

THE FUTURE FOR NEW ZEALAND AGRICULTURE

ECONOMIC STRATEGIES FOR THE 1980s

BY IAN McLEAN

NEW ZEALAND PLANNING COUNCIL
FOURTH ESTATE BOOKS



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PREFACE

The New Zealand Planning Council decided early in its existence that it was important to focus attention on the development of farming. Accordingly, it asked Massey University to organise a rapid assessment of alternative strategies. The University assigned the work to Mr Ian McLean, previously a member of the Task Force on Economic and Social Planning, and now of Ashworth-Morrison Cooper, Mr McLean has had the benefit of advice from Dr E.M. Ojala, Mr A.B. Ward and Professor A.R. Frampton of the Department of Agricultural Economics and Farm Management at the University. Professor Frampton has provided a foreword.

An earlier draft of Mr McLean's report was helpful to the Council in preparing its own document "Planning Perspectives 1978-83". It has also been made available to Government departments and Federated Farmers as a basis for their work on policy in recent months. The final version has benefited from comments received from these and other sources.

As with earlier documents, such as "Income Maintenance and the Tax Structure", the Planning Council offers this report for public information and discussion. I believe that the report should serve its purpose admirably, but the Council does not necessarily share all the views which the author has expressed.

Frank Holmes
Chairman
New Zealand Planning Council

FOREWORD

Ian McLean discusses the general economic environment in which agricultural policy is formulated. Strengths and weaknesses are described and the present mixed economy summarised as:

“a market economy where markets are seldom permitted to operate efficiently together with a centrally planned economy without a central plan” (p.14).

Mr McLean concludes that the most limiting constraint with respect to agricultural exports is production and not markets. His review of past and present agricultural policies indicates that there is great scope for changes in those policies that could result in an upsurge in farm production. A significant increase in the volume of production would solve many of New Zealand's problems and, if sustained, enable us to take a more optimistic view of the future.

Five alternative strategies that could be adopted are described and assessed. The conclusions are seldom new. However, an attempt has been made to state a set of mutually consistent objectives for each alternative strategy and to design policy measures to achieve those objectives. In deciding which strategy to adopt, New Zealanders will need to choose among, and assign priorities to, the feasible objectives.

New Zealand has always faced the same challenge — and has usually responded in a spirit of “benign neglect”. The nature and severity of the oil crisis has drastically curtailed the gains to be had from trade. Higher transport charges have increased the natural level of protection of New Zealand industry and reduced the profitability of the export sector. The time for equivocation has gone. If New Zealanders wish to enjoy a rising standard of living and full employment, raw materials and goods must be imported. To pay for these imports foreign exchange must be earned. This can only be done by producing goods and services for export. As New Zealand does not possess a wide range of natural resources, a large proportion of export goods must be derived from land based products.

If a country spends more than it earns it must either make importing less attractive and exporting more attractive or postpone the inevitable adjustments by borrowing from the world's moneylenders. As for an individual or a family, there is no escape from the required restraints. Self or national discipline may be evaded or postponed for a time but in the end the accounts must be balanced or bankruptcy ensues.

There are some factors which inhibit the wide public discussion of general economic and agricultural policy issues in New Zealand. Dr J.B. Condliffe puts it this way:

“In every country where government intervention has increased, public criticism is muted because the critics have become dependent on official decisions and fear retaliation. In a small country such as New Zealand those conversant with the inner workings of policies are normally inhibited from criticism by the confidential nature of their information. There are almost no informed individuals who feel free to comment on policy decisions. Public comment is therefore largely confined to individuals who are not in possession of detailed information but who nevertheless hold strong opinions.”*

This publication provides information and ideas which should be widely discussed and debated. The debate should lead to the selection of objectives and then to the application of the most effective and efficient strategies to achieve the chosen objectives. Action, following discussion, should be our aim.

A.R. Frampton,
Head, Department of Agricultural Economics and Farm Management,
Massey University.

* Condliffe J.B. *The Economic Outlook for New Zealand*, Whitcombe and Tombs 1969, p.117.

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Ian McLean was born in 1934. He holds a BA in Mathematics from Auckland University. He farmed in the Whakatane district for 18 years; was a dairy company director and involved in Federated Farmers. During this time he undertook some consultancy work and in 1971 joined the Economics Division of the New Zealand Ministry of Agriculture and Fisheries, where he was appointed Chief Agricultural Economist in 1976. He spent two years in Tanzania with F.A.O., leading a Dairy Development Project team. After being seconded to the Task Force on Economic and Social Planning, he remained with the Secretariat of the New Zealand Planning Council in its formative period. In 1977 he was appointed manager of Ashworth-Morrison Cooper, a consultancy firm engaged primarily in development projects overseas.

INTRODUCTION

This project was initiated as a study of agricultural policy strategies. It soon became evident that the various strategies for New Zealand agriculture depend upon the policies adopted for the economy as a whole. The problems of New Zealand agriculture cannot be solved within the sector itself; and conversely the growth of the New Zealand economy requires growth in agricultural output.

The publication discusses the economic setting, then considers agricultural policy, and next presents alternative economic strategies with particular attention to the agricultural sector. (A "Strategy" is defined as a set of mutually consistent policy objectives together with a package of policy measures designed to achieve these objectives).

A research paper by C.W. Maughan, *New Zealand Development: The Problem of Exports and Imports* (1977), concludes that New Zealand has no alternative but to expand land-based exports in the medium-term future. That conclusion, with its rejection of further import-substitution as a sufficient solution to the chronic New Zealand shortage of foreign exchange, forms the starting point for this book.

The viewpoint is technical, with strategies considered according to their economic effects rather than public acceptability. The book does not take into account changes since March 1978 in the economy, in the agricultural sector, or in public policies.

Grateful acknowledgement is made of the assistance given during preparation of this publication by Professor A.R. Frampton, Dr. E.M. Ojala, A.B. Ward, and staff of the Agricultural Economics and Farm Management Department of Massey University; Sir Frank Holmes and G.R. Cleland of the New Zealand Planning Council; E.J. Stonyer, Dr. R.W.M. Johnson and staff of the Economics Division of the Ministry of Agriculture and Fisheries; and Professor B.P. Philpott of Victoria University. Thanks are also expressed to the many other people who have contributed ideas in discussion.

Ian McLean

CHAPTER I

THE ECONOMIC POLICY SETTING



In New Zealand, agricultural policy and economic policy are interdependent. When we use the term “agricultural sector”, we mean not only farms but processing and service industries as well. This sector forms a major part of the economy and has strong links with other sectors.

The state of the economy and general economic policy measures usually have more effect on the well-being of New Zealand agriculture than do particular policies directed towards agriculture alone. Conversely, the level of agricultural output has a significant effect on New Zealand export earnings, and thus on the rate of economic growth.

This chapter discusses the policy environment within which agricultural policies operate. The conclusions reached are quite general and are seldom new, but are explicitly set out because agricultural strategy needs to be a coherent part of general economic policy.

WHAT ECONOMIC MANAGEMENT TRIES TO DO

Over the last ten years, economic management in New Zealand seems to have been directed towards:

- full employment
- low rates of inflation
- keeping up and extending the social welfare system
- retention and extension of access for New Zealand exports
- developing manufacturing
- maintaining a mixed economy
- a moderate rate of economic growth

Successive governments have given different weight to each of these goals, as well as adding in particular objectives of their own. On the whole, though, New Zealand governments have shown remarkable consistency in the aims of economic management over this period.

Some objectives, such as the maintenance and extension of the social welfare system have been achieved, while others have been virtually abandoned as governments have been forced to choose between priorities. It has proved impossible to achieve a reasonable rate of economic growth, and despite everybody agreeing on the

need for growth, the policy measures aimed at growth have proved inadequate. This lack of success of the growth policies has been partly due to the priority given to other objectives (some of which hold back rather than promote growth), and partly due to constraints on growth.

