CHAPTER TWO

POLICY ISSUES AND OBJECTIVES

Introduction

Chapter 1 of this volume brought out some of the features of the external market environment in which New Zealand's land-based industries must operate. Two features applying to most of the traditional pastoral products are difficulties of market access and falling real prices: these have important consequences for investment decisions. The need to adjust to new market situations is the main lesson to be learnt. Not only have the market environments changed but they can be expected to continue to change, perhaps at an even faster rate, in the future. New Zealand can, and does, seek to influence the external environment through trade policy. Within the limits of whatever successes are achieved on that front—and past experience suggests that they are unlikely to be dramatic—New Zealand industries must accept the environment they find, and accept the changes that occur in it.

The changing environments in which the land-based industries operate include not only the international market situation but also the domestic New Zealand economy. As a percentage of gross domestic product, agricultural production has fallen steadily from about 10.1 percent in 1980 to about 7.1 percent in 1984. What happens elsewhere in the economy can therefore be expected to have a major impact on agriculture, e.g. by affecting the prices the agricultural sector has to pay for inputs. Some difficulties facing New Zealand's primary industries are a consequence of problems elsewhere in the domestic economy (e.g. restrictions on capital markets and assistance to other sectors). In these cases the best solution is to solve the basic problem rather than seeking to suppress the symptoms as they appear in the primary sector.

As with other areas of the economy, policy for agriculture and the related land-based industries, must be one which allows these industries to adapt as both the international and domestic environments change. Therefore to divorce the agricultural sector from the effects of changes elsewhere (including the effects of agricultural policies pursued in other countries) would be to ignore relative changes in profitability and can only lead to an economic loss to the nation. While New Zealand can be critical of policies applied to agriculture by other governments, and seek to have those policies changed when they affect us adversely, we must in the end adapt to the realities of the external situation if changes in policy are not forthcoming. The economic policies of other governments, to the extent that we cannot reasonably expect to affect them, should be regarded as one of the factors that determine New Zealand's comparative advantage.

The need to adapt to change requires that policies for the land-based industries should not prevent the movement of resources to where they can be used most efficiently. As the relative profitability of various activities changes, resources need to move from those activities in which returns have become relatively low to those activities in which returns have become relatively high. This involves movement of resources not only within sectors (e.g. from dairy to kiwifruit or from pastoral farming to agroforestry) but between sectors (e.g. from agriculture to manufacturing or vice versa). It is thus essential to apply an economy-wide perspective to assessing changes in assistance measures in the agricultural sector.

At the end of Chapter 1, in a discussion on macroeconomic perspectives, the point was made that the problems facing agriculture are not just those of marketing and assistance—macroeconomic issues are also important. In the context of assistance levels and forms, which are discussed in this chapter, the following points should be kept in mind:

- maintaining an appropriate domestic cost and price structure is fundamental to the health of the primary sector. This involves policies to control inflation (especially monetary policy) and in the exchange rate area;
- all market sectors only function efficiently if the environment is stable. This requires price changes to be essentially relative price changes which signal emerging scarcities and surpluses. It is the role of macro policy to hold down inflation so that uncertainty is minimised and efficient investment and production decisions are made; and
- this macro background is important to agricultural "stabilisation". Specifically a more stable economy provides a better basis for individual planning. Provided tax and other arrangements are neutral, there will be little need for the Government to intervene to supplement farmers' own risk avoidance and hedging abilities.

Government Interventions

The post-election briefing paper on government intervention in the private sector (Part Two, Chapter 14) developed a framework for analysing interventions in the private sector, including interventions designed to assist industry. The general approach proposed in that paper is that all policy interventions should be directed as closely as possible to the objectives of policy, and that direct policy devices are usually preferable to those which are less direct. It was further argued that the fundamental criterion for assessing interventions in any area of the economy is that the benefits of any intervention, in the widest sense, should outweigh the costs. The broad objective of industry assistance policy is to improve the efficiency of resource use in the economy; that is, to help achieve the greatest community income with the resources available.

Interventions fall under the following broad categories:

— intervention by financial assistance, e.g. SMPs, fertiliser subsidies, forestry encouragement grants, Rural Bank concessionary lending etc.;

— intervention by regulation, e.g. statutory boards and controls over domestic markets;

— intervention by government ownership of enterprises, e.g. Forestry, Lands and Survey, Rural Bank.

