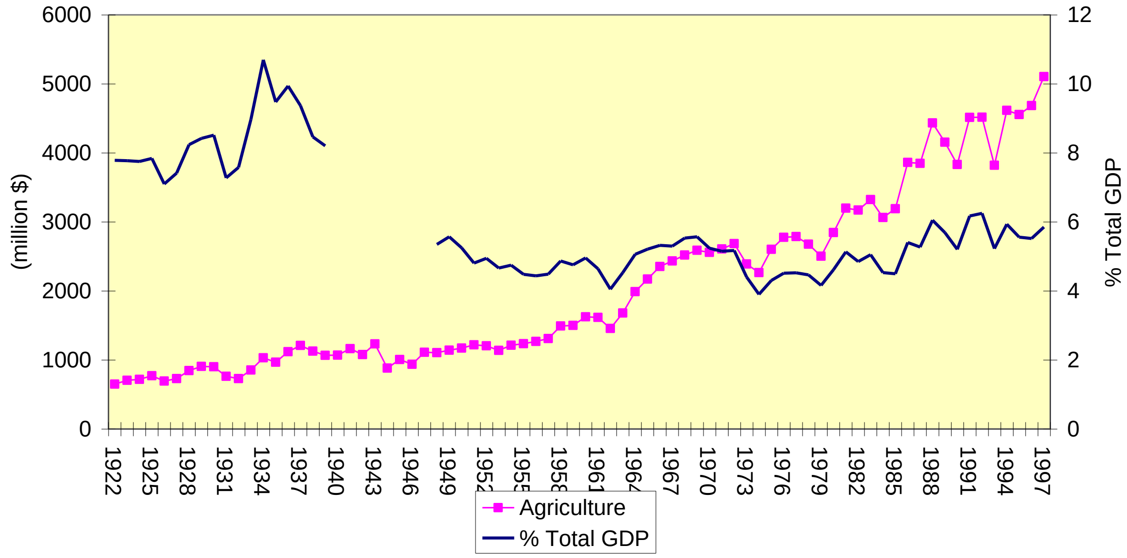
Percentage Value Added Off-farm

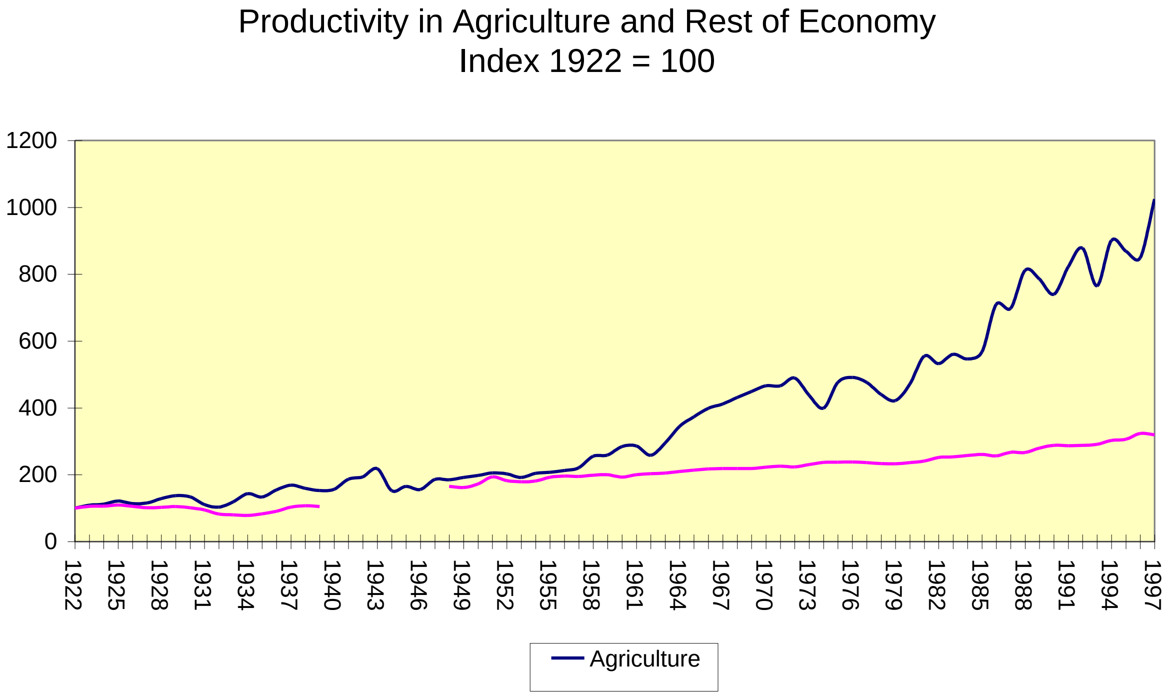


Area in Exotic Forestry



Gross Domestic Product (1991/92 Prices)
Agriculture and Horticulture




Productivity in Agriculture and Rest of Economy
Index 1922 = 100
1200
1000
800
600
400
200
0
1922
1925
1928
1931
1934
1937
1940
1943
1946
1949
1952
1955
1958
1961
1964
1967
1970
1973
1976
1979
1982
1985
1988
1991
1994
1997
Agriculture