CONSTRAINTS ON GROWTH

The tightest constraint on economic growth in New Zealand over the last decade, as for most of its history, has been the supply of foreign exchange. The Overseas Exchange Transaction current account deficit reached over 10 per cent of Gross National Product in 1975 (March year), and is still running at about 3.6 per cent of G.N.P. New Zealand shares this unhappy situation with most of the developing countries which do not have oil, and also with a number of smaller industrial nations.

While New Zealand must still appear to be a relatively good credit risk compared with most developing countries, this is not much consolation. What is more to the point is that, if current account deficits continue at about their recent levels, the cost of servicing increasing levels of overseas debt is likely to become intolerable. Removal of the current account deficits would require either changes in the world economy of a kind which would improve New Zealand's terms of trade; or changes in the New Zealand economy such as those recently summarized by D.A. Preston in a paper delivered to the New Zealand Association of Economists*; or the discovery of an oil field which would do for us what North Sea oil is doing for the United Kingdom. The balance of payments constraint is likely to be a major problem in our economic management in the medium-term future, and other problems, such as a higher rate of inflation than that of trading partners, make the balance of payments constraint even more intractable.

Successive governments since 1968 have wanted to disturb existing arrangements as little as possible, and this, too, has acted as another major constraint of economic policy. Changes in economic policy have been slight compared with the extension of social policy we see in the introduction of the Accident Compensation Scheme, the Domestic Purposes Benefit, and the advances in Superannuation. Major steps in economic policy have been the introduction of a more flexible and effective interest rate policy and removal of most consumer subsidies, but the agonizing process by which successive governments have proceeded to decide on matters such as the forty mile rail restriction suggests that they regard changes as being undesirable or politically impracticable.

* For this and all further references see Bibliography on page 71.

HOW THE ECONOMY IS MANAGED

Major methods used to manage the New Zealand economy in recent years include:

- Considerable reliance on income and price policies to restrain inflation. Before 1976, monetary measures were seldom used;
- Limiting competition: licensing or government approval of one kind or another used to restrict the numbers entering particular areas of economic activity, or to limit their competition;
- Continued use of import licensing as a means to protect several sensitive New Zealand industries;
- Much more active use of monetary policy measures than in the past. Open money market operations are just starting to appear, and any adjustment to the average exchange rate is still regarded as a traumatic event rather than a normal, continuing process. (The day to day adjustments of exchange rates seek to keep the weighted average rate constant).

There seems to be an underlying assumption that managing a mixed economy needs continued detailed intervention by the government. It presupposes that the administrators can allocate resources more efficiently than market mechanisms, and that market mechanisms require detailed control. The practice in New Zealand also assumes that policy makers are particularly omniscient, since the decisions which are taken are often on an individual, "one off" basis, and seldom form part of an explicit plan for economic development.

So fickle a system can give little confidence to investors, since government intervention is ad hoc and unpredictable. At the same time it encourages reliance on "incentives" and "assistance" rather than on enterprise. Its effect on farming is particularly serious because farming involves continuous production processes which cannot be turned on and off, and the agricultural sector is made up of many small economic units each of which needs to be able to have confidence in future government policies, and to have a fair idea of what those policies might be, before they can make investment decisions.

POLICY AND PEOPLE'S JOBS

On the surface, our economic management seems to have been markedly successful in achieving some of the aims listed earlier. Yet it has not kept inflation at a reasonable level, the rate of economic growth has been low by world standards, and our balance of payments deficit is a recurring problem. Even our apparent successes depend on how you look at the numbers.

Let's look at how policy affects people's jobs. Conventional wisdom states that New Zealand has maintained full employment since World War II. Yet the New Zealand method of measuring unemployment by the number of people registered as unemployed gives a very much lower figure than the survey technique used, for example, in the United States. If we compare the number *registered*

unemployed with the number *describing themselves as* unemployed in the last two censuses, we see that only one third or less of those who are in fact unemployed do register. (The point is not which measurement of unemployment is "correct", since each statistic can be used as an indication of changes in the level of unemployment). Our record on unemployment is not as good as it seems to be from superficial international comparisons. It may well be that unemployment does not present such a problem in New Zealand because many of its social consequences have been averted by a reasonably adequate welfare system. If this is true, it would make sense to devote more effort to finding methods of reducing the hard core of semi-permanently unemployed.

The major problems arising from unemployment in New Zealand are likely to be concentrated amongst certain groups. Unskilled workers, especially Maoris and Polynesians, school leavers with lower educational achievements and married women seeking to re-enter the work-force (whose employment is more costly since the advent of equal pay) are the groups most likely to be affected. At the same time that a significant degree of unemployment exists, some industries still find it difficult to obtain skilled workers. The situation is not peculiar to New Zealand, and it is generally acknowledged that the solution lies in retraining the workers rather than just paying them unemployment benefits, and in making use of the fact that people in a well-educated work-force like New Zealand's are flexible and able to undertake a wide range of jobs. It would thus be possible in New Zealand to base policy on new industries drawing staff from dying industries, a far more positive approach than propping up uneconomic industries because their employees would have difficulty in continuing to practise their current trade.

Not many new job opportunities will be created directly by the farming and processing sub-sectors of agriculture. From 1966-76 full-time employment in New Zealand increased by 21 per cent or over 160,000 jobs, while employment in farming increased by only about 3 per cent, or about 3,500 jobs. In fact, most of the increase in efficiency in New Zealand farming has come from innovations which employ fewer people, not more, and this trend is likely to continue unless new labour-intensive horticultural crops increase very substantially. In the agricultural processing and servicing industries, it is unlikely that many new jobs will be created as the hoped-for greater automation in the meat industry should offset the extra labour required for further processing. In the future, as in the past, new jobs for the expanding work-force must be created outside the agricultural sector.

As well as preventing structural, long-term unemployment, economic policy has been directed towards preventing such recessions in economic activity as would cause unemployment to increase for a year or two. This policy appears to have been

remarkably successful with the maximum recorded level of unemployment since World War II being the current (end of March 1978) level of 2.6 per cent. (Although we restate our previous assertion that this figure is understated since it does not include people who are seeking work but who have not registered as unemployed.) Maintaining a consistently high level of economic activity has probably reduced the pressure for technical change and improvement in efficiency, and thus reduced the rate of growth of the economy.

Our dependence on our agricultural exports has helped keep full employment, because in times of world recession, the volume of agricultural trade is reduced less than the volume of trade in manufactured products, while the prices of agricultural commodities fall more than those of industrial products. Our farmers have still been able to sell their products in time of recession, in part through stockpiling with finance from industry reserves or the Reserve Bank. Farms and processing factories by remaining in business have avoided the wholesale staff redundancies experienced by some manufacturing industries, such as clothing. They keep buying goods from the rest of the community, too, though certainly at a somewhat reduced level, and have maintained reasonable levels of employment in linked industries. The unemployment in the clothing and whiteware industries resulting from the present restraint on exports to Australia demonstrates that stability in employment will be more difficult to achieve as New Zealand moves towards a greater proportion of manufactured exports.

Any discussion of employment should consider the growth achieved in the labour force. Between 1970 and 1976 our labour force grew on average by 2.7 per cent per annum. The New Zealand Planning Council labour force projections (taking the zero net migration assumption) show a growth of 1.7 per cent in the years 1976-86. Unless the rate of economic growth is much faster than it has been in recent years, more New Zealanders will be out of work or forced to leave the country.

STABILITY

The major fluctuations in the economy since World War II have arisen in, or have most affected, the external sector. While import prices have risen consistently, export prices have moved up and down, so that the purchasing power of exports (measured by the terms of trade) varied considerably. The index of terms of trade reached a maximum of 122 in 1973 and a minimum of 70 in 1975; or, put in a different way, our exports in the early part of 1975 could pay for the purchase of less than 60 per cent of the imports which they would pay for in 1973.

The *decline* in terms of trade is due to the rise in import prices. Also, because agricultural commodities constitute such a large proportion of New Zealand exports our terms of trade are subject

to severe *fluctuations*. As manufactured exports increase, the terms of trade should become more stable – although export revenues may still fluctuate.