These types of intervention, as they apply to the land-based industries, are discussed below.

Intervention by Assistance

When discussing assistance two aspects need to be considered. These are

- the level of assistance; and
- the form in which assistance is delivered.

a *Levels of Assistance*

The level of assistance to an industry determines the extent to which the 'returns' of the industry differ from what the 'returns' would be if unassisted market prices were to prevail. The totality of returns to an industry or sector, i.e. market return plus assistance, relative to that of other industries, in turn determines the ability of that industry to compete with other industries in the economy for the available resources. Other things being equal, the higher the level of assistance to an activity, the greater its ability to attract resources. Given that in the tradeable goods area world prices give a good indication of the private and social returns to the use of the resources in different activities, interventions which result in a different pattern of resource use will cause a loss of efficiency and community income. Reductions in both assistance disparities between activities and in the average level of industry assistance will result in a more efficient use of resources and higher national income.

The effective rate of assistance (ERA) is a measure which indicates the relative strength of the incentives for the employment of resources in an activity provided by government assistance. It relates the net assistance received by an activity to the value added by that activity measured in world benchmark prices after allowing for the impact of assistance/protection on the inputs to the activity. Factors which will influence the extent to which differences in ERA will affect resource movements include the ease with which resources can be transferred from one activity to a more highly assisted one and the responsiveness of demand (and hence price) to an increase in the output of assisted activities.

The effective rates of assistance among land-based activities vary enormously. The disparities are probably just as large as those within the manufacturing sector. The variation in effective rates of assistance is due largely to historical reasons. Different governments at different times have intervened in particular activities in response to perceived difficulties peculiar to those activities, and in response to pressures exerted by the interest groups concerned. The approach has usually been that of bolstering incomes seen as less than 'adequate'. What has not been clearly perceived is that an incentive to one activity is a disincentive to all other activities. What is assistance to the favoured activity is a tax on all other activities. The result is a hotchpotch of interventions from which various degrees of incentive and disincentive flow. The levels and distribution of assistance resulting from these interventions make little overall economic sense, and act to impede overall economic growth. Appendix II provides a breakdown of financial assistance to the primary sector and indicates, inter alia, the very wide range of forms and levels of financial assistance in the primary sector. In considering assistance to land-based activities, it is also important to compare effective rates of assistance to these activities with those applying to the other sectors of the economy. If land-based activities are disadvantaged in terms of assistance levels then other sectors will attract resources that could more profitably be used in the rural sector. However, as the Syntec Report (1984) concluded, it cannot be presumed that production of importables (import substitutes) is always highly assisted or that production for the export market is always lightly assisted. There is a very wide range of assistance in both types of activity. What is now clearly required is a co-ordinated approach to assistance so that adjustments are made so as to reduce disparities and are not made, as in the past, in isolation.

The following table sets out the current estimates of effective rates of assistance for the pastoral industries as a whole.

Assistance to Pastoral Activities

(Cost Excess Assumed* = 20%)

	1979/80	*1980/81*	*1981/82*	*1982/83*	*1983/84*
Effective Rates of Assistance..	4%	5%	44%	51%	38%

* As noted above, assistance to other sectors imposes a 'tax' or 'Cost Excess' on the pastoral industries. In arriving at the net assistance to any industry the amount of cost excess needs to be deducted. No firm figures for the cost excess are available so an assumption has been made that the cost excess amounts to 20 percent of input costs. The ERA's have been calculated using different rates of cost excess and this has shown that the relative rates of assistance are not sensitive to the different assumed rates of cost excess.

Further details of ERAs are shown in Appendix I. The above data have been disaggregated into the main industries within the pastoral sector and the results of that disaggregation are given below. To show the effects of

SMPs on relative assistance levels the ERAs are given for two situations: with and without SMPs. It should be noted that, because of the way these estimates have been produced, the absolute figures for ERAs are subject to a margin of error. Given, however, that it is the relative ERAs that are important, and that the relativities are not so affected by the estimation errors, this is not a major problem.

