



**AgEcon** SEARCH  
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

*The World's Largest Open Access Agricultural & Applied Economics Digital Library*

**This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.**

**Help ensure our sustainability.**

Give to AgEcon Search

AgEcon Search  
<http://ageconsearch.umn.edu>  
[aesearch@umn.edu](mailto:aesearch@umn.edu)

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

## Review

# New Zealand Agricultural Policy Review: 1991-93

R.W.M. Johnson\*

The period under review has been one of steady consolidation rather than spectacular change. The agricultural sector has accommodated itself to the deregulated environment and has indeed benefited from the macro-economic emphasis on stable exchange rates and low interest rates. Further reform of the state marketing boards has proceeded; the situation exacerbated by a failure of the Kiwifruit Marketing Board to control its payouts within current income. Over the period 1984 to 1993 there has been sustained growth in real net output of agriculture reflecting a considerable improvement in the use of resources. Incomes in the sheep and beef sector have been static in the period but not disastrous, and the dairy sector continues in a phase of steady growth in farmer incomes. Government and the public appear to underestimate the economic performance of the agricultural sector.

### 1. Introduction

This review follows previous surveys of the impact of deregulation on the New Zealand agricultural sector (Johnson, Schroder and Taylor 1989, Johnson 1991). The aim is to cover policy developments in the period mid 1991 to mid 1993. The review covers macro-economic factors affecting the agricultural sector, major policy changes including marketing board legislation, performance criteria for the sector as a whole, and changes in production, incomes and investment.

In the period the conservative government of the Rt Hon James Bolger has continued in power, with the Hon Ruth Richardson as Finance Minister and the Hon John Falloon as Agriculture and Forestry Minister. There still do not appear to be explicit government policies for the agricultural sector; in the deregulated environment all sectors are subject to the

same set of macro-economic controls. In the 1993 Budget 'exporters' and the 'food and beverage sector' are identified as benefiting from government policies, but are not otherwise singled out (Minister of Finance 1993a). The emphasis remains on getting the fundamentals right (p.9):

Three key factors - low inflation, reducing interest rates, and more constructive approaches to work practices - have formed a strong foundation for further growth and employment.

The Finance Minister remains a strong disciple of fiscal responsibility. While earlier forecasts of surpluses have not been achieved, the 1993 Budget strongly endorses balanced budget objectives (p.29):

Despite a substantial improvement in the fiscal position over the past three years, New Zealand remains a highly indebted nation. For that reason, the Government is committed to achieving budget balance and then fiscal surpluses by the year 2000. This goal will require a disciplined fiscal strategy but the fiscal outlook shows that it is obtainable.

The Minister has stressed that the large role played by the Government in the economy

---

\*Consultant, Wellington.

Assistance from Garry Griffith and Ray Jeffery is gratefully acknowledged. Writing was completed in mid August 1993.

means the *quality of its financial management* has an important influence on long-term economic performance and the achievement of social objectives. The Budget sets out the Government's approach to *good* fiscal management (p.33):

Over the past three years, the Government has supported the economic recovery with a fiscal strategy which has the following key components; keeping fiscal policy in harmony with monetary policy....ensuring that individual expenditure and revenue decisions make good sense.....enhancing business and investor confidence through clear and consistent fiscal management..... and..managing the Government's balance sheet risks ....

As previously pointed out, the agricultural sector has to accommodate itself to this kind of macro-economic strategy. There is certainly little scope for internal transfers or other direct payments to the sector, but there is a considerable window of opportunity for a more productive agricultural sector in a fiscally responsible budget policy that reduces the level of government activity in the economy, puts pressure on inflation and interest rates and encourages flexible wage and labour arrangements.

## 2. The Macroeconomic Environment

### 2.1 The Economy

In this section the earlier practice of summarising the macro-economic information in tabular form has been re-introduced (Johnson, Schroder and Taylor 1989, p.49). With revisions, the tabular material in both reviews is directly comparable.

#### 2.1.1 Growth

Real GDP has remained static in the period under review (Table 1). There was no real growth in the March years to 1991 and 1992 but some signs of recovery to 1993 (1.9 per cent to Dec. 1992). Forecasts are optimistic, however, with the Minister of Finance using Treasury estimates of 2.5 per cent for the 1993 March year and 2.9 per cent for the 1994 March year (Minister of Finance 1993b, p.9). The contribution of farming to real GDP has fluctuated somewhat, being up in 1991, down in 1992, and up in 1993 (Table 3). The lack of growth in the economy can be mainly attributed to tight monetary policies, a declining external terms of trade and general lack of confidence. Export volumes have been robust and exchange rates in the period have been in favour of exporters.

The lack of growth is reflected in static levels of employment (Table 1), and declining import volumes. With small growth in the population and labour available, the rate of unemployment has steadily risen in the period under review and stood at 11.1 per cent in December 1992 (Table 1). Government forecasts of unemployment are not all that hopeful at 9.9 per cent for March 1993 and 9.6 per cent for March 1994 (Minister of Finance 1993b, p.9). Previous pressure on the rate of inflation has brought significant results and the consumer price index has been held at 1 per cent per annum increase for the last two December years. This has had real benefits to the agricultural sector.

#### 2.1.2 Terms of trade

Over the period under review export volumes have shown considerable growth. Forestry and fishing have made increasing contributions though manufactured exports have been static. Import volumes have declined following the substantial increase in the 1989-90 boomlet previously noted (Johnson 1991,

**Table 1: Trends in the National Economy 1986-87 to 1992-93**

	Annual Percentage Changes										
	Real GDP	Employment	CPI	Export Volumes	Export Prices	Import Volumes	Import Prices	Terms of Trade	Balance of Payments Current Account (% of GDP)	Government Deficit (% of GDP)	Unemployment (% of Labour Force)
1986-87	+2.6	+1.2	+18.2	+8.6	+6.8	+3.3	-0.3	+7.2	-5.2	-3.5	4.1
1987-88	+0.5	-1.9	+9.6	-0.3	+2.8	+4.4	-5.8	+9.1	-4.1	+0.7	4.1
1988-89	-1.3	-4.1	+4.7	+5.8	+12.6	+1.3	+6.2	+6.0	-1.1	+2.6	5.0
1989-90	+1.3	+0.4	+7.2	-5.8	+6.4	+22.1	+3.4	+2.9	-3.6	+3.9	7.4
1990-91	-0.4	+0.0	+4.8	+9.7	-5.6	-3.7	+1.0	-6.6	-2.8	+2.4	7.3
1991-92	-1.6	-0.8	+1.0	+11.5	+2.7	-2.8	+4.0	-1.3	-1.4	-2.6	9.9
1992-93E	+1.9	+1.1	+1.0	-1.5	+1.9	-3.7	+1.2	+0.8	-2.6	-5.1	11.1

**Source:** Department of Statistics (1993a, 1993b)

**Notes:**

Real GDP (production basis), March years.

Employment is per Household Labour Survey (revised), March quarter.

Consumer Price Index, December quarter.

Exports and Imports, June years.

Balance of Payments, March years.

Government Deficit before borrowing and financing of major projects, March years to 1989, June thereafter.

Unemployment, persons seeking work (revised), March quarter.

E= estimate by author.

**Table 2: Annual Trends in Exchange Rates and Interest Rates**

	Exchange Rates <sup>1</sup>			Interest Rates <sup>2</sup>	
	Trade Weighted Index	Index % Change	A\$/NZ\$ % Change	Government Stock (5-7 yrs) (issue Rates)	Bank Overdrafts (weighted average)
1987-88	65.2	+9.4	+9.2	13.1	17.5
1988-89	61.1	-6.3	-13.8	13.1	15.8
1989-90	60.8	-0.5	0	12.3	15.8
1990-91	54.8	-9.8	-0.1	9.9	14.4
1991-92	55.1	+0.5	-5.5	8.3	11.4
1992-93	53.6	-2.7	+5.0	7.1	10.9

<sup>1</sup> June years  
<sup>2</sup> May average

Source: Department of Statistics (1993b)

p.40). Export prices were depressed in the 1990-91 season in spite of a considerable depreciation of the \$NZ (Table 2). Since then, the trade weighted exchange index has been more stable and small improvements in export prices have been recorded. With changes in import prices being slightly upward in the most recent three year period, the terms of trade fell in 1990-91 and 1991-92 but were marginally positive for March 1993.

The balance of payments on current account continues to show a deficit (Table 1). While merchandise exports well exceed imports, invisible payments far exceed invisible credits. Continued borrowing overseas therefore remains the rule with increasing servicing costs to the central government and consequent effects on the fiscal deficit. As at 31 March 1992, total overseas debt was \$NZ62263m of which \$35180m was private sector debt. The remainder is serviced by central government (Department of Statistics 1993a, p.542).