Successive governments have sought to maintain the level of economic activity by running down foreign exchange reserves and by increasing foreign borrowing at times when the terms of trade decline. They have accepted OET deficits of up to \$1,000m annually. The main burden has been borne by foreign borrowing rather than running down the relatively small foreign reserves, a recurring situation in our country's history. The judgement: "among the borrowers New Zealand still maintains its leading position" was made by *The Economist* in its Commercial Review of 1879, but applies equally well 99 years later if borrowing as a percentage of GNP is compared internationally.

Three times in the last thirty years, this policy (attempting to maintain the level of activity in the economy through periods with low terms of trade) has gone badly wrong. In 1958, 1967 and 1976 the external situation (as indicated by terms of trade, OET deficit, level of reserves, and level of borrowing) has been serious enough to need abrupt policy reversals. In each of these years policies have been changed to conserve foreign exchange by reducing consumer demand and imports, to reduce government deficits (especially by cutting back on capital expenditure), and yet at the same time to cause as little unemployment as possible.

The difficulty experienced in maintaining a high level of economic activity during periods of low terms of trade arises from six main causes:

- The policy of Keynesian demand management on which the stabilisation policy is based was developed in large economies such as the United Kingdom and United States and it may simply not be an option for a small open economy like New Zealand. As M.F.J. Prachowny has written: "... in a sense, a small open economy faces an externally determined incomes policy."
- In an economy like ours, where external trade is large in proportion to total production, and which can do little to determine the prices of its imports and exports, the balance of payments constraint places a rigid limit on attempts to ride through recessions without reducing the level of economic activity.
- Attempts at stabilisation in New Zealand have given much more attention to keeping things going in recession, than to slowing down in times of boom so as to be in a better position to meet the next recession. In other words, attempts have been made to stabilise the economic activity at the level of the peaks in the cycle rather than about the medium-term trend level. Keynes advocated a similar policy for larger, less open economies, but it cannot be operated in a small open economy like New

Zealand.

As D.B. Copland has noted: "It is not [only] legitimate but wise to draw on reserves in depression — that is what reserves are for. But if they are exhausted in the upswing, the only alternative when depression comes in external markets are exchange depreciation or exchange control, unless indeed the local economy is to be subjected to harsh deflation."

International borrowing gives further breathing space, but ultimately credit worthiness, like reserves, becomes exhausted.

- New Zealand is in a particularly difficult situation since it enjoys the worst of both the developed and developing worlds. Like the developing countries it faces a steady rise in the price of sophisticated manufactured goods from the major industrial countries, yet it also has to import those raw materials and commodities which have most increased in price (oil, coffee, tea, for example).
- Future changes in the terms of trade are difficult if not impossible to predict, and governments have no way in advance of determining whether a recession will be small enough to ride through, or so large that major adjustments will be required. In a small open economy, the government has no power to alter the length of world recessions. Because of the political dangers of recession, this has led New Zealand governments to adopt an optimistic stance until either the balance of payments constraint forces restraint, or an election brings in a new government with the chance to exercise restraint and place the blame on their predecessors.
- Considerable time must elapse before changes in the terms of trade can be classified as trends rather than minor fluctuations. Policies take time to change, and even changed policies do not affect the economy immediately. The total time lag is about eighteen months to two years. Since the world business cycle has been about four years in length, measures designed to restrain or lift the level of economic activity are likely to have their maximum effect when the economy has already entered a new phase, and thus they tend to be procyclical rather than counter cyclical. The measures thus tend to widen rather than narrow economic fluctuations.

For all these reasons, the policy of keeping the New Zealand economy operating at a high level of activity through recessions has failed. Unless policies are designed to cause some adjustment immediately the terms of trade start to decline, as well as limiting the height of peaks in the cycle, they will continue to fail.

Agriculture plays a big part in stabilisation policies because agricultural price fluctuations are believed to be the major cause of instability. Solutions have thus been sought through agricultural price stabilisation schemes and through reducing our dependence on agricultural exports. Whereas both agricultural price stabilisation and

increased exports from other sectors are necessary and desirable, neither is likely in the future to produce the level of stability which New Zealand is seeking.

These particular policies will be discussed in later chapters.

INFLATION

The rate of price inflation in recent years in New Zealand has been much higher than the average of the major industrial countries. From 1973 through to the second quarter of 1977, the New Zealand rate averaged 13.8 per cent per annum compared with 8.9 per cent for the industrial countries (using *International Financial Statistics* data for its classification "industrial countries").

Economic policy in New Zealand has stressed control of inflation, but perhaps the real priorities have been placed elsewhere. However, one wonders whether the smallness and openness of the New Zealand economy together with the institutional factors influencing prices and wages combine to make a high rate of inflation a structural problem . . . in other words, something caused by the very nature of our economic structure itself, rather than by any malfunctions in it.

The effects of inflation include:

- a cost-price squeeze on export industries, including agriculture
- encouraging people to use their savings to purchase real estate rather than invest them and bring about increased production (especially prior to the rise in interest rates in 1976); particularly since capital gains are generally not taxed
- substantial transfers of wealth from those holding financial assets to those borrowing and holding real property; and transfers of income, especially away from farmers.

Blyth has commented that "democratic electorates are not prepared to pay the price of ridding themselves of inflation . . .", but many economists are horrified at the difficult and uncharted consequences of policies designed to live with (rather than control) inflation. Yet if inflation continues at double digit levels, there will be pressure for new measures such as indexation of financial assets, current cost accounting, and capital gains tax. Such measures could not, of course, be confined to the agricultural sector.

THE MIXED ECONOMY AND THE INDUSTRIAL STRUCTURE

Successive New Zealand governments have had two constant goals: the maintenance of a mixed economy, and the development of manufacturing industry. Since policies connected with these two objectives are closely related, they will be discussed together.

The mixed economy as it exists in New Zealand may be described as a market economy where markets are seldom permitted to operate efficiently, together with a centrally-planned economy without a central plan. The allocation of resources is to a large extent determined neither by market mechanisms nor government decision,

but by historical patterns fossilised in institutional procedures. Unremarkably, the New Zealand economic sickness is diagnosed as inefficient use of resources.

Import licensing together with tariffs, usually comes to mind as the prime example of protection in New Zealand. Yet protection against imported competition may well be much less important than the many forms of licensing and protection against competition for service industries. A partial list illustrates the degree of protection:

- **Transport** – rail protected against competition from road transport by 150km limit; road carriers, bus operators, taxis, airlines, helicopters all require licences.
- **Retail** – shopping hours are limited (as are ranges of goods that can be sold at different times); chains of chemists' shops are prohibited; hotels and restaurants selling liquor must have licences.
- **Telecommunication** – government monopoly.
- **Radio and TV** – TV is a government monopoly, and all radio stations require licences.
- **Agriculture** – meat works require a licence; dairy companies have "milk zones" which limit competition; town milk suppliers have "quotas"; aerial topdressing requires a licence; deer farms require a permit; rabbit farming and fish farming are illegal.
- **Electricity** – almost complete government monopoly.
- **Resources** – the taking and discharge of water requires a "right", as does mining.

While each of these restrictions was brought in for a good reason, their overall effect today is to hold back technical change and economic progress. A widely quoted example is that of the forestry company which needed to consult or obtain permits or licences from twenty-three separate government agencies before it could start building a new plant.

Many professions require a licence for members to practise, and professional associations hold considerable power to set what are effectively minimum charges, and to limit competition.

On top of all these restrictions on trade are the country's natural monopolies – those industries for which the New Zealand market is not large enough to support more than one or two efficient manufacturers.