Effective Rates of Assistance

(At 20% Cost Excess on Inputs)

Year to 31 March		*1980* %	*1981* %	*1982* %	*1983* %	*1984** %
Dairy (for export) ..	— With SMPs	20	13	6	7	15
.. .. ..	— Without SMPs	13	13	6	7	15
Sheepmeat	— With SMPs	8	9	100+	100+	100+
.. .. ..	— Without SMPs	8	9	37	62	100+
Wool	— With SMPs	−5	−3	54	97	24
.. .. ..	— Without SMPs	−5	−3	−4	−1	−2
Beef	— With SMPs	−9	−4	21	21	−2
.. .. ..	— Without SMPs	−9	−4	0	−1	−2
All Pastoral	— With SMPs	4	5	44	51	38
.. .. ..	— Without SMPs	2	5	5	7	10
Pipfruit		5	7	17	9	—
Kiwifruit		59	50	55	27	—
Vegetables		−6	0	−4	−8	—
Other Crops		24	24	11	8	—
All Horticulture ..		10	13	9	3	—
Arable		—	−12	−9	−8	—
Forestry and Logging Industry		—	12	—	—	—

* Provisional

The main conclusion from the above tables is that the effective rates of assistance for the pastoral industries have varied considerably both between industries and over time. This reflects the basic imbalance between the assistance levels to the different industries and the large fluctuations of assistance delivered to the pastoral industries by way of SMPs.

The other major point to be drawn from the above tables is that the levels of assistance to the land-based industries, and to the other sectors, have a direct bearing on, and relationship to, other major policy areas such as government owned enterprises, government expenditure, protection (import licensing and tariffs), and exchange rates. All these policy areas are inter-related. The major argument for continuing to provide assistance to the land-based industries is that these industries need to be compensated for the cost-disadvantages they face because of assistance to other industries by way of import licensing, tariffs, direct grants etc. Thus a reduction in protection for importables would mean that assistance to export industries should be lowered. Again, government assistance to agriculture/horticulture to make up for these cost penalties has a direct impact on government expenditure and/or revenue with implications for the deficit and/or monetary policy and taxation on other sectors.

b *Forms of Assistance*

The method by which the Government delivers assistance to the various sectors of the economy can have significant implications separate from the effects of the levels of assistance involved. All assistance by the Government to any activity involves an intervention in the market process. There can, of course, be valid economic as well as social grounds for such interventions (e.g. in terms of market failures), but it is necessary to ensure when contemplating any intervention that the costs (including the costs of any consequential side effects) do not exceed the intended benefits. That is, it is important to give close consideration not just to the level of assistance but also to the form in which assistance is given and the effects this will have. Forms of assistance or intervention which prevent relative price signals from affecting individuals' production decisions, or distort those relative prices are less preferred than those forms which do not have these effects. Similarly, interventions which inhibit producers adjusting to changed conditions are also undesirable.

Selective assistance will, by definition, always distort resource allocation except where it corrects a market failure of some kind. The effect of selective intervention will be to enable that activity to compete resources away from other activities more successfully. The resulting distortion in resource allocation will have an economic cost. This is not to say that all such intervention is always undesirable. As observed in Treasury's briefing paper on government intervention in the private sector (Part Two, Chapter 14) there are a number of reasons why reliance on markets may fail to produce socially desirable outcomes. However, where intervention by assistance has only an economic objective, it is particularly important to ensure that a net advantage can be expected from the intervention and that the method of delivery is the least distortive.

The following are some of the factors that need to be considered as regards forms of assistance in the land use area of activity.

i *The Point at Which Assistance is Delivered*

Assistance can be applied to factor inputs (labour, capital, land), intermediate goods, or to output. Generally, assistance to lower the cost of inputs to users is undesirable for three reasons. Firstly, it discourages efficient use of the input concerned. It is possible for example, that because of high levels of subsidisation in the past (when the fertiliser subsidies were a much higher proportion of applied costs than they are now) superphosphate was applied in a wasteful manner from the national perspective. If farmers had had to pay the full cost of fertiliser, their perspective as regards application rates would have been much nearer the national viewpoint. Secondly, input subsidies influence input mixes biasing resource use towards assisted inputs and discouraging switches to more efficient input mixes and to substitute inputs. Again taking fertiliser as an example, the present subsidy regime, being on a $/tonne basis favours single superphosphate and discourages the use of newer forms of fertiliser which have higher nutrient to weight ratios. Thirdly, input subsidies favour those activities which use a relatively high level of the input concerned. Fertiliser subsidies will assist those land-based activities which are very dependent on fertiliser application more than those that use little or none. The same applies in the case of other input subsidies such as those for the eradication of pests, diseases and noxious weeds.