Treasury forecasts of export volumes suggest a growth rate of 5.7 per cent from 1993-94 to 1995-96 (Minister of Finance 1993b, p.17),

and that of imports of 5 per cent in 1993-94 and 4 per cent in 1994-95 (p.32). Treasury see the current account in balance by 1994-95. Treasury forecasts of sector exports are instructive in identifying where future export growth is likely to occur. They predict moderate growth rates for livestock products (3.2 per cent), fish and horticultural products (5.9 per cent), forest products (5.9 per cent), large-scale manufactured products (4.8 per cent), services (5.4 per cent), but a large expansion in non-commodity manufactured products (13.8 per cent) (Minister of Finance 1993b, p.17).

'Large manufacturing' consists of aluminium, iron and steel, paper products, urea, methanol and casein. 'Non-commodity manufacturing' consists of processed foods, carpets and textiles, clothing and footwear, chemicals, transport and machinery. Apparently, traditional exports are all expected to show some export volume growth but the main impetus for accelerated growth will be coming from the smaller scale non-commodity manufacturing sector.

### 2.1.3 Budget deficit

As anticipated in 1991 (Johnson 1991, p.40), there was a structural change in the central government accounts in the March year 1990-91 as the rate of growth of tax revenues declined and total expenditure continued growing at then current settings. For the year ending March 1991, total expenditure increased by 6.8 per cent, and the following year by 7.1 per cent. However, total revenue from taxation and miscellaneous receipts only increased by 2.3 per cent in 1991 and actually declined by 4.7 per cent to March 1992. Some notion of such a change in receipts could probably have been anticipated from the tax concessions granted by the outgoing Labour administration, though they did move to raise the Goods and Services Tax (GST) to 12.5 per cent in 1990. The main reason must, however, be the slow-down of the economy as the GDP figures have already demonstrated.

As a result, the budget deficit before borrowing turned sharply negative in fiscal year 1991-92 and looked like continuing that way unless some corrective action was introduced (see Table 1). As this coincided with the change of Government, considerable political rhetoric accompanied the belt-tightening that had to be introduced by the conservative administration (Minister of Finance 1993a, p.32):

The Government inherited a rapidly deteriorating fiscal situation in late 1990. The key features were: on unchanged policy settings, the financial deficit was projected to rise from \$3.7b (4.8 per cent of GDP) in 1991-92 to \$5.2 b (6.3 per cent of GDP) in 1993-94; expenditure was forecast to increase from 43.9 per cent of GDP in 1991-92 to 44.2 per cent of GDP in 1993-94; revenue was forecast to fall from 39.0 per cent of GDP in 1991-92 to 37.9 per cent of GDP in 1992-93; net debt was projected to increase from 43.1 per cent of GDP to 53.3 per cent of GDP in 1993-94. [this

raised] the risk of serious loss of financial-market and business confidence and sharply increased pressures on interest and exchange rates.

The Government embarked on a series of reforms to both sides of the accounts, with considerable tightening of welfare payments, raising the age for entry into national superannuation, and pruning of administrative expenses. Taxes on entertainment spending and overseas remittances have been introduced but the basic structure of income tax and GST has remained unchanged. According to the 1993 Budget forecasts, expenditure will grow by 1.7 per cent in June year 1993, by 2.4 per cent in June year 1994, and by 2.3 per cent in June year 1995. Total revenue will decline by a further 1.1 per cent in 1993, then rise by 2.8 per cent in 1994, and by 3.4 per cent in 1995. Accordingly, the Government has stated that the financial deficit as a percentage of GDP will fall from 3.1 per cent in 1992-93 to 1.3 per cent in 1995-96 (Minister of Finance 1993a, p.42).

For the agricultural sector, these changes have minimal effects. Indeed each round of belt tightening is gladly welcomed by Federated Farmers, the main farm lobby group in Wellington. Direct support payments of any sort have long since been eliminated, and nothing further can be cut off the agricultural 'bone'. The fiscal reforms fall more heavily on the urban population and must be seen as a necessary response, not only to the low growth rates in the New Zealand economy, but also to those of other western nations with which New Zealand trades.

### 2.1.4 Monetary policy

Monetary policy is implemented by the Reserve Bank under the terms of the Reserve Bank Act 1989 and the Policy Targets Agreement between the Governor of the Bank and the Minister of Finance. The Bank's objective

is to achieve price stability (0 to 2 per cent annual increases in the CPI) and then to maintain it. As noted in Table 1 the rate of inflation has stabilised at around 1 per cent in the last two calendar years. The Bank operates primarily through controlling the level of the monetary base, that is the liquid claims on the Bank. These consist of the cash balances held by the settlement banks and short-term Reserve Bank Bills. The Bank influences short-term interest rates and other variables by controlling the supply of settlement cash and primary liquidity relative to demand.

During the period under review, policy has continued to focus on price stability to the exclusion of other factors. Some of the fall in inflation in 1991 was due to one-off factors associated with oil prices and falling mortgage interest rates. However from late 1990, interest rates had been easing steadily as the Bank's objectives were being achieved (Table 2). As at May 1993, 5-year Government Stock had an issue rate of 7.1 per cent, and the weighted average of trading bank overdrafts was 10.9 per cent. In October 1991, the Bank took a more lenient view of settlements, with the result that interest rates fell further and there was less pressure from overseas funds on exchange rates (see below). As this particular policy objective was seen to be achieved, economists have turned to some of the consequences of the policy in other macro parameters. Clearly, the rate of growth of economic activity has been constrained, and new employment has not been created as yet (Table 1).

### 2.1.5 Exchange rates

As opposed to monetary indicators, exchange rates are a barometer of *external* factors affecting the economy as well as monetary policy and interest rates. As is now widely recognised, the movement of funds dominates trade flows in the exchange rate mechanism, and small margins in interest rates and risk factors can cause relatively large movements in cur-

rencies. No doubt, the various exchange rates are a large factor in Reserve Bank decisions on monetary policy in its pursuit of internal price stability. Thus there was a downward movement in the trade-weighted index in the course of 1991 (Table 2) as interest rates steadily declined *and* the Bank eased up on its discounting policy. Since mid 1991 the TWI has hovered around the 54-55 point level with the June year 1993 level nearly 3 per cent below the previous year (Table 2). The success of the price stability policy has brought down interest rates *and* enabled the Reserve Bank to relax its grip on a devaluing exchange rate which was inhibiting the potential of export-led growth.

A by-product of this policy stance is the exchange rate between Australia and New Zealand. In this case, all the external factors on each country's macro-situation determine the result. After a period in 1988-89 when the \$NZ declined in terms of the \$A, the period through to the end of 1990-91 was a time of stability and little change (Table 2). However, in 1991-92 there was further depreciation of the \$NZ but through 1992-93 a marked appreciation. At latest report (Aug 1993) the \$NZ was worth 81 cents Australian as compared with 71 cents in March 1992. The importance of these changes relates to the dominance of the Australian market for New Zealand manufactured goods and the fact that Australia is an important supplier of componentry to New Zealand. Exchange rate movements can wipe out profits on both sides of the Tasman though in opposite directions! A large proportion of New Zealand manufactured exports go to Australia and policy makers in Wellington will not be unaware of this fact.

## 2.2 Commentary

This review continues to place considerable emphasis on the macro-environment policy settings because of the absence of individual sector and regional government policies. The

philosophic paradigms of the day are centred on the free operation of markets with minor interference by Governments in day-to-day management or ownership of enterprises. As a result, the agricultural sector has to find its appropriate role in the new policy framework by learning by experience and experimentation. The evidence is that the farmers were the first to make the necessary adjustments (Johnson 1991, p.38) and that the various institutions associated with agricultural industry are somewhat slower to come to terms with the new framework. The biggest lesson to learn is that government still retains control over the important macro-parameters such as monetary policy, fiscal policy and the exchange rate. The settings of these policy parameters determine the conditions for the conduct of ordinary commerce and trade. The agricultural sector in New Zealand is no exception to this, whatever it was in the past.

In the period under review, there has been a slow movement towards exchange rate depreciation as monetary objectives have been achieved. At the same time internal interest rates have eased as the need for restraint has gradually been removed. The agricultural sector can only benefit from these policies, as higher export returns are accompanied by lower increases in input prices and falling charges for borrowing both long-term and short-term money from the banks and other servicing agencies.

The success of the policy as a whole will be clear when the tradable sectors of the economy respond to the new environment. The evidence available is somewhat slim at the present time, but the present author would not disagree with the Treasury data presented above (section 2.1.2) that primary industry can make a steady and probably sustained but modest contribution to export-led growth in the coming years. This leaves open the question of what *other* industries should be encouraged or established to provide for rather higher rates of growth for the economy as a whole

than primary industry can provide? New Zealand is probably not alone in having this problem.

### 3. Agricultural Policy

#### 3.1 General Policies Relating to Agriculture

##### 3.1.1 Public sector reform

In the period under review the process of setting up Crown Research Institutes was completed, the extension services have been reorganised on a fee-paying basis within government, and further details of the electricity industry reforms announced. A major debate has taken place in the area of rural mail delivery and this is discussed in section 3.2.3.