In other areas, the law steps in and the market is restricted by legislation or regulation. Until recently interest rates were largely controlled, and the rate for government stock has until recently been sufficiently below the market rates to require government borrowing to be achieved by compulsion on financial institutions rather than by the market. Price and dividend controls make it difficult for companies to attract equity capital. The nature of the trade union structure, with many small craft unions rather than a few large industry unions, together with the form of wage controls, means that wage rates for comparable trades remain similar across industries, and

it is difficult in practice for efficient and profitable industries to attract labour from less efficient industries by offering higher wage rates.

Then there's what goes on behind the scenes that has the effect of holding back growth. Firms are restricted by a set of less public but no less effective control procedures. Governments can and do influence individual firm's or industry decisions by threatening regulatory action or merely by expressing their strong displeasure. Because of the considerable regulatory and discretionary power available to the government in matters ranging from import licensing to bulk electricity tariffs, little major industrial development can take place against its active opposition. Thus control can be exercised well beyond areas covered by statute or regulations.

The government itself also provides many social services which are inherently in the form of monopolies.

Many of the measures which provide a degree of monopoly were brought in for sound economic and social reasons. Pure laissez-faire and unbridled capitalist competition have been shown to have disastrous consequences in many ways: the accumulation of economic power in the hands of a few people, scant regard being paid to the needs of consumers; and large private profits being made at the expense of the community which bears the social costs (e.g. in pollution). But rejection of laissez-faire does not necessarily mean a rejection of competition itself.

Yet if we read parliamentary debates or the decisions of licensing authorities we might be forgiven for assuming that competition in the market has been almost rejected in New Zealand as a means of allocating resources, and allocation by means of administrative decision (especially licensing) is believed necessary to prevent wastage of resources.

In other words, a degree of monopoly has been accepted as the most efficient form of economic organisation. The reasons for this belief are not clear, and the case is seldom explicitly argued (except in those industries where economies of scale are such that the New Zealand market is too small to support more than one or two – if any – plants of sufficient size to be efficient by international standards). In order to ensure "fair" competition and to prevent large monopolies being formed as a result of "unfair" competition forcing small firms out of business, both trading practices and the entry of new firms are tightly controlled.

The protection received by the import substitution and service industries has a significant effect in increasing the costs of exporting industries so that they need assistance and incentives (i.e. subsidies) of one kind or another to be economic.

The growth of export incentives may thus be seen as a search for new ways to compensate export industries for the effects of protection afforded other sectors, and to keep export industries sufficiently profitable to maintain reasonable export production.

The highly effective rate of protection is also leading to a shallow industrial structure, in which few industries can afford to buy at New Zealand prices the major part of their raw materials, intermediate inputs and capital goods, and still produce goods which are competitive even on the New Zealand market. Industries which can purchase externally (at low tariffs) two of the three classes of input have a chance of being competitive internationally. The New Zealand fishing industry can be competitive if it purchases its fishing boats duty free from overseas, and plastic toy manufacture is competitive if it purchases its raw plastic at the best foreign prices. For some industries (e.g. Tasman Pulp and Paper) the effect of purchasing capital goods such as new buildings at a local price which has included the cost of delays, has made the operation barely economic. The establishment of an inefficient industry may rule out the introduction of more efficient industries "upstream" or "downstream" of it.

The level of protection (especially internal licensing) has led to increased rigidity in the economy. Administrative tribunals and bureaucracies, by their very nature, tend to retard the abandonment of uneconomic forms of production, the entry of new aggressive firms into an industry, and the reallocation of resources. It's interesting to contemplate how a licensing authority (had it been in existence) would have reacted to the introduction of steam ships. The change from sail to steam late last century contributed to a fall in world shipping rates to less than one quarter of their previous level, but caused great changes in the shipping industry. Had there been a licensing authority together with a union which sought to preserve the status quo, the change would probably have been considerably delayed, and the many benefits of the new technology would have been lost in inefficiencies caused by restrictive practices. We are seeing this take place today when a similar "revolution" – container shipping – is being affected in just this way.

While a monopoly which maximises its profits produces at a lower level and at higher costs than a perfectly competitive situation, monopolists who "take it easy" are even less efficient. As Salter [1969] points out, there is danger in a monopolist who merely seeks an "adequate" profit. He is less inclined to invest and hence bring in new technology and lower prices.

The losses of statutory monopolies may be largely caused by the use of obsolete equipment which would not be tolerated in a competitive situation.

Part of the problem with licensing in New Zealand lies in the fragmented nature of the decision-making. There are definite benefits in decentralisation of decision-making, but if we were to start from scratch to draw up a system of tribunals to make decentralised administrative decisions, we would certainly not come up with the present one. The present system depends largely on historical patterns; the tribunals focus on a particular industry and not even on

the sector as a whole (e.g. how far do transport licensing authorities consider the relationship between the supply of taxis and congestion of city centres by private cars?), and they do not relate their decisions to a general plan for economic development. If licensing is to remain, it could be made much less harmful by requiring the effect of a licensing decision on the efficiency of the economy as a whole to be the prime criterion. But to judge this effectively, of course, would depend on governments making explicit their strategies of economic development.

EXPANSION OF WELFARE

The social welfare system has been greatly extended in recent years through introduction of the Accident Compensation Act, the Domestic Purposes Benefit, and the National Superannuation Scheme. These measures have the economic effect of further increasing transfer payments and thus raising taxes, but the growing adequacy of the welfare system offers an opportunity for considerable change in the structure of the economy without causing undue hardship.

Some problem areas do remain: redundancy payments, for example. When these are financed by an industry which is reducing its production they are inefficient since they slow down the closure of inefficient enterprises; they are inequitable in that the level of redundancy payment depends in part on the financial strength of the firms and on the bargaining power of the union; and they are available at different rates in different industries. If the State were to assume responsibility for redundancy payments, and to extend the principle of redundancy payments to other groups in the community, it could encourage change and increase efficiency. If, for example, New Zealand has too many retail shops, it would probably be cheaper to make some form of redundancy payment to the shop-keepers closing down than to maintain retail margins at a level which would keep all the extra shops profitable.

A policy of providing welfare benefits which are adequate to prevent hardship, and yet at the same time discouraging economic change so as to prevent hardship, is a "belt and braces" policy, and is wasteful in terms of reduced economic efficiency. Generous welfare policies also tend to reduce the need for personal savings which in turn makes it more difficult to divert consumption expenditure to investment.

Such a costly policy leads to a reduction in economic growth and in particular creates difficulty in funding adequate welfare payments such as the National Superannuation Scheme.

OFFERING THE IMPOSSIBLE

Management of our economy is difficult because economists all over the world have only a limited knowledge of how to deal with stagflation, the pressures exerted by powerful interest groups, and

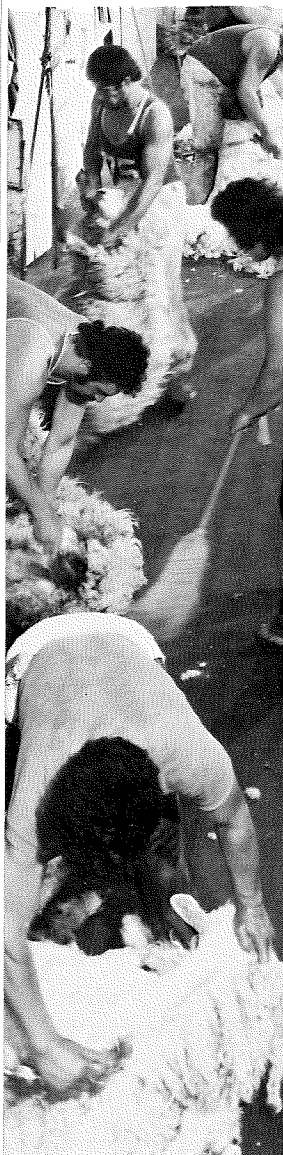
the balance of payments constraint. Despite this, all political parties in New Zealand have promised to achieve objectives which are beyond the reach of the economy.

Unfulfillable political promises to provide a land of plenty only encourage sections of the community to safeguard their own incomes at the expense of other groups, and contribute to the high rate of inflation. The effect of internal price inflation is most severe on those sections of the economy, such as farming, which are unable to pass on their cost increases. To be successful, policies of economic development in New Zealand require public expectations to be limited to what is deliverable. The less we learn to want, the better chance there is of getting it.