Current assistance to intermediate goods or services includes concessional credit, taxation concessions, and services and grants provided by MAF and the New Zealand Forest Service. Similar problems to those attending input subsidies apply here. Use of these intermediate goods and services can be wasteful (from a national perspective) and improvements in productivity can be discouraged. The issues raised by the subsidised provision by MAF of a number of services, which involve substantial resources are discussed in Chapter 4 of this volume. While ERAs to agriculture may not in general be high, significant distortions in the use of resources in agriculture may nonetheless be occurring as a result of those forms of assistance.

Assistance on output avoids some of the problems applicable to input subsidies. As it is related directly to output it encourages production and avoids problems of waste and incorrect input mixes. The main problem is with those forms of assistance which shield the producer from market realities—a very real problem in the case of SMPs. One form of output assistance is price control for products sold on the domestic market. Insofar as prices are based on 'cost plus' this can have a harmful effect on efficiency and innovation.

ii *Policy Uncertainty*

In the past assistance was usually provided in response to what were perceived as the immediate, short term, problems facing particular producer groups. In the land use area it is mostly provided by voted expenditures as a result of administrative decisions by the Government of the day. There can be a high degree of uncertainty about the level and duration of such assistance measures. This uncertainty is heightened when eligibility for subsidies is determined by criteria applied administratively. This can hinder sound decision-making by producers.

iii *Administrative Efficiency*

Another major area of concern with the forms of assistance applying to all industries, including agriculture, is that of administrative efficiency. Forms of assistance which involve substantial administrative discretion, complex procedures, or high administrative and compliance costs are wasteful of resources. An example of this is the Land Development Encouragement Loan Scheme.

iv *Transparency*

It is highly desirable for efficient economic management that forms of assistance are clearly visible. This enables calculations of the cost to the community and permits more informed discussion about the merits of such measures. Many forms of assistance are, however, far from transparent. These include interest and tax forgone and government guarantees. Visibility means, of course, that assistance measures are visible to overseas competitors and this can invite trade retaliation. However, even the less obvious forms of subsidy are now subject to close scrutiny by overseas competitors, especially those in the United States.

v *Effect on Industries Supplying and Servicing Land Use Industries*

Subsidies on goods and services can have an adverse effect on the efficiency of the industries supplying those goods and services. For example, because the present fertiliser subsidy regime is on a weight basis, it puts at a disadvantage producers and suppliers of newer forms of fertiliser which have higher ratios of nutrients to weight. Price control on the distribution of fertiliser discourages the development of more cost efficient storage and distribution arrangements. The ability of the Rural Bank to provide loans at interest rates subsidised by the taxpayer means that, especially as regards medium and long term finance, other financial institutions cannot compete with it. This reduces the incentive of other institutions to compete in this area and effectively denies them access to a significant segment of the rural finance market. Some services provided by MAF, such as its advisory services, were introduced at a time when private sector counterparts were not developed. With the growth of private sector services, any case there may have been for public sector provision of such services is largely, if not wholly, removed. In fact free provision of such services will tend to inhibit the growth and development of private sector sources of supply.

vi *Equity Effects*

Some forms of government assistance effect very substantial transfers of wealth from the taxpayer (or consumers) to individuals. For example, the very high levels of irrigation subsidies available can directly transfer tens of thousands of dollars of taxpayers' funds to individual farmers in the form of capital improvements and hence higher market prices for their properties. The provision of substantial Rural Bank, Maori Affairs and Lands and Survey concessionary finance has a similar effect for both the borrower and (probably to a lesser extent) for established farmers. The borrower benefits from the subsidised interest rate which is paid for by taxpayers in the form of interest forgone. Also, insofar as the availability of cheap credit puts upward pressure on land prices, established farmers receive benefits in the form of tax-free capital gains. Licensing of production, as in flour milling and the egg industry, protects existing producers from competition and effects a transfer of wealth from final consumers of those products to mill owners and egg entitlement holders respectively.