##### Science organisation

In June 1992 ten crown research institutes were established from the former science activities of the Ministry of Agriculture, the Department of Scientific and Industrial Research, the Forest Service and the Meteorological Office. The four agricultural institutes are the Agricultural Research Institute (pastoral research), the Horticulture and Food Research Institute (horticulture), the Institute for Crop and Food Research (arable crops), and the Landcare Research Institute (land and ecology). These Institutes will be the main providers of research services working on contract to the Foundation for Research, Science and Technology (FoRST). In the 1992 Budget, some \$255m was voted for public good science; this would be available to the institutes and other providers like the Universities and other research agencies.



In October 1992, the Government issued a statement of science priorities, covering all fields of research except medical research. An expert panel recommended to the Government that 'the key strategic direction for New Zealand's science and technology is to foster a sustainable, technologically advanced society which innovates and adds value, especially to our strong base of biological production' (STEP Report 1992). Within the public good research budget of \$255m, this objective resulted in rather less resources being devoted to primary production and more to processing and product development.

An ongoing issue has been the funding of research. In the new system the research institutes were to seek greater private funding of their activities; this was why public good research and funding was separated from appropriate or private benefit research. Industry, on the other hand, held the view that if they increased their level of funding, the government would decrease its contribution still more. As a result of this, the announcement of a five year funding level for public good research was considered desirable. Compared with Australia, funding from industry and the marketing boards is relatively low; a fact explained by the dominance of the big government departments in the past.

In keeping with these aims, the government introduced the Commodity Levies Act 1990 to allow compulsory levying of commodities. The Act sets out the activities that levies could be used to fund, the requirements to be met before government will authorise a levy, and the practices to be carried out by groups that are recipients of compulsory levies. Existing compulsory levies, like that collected by Federated Farmers, would have to be legitimised by fresh application to the Minister. Considerable debate has ensued on the rules for obtaining majority support for a new levy and an amendment to the Act is currently expected (MAF 1993, p.39). Its effect on research funding, at this stage, is minimal.

## Extension services

After considerable discussion and debate, the government has not proceeded with its plans to privatise the extension services of the Ministry of Agriculture and Fisheries (MAF). From July 1 1992, the extension service has been called Agriculture New Zealand, operating as a profit centre within the general framework of the Ministry, charging Government and private users for its services.

## Electricity reform

Though the Electricity Corporation of New Zealand was set up in 1987, major legislation only came in with the Energy Sector Reform Act 1992. Electricity Supply Authorities (ESAs) were established as corporate entities with the likelihood of future privatisation. A range of ownership and management structures is outlined, including trusts and share give-aways. Exclusive franchise areas are being removed to aid competition, and the way left open for future amalgamation of smaller ESAs. Line and energy charges are to be billed separately to reflect cost of distribution. This will effectively remove the rural subsidy, though provision is made to phase in the new charges.

The Rural Electrical Reticulation Council (RERC) will cease to have responsibility for the subsidy on rural distribution, but will continue to have a monitoring function for prices and types of supply in the ESAs. It will also act as a channel of communication for rural users for five years as the reforms are put into place.

### 3.1.2 Market channel reform

The chief reform in this area in the period under review has been the introduction and implementation of the Employment Contracts

Act 1991. There has also been considerable discussion of waterfront and shipping reform; some changes in the financial sector are also noted.

### Employment Contracts Act

The Act aims to introduce greater flexibility into labour relations by providing employers and employees with more freedom of choice in negotiating their terms and conditions of employment. Compulsory union membership is abolished and parties are allowed freedom to choose who will represent them in negotiations. The Act provides for both individual employment contracts and collective contracts. The latter contracts can be site specific, employer specific, or at a national level.

Ellis (1993) has reviewed the implementation of the Act in the wider agricultural sector. At the farm level, individual contracts are now almost universal and union membership has virtually disappeared. Some collective agreements still remain in the horticultural sector; there has been a reduction in penal payments but some wage compensation in place of them. There is some evidence that employers are not meeting the statutory minimum requirements of the Act or are in breach of it. Ellis suggests that this may be due to job insecurity in the single farm situation, or it may be due to a fairly high level of ignorance of the detailed provisions.

In the processing sector there are marked contrasts. The dairy industry has retained its national collective agreement after consultation between employers and the union involved. A fairly high degree of harmony has been maintained by the parties over the years with the common objective of maintaining competitiveness common to both parties. In the meat industry the agreements with the two major unions have been replaced by company or

plant-specific agreements; union membership has dropped by about one third. The new agreements put greater emphasis on varying hours of work, permitting seasonal hiring of workers, break-down of job demarcation, and greater constraints on industrial action. Ellis reports that in 1991-92 work stoppages in the meat industry were markedly down on the level reported in 1990-91.

### Waterfront reform

This was described in some detail in Johnson (1991, p.42). There has been greatly reduced levels of manning on the waterfront, and as suggested previously, considerable improvements in productivity. On the trans-Tasman shipping route, discussion is developing on ways of reducing restrictions on trade in this area. MAF quotes a report completed in 1992 that liner freight rates had declined by 12 per cent over a three year period with improved levels of services. It suggests that the union agreement to confine the trade to Australian and New Zealand vessels should now be reviewed as a means of increasing competition on the route (MAF 1993, p.23). The New Zealand government has also reviewed the role of foreign ships in the New Zealand coastal trade; once implemented, the decision to allow foreign ships to carry domestic cargoes whilst in transit could not only lower coastal freight rates but also put pressure on land-based means of transport.

Over the whole transport, storage and communications industry, there were 93000 employees in 1988-89 and an annual turnover of \$NZ10583 b. In the period 1985-86 to 1988-89 value added per full time equivalent person engaged rose from \$33896 to \$56789 (Department of Statistics 1993a, p.412). The CPI rose by 32 per cent in this same period. Further increases in productivity are expected as manning levels are trimmed throughout this sector.

## Other services

The stock and station agency business is in a consolidation phase. There are now two main players, Wrightsons (part of the Challenge group) and Elders. In the North Island, Williams and Kettle are the next most important. MAF says companies are adjusting to amalgamations and buyouts in a strictly competitive market. Some new operators have started on a small scale and some have just as rapidly disappeared (MAF 1993, p.21).

The Rural Bank has been sold again (Johnson 1991, p.46). In the process of reorganising its balance sheet, Fletcher Challenge sold the bank to the National Bank in November 1992 for \$450m. In September 1993 it was announced that the Rural Bank brand name would disappear and all its branches would close as all activities would be fully integrated in the National Bank (*Dominion* 23 September, 1993).

### 3.1.3 Local government and resource management

The Resource Management Act was passed in June 1991. The Act promotes the sustainable management of natural and physical resources and incorporates all previous soil and water and town and country planning legislation. Regional and district councils administer the Act, and most of these are involved in the process of issuing regional policy statements and more specific regional plans on resource issues. Many councils will review their district planning schemes as these come up for renewal. One regional council (Nelson-Marlborough) has been abolished on the vote of the ratepayers, and the two constituent district councils have taken over its functions.

The Resource Management Amendment Bill was introduced to Parliament in late 1992. Among other things, the amendment seeks to

modify the provisions for riverine strips of land on private property. The main Act provided that when a subdivision takes place, district councils must take a reserve of 20 metres width along rivers, lakes and the coast. This has evoked strong opposition from rural landowners. It is proposed that sections over 4 ha should be exempt from this provision, and that district councils could, where appropriate, pay compensation to private owners. It is also proposed that esplanade and access strips be designated on private land so that management and public access can be maintained.

The district and regional councils have not yet reached the phase where they must introduce regulatory or incentive mechanisms for better land use. Johnson (1992) has reviewed the property rights arguments that underlie the Resource Management Act and found that there will be considerable conflict between established rights and the Act's requirements. Councils will have considerable difficulty in preparing resource management plans that require constraints on water contamination, soil erosion, and heavy use of pesticides (including spray drift). In all these cases, third party effects (externalities) are important and internalisation of the problem in each case could be difficult.

### 3.1.4 Land rights

In 1840, Governor Hobson was sent from New South Wales to draw up a treaty with the Maoris of New Zealand to regularise the sale of land to the colonists. The resulting Treaty of Waitangi provided that the Crown would have the sole right to purchase land and that existing Maori rights to sea, land and water would be honoured. As a result, the colonists or the Maori could obtain freehold land by purchasing it from the Crown or from other persons. The Maori Land Court was established to regularise customary land held by Maori and to issue freehold title where warranted by investigation. Up to 1975, the Court

managed the Maori estate under the Maori Affairs Act 1953, resolved many conflicts and provided a record of ownership of the former customary land (Department of Statistics 1993a, p.303). The Court established corporate ownership of customary land under the Act (or its earlier versions) and thus enabled groups of Maori to borrow money and embark on land development programmes.