While public promises have remained extravagant, ministers and senior officials appear to have been much less certain as to which specific measures will make their promises a reality. The constraint on policy of not giving offence to major established interests has tended to limit new measures to "fine tuning" of existing systems rather than major changes. A few real changes have been made, such as the more flexible monetary policy introduced in March 1976, and the meat and wool price stabilisation schemes developed during the last five years. If in fact the present structure of the New Zealand economy is largely determined by institutional factors, the existence of structural problems may well arise from government unwillingness to change institutions or procedures. With a fairly tight constraint on major policy change, and fine tuning measures proving not just ineffective but actually irrelevant, it is no wonder that policy makers are being forced to consider more major changes.

CHAPTER II

AGRICULTURAL POLICY



Farming has been traditionally described as the “backbone of New Zealand”. Agriculture is much less significant now than in the first century of European settlement as a source of employment or production, but it still provides most of New Zealand’s foreign exchange receipts, and indirectly supports the activity of a substantial part of the economy. Nearly all food is produced locally, the major exceptions being beverages, sugar, nuts and some fruits. Agriculture could hardly be called the backbone of the country any longer, but our economy would be in dire straits if agricultural output were to be static or depressed.

Logically, one should start with the objectives of policy, then proceed to discuss particular issues and policy measures. But because recent agricultural policy objectives have seldom been clearly stated, it is more convenient for us to look at individual policy issues, and then to try to define the objectives underlying issues and policy instruments.

A problem-centred discussion of policy issues is likely to cause undue gloom and pessimism. This is especially so at the moment when the static output of the agricultural sector has caused people to doubt whether agriculture can make a significant contribution to the development of New Zealand in the future. Farming confidence ebbs and flows with the tides of price movements and climatic change, and the professional judgements of economists associated with the sector move in sympathy. In order to counter the gloom, let’s start by listing major problems holding back agricultural development overseas, but which New Zealand doesn’t suffer from.

Our farms are the right size: The structure of farming remains highly efficient economically by world standards. While the problems of agriculture loom large to New Zealanders, a comparison with either developing or developed countries show how manageable our farming problems are. The sizes of our farms are generally close to the most efficient size for New Zealand conditions, with few large estates (*latifundio*) or fragmented small holdings (*minifundio*) operating at a low level of efficiency.

We have no peasant farmers: Incomes are inadequate among a significant sector of New Zealand farmers and some social problems do exist in rural areas. But our farmers are well educated and relate closely to the urban community, unlike peasant farmers in both developed and developing countries.

We are technically well-off: As well as possessing the technical advantages of a temperate grassland environment, New Zealand has few major problems of contagious animal or plant diseases.

Our back-up facilities are good: The physical infrastructure of transport, communications, and processing facilities is well developed, even allowing for problems with the meat industry, roading and other services. The farming sector is well served by institutions providing credit and services. In particular the stock and station agencies which are distinctively Australian and New Zealand organisations provide a useful multipurpose service (despite their conservatism which can tend to delay innovation).

We have no stockpiles: Agricultural policy has prevented agricultural production drifting too far from market demand, so we have no "butter mountains" to dispose of. Any temporary stockpiling of wool and milk products has been in the nature of buffer stocks created to assist price stability rather than long-term "surpluses".

With the advantages it possesses, New Zealand agriculture is relatively well placed to achieve high growth rates in output.

WHAT GOALS FOR AGRICULTURE?

The objectives of agricultural policy are difficult to discover, since most discussions of agricultural policy focus on the means rather than the ends (for example the OECD report on New Zealand agriculture barely touches on policy objectives). Yet Maughan [1977] analyses a prime objective for agriculture: to grow sufficiently fast to provide enough export income for national income to keep increasing.

If we look at public policy measures affecting agriculture in the last ten years four objectives appear to have been sought consistently by successive governments.

- Greater stability in the prices received by farmers for agricultural products.
- Reasonable stability in farm incomes, especially the avoidance of high peaks and low troughs, but with less emphasis on the maintenance of relativity between the farming and non-farming sectors.
- As much growth in agricultural output as possible within the constraints imposed by the style of economic management.
- Minimum disturbance to existing institutional arrangements, particularly if major interest groups are opposed to specific

changes.

The current strategy has merit in that it relies on evolutionary change rather than risking revolutionary upheavals. But that evolution is too slow; technology and world trading conditions change rapidly, and our past patterns of activity become fossilized in institutional arrangements, which have now become a drag on economic development.

Just as general economic policy has given priority to stability and "fine tuning" rather than to substantial growth in national income, so too has agricultural policy made timid adjustments rather than bold, ambitious ones. (One exception is the major improvement in the price stabilisation schemes, which has been steadfastly pursued, and represents a major advance in policy).

The lack of clear-cut policy objectives has much in common with the uncertainties in agricultural policy characteristic of the slumps of the 1920s and early 1930s, and is in strong contrast with the more explicit nature of agricultural goals reaching back to the time of Wakefield (even Kupe?).

In particular, the situation in the 1970s is a reversal of that of the 1960s, when production increased rapidly. The climate of enthusiasm provided by the Agricultural Development Conference and the institutions that followed it persuaded farmers that the country needed increases in production and that these were in the farmers' interest as well. Good weather also helped, of course, as did a greater use of aerial topdressing.

The establishment of "targets" probably contributed little in itself to the increases in production, but farmers did gain the impression that national priority would continue to be given to the development of agriculture, so they invested with more confidence. In the event, farmers' average real incomes (as well as their income relative to the community as a whole) declined quite steadily between 1965 and 1971, producing considerable disillusionment.

The National Development Conference placed emphasis on increased exports of manufactured goods, while still relying on increases in agricultural exports. Unfortunately, policy makers seem to have subconsciously concluded that agricultural output could now be taken for granted. Events have shown this to be false, yet no major policy changes have put in an appearance.

FARMING IS STAGNATING

New Zealand has depended for a century on growth in agricultural production for the extra exports which meet the foreign exchange costs of a growing economy. During the 1970s agricultural production, and hence agricultural exports, have been relatively static. Why has this happened? Has the problem been a lack of export opportunities, or a change in the farming scene which has held back production?

It is clear that farming is stagnant. What is not so clear is why this

has happened.

Graph I (page 24) shows the volume of gross agricultural output from 1949/50 to 1975. The compound growth rates were: 1951/52 to 1961/62, 3.0 per cent; 1961/62 to 1971/72, 2.9 per cent.

Since 1971/72 the gross output fell but rose again in 1974/75 to just above the level of 1971/72.

It is useful to confirm the conclusions drawn from the real gross agricultural output series by examining the series for livestock numbers, (Graph II — page 24) which is also an indication of trends in output since most of the medium term change in output has been due to changes in livestock numbers rather than to changes in production per stock unit or to changes in non-livestock production. The trend of change in livestock numbers follows quite closely the change in real gross agricultural output.

The volume of agricultural exports has been relatively static since 1971. Changes in stocks of wool and dairy products make year to year comparisons difficult, but the average volume of agricultural exports over the past six years has been less than that in 1971 (see Table I — page 25). (An increase of about 8 per cent occurred in 1977, but it is too soon to assess whether or not this is the start of a rising trend.)