vii *Fiscal Effects*

The fiscal cost of support for agriculture approximates $1 billion per annum (see Appendix II). Clearly the fiscal impact is considerable. The problem of fiscal control is made more difficult by the open-ended nature of some of the schemes—the SMP scheme was very significant in this respect as is the current forestry encouragement grants scheme. It should be recognised though that if a constant proportion of the cost of protection is to be offset, then this necessarily implies a degree of open-endedness. A breakdown of assistance is provided in Appendix II.

viii *Monetary Effects*

Some forms of assistance also have a major impact on the conduct of monetary policy. In the land use area, monetary problems arising from assistance measures are largely those arising from access to Reserve Bank credit by producer boards for stock financing and stabilisation. Such access can make the task of credit control more difficult. In recent years steps have been taken which reduce these problems. As part of the programme to deregulate the tobacco industry, its access to Reserve Bank credit is being phased out. The Dairy Board's access for trading purposes is now limited to $750 million provided on the basis of a 40 year subordinated loan. The Meat Board's overdraft on its stabilisation account at the Reserve Bank is to be converted into a 30 year subordinated loan (details of this are provided in Chapter 9). The Apple and Pear Board still has access: however this is now under discussion. The interest rates on producer board accounts at the Reserve Bank are gradually being brought into line with market rates. The only large account now outstanding in this regard is the Dairy Industry Reserve Account on which a final decision has yet to be made.

Intervention by Regulation

a *Introduction*

The Government intervenes by regulation in the land use area in a whole host of ways. There is nothing unusual or necessarily wrong in that. Much regulation in this area, as in other areas, is intended to protect property rights and to ensure reasonable standards of performance in terms of safety, hygiene etc.

Of more direct economic significance are regulations in two particular areas. The first is the exporting of primary produce. The second is the production and marketing of certain goods produced mainly for the domestic market (i.e. tobacco, wheat and flour, eggs and town milk supplies). It should be noted that in recent years government policy in the two areas has been going in different directions. In the former area, that of export marketing, the trend has been to increase controls and restrictions. In the latter area, that of domestic production and marketing, the trend has been towards deregulation and removing constraints.

b *Regulations Aimed at Limiting Competition Among Exporters of Primary Products*

This subject has been considered at some length in Chapter 15 of the Treasury brief 'Economic Management Part Two'. It is also referred to, much more briefly, in Chapter 14 on intervention in the private sector. In this volume it would seem sufficient to make the following summary comments:

— limitation of competition is effected by product acquisition or by licensing exporters, and/or by the setting of quality standards and/or by compulsory levies;

— such controls have long existed for dairy, meat, apples and pears and have recently been extended to, or are available or proposed for, new products such as kiwifruit, raspberries, boysenberries, blackcurrants, other horticultural products, farmed and game deer, fish and goat fibre;

— while it may be argued that controls are desirable in the interests of 'producer control' it should be recognised that:

- it is control by some present producers over both all present producers and over potential new entrants;
- the effects of producer control can be a cost to domestic consumers of the products concerned and to the nation generally; and
- the means of implementing producer control, namely co-operatives, reduces the incentive for monitoring performance. This tends to reduce efficiency. In most cases the problem is compounded by creating statutory monopolies which means that no standard of comparison exists with which to measure performance;

— the pooling of returns from all export markets (as with dairy products) draws forth output which is profitable to the producer at the margin but represents a loss to the industry as a whole and the nation, because it ends up being sold in low price markets for less than the value of the resources used to produce it. In effect, the "quota rent" from volume limited markets such as Europe is dissipated because it offsets losses in poorer markets which it is not in the nation's interests to supply. The same is now true of sheepmeats, since the Meat Producers' Board took control of the kill, and the entrenchment of pooling would make permanent the loss of national income;

- the main economic argument for limiting competition among exporters (the 'weak seller' argument) is likely to be valid only in certain rather exceptional circumstances;
- most of the alleged efficiencies obtainable from limiting competition among exporters (more efficient distribution, promotion, quality control etc.) may in fact be achievable to the same or greater degree by voluntary co-operation; and
- single or limited seller operations can seriously impede the development of export marketing skills and performance.