In the Treaty of Waitangi Act 1975, the then government established the Waitangi Tribunal 'to consider claims from any Maori who considers he or she or any group of Maori of which he or she is a member, is prejudiced by any legislation, policy or practice by or on behalf of the Crown which is inconsistent with the principles of the Treaty' (Department of Statistics 1993a, p.113). The Act only covered current claims against the Crown when it was passed, but this was amended in 1985 to extend its jurisdiction to claims dating back to 1840. This has allowed many grievances arising out of the colonisation process since the Treaty was signed to be aired and adjudicated on.

The Tribunal has held a large number of hearings and made consistent recommendations to government in the areas of land, water and sea resources. (In the case of sea claims a very interesting discussion of property rights has developed.) The main Act specifies that the claims can only be made against the Crown but in some cases the Tribunal has recommended the return of freehold land to the claimants. The present government takes the view that this form of compensation was not intended and in August 1993 passed legislation preventing this course of action. The Treaty of Waitangi Amendment Act 1993 prevents the Waitangi Tribunal from recommending the buying of private land to resolve Maori land disputes. Ministers stated that any such recommendation destroyed the credit base on which farmers could borrow money and it created increased uncertainty among all farmers.

The debate about this Bill has served to clarify the status of the underlying property rights. At issue are the freehold rights issued by the Crown since 1840. All European land titles and some Maori titles derive from the Treaty agreement. They are considered to be very secure rights backed up as they are by the Torrens system of land registration. Furthermore, there has been 150 years of case law established in dealing with existing conflicts and arguments. While minor modifications are needed to accommodate the Resource Management Act, for example, major changes would undermine the whole system of exchange and value built up over many years.

### **3.2 Sectoral Policies for Agriculture**

#### **3.2.1 Producer marketing boards**

The main legislative change in the period under review was the passing of the Dairy Board Amendment Act 1992. The aim of the legislation is to make the Board more independent of government and more accountable to the industry. The Act stipulates that the co-operative dairy companies and their suppliers are the owners of the Board's capital, provides for more commercially oriented financial reporting, and provides for five yearly independent performance and efficiency audits. Two government nominees to the Board are replaced by commercial directors nominated to the Minister by the Board; the Act no longer prescribes a constitution but enables eleven other directors to be elected or appointed by industry. Specific activities of the Board are to be exempt from Part II of the Commerce Act 1986, which regulates restrictive trade practices. The activities exempted are those relating to the establishment of price, product acquisition and the distribution of surpluses.

Finlayson (1993) has expressed doubts as to whether these reforms will meet basic objectives. He points out that primary producers have successfully put in place statutory and regulatory barriers to trade which entrench the cooperative system and preclude competition. No allowance is made in the new legislation for identifying the individual shareholders' capital in the Boards, or for enabling shareholders to realise on their capital holdings. The provision for exemption from the Commerce Act clearly protects the Board from competitive forces in all matters relating to production for the market. Given the lack of competition, and associated commercial indicators of performance, doubts must exist over the usefulness of five yearly audits.

In August 1993, the government introduced the Producer Boards Acts Amendment Bill. This bill exempts specific activities of the Apple and Pear Board, including its ability to cross-subsidise, from the anti-competitive provisions of the Commerce Act. The bill also paves the way for the de-regulation of the domestic market for apples from 1 January 1994; introduces measures to improve the Board's accountability, and provides for five yearly performance and efficiency audits to be conducted. There is a requirement that the Board holds annual meetings for its 1600 growers and furnishes reports that comply with the same standards expected of public companies. In addition, the bill grants financial independence to all bodies established under the Primary Products Marketing Act 1953. This involves the Kiwifruit Marketing Board, the Game Industry Board, and the Raspberry Marketing Council. As for the major Boards, these bodies will no longer require the consent of the Minister of Finance with respect to borrowings and investments.

The role of producer marketing boards continues to engender wide debate. In 1992, the Australian consulting firm, ACIL, prepared a long report for a major business owner organisation in New Zealand on the economics of

regulated marketing in New Zealand (Hussey 1992). This report focussed particularly on the bundling of returns to producers and its effects on marginal returns on production as compared with the return on capital 'owned' in processing and marketing. Economic critics have suggested that the analysis is too concerned with structure, conduct and performance and too little with understanding the nature of the end-markets faced by marketing boards (Cartwright 1993, Zwart 1993). Board representatives point to market and product diversification and the need for central control in a discriminating monopoly situation (Betts 1993). Another argument is that the specific nature of a market like Japan for meat requires a controlled strategy and sustainability that only a government backed statutory body can give (Harrison 1993). Another author puts the blame for poor management on the cooperative structures that have historically been favoured by farmers and producers to get a greater say in the market place (Finlayson 1993).

It can be seen that the debate is somewhat removed from the reality. Changes to legislation reported above seek to improve performance rather than challenge the basic structure. The producer organisations are given a democratic right to speak on reform of their marketing institutions and progress will necessarily be slow in achieving the needed improvements to marketing structures that changing trends and markets abroad will require.

Actual performance and payouts achieved by the respective boards in 1992-93 is discussed in section 4.3.3 below.

### 3.2.2 Other legislation

In keeping with higher environmental and quality standards, MAF continues to develop appropriate legislation for managing pests and unwanted organisms, animal welfare, risks caused by the use of agricultural compounds,

and chemical residues in meat. Brief details of each of these proposals are available in MAF (1993). In the pest control area, major concerns lie in the control of TB infected possums and feral rabbits in certain areas. Increased resources are being devoted to these tasks. The Minister of Agriculture announced in July 1993 that he would not allow the introduction of the European Rabbit flea into the country, the vector for myxomyotosis.

### 3.2.3 Rural mail delivery

With the partial deregulation of the Post Office, it was inevitable that the distribution cost of rural mail should come up for examination and debate. The debate started in mid 1991 when NZ Post announced that the rural delivery fee would be increased from \$40 to \$80. As with electricity, charging a line fee is the logical outcome of recognising consumers distance from source of supply, even if the fee is averaged over everybody with a rural box number! In hearings before a caucus committee, NZ Post stated that cancellation of the fee would cost \$8.7m from about 100,000 subscribers. Taking into account other boxholders, the loss could be as much as \$30m per year. This looked large against their current credit line of about \$100m with banks (*Dominion*, May 17, 1993).

Federated Farmers made an issue of the fee rise and recommended to its members to pay nothing. They argued that the sender of a letter should pay the full cost not the receiver! However, deregulation raises interesting questions: if the country went to some form of open competition, NZ Post's costs could be trimmed markedly, cross-town stamp prices would plummet, big-volume business mailers would get heavy discounts and anyone could set up a postal agency! But corner post boxes would disappear, and prices for ordinary letters would increase; daily delivery to urban premises would cease and rural delivery be non-existent. The net result of all this debate

was the recognition that the mail service was a social service and some uneconomic parts need to be subsidised. In the end, the \$80 rural fee came into effect on June 30 1993 and most farmers are paying it.

### 3.2.4 Farm taxation

A major reform of livestock valuation for income tax purposes has been undertaken with effect from the tax year ending March 31 1993. Considerable opposition to previous provisions had grown up where farmers were calculating changes in valuation, which are taxable, over and above their cash returns. Two valuation schemes were available: a 'trading stock scheme' which tried to reflect on-farm costs of rearing live animals, and a 'herd scheme' which was meant to reflect national average market values. The trading stock values were determined as 70 per cent of the national average market values which were themselves three-year rolling averages. The reform abolishes the trading stock scheme and introduces two new schemes, the 'the national standard cost scheme' and the 'self-assessed cost scheme'. Standard cost is based on average costs of breeding and growing livestock; these will be determined by the Department of Inland Revenue. Self-assessed cost allows farmers to use their own costs under certain guidelines.

The previous trading stock scheme was hard to understand and the 'values' derived were very artificial. Its replacements seem even more complicated and thrust the onus of making returns even more on the farm accountants. It appears that it is exceedingly difficult to give every farmer absolutely equal treatment, but once the government rejected standard values for livestock the way ahead was going to be very difficult anyway. One small gain is that farmers making changes in their 1992-93 returns can take advantage of transition provisions that allow a five year spread of any

additional income arising in the 1992-93 year (MAF 1993, p.29).

### 3.3 Commentary

As the legislative part of the review demonstrates, there is a continuing need for regulatory solutions to issues that arise in the conduct of the farm sector. A high proportion of this demand probably arises from the need to re-draft most of the legislation dealing with environmental issues. While this review has not gone into the detail of the regulatory process and the issues involved, it does appear that with economic policy having moved into the macroeconomic area, agricultural policy has become more technical in nature. The increased level of resources going into pest control and related research is noteworthy. These are problems partly created by under-appropriation in the past and partly by changes in biological conditions which were unanticipated.

The agricultural sector is now largely deregulated and receives little direct assistance. As indicated above there are transfers in the mail and electricity areas that are explained by past charging and redistribution of income practices, and there is some evidence to suggest that education services to rural areas are, on average, more costly. A recent report by Fairweather (1993) indicates that social welfare payments are reasonably evenly distributed.