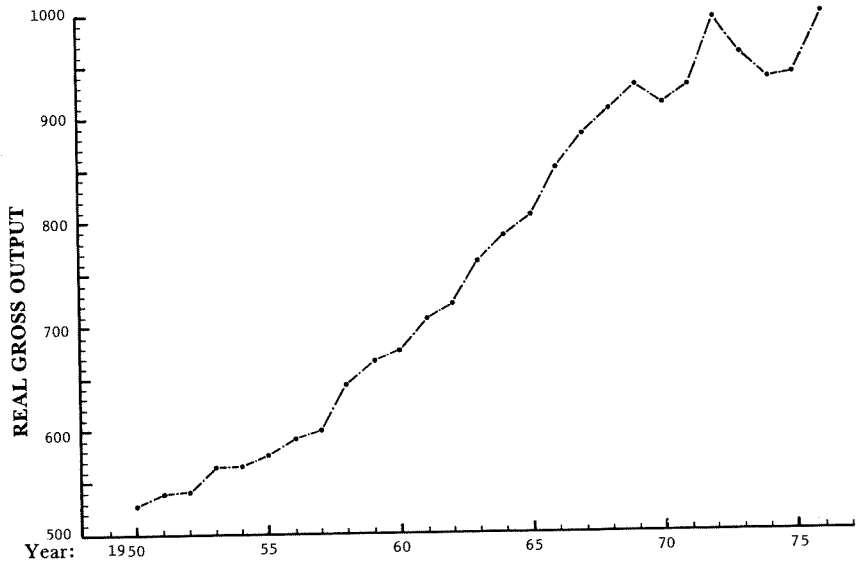
Had agricultural production kept increasing at 2.9 per cent per year, and all the extra production been in the form of pastoral products, in the same proportion as these products were produced in 1976/77, the export availability would have been that shown in Table II — page 25). This table also shows the extra export income from these products at the average export price in 1976/77.

These calculations are somewhat speculative, but they do show that the OET Current Account would be in deficit by \$100m-\$150m (instead of over \$500m), if agricultural growth had been maintained at the level of the decade to 1972, even if the extra exports had sold at prices current in 1976/77, even if the extra volume of exports had achieved a marginal price of only one-half of the achieved price levels, the additional export revenue would have been sufficient to bring the OET current account deficit to about \$350m, a far more manageable level.

By comparison, an improvement in Terms of Trade to an index level of 90 (base 1957=100) through lower import prices, would have meant a lower import bill in 1975/76 of about \$520m. (This assumes that the demand for imports was not increased by the lower price.)

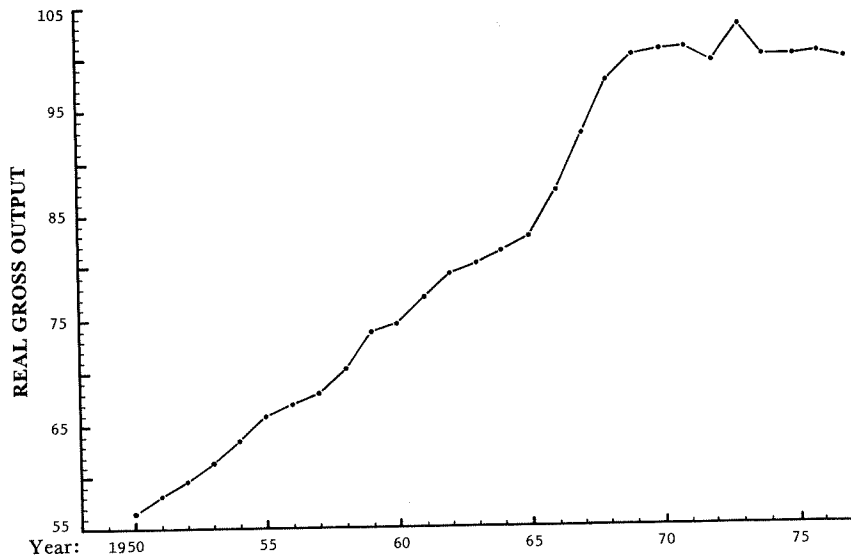
The conclusion to be drawn is that New Zealand's current and chronic balance of payments deficit has been caused nearly as much by the lack of growth in agricultural exports as by the decline in the terms of trade.

Popular (and even official) discussion of the problem soon becomes confused as to whether the constraint on agricultural exports has been due to an inability to market more exports without driving the marginal price too far down, or to a constraint on farm production.



GRAPH I AGRICULTURAL PRODUCTION

Source: B. Philpott *Why Has Agriculture Slowed Down.*
PEP Internal Paper No 32



GRAPH II TOTAL STOCK UNITS

Source: Ministry of Agriculture & Fisheries, *Economic Review of NZ Agriculture 1977* for post-1963, pers. comm. for prior to 1963.

TABLE I
VOLUME INDEX OF AGRICULTURAL EXPORTS
(1970 = 1000)

June Year	Index
1971	1000
1972	1024
1973	1021
1974	876
1975	855
1976	1005
1977 ¹	1089

1 Provisional

Source: Statistics Department, *Abstract of Statistics*

TABLE II
HYPOTHETICAL PASTORAL EXPORTS 1976/77¹
(Assuming 3.3 per cent growth in pastoral output 1971/72-1976/77)

Products	EXPORTABLE SURPLUS			
	Actual Situation ¹		Hypothetical Situation ²	
	Volume (^{'000 tonnes})	Value \$m	Volume (^{'000 tonnes})	Value \$m
Dairy (May)	228.0 ⁸	515.7	281	636
Lamb (Sep)	306.5 ^{3 4}	319.7	373 ^{3 6}	389
Mutton (Sep)	95.8 ³	67.8	123 ³	87
Beef (Sep)	353.4 ^{3 5}	} 312.3	376 ^{3 7}	} 331
Veal (Sep)	18.1 ³		17 ^{3 7}	
Wool (Jun)	285.5	648.0	338	769
Other Pastoral	—	237.6	—	279
		\$2101.1m		\$2491m
		Extra exportable surplus with 3.3 per cent growth		\$390m

NOTES:

- 1 Bases of calculations: Tables 44 and 45 of *Report of the Agricultural Review Committee* 1st March 1978. "Actual situation" taken directly from these tables.
- 2 Hypothetical situation based on a 3.3 per cent compound growth in pastoral production (equivalent to 2.9 per cent compound growth in gross farm output; with non-pastoral products held at actual levels). All products are given same growth rate. If growth had occurred, the product mix would have varied.
- 3 "Bone-in" weights.
- 4 The export surplus is less than production because of the increase in sheep numbers 1975/76-1976/77.
- 5 The export surplus is greater than production because of a decrease in cattle numbers in 1976/76-1976/77.
- 6 Allows for a retention of lambs to achieve a continuing 3.3 per cent growth rate in lamb and mutton output.
- 7 Assumes all extra cattle come from steers from the dairy herd.
- 8 Milkfat equivalent.

It is indeed hard to assess the market situation, since any increased quantities of lamb, beef and dairy produce are now being sold in "non-traditional" markets in which New Zealand has had relatively short experience in selling large quantities of produce. Even in these new markets the situation has changed in the last twenty years with the more protectionist policies of the E.E.C., and the U.S. (in beef), causing greater price inelasticity in residual world markets. Added to this have been the changes in the foreign exchange positions of the developing countries since the quantum jump in oil prices, with areas like the Middle East now appearing to offer significant market opportunities, and the non-oil developing countries having difficulty in finding foreign exchange for imports.

For three products, however, the market structure is such that an increase in New Zealand exports of about 25 per cent between 1971 and 1977 would have been unlikely to have caused a significant fall in world prices. For wool and beef our share of the world market (if one includes with wool the competing synthetics) is sufficiently small for an increase in our output not to have affected prices greatly. With lamb, where New Zealand supplies a larger proportion of world trade, much greater marketing efforts would have been required, but the capacity of markets in North America has hardly yet been tested. There is no doubt that stocks would have risen to much higher levels in 1975/76 (particularly with wool and mutton), but such stocks would have been quit by now. An assumption of a marginal price of one half the average price actually received is probably conservative.

At the very least, one can say that the existence of a binding market constraint on agricultural exports has not as yet been tested; and the constraints on the markets for non-agricultural goods may be equally binding. In such a situation we must conclude, (as have both Maughan and Ross), that New Zealand has no other choice but to try to expand agricultural exports.

A rapid expansion would mean we had to invest much more heavily in improving our marketing methods, and developing more marketing expertise.