Our conclusion is that proposals for new or extended controls on exporting need a much greater degree of analysis than has been made in recent cases. Indeed recent legislation appears to have been implemented without any prior detailed analysis. There may well also be a case for reviewing some existing legislative provisions (e.g. those for berryfruit and kiwifruit) and the current arrangements for sheepmeats.

c *Regulations Over Production and Marketing of Goods for the Domestic Markets*

In the land use area such controls apply to the production and marketing of tobacco, wheat, flour, eggs, and town milk. The controls were introduced many years ago and the original reasons for introducing them are somewhat obscure. In the case of wheat, the controls which assure a market for millable grade wheat were probably for the strategic reason of self-sufficiency. Controls over flour milling, eggs and town milk industries were probably primarily aimed at social objectives, as were the consumer subsidies that applied (and in the case of town milk still apply) to their products.

While the objectives of these interventions are now obscure, they continue to have a number of adverse effects on resource allocation. The lack of any clear objective is a prime reason for considering their removal. Their distorting effects on resource allocation form another. The distortions to resource allocation arise in the following ways:

i *Location:* Production locations cannot be easily moved in response to changes in the location of demand as, for example, shifts in population take place. Thus we have a geographical distribution of flour quotas and egg entitlements that are out of line with the geography of consumer demand and of sources of inputs.

ii *Excess Production:* Production quotas once set appear to be very difficult to reduce even if changes in consumption patterns require this. For example, the annual cost of disposing of surplus eggs is considerable and is mainly borne by the consumer.

iii *Excess Capacity:* If pricing is controlled and based on costs there is no incentive to adjust capacity downwards as demand falls. The excess capacity in the flour milling industry has been estimated to be about 36 percent. The cost of providing a return to millers on under-utilised resources is borne by the consumer.

iv *Efficiency and Innovation:* Producers with assured markets at controlled 'cost plus' prices have little or no incentive to increase productivity and to invest in innovation and research. They are protected from the competitive pressures and disciplines of the market.

v *Effect on Resource Use:* At any point in time the amount of assistance delivered by a guaranteed market arrangement may vary depending on movements in international prices. However, as with import licensing, the amount of assistance delivered by guaranteed market arrangements automatically increases as producers' efficiency decreases. Because of this, the effect on resource allocation may be far greater than one might expect from measured effective rates of assistance. This effect is magnified when resources used in the protected activity are easily transferable to other activities.

In Chapter 10 of this volume we describe the action that has been taken, or contemplated in respect of the tobacco, wheat and flour, eggs, inshore fisheries, and town milk industries.

Intervention by Ownership

State owned enterprises play a significant role in the land use area. The major enterprises involved are:

— the New Zealand Forest Service: production forestry activities and sawmills;
— the Rural Banking and Finance Corporation;
— the land development and settlement programme operated by the Department of Lands and Survey;
— the Phosphate Commission of New Zealand; and
— the Ministry of Agriculture and Fisheries in its role as provider of services, especially:
  - advisory services;
  - media services;
  - animal health laboratory services;
  - quarantine services;
  - meat inspection services; and
  - dairy quality assurance.

In the case of state operations that are essentially commercial (e.g. the Forest Service sawmills and production forestry activities) the principal benefit that New Zealand derives from its investment in them is the return on that investment. MAF's services are not usually seen as commercial enterprises although they provide inputs into commercial activities. Moreover they use substantial resources and in some cases have private sector counterparts.

Accordingly, it is important to ensure that the objectives of all these organisations are consistent with their primary role, and that the organisations have an operating environment which encourages the best use of national resources in meeting those objectives.

Chapter 13 of Treasury's brief 'Economic Management Part Two' addresses in detail the principles involved in state owned enterprises. Later chapters of this volume outline how these principles apply in some important parts of the land use area. It should be noted that, as well as the entities that can be classified as state owned enterprises, some of MAF's activities essentially involve the public production of private goods. The principles developed in the discussion of state owned enterprises are equally applicable to these activities. The major points for the land use area are that:

a a number of these enterprises are dominant organisations within their respective spheres of operation (e.g. the New Zealand Forest Service in production forestry, and the Rural Bank within rural finance), and are large enough for their performance to have a significant impact on the performance of the whole economy;

b under-pricing (i.e. pricing below cost of supply or below export parity) is a feature of most of these operations. This has the effect of increasing demand for the services supplied, increasing the resources invested in these operations, reducing the ability of similar private sector organisations to compete, encouraging the establishment of inefficient downstream industries, and increasing in a discriminatory and inefficient manner the overall level of assistance to the sectors involved; and