The debate on the role of the statutory marketing boards will continue for some time. Clearer distinctions are needed between their marketing strategies and their farmer payment strategies. Indicators of performance are needed for accountability and audit purposes. Greater transparency is useful for accountability to shareholders but may run counter to commercial requirements.

## 4. Performance of the Agricultural Industry

In this section total farm sector returns are examined in nominal and real terms, comparisons with Australia are made in the nominal series, farm productivity relationships are examined, the real rate of exchange for agricultural industry is detailed and micro-statistics of performance on sheep and dairy farms are reported.

### 4.1 Government Assistance

As already discussed, direct payments to the agricultural sector have now been phased out. There still remain relatively large transfers for research, quarantine, animal health and adverse events. In aggregate these are estimated to add up to \$127m in 1991-92 and \$116m in 1992-93 (MAF 1993, p.134). In the MAF framework these amounts are equivalent to effective rates of assistance to pastoral agriculture of -3 per cent in both years, when excess costs imposed by protection in other sectors are included. In terms of net production subsidy equivalents (PSEs), the rates of protection for pastoral agriculture are 2.4 per cent in 1991-92 and 2.0 per cent in 1992-93 excluding excess costs, and -1.3 per cent in 1991-92 and -1.0 per cent in 1992-93 including excess costs. Full data are given in the reference and these were discussed in an earlier review (Johnson 1991).

### 4.2 Sectoral Performance

The aggregate value of farm production reached \$9725m in 1992-93 with value added of \$4624m. The latter represented 6.0 per cent of GDP in that year. Sector returns remain dominated by pastoralism being 60 per cent of gross value in 1992-93. In the period under review, revenue from dairy products has been

most buoyant followed by beef. Sheepmeat and wool returns have been relatively depressed compared with 1989-90. Up to 1991-92, kiwifruit and apple production were bringing rising returns, but since then kiwifruit returns have been affected by a glutted soft fruit market in Europe and apple returns has suffered from overproduction in the European Community.

production, the two countries have been expanding at a rather similiar rate with Australia showing more growth in the late 1980s but New Zealand recovering faster from the downturn in values in 1990-91. Given the difference in the trends in gross value and net value, it appears that New Zealand has a greater ability to control or reduce costs of production and hence maximise net returns to farmers after interest payments.

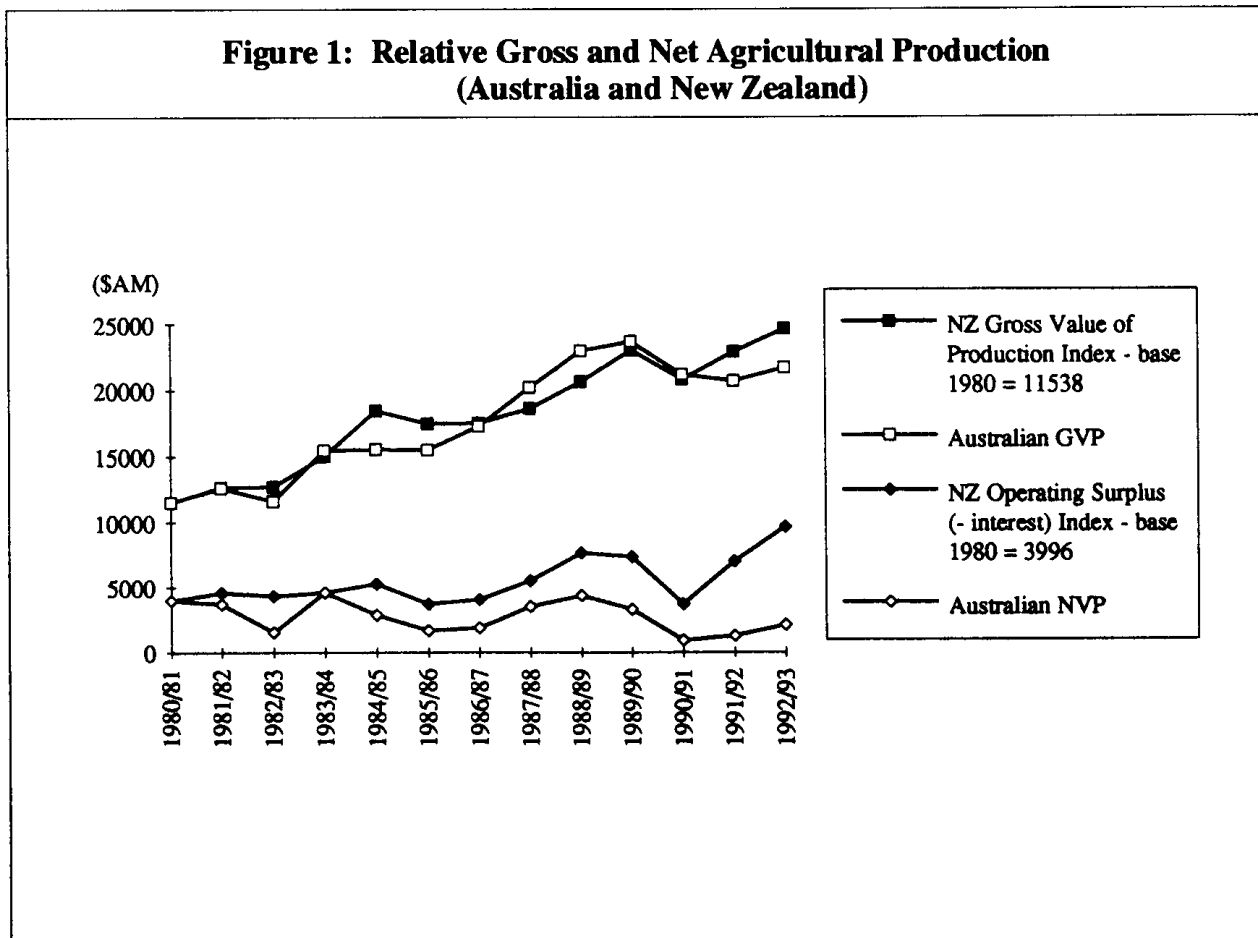
#### 4.2.1 Trans-Tasman comparisons

The lack of growth in the farm sector has been more marked in Australia than in New Zealand in the last ten years. Net value of production in Australia has fluctuated between \$954m and \$4591m since 1983-84 without showing any trend to growth, while New Zealand operating surplus (less interest) has been on a steadily rising if fluctuating slope (Figure 1)(Walker 1992). In terms of gross value of

#### 4.2.2 Capital employed

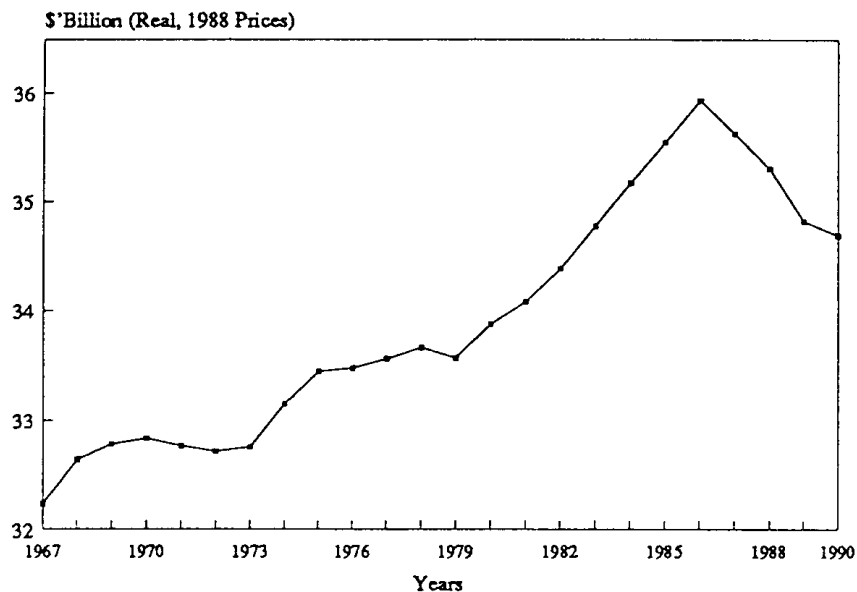
Earlier estimates for capital employed in the farm sector in New Zealand have recently been updated (Johnson 1970, Johnson 1979, Narayan and Johnson 1992). The authors use perpetual inventory methods to estimate changes in the national stock of capital as represented by land improvements, buildings, plant and machinery, and live stock. Real

**Figure 1: Relative Gross and Net Agricultural Production (Australia and New Zealand)**





**Figure 2: Value of Aggregate Stock of Capital, Including Livestock**



annual additions to the total stock in 1988 prices rose to \$1300m in 1983-84 and fell to \$371m in 1988-89. After taking account of real economic depreciation, the gross capital stock continued to expand up to 1985-86, and since then has slowly declined (Figure 2). The total stock employed reached a peak of \$36b. in 1985-86 (in 1988 prices) and is estimated to be about \$34.7b. in 1989-90. This is about \$546250 of assets per average holding.