In the rest of this book we assume that the binding constraint is on production, not markets.

Considerable work has been done recently on the causes of agricultural stagnation (Philpott [1977], Maughan [1977] and MAF [1976] are the most significant, without conclusive results. It is generally agreed that the most significant factors include:

- Climate: several poor seasons in the early 1970s;
- Economic: periods of lower farm incomes;
- Behavioural: lack of confidence by farmers, and disillusionment at lack of support by the community;
- Technical: fewer major technical advances than in the past.

(Some factors such as the effect of poor industrial relations in service industries, and uncertainty over export markets, are partly

behavioural and partly economic.)

An analysis of these factors is contained in Appendix I (page 58). The static output, we conclude, is mostly due to a normal economic response by farmers. As farmers' incomes have declined relative to those of the community as a whole, they have reduced the amount of new investment, with a consequent lowering in the rate of growth of agricultural output.

Several seasons of bad weather also left their mark. "Behavioural" factors – farmers' feeling of disillusionment at a supposed loss of support from the community, and their desire for more leisure – may both have deterred increases in production, but the remedy for these must be primarily economic.

There have been no major breakthroughs in technology in the last ten years that would further boost farm production, and much of the technological advance which has taken place has been in the form of innovations which reduce inputs rather than increase output, or in new systems of management. Management systems are always adopted more slowly than new devices or better chemicals. Yet agricultural production can still increase substantially with the technology we have now. The most significant effect of major advances (similar to aerial topdressing) would be to reduce the cost of producing more.

Barring technical miracles, the surest way to increase agricultural production is to make farming more profitable.

POLICY MEASURES

Most policy measures of the past ten years have been defensive in nature, ad hoc responses to particular situations rather than steps in a major programme. The measures tried include:

- minimum price support (through Reserve Bank or Government funding of the costs);
- better price stabilisation measures;
- a direct income supplement (Stock Retention Scheme);
- selective input subsidies of which the largest apply to fertiliser;
- a capital grant for development (Livestock Incentive Scheme)
- various taxation provisions to encourage investment.

These are the major measures, but a host of detailed "incentives" have also been applied. Some are quite specific, such as the lucerne establishment grants in the Rotorua/Tāupo area, while others have a much more general application.

The nature and complexity of the measures make it hard to assess their individual effects, but the total result can be seen from trends in output and livestock numbers. Recent policies have helped prevent our agriculture slipping, but have not yet succeeded in restoring sustained growth.

The reason for this failure seems to lie more in the effect general economic policies have on the farming sector, and in government's reluctance to try bold measures, rather than their lack of concern

over the state of farming. It's not that governments aren't worried about agriculture — they simply feel their hands are tied.

In the 1977 year some growth in the agricultural supply capacity seems to have been achieved, with sheep numbers expected to show the greatest increase since 1967/68, cattle numbers declining slightly, and grain and horticultural output still rising.

While the Livestock Incentive Scheme has made development involving increased stock numbers significantly more economic (see Appendix I), the exact extent of its effect on farmers' decisions to increase stock numbers is difficult to measure. The estimated increase in livestock (about 1½ million stock units) in 1977 is of the same order of magnitude as the stock increases in the applications made under the Livestock Incentive Scheme relating to 1976/77.

The Livestock Incentive Scheme breaks new ground. It is the first measure to base an incentive on a measure of productivity. It directly encourages farmers to increase their stock numbers rather than merely encouraging them to spend more money (as with other tax concessions). Since the applications under the scheme can be made at any time up to March 1979, and incentives apply to increases in stock numbers over three years after application, the scheme is known to be more permanent and hence likely to contribute more to farmer confidence than previous measures.

For all its benefits, the Livestock Incentive Scheme still has two disadvantages. It does nothing to directly discourage farmers from taking their money out of agriculture and buying non-farm assets. An element of distortion in resource use is introduced, since the incentive applies only to increases in stock numbers and not to increased production per stock unit. Since most increased output in the medium term must come from increased numbers rather than better stock performance, this drawback is not severe, but it is still undesirable.

Fertiliser subsidies are now largely used to keep up farmers' incomes. For many farmers, removal of the fertiliser subsidy would cause a significant drop in net income. Although the scheme is easy to administer and of particular assistance to many North Island hill country farmers, the subsidy has three big drawbacks:

- it encourages farmers to purchase more fertiliser than they would otherwise do, thus increasing the foreign exchange cost of phosphatic rock and sulphur imports, and slowing down the adjustment to higher world prices for these raw materials;
- not only does the subsidy distort farmers' spending in favour of fertiliser at the expense of items such as fencing, but fear that the subsidy may be removed causes even higher applications (a form of hoarding);
- if inefficient use of resources is the "New Zealand sickness", such a subsidy worsens the malady, since income support through input subsidies discourages increases in productivity.

Replacement of the fertiliser subsidy by other measures is urgently required.

While the taxation "incentives" do assist a farmer who is developing his property, he obtains the major benefits by spending more, especially on costly capital inputs, rather than by economising on inputs. A farmer who achieves higher production without increased inputs (through improved management) makes a greater contribution to the economy than one who spends a lot of money to increase production; yet the tax system favours the big spender. He is also likely to increase the value of his farm more, and thus recover the tax exempt investment if he should sell.

There are differing reasons why the present measures are not proving adequate to meet the goal of a steady and sufficient increase in agricultural output. As already discussed, the measures have not been sufficient to make development economically attractive to farmers in the face of adverse terms of exchange.

"Incentives" are only of use to farmers who are developing. Farmers who have already reached a high level of efficiency are left out in the cold and their best move may be to disinvest (i.e. reduce the level of their inputs to below maintenance level and not replace the capital items). They then invest the savings off the farm, or spend them on consumer goods. In other words, the present measures only relate to those farmers who are willing and able to increase production, and do nothing to prevent decreases in production on other farms.

Many of the measures are either "one-off" (e.g. the Stock Retention Scheme) or are subject to review or cancellation each year in the Budget (e.g. the fertiliser subsidy). Farmers cannot predict changes and so cannot undertake long term investment with confidence. As devices to compensate for inappropriate price levels the measures are inadequate.

Policies in research, extension and credit are pursued virtually independently of each other. A clear sense of purpose in increasing production by combining all three elements is badly needed.

As it the preceding factors weren't enough, the rising cost of meat processing and the unsatisfactory service provided by freezing works also deters many farmers from increasing production. Unless industrial relations improve, and increases in productivity start to restrain cost increases, the situation in the meat processing industry will hold back the achievement of extra farm production.

NEED FOR CHANGE

The stagnation in agriculture could be removed by a marked and permanent improvement in the climate, by farmers' terms of exchange (and hence farm incomes) improving substantially, or by a major technological breakthrough. Regrettably, none of these look likely to occur of its own accord.

If extra agricultural output is needed for the economy to grow, government policies must change. We must break the vicious circle of policy-makers expecting little from agriculture, introducing measures which achieve little, and expecting low growth, ever after.

The logical deduction is that evolutionary change in policy is not enough. Bold choices are required today. Policies to achieve growth will disturb entrenched interests and arouse opposition. In particular, growth policies for agriculture will almost certainly require that farmers' and other exporters' incomes increase (although not necessarily that farmers' wealth will be greater). Incomes may thus be distributed in a slightly less egalitarian manner and revert in this respect more to the position of the 1950s.

Political parties have been little attracted to major changes in agricultural policy and the opposition of pressure groups with apparently more voting power (and certainly the ability to protect their own income levels) would discourage change. The choice for political parties is difficult: whether to risk alienating significant groups of voters by apparently favouring agriculture (and other exporters) or risk being defeated because of recession or slump. While the choice for politicians may be difficult, the issue for New Zealand is more simple.

The easiest and quickest way to make everybody a little better off in New Zealand is to make export industries (including workers, shareholders, managers, and farmers) slightly better off still.

CHAPTER III

FIVE ALTERNATIVES

INTRODUCTION

In this chapter, we discuss five economic strategies and look at their effects on agriculture.