c there is scope for increasing efficiency in the use of national resources within these enterprises by clarifying their objectives and subjecting them to market disciplines. In general the changes required include:
   - making the objectives more limited and clear-cut, so that the direction in which management should be heading is clear;
   - encouraging the fulfilment of any secondary, non-commercial, objectives by other means, such as more general policies or direct subsidies to the organisation;
   - subjecting the organisation to operating conditions similar to equivalent private sector enterprises, so that the degree of attainment of the primary objectives can be measured against an objective standard;
   - changing its operating environment to enable the performance of the organisation to be monitored in terms of the attainment of its objectives, and reducing input controls and other impediments to the attainment of those objectives; and
   - judging the performance of the organisation's management by how well they meet those objectives, compared to the market determined standard.

APPENDIX I

Assistance to Pastoral Activities

(Cost Excess Assumed = 20%)

	1979/80 $m	1980/81 $m	1981/82 $m	1982/83 $m	1983/84 $m
Value of Output	2638	2767	3217	3544	3601
Less Inputs gives Value Added ..	855	898	1096	1191	1227
Assistance on Output:					
SMPs Paid to Farmers ..	17	0.5	326	395	290
SMPs Domestic Effect ..	0	0.2	42	42	34
Other	47	52	68	73	76
Less Total Assistance on Output	64	53	435	510	400
Less Total Assistance on Inputs ..	80	71	74	71	64
Plus Cost Excess on Inputs ..	297	311	353	392	396
Gives Unassisted Value Added ..	1008	1085	941	1002	1158
Total Assistance to Value Added Factors	188	239	263	323	375
Net Subsidy Equivalent	36	51	418	512	443
Assistance to Inputs and Outputs ($m)	153	188	155	189	69
Effective Rate of Assistance ..	4%	5%	44%	51%	38%

APPENDIX II

TOTAL VALUE OF ALL SUBSIDIES, INCENTIVES AND OTHER SERVICES TO THE PRIMARY SECTOR

A DIRECT SUBSIDIES

Direct Subsidies: Agriculture

	Voted 1983/84 ($ 000)
Vote: Agriculture and Fisheries	
Fertiliser and Lime Transport Subsidy	20,000
Fertiliser Price Subsidy	24,500
Fertiliser Bounty	1,550
Sharemilkers Suspensory Loan Scheme	389
Emergency Expenditure	100
Meat Industry Hygiene Grant	1,500
Rural Export Suspensory Loans	1,694
Livestock Incentive Scheme[1]	18,830
Land Development Encouragement Loans[1]	11,620
Agricultural Pests Control	7,000
Control and Eradication of Animal Diseases	5,180
Compensation	60
Grants & Misc. Payments to Agricultural & Allied Organisations	3,776
Noxious Weeds Eradication	7,838
Supplementary Minimum Prices[2]	355,000
Sulphuric Acid Transport Subsidy	750
Subsidy for Control of Potato Cyst Nematode	40
Sub-total	459,827
Vote: Lands and Survey	
Grants to Lincoln College	60
Tussock Grasslands and Mountain Lands Institute	512
Sub-total	572
Vote: Scientific and Industrial Research	
Grants to Massey University	232
Grants to Lincoln College	43
Grants to Research Associations	
— Dairy	2,150
— Fertiliser	348
— Meat	1,315
— Wool	1,061
— Logging	260
Grant to Commonwealth Agricultural Bureau	160
Other	10
Sub-total	5,579

	Voted 1983/84 ($ 000)
Vote: Trade and Industry	
Horticultural Marketing Unit	250
Tobacco rebate	1,523
Sub-total	1,773
Vote: Works and Development	
Construction of Irrigation and Rural Water Supply Schemes (net expenditure after recoveries)[3]	25,250
Maintenance and Operation of Irrigation Schemes (net after revenue from sale of water)	1,570
Catchment, River Control, Soil Conservation and Drainage Works[4]	34,364
Sub-total	61,184
Total Direct Subsidies to Agriculture	528,935
Direct Subsidies: Fishing Industry[10]	
Fishing Vessel Construction Suspensory Loans	243
Fishing Vessel Refrigeration Suspensory Loans	33
Fishing Industry Hygiene Grant	100
Total Direct Subsidies to Fishing Industry	376
Direct Subsidies: Forest Industry	
Forestry Encouragement Grants	17,400
Total Direct Subsidies to Forestry Industry	17,400
Total All Direct Subsidies to Primary Sector	**546,711**
B *INFRASTRUCTURAL SUPPORT SERVICES*	
Animal Health (MAF)	20,167
Meat Inspection (MAF)	44,491
Dairy Inspection and Grading (MAF)	9,178
Advisory Services (MAF)	20,133
MAF Research Services	40,188
Research surveys, planning and technical services in the field of soil and water conservation and water utilisation (MWD)	12,607
DSIR Research Services (Departmental):	
— Agricultural Production	26,759
— Agricultural Processing	3,415
MAF Fisheries Research	7,790
MAF Fisheries Management and Inspection	7,285
Forest Service[10]	
Forestry Research	18,430
Forestry Sector Responsibilities	8,015