#### 4.2.3 Labour employed

Since 1981 the normal trend of declining numbers has continued with an overall drop of 21000 or 16.5 per cent in full-time employment between the 1981 and 1991 census years (MAF 1993, p 26). This, however, disguises a rise in part-time employment of 15000 over the same period. At the same time, all the major primary processing industries have shown a decline in both full-time and part-time employment.

#### 4.2.4 Aggregate productivity

For present purposes this is expressed as the ratio of real output to total real current input (Table 3). This measure of real input is based on purchased inputs and excludes changes in management, labour and capital employed. The Department of Statistics uses the double deflation method for these series so that gross value of production is deflated by the product price index, total intermediate consumption is deflated by the input price index, and real GDP in farm production is calculated by difference. Given the relative decline in capital and labour employed it would be expected that gross real product would be constrained from further growth by the shrinkage in the capital base which started in 1985-86.

As shown in Table 3, there has been a fairly steady and consistent growth in real output since 1984; the fitted log growth rate is 1.5 per cent per year. In 1988-89 there was a major drought in the South Island but this has not caused a major reversal (possibly sales of stock compensated for the loss of productivity in that season). On the other hand, the level of real current inputs has stayed remarkably sta-

**Table 3: Agricultural Sector Performance 1984-93 (1982-83 \$)**

March Years	Real Output	Real Input	Real Value Added	Output/ Input
1984	4,808	3,030	1,718	1.59
1985	5,177	3,325	1,851	1.55
1986	5,127	2,827	2,298	1.81
1987	5,115	2,783	2,331	1.84
1988	5,430	2,730	2,701	1.99
1989	5,354	2,889	2,464	1.85
1990	5,305	2,983	2,322	1.78
1991	5,548	2,806	2,741	1.98
1992	5,520	2,926	2,594	1.89
1993E	5,721	2,995	2,716	1.91
Growth p.a.	1.5%	Nil	4.2%	2.0%

**Source:** Department of Statistics (pers. comm.)

real current inputs has stayed remarkably stable over the ten year period and does not show a statistically significant trend. The net result is that real GDP in farm production has shown a consistent growth over the period of 4.2 per cent per year. This is also shown in the ratio of real output to real input which shows an average growth rate of 2.0 per cent per year.

These data suggest that the farm sector has made a significant contribution to the national economy in recent years both in absolute terms and in growth terms. Aggregate real GDP (Table 1) has been static in recent years and yet the farm sector's contribution has been growing. There is little recognition of this contribution in official publications (see for example, MAF 1993, pp.17-18). These trends are demonstrative proof that the anti-inflationary policies of the government work to the benefit of the tradables sector and that, after the initial shocks from an appreciating dollar and high interest rates have been overcome, farming still has a very positive role in the New Zealand economy.

### 4.3 Terms of Exchange for Pastoral Products

This section contains information on the international agricultural wholesale markets that New Zealand products are supplied to, the influence of exchange rate mechanisms and trends on New Zealand f.o.b. returns, and the real rate of exchange for pastoral products. The terms of exchange at farm gate are discussed in section 4.4 along with other farm level performance indicators.

#### 4.3.1 Wholesale prices

In the period under review, world commodity markets have been static or declining (Table 4). Since 1989, *The Economist* SDR Commodity Price Index for Food has declined by 15 points and that for Non-Food Agriculturals by 18 points. In the first six months of 1993 the Food index rose by 7 points and the Non-Food by 2 points. Over the 1989-93 period, the TWI for New Zealand has appreciated by 14 per cent. In some years the movement of

**Table 4: Trends in Wholesale Prices 1986-1993 (Annual Percentage Change)**

<i>Calendar Years</i>	Beef a	Lamb b	Butter c	Wool d	<i>Economist</i> Indices e	<i>Economist</i> Indices f
1986	-2.8	-2.2	+0.3	-4.5	-	-
1987	+13.9	-4.7	-11.8	+12.0	+14.9	-21.0
1988	+5.5	+1.0	+14.0	+5.5	+6.0	+17.3
1989	+2.0	+4.6	+14.6	-2.0	-0.6	+0.0
1990	-0.2	+5.8	-8.3	-25.2	-6.5	-13.8
1991	+3.9	-12.7	-4.0	-22.8	-10.3	-10.3
1992	-7.8	+10.3	+7.2	+3.9	-3.3	-4.5
1993E	-1.3	+12.2	+7.2	+8.7	+2.5	+10.9

**Notes on Pricing Points:**

- a** Beef: US imported frozen boneless from Australia and New Zealand, 85 per cent visible lean cow meat, import price, US\$ f.o.b., port of entry, average of daily quotations.
- b** Lamb: NZ PL, Smithfield, London, sterling, average of daily quotations.
- c** Butter: NZ Best quality, selling price, sterling, London, Provision Exchange (duty paid).
- d** Wool: Australia-New Zealand 50's, UK-Dominion 50's, clean dry, combed basis, Bradford grade, sterling, monthly quotations.
- e,f** *Economist* Indices:
- e** SDR Commodity Price Index, non-food agriculturals, annual average.
- f** SDR Commodity Price Index, food, annual average; 1993, July average.
- E** Estimate

**Sources:** (IMF (1993), *The Economist* (1993)).

the weighted index of exchange rates has exacerbated the movements in commodity prices and in other years it has cancelled out such overseas price movements.

Are commodity prices a harbinger of changes to come? *The Economist* (1993, p.13) is in no doubt:

'Commodity prices have traditionally been a handy leading indicator of economic growth. Since they are determined in free markets, prices respond swiftly, so an increase in aggregate demand will show up much earlier in commodity prices than in consumer prices. Better still, commodity prices are published daily, without one or two months' delay before government sta-

tistics emerge. The recent pick-up in commodity prices may therefore bode well for world recovery. But commodity prices also tend to be an early sign of inflation. Peaks and troughs in the rate of commodity-price inflation typically precede turning points in consumer-price inflation in industrial economies as a group'.

In February 1993, the Australian Bureau of Agricultural and Resource Economics (ABARE) was more pessimistic (ABARE 1993a, p.1). They maintain that their index of world commodity prices in SDR terms will fall by 5 per cent in 1992-93 June years, though only by 2 per cent in \$US terms. For 1993-94, more recent ABARE estimates show a static situation for the SDR total commodity index

and an improvement in the SDR rural index of 2 percentage points (ABARE 1993b). They ascribe this to weak world commodity demand though prospects should improve from 1993 through 1998.

In the period under review, the performance of New Zealand's main pastoral markets have followed international trends (Table 4). The beef market in the United States was favourable in calendar 1991 but declined through 1992 and early 1993. The lamb market in the United Kingdom was depressed in 1991 but has sharply recovered in 1992 and early 1993. Butter was depressed in 1991 but has recovered in 1992 and 1993. Cheese and powder prices are more robust than the London quotation, which is itself determined by European Community rules. Wool has been very depressed over the period though market prices

have recovered slightly from the low point of 1991.

#### 4.3.2 The real rate of exchange for pastoral products

These changes in commodity markets determine export prices in New Zealand, but in the process are modified by almost independent movements in exchange rates. This is brought out by a comparison of the estimated 'foreign prices' that would have been needed to bring about the actual changes in f.o.b. or wharf prices (Table 5). It is also possible to show the internal purchasing power of actual export prices over New Zealand produced 'outputs' that have to be purchased by the agricultural sector as a whole.

**Table 5: Decomposition of Real Rate of Exchange for Pastoral Products 1988-1993**

June Years	"Foreign Price"	Exchange Index	"Wharf" Price	Input Price	Real Rate of Exchange
	(Annual Percentage Changes)				
1988	+11.4	-8.6	+1.8	-5.7	-3.8
1989	+4.1	+6.6	+11.0	-5.0	+5.8
1990	+9.3	+0.5	+9.9	-3.4	+6.4
1991	-18.4	+10.9	-9.5	-2.4	-11.6
1992	+4.8	-0.5	+4.2	-0.4	+3.7
1993E	+7.4	+2.8	+10.3	-0.6	+9.9

**Notes:**

"Foreign Price": Index of Pastoral Export Prices x Exchange Rate Index.

Exchange Index: Trade weighted index on June year base expressed as NZ\$ per unit of foreign exchange.

"Wharf" Price: Price index of external trade, all pastoral products, free-on-board.

Input Price: Price index of non-tradeable producer goods (outputs); negative sign is a rise in index.

Real Rate of Exchange: Wharf Price/Input Price.

E 3rd quarter

Source: Department of Statistics (1993b).

Pastoral export prices showed a sharp rise in June year 1989-90, a sharp fall in 1990-91, then steady rises in 1991-92 and 1992-93 (Table 5). However, the implicit movement in wholesale commodity prices was the same in 1989-90, more depressing in 1990-91, and roughly similar again for the following two years. The depreciation of the \$NZ in 1990-91 was due to the easing of interest rates and had nothing to do with any form of compensation for exporters!