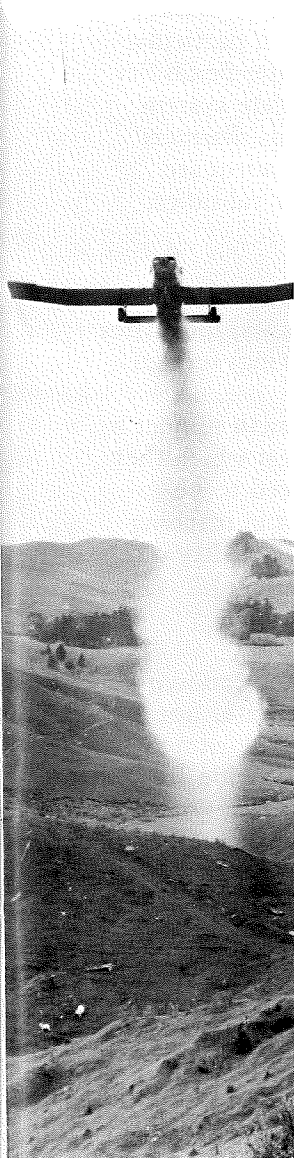
The strategies chosen are taken from major themes latent or explicit in the policies put forward by New Zealand political parties. While one or other of the strategies may be more in accord with the basic philosophy of each party, the administrative actions of both National and Labour governments suggest that in practice either could implement more than one of the strategies.

The strategies discussed are:

1. "More Market": a greater use of market forces to allocate resources within the economy, but at the same time using fiscal and monetary policies as stabilisers, and fully maintaining the social welfare system.
2. "Insulation and more Central Planning": increasing "protection" for export industries, with greater direction of resources by government on the basis of central planning.
3. "Industrialise Rapidly": allocating new resources primarily to the manufacturing industry, and limiting the resources (new and replacement) going in to agriculture.
4. "Tidy up Existing Policy": no change in the present style of economic management but rationalising existing measures applied to agriculture to obtain what extra output is possible under the constraint of limited change.
5. "Social and Environmental Needs First": placing social and environmental goals above the achievement of a higher "standard of living".

The alternatives are related to the general economic strategies discussed in Preston [1977] and Maughan [1977], but deal more specifically with agriculture. An attempt has been made to make clear the aims of each strategy and to suggest coherent ways of reaching those goals.

More extreme doctrinaire solutions have not been considered. State ownership and operation of all farm land in New Zealand would not only be politically unacceptable to most, but in the light of world-wide experience with state-run farms, would be most



unlikely to achieve increases in production or productivity. Similarly, removing all the restraints on private enterprise (such as control of land aggregation, or price stabilisation schemes) has not been considered to be either feasible, socially desirable, or likely to achieve the goals of growth in output.

For all that, the alternatives are presented starkly because the choices facing our economy today are themselves stark. Measures which involve little change have been tried for ten years, with limited effect. So the five strategies presented here involve more drastic change than this country has grown used to.

STRATEGY 1: "MORE MARKET"

The "more market" strategy is based on greater use of market forces to allocate resources within the economy, and in particular between the exporting and non-exporting sectors. Greater flexibility would be encouraged in all sectors and the social welfare system would be fully maintained to avoid individual hardship. Farmers' incomes would be kept at a level sufficient to ensure adequate investment for growth in output without the need for subsidies, incentives and assistance.

Goal

To maximise growth in export (and import substitution) industries according to their relative efficiencies in earning (or saving) foreign exchange.

The goal is not economic growth at all costs, but growth subject to environmental and social constraints at about the level at which they now stand. (The nature of these constraints would need to be changed in certain key respects, such as reducing delays in reaching decisions on development projects, especially where the quality of life is not significantly affected and economic costs are high).

Methods

The strategy is based on much greater flexibility in the economy combined with a more advanced social policy. The State, not the individual worker, would bear the personal costs of adjustment, and the social welfare system would be extended to provide for retraining and relocation of redundant workers.

In the economy, greater flexibility would be achieved through removal of many of the restrictions on competition. Fiscal and monetary policy would be directed towards the evening out of major fluctuations in economic activity to the greatest extent that is possible in a small open economy. No attempt would be made to "fine-tune" the level of demand.

The "more market" strategy depends upon a change in the style of economic management involving the use of policy instruments which are more neutral in their effect on different sectors. Especially it requires much less detailed administrative

intervention.

The strategy centres on the use of a flexible exchange rate policy to deal with fluctuations in the terms of trade. The policy would be a variant of the "crawling-peg" or managed float, in which the New Zealand exchange rate would be altered frequently by small amounts. The changes would follow trends in the relative level of prices in New Zealand compared with its major trading partners, as well as in the terms of trade. This paper will not go deeply into monetary policy, except to note:

- Frequent adjustments to the exchange rates through a float with varying degrees of management are now normal practice for most major economies and many of the smaller ones.
- Fear of the inflationary consequences of devaluation has prevented New Zealand governments from making exchange rate changes until the last possible moment. Frequent small movements in the exchange rate may not have as significant an effect on public expectations as large jumps in the rate, which encourage both businesses and unions to seek increases in prices and wages of the total amount of the exchange rate change, even though the direct effect of the exchange rate change on costs is smaller. Should the rate of inflation reach the level of some Latin American states, public expectations of exchange rate changes would become a significant factor in fuelling inflation. In such circumstances, though, relatively fixed exchange rates present an even greater problem.
- An over-valued exchange rate can only be maintained for a certain period of time unless major compensatory assistance is given to the export sector. Nearly all this assistance involves tax concessions or subsidies, so it increases the general level of taxation. The compensatory measures may in fact be having a more adverse effect on wage inflation and the rate of growth of the economy than would a more flexible exchange rate policy.

The use of exchange rate changes would reduce the need for incentives and assistance for exporters, and as many as possible of the existing measures should be phased out. Any measures which remained would need to be neutral in their effect on different sectors, i.e. not to be more favourable to one sector more than another. The "more market" strategy means that governments must recognise their inability to forecast changes in the world economy and changes in the demand and price for particular New Zealand products. It allows the New Zealand export product-mix to be determined by market forces (with some smoothing of short-term fluctuations in the case of agricultural products). Measures which favour one sector or another imply the government thinks that sector to be more efficient or to have better prospects, but if governments abstain from prediction and allow the relative efficiency of resource use in different sectors to determine their levels of production, discriminatory and distorting incentives are unnecessary.

The level of protection given domestic industries through tariffs and import licensing would gradually be reduced as the exchange rate changes, but measures against dumping would need to be both vigorous and speedy.

In the service sector, market forces would also be allowed to operate more freely. The restrictions on competition imposed through licensing authorities would be reduced; restrictive practices in service industries would be discouraged as far as possible; greater efforts would be made to increase efficiency within the government sector, especially in those areas which comprise a large part of government expenditure and where there is already clear indication of possible improvements, (e.g. hospitals and other health services).

This strategy would require governments to refrain from making nervous twitches of the wheel as they steer the economy.

Measures

1. Incorporate within the social welfare system provision for redundancy and retraining. Redundancy payments at standard rates common to all sectors (e.g. as a percentage of the worker's wage) would become a responsibility of the State. The redundancy supplement would be added to the unemployment benefit and payment would be limited if a worker immediately found another job (perhaps by making only a "dislocation" payment). Unemployment and redundancy schemes would include retraining (which would be widely defined to include university courses for professional groups, and trade training for unemployed school leavers) at full salary for fixed periods of perhaps up to a year.
2. Phase out tax concessions for agriculture and on manufactured exports, as well as agricultural input subsidies, and concurrently adjust the exchange rate downwards. Reduce taxation rates slightly at the same time to reflect the consequent lower level of government expenditure and increase in tax collected because of the removal of subsidies and concessions.
3. Abolish licensing as far as possible wherever it acts to restrict competition rather than to protect health and safety. To increase competition