	Voted 1983/84 ($ 000)
Rural Bank	
Administration of Loans and Mortgages[5]	11,400
Total Infrastructural Support Services	**229,858**

C *ESTIMATE OF REVENUE FORGONE**	*1982/83* ($ 000)
Interest Rate Concessions	
Rural Banking and Finance Corporation	
Estimate of interest concessions[6]	95,000
Reserve Bank Overdraft Facility	
Estimated total cost of low interest rate overdraft facility[7] (Assistance was provided to the Apple & Pear Marketing Board and the Dairy Board)	80,084
Lands and Survey—Loans to Settlers	
Estimate of interest concessions[8]	9,637
Maori Affairs—Loans to Settlers	
Estimate of interest concessions[8]	3,606
Forest Service	
Estimate of interest concession on Forestry Encouragement Loans[8]	543
Sub-total	188,870
Taxation Expenditure[9]	
Agriculture	
Investment Allowances	13,000
Deduction of Development Expenditure	39,000
First Year Depreciation	15,000
Deduction for Increase in Livestock Units	5,000
Income Equalisation	2,000
Spreading of Income on Sale of Livestock	2,000
Miscellaneous	3,000
	79,000

* Please note that the estimates for revenue forgone and energy subsidies relate to the 1982/83 financial year as estimates for 1983/84 are not readily available.

Fishing Industry[10]	Voted 1983/84 ($ 000)
Investment Allowances	3,000
Deduction for Development Expenditure	6,000
First Year Depreciation and Deduction for Capital Expenditure on Vessels	2,000
	11,000
Forestry Industry[10]	
Current Year Deduction for Forestry Costs	10,000
Deduction for Forestry Holding Companies	1,000
.. ..	11,000
Sub-total	101,000
Total Estimate of Revenue Forgone	**289,870**
D *ENERGY SUBSIDIES*[11]	
Electricity	20,000
Total Energy Subsidies	20,000

Notes

[1] These figures are the interest concessions and principal writeoffs under the LIS and LDEL Schemes funded from Vote: MAF.

[2] This amount refers to voted provision for SMP payments to be made by the Government to the respective producer boards in the financial year ending 31 March 1984.

[3] The Government generally funds the full capital cost of irrigation schemes and recovers part of the cost from farmers. Because of the lag between expenditure and recoveries, a further portion of the amount shown will be recovered over time.

[4] This includes loans to local authorities, which will be recovered.

[5] This is the Rural Bank's net drawings from the Consolidated Account (i.e. after deducting the surplus returned to the Consolidated Account).

[6] The interest forgone on RBFC loans has been calculated as the difference between an assumed market rate of interest (14 percent per annum) and the interest yield (8.85 percent) on the average total principal outstanding in 1982/83.

[7] This is calculated on the basis of a 1 percent interest rate on the average daily balance compared with a market interest rate on a comparable amount. The assumed market interest rates are 12 percent for the Dairy Industry Account and 13 percent for the Apple and Pear Industry Account.

[8] The methodology in (6) above has been used to calculate the interest forgone as a result of the lending activities of the departments of Lands and Survey, Maori Affairs and the Forest Service.

[9] Varying degrees of uncertainty attach to these estimates.

[10] These concessions relate to the primary stage (i.e. growing, harvesting, etc) of the fishing and forestry industries and not to further processing, which is assumed to fall within the secondary industry sector.

[11] This is calculated on the basis of the difference between the bulk supply tariff of electricity/selling price of coal and the long run resource cost of new generating/mining capacity.