Internal producer prices are measured by the 'output' prices of those industries in the producer price index series that provide services to other industries (industry groups 14-19). F.o.b. prices are common to all agricultural export industries, hence the terms of exchange at this point is an indicative measure of the purchasing power of tradables over non-tradables. This is one of the acceptable measures of the real rate of exchange used by the IMF (Maciejewski 1983). Expressed in this way, the pastoral sector as a whole had two favourable seasons in 1988-89 and 1989-90, a very sharp downturn in purchasing power in June year 1990-91, but reasonably favourable conditions for expansion and growth since. This analysis confirms the earlier point that the tradable sector stands to gain considerably if government policies are held in their present settings and internal inflation is kept under control.

#### 4.3.3 Payout policies

*Dairy:* the New Zealand Dairy Board final basic price for 1991-92 was \$5.20/kg of milkfat compared with \$3.70/kg of milkfat in 1990-91. This is the average price paid to the cooperative companies who then supplement the producers payment from efficiency gains and non-dairy activities. Thus in 1991-92 the company payout to producers averaged \$5.84/kg of milkfat. The initial price for the 1992-93 season was set at \$4.50/kg and this was increased to \$5.30/kg mid season. As

prospects are reasonably positive, forecasts for the total final payment for 1992-93 are \$6.30/kg, and \$6.80/kg for 1993-94 (MAF 1993). It should be noted that although the basic price is expressed in milkfat terms, it is actually the average of realised returns on solids-not-fat and milkfat.

*Sheepmeat:* meat companies determine their own payment schedules and buyers compete on farms and at sales for live stock. Lamb prices have been rising since 1991 and in 1992-93 were expected to average \$35.50 per head at an average dressed weight of 14.7kg. Mutton prices have moved up similarly and in 1992-93 were expected to average \$23 per head at 20.2 kg. These rises are attributed to shortfalls in the United Kingdom market and are not expected to last (MAF 1993, p.45). Live sheep exports to Saudi Arabia bolster market returns but are presently restricted to around 1.3m per year for animal welfare reasons.

*Beef:* this market is dominated by the United States demand for manufacturing beef. Prices for cow and bull beef in the United States have been static in the last two years but exchange effects have lowered the return to New Zealand producers. For 1992-93, producers were expected to average 197c/kg for 145-170kg cows and 245c/kg for 220-245kg bulls (MAF 1993, p.57). The average weight of adult slaughtered cattle is 245kg on hooks. The market is restricted at the present time as the United States government invoked the Meat Import Law to impose import restrictions in June 1992 and these have continued into 1993.

*Wool:* in common with Australia, New Zealand is holding stocks of wool off the market. In August 1993 the stockpile was 327000 bales representing about 23 per cent of annual production. World demand is at a very low level with little sign of recovery at the present time. The current estimate for average price at auction for 1992-93 is 430c/kg clean. In February 1993 the Wool Board stopped offer-

ing wool from its stockpile for auction; and has not drawn on its reserve price scheme since February 1991.

*Apples:* in the September year to 1991 the Apple and Pear Board was successfully selling its premium varieties of apples in Europe at record prices. Grower returns averaged \$NZ12.94/carton (18.5kg). In 1991-92, most of the apples were sold before a glut of soft fruit enveloped European markets and growers were paid \$12.60/carton. In 1992-93, unsold fruit from the European Community still hung over the market and the Board is currently estimating a return to growers of \$8/carton. The Board announced recently that \$111m had been paid out as an advance payment but that only \$35m was likely to be available for final payment in November (*Dominion* August 21, 1993). The Board continues its policy of averaging payout prices across varieties of apples; this has been challenged in the Courts by one large grower of improved varieties who believes substantial losses are involved for themselves because of the Board's policy. This company had taken a successful appeal to the Privy Council in 1990 establishing that the Board had breached the Commerce Act in setting two tiers of levies that favoured some growers (*Dominion* August 21, 1993). Further litigation will be constrained by the introduction of the Producer Board Acts Amendment Bill.

*Kiwifruit:* the northern hemisphere glut in 1992 lowered kiwifruit returns by some 12 per cent at f.o.b. and this resulted in severe difficulties for the Kiwifruit Marketing Board. Up to September 1992, the Board paid out \$258m in advance payments to growers (\$3.85 per tray of 3.5kg) but final realisations (net of costs) only came to \$167m or \$2.50 per tray. The Board thus inadvertently entered into a stabilisation arrangement very much in keeping with the other marketing boards in pre-de-

regulation days. In this case, accommodation had to be arranged with banks for a trading deficit of \$84m, a very changed situation from when the boards could draw on Reserve Bank overdrafts at 1 per cent. In the event, the government introduced regulations to allow the Board to recover payments from growers in the future; this enabled the Board to get agreement with its banks for a financial package to cover the following three seasons when the debt will be repaid.

It can be observed that neither the New Zealand Dairy Board, the New Zealand Apple and Pear Board, nor the New Zealand Kiwifruit Marketing Board have addressed the issue of averaging returns to growers. The problem is probably different for each Board. The Dairy Board has a cooperative structure hence there is an implicit merging of the rate of return on capital 'shares' and production returns. The Apple and Pear Board has a portfolio of different qualities of apples to sell into different markets and does not want to discriminate too adversely against growers with out-of-date orchards. The Kiwifruit Board has a more-or-less standard product but differentiated markets. They would probably take the view that growers should share the risks of marketing such a price-sensitive commodity.

#### **4.4 Production, Income, Expenditure and Investment**

##### **4.4.1 Livestock capital**

Sheep numbers continue to decline in New Zealand and at June 1993 are estimated at 53m, down from 70m ten years ago. Beef cattle numbers are rising at 4.75m and have recovered from losses in the 1989 drought. Dairy cow numbers are also rising slowly and will reach 2.72m in June 1993.

**Table 6: Micro Economic Indices of Production, Income and Investment 1988-1993**

Farm Years	1988	1989	1990	1991	1992	1993E
<b>Dairy:</b>						
Milk production (M litres)	7,551	7,240	7,500	7,870	7,931	8,180
Prices received index	2,949	4,054	4,948	3,664	4,502	5,340
Prices paid index	3,950	4,163	4,499	4,569	4,514	4,579
Ratio (1976=1000)	747	974	1,110	802	997	1,166
Percent change		+30.4	+14.0	-27.7	+24.3	+17.0
Revenue/farm (NZ\$)	109,033	144,872	170,908	127,576	158,810	179,200
Expenditure/farm	81,022	104,123	114,853	102,193	117,153	122,800
Net income/farm	28,011	40,749	56,055	25,145	41,657	56,400
<b>Sheep:</b>						
Lamb slaughter (M)	30.4	30.3	25.1	27.2	28.1	23.0
Sheep slaughter (M)	7.9	8.8	7.7	7.2	7.8	7.0
Cattle slaughter (M)	3.1	3.1	2.7	2.9	2.9	3.0
Prices received index	2,446	2,833	3,304	2,914	2,831	3,310
Prices paid index	4,194	4,265	4,303	4,368	4,206	4,156
Ratio (1976=1000)	583	664	768	667	673	796
Percent change		+13.9	+15.7	-13.2	+0.9	+18.3
Revenue/farm (NZ\$)	126,178	128,536	143,356	133,653	133,200	134,700
Expenditure/farm	97,691	100,279	106,071	104,869	102,600	102,100
Net income/farm	28,487	28,257	37,285	28,784	30,600	32,600
<b>Investment (NZ\$M):</b>						
Building and Construction	127.9	131.5	224.8	193.4	223.0	n.a.
Vehicles and Machinery	183.9	256.3	319.5	323.0	302.9	n.a.
Land Development	58.9	55.3	83.1	72.3	89.0	n.a.
E Estimate						
n.a. not available						
Source: Ministry of Agriculture (1993, Tables 10, 11, 14, 17, 18, 23, 25)						

#### 4.4.2 Dairy farms

Milk production is fairly stable at 8 b. litres in 1992-93 (Table 6). The terms of exchange for dairy farmers has been very positive in 1992 and 1993 after a downturn in 1991. The input

price index is virtually static. As a result dairy farm average revenues have increased markedly with higher input levels and re-investment. There is an enlarged demand for purchase of dairy farms in both the South Island and the North Island. Net incomes are

high by historic standards and live stock are hard to buy.

#### 4.4.3 Sheep farms

The declining flock is reflected in falling lamb and adult sheep slaughter (Table 6). Cattle slaughter levels are being maintained. After a sharp fall in 1991, the terms of exchange for sheep farmers was static through 1992 but has improved markedly since. Again input prices have been brought under control in this sector. Average farm revenues remain fairly static (Table 6) with production falls being compensated by better product prices. Nominal farm incomes have not recovered to the 1989-90 season level and are declining slightly in real terms.

#### 4.4.4 Investment

The Department of Statistics' survey of farms shows that in 1991-92, capital investment on farms increased by 4.5 per cent to \$618m. Investment increased in building and construction more than it did in vehicles and machinery. There are signs that in 1992-93 the increase will be more than 10 per cent above 1991-92; farm building permits were up 24 per cent in the second half of 1992, tractor purchases were at their highest for six years, and fertiliser sales were running at 20 per cent above previous levels (MAF 1993).

### 4.5 Farm Asset Values and Indebtedness

#### 4.5.1 Land prices

The volume of sales in calendar 1992 was considerably higher than in 1991. This has been most evident in dairy farms and sheep

and beef farms in finishing areas. In 1992 dairy farms sold for an average of \$23.1 per kg of milkfat produced, up 6.4 per cent on the previous year. Finishing farms were purchased at a cost of \$193 per stock unit (one ewe equivalent), up 7.4 per cent on the previous year. Extensive grazing farms sold at \$121 per stock unit, up 26 per cent on the previous year. Over all sales the rural sale price index was up 15 per cent for 1992 over 1991.

#### 4.5.2 Asset values

Evidence from sheep farm surveys shows total assets on farms have risen considerably since 1988 (MAF 1993, Table 28). Land and buildings valuation data is updated regularly for the survey and shows the biggest buildup in the year ending March 1990. There was no further increase in 1991 as would be expected from the income data (Table 6), but further increases of the order of 10 per cent could be expected in 1992 following the grazing land prices indicated in section 4.5.1. In 1991, the average value of assets on sheep farms was \$794550, of which land and buildings represented 74 per cent.

#### 4.5.3 Indebtedness

For some years the level of indebtedness on sheep farms has stayed at about \$180000, and this had risen to \$194167 in 1991. In the period since 1988 average equity has risen from 67 per cent to 76 per cent. Debt servicing costs will have reduced as interest rates have come down (Table 2), but it seems sheep farmers are not entering into new debt. With the greater volume of farm sales as reported above, a slow movement could set in towards higher debt levels and lower equities. It would be useful to have more evidence of these trends.



## 5. Summary and Conclusions

The New Zealand Government's policies for inflation and interest rates are now working to the benefit of the agricultural sector. Farm input prices on sheep and dairy farms are virtually static for the first time in decades and interest rates on loans and advances are at their lowest for the last fifteen years.

Farm production is making a significant contribution to the national economy. Real value added has increased consistently over the last seven years. Farmers are using their resources more efficiently. However, the contribution of the farm sector to the wider economy is not well documented or appreciated by the community as a whole.

There have been considerable savings from increased efficiency in the market channels for the main agricultural exports. This has been largely due to waterfront reform and to rationalisation of transport and communication services.

There still remains a lack of coherence between interest rate differentials and the valuation of the New Zealand dollar. Government policy is to drive down inflation and thus reduce internal interest rates. However, there still appears to be a risk margin between internal interest rates and overseas rates sufficient to attract overseas investors. These investments in turn drive up the exchange rate and reduce the value of export income. In turn there are few benefits passing to the rest of the economy from the export sector.

As a result, some favourable movements of overseas prices are flattened out by exchange rate movements, and in others the movement is exaggerated. This causes greater uncertainty for farmers than should be actually occurring.

On balance, however, the macro-policies followed by recent governments have assisted the agricultural sector.

Formal agricultural policies are now confined to matters of hygiene, quality assurance, pest control and animal welfare. These activities are becoming more and more identified with better environmental controls on production, processing and exports.

The marketing structures set up in the post war years have not been seriously modified. This has not been due to a lack of debate. It is rather the product of the consultation process adopted by successive governments with the farmer representatives. Farmers still seem to have the utmost belief in their marketing institutions and will not agree to a rapid rate of change.

The period under review has been one of static incomes and investment at the farm level. Dairy farm incomes have been the most buoyant; sheep and beef farms are just holding their own; while kiwifruit and apple producers are going through the trough in their commodity cycle.

The little evidence available suggests that land markets were improving in the first half of 1993, and that farm asset values were rising. There is little evidence of increased borrowing in the sector.

The overall picture is one of contrasts. Aggregate production and value added are important contributors to the national economy. However, farm incomes and investment are mediocre to say the least. This suggests that the current market economy does not particularly reward the basic producer of goods, and indeed spreads the rewards very thinly over other sectors as well. This should be the subject of proper research as resources will find other uses if the rewards are no longer great enough, or asset values will decline. This is

already happening where pine plantations are now a viable alternative to pastoralism.

## References

- ABARE (1993a), 'Australian commodities overview', *National Agricultural and Resources Outlook Conference 1993*, AGPS, Canberra.
- ABARE (1993a), 'Statistical Table 1', *Agriculture and Resources Quarterly* 5(2), 275.
- BETTS, A. (1993), 'Agricultural marketing structures: an integrated market back system', paper presented at the NZ Branch of Australian Agricultural Economics Society Conference, Blenheim, July.
- CARTWRIGHT, W. (1993), 'Theoretical aspects of the relationship between international competitive performance and the structure of land-based industries and firms', paper presented at the NZ Branch of Australian Agricultural Economics Society Conference, Blenheim, July.
- DEPARTMENT OF STATISTICS (1993a), *New Zealand Official Year Book*, Department of Statistics, Wellington.
- DEPARTMENT OF STATISTICS (1993b), *Key Statistics*, Department of Statistics, Wellington.
- ECONOMIST, THE* (1993), 'The inflation barometer'; January 16, p.13.
- ELLIS, J. (1993), 'The impact of recent labour reforms on agriculture', in *Situation and Outlook for New Zealand Agriculture*, 102-107.
- FAIRWEATHER, J. (1993), *The Distribution of Welfare Payments in New Zealand*, a report to the Ministry of Agriculture and Fisheries, Wellington.
- FINLAYSON, B.A. (1993), 'An evaluation of alternative institutional structures that could be utilised in the New Zealand agricultural industry', paper presented at the NZ Branch of the Australian Agricultural Economics Society Conference, Blenheim, July.
- HARRISON, G. (1993), 'Economic theory versus pragmatism: the realities of doing business in the expanding north Asian meat market', paper presented at the NZ Branch of Australian Agricultural Economics Society Conference, Blenheim, July.
- HUSSEY, D. (1992), *Agricultural Marketing Regulation, Reality Versus Doctrine*, a report prepared for the NZ Business Round Table, Auckland.
- INTERNATIONAL MONETARY FUND (1993), *International Financial Statistics*, IMF, Washington DC., and previous issues.
- JOHNSON, R.W.M. (1970), *Capital Formation in New Zealand Agriculture, 1946-67*, Agricultural Economics Research Report No. 65, Lincoln College.
- JOHNSON, R.W.M. (1979), *Capital in New Zealand Agriculture*, Economics Division Research Paper No. 5/79, MAF, Wellington.
- JOHNSON, R.W.M., W.R. SCHRODER and N.W. TAYLOR (1991), 'Deregulation and the New Zealand agricultural sector: a review', *Review of Marketing and Agricultural Economics* 57(1,2,3),47-74.
- JOHNSON, R.W.M. (1991), 'Current changes in New Zealand agriculture: a review', *Review of Marketing and Agricultural Economics* 59(2), 38-56.
- JOHNSON, R.W.M. (1992), 'Resource management, sustainability and property rights in New Zealand', *The Australian Journal of Agricultural Economics* 36(2), 167-185.
- MACIEJEWSKI, E.B. (1983), 'Real effective exchange rate indices', *IMF Staff Papers* 30, 491-510.
- MINISTER OF FINANCE (1993a), *Budget*, Parliamentary paper B6, Government Printer, Wellington.
- MINISTER OF FINANCE (1993b), *Economic and Fiscal Outlook*, Parliamentary paper B6A, Government printer, Wellington.

- MINISTRY OF AGRICULTURE (MAF)(1993), *Situation and Outlook for New Zealand Agriculture*, MAF, Wellington.
- NARAYAN, P. and R.W.M. JOHNSON (1992), *Capital Stock in New Zealand Agriculture 1967-1990*, MAF Policy Technical Paper No. 92/15, 127-140.
- SCIENCE AND TECHNOLOGY EXPERT PANEL (STEP)(1992), *Investing in Science for Our Future*, A report to the Ministry of Research, Science and Technology, Wellington.
- WALKER, A.B. (1992), 'Responses in the New Zealand meat and wool sector to rural downturn', *National Agricultural and Resources Outlook Conference 1992*, AGPS, Canberra.
- ZWART, A.C. (1993), 'Producer controlled marketing organisations', paper presented at the NZ Branch of the Australian Agricultural Economics Society Conference, Blenheim, July.

**Erratum:** In the *Review of Marketing and Agricultural Economics* 61, p.383, 'New Zealand Agricultural Policy Review: 1991-93', annual turnover of the transport, storage and communication industry is given as NZ\$10583b. This should be NZ\$10.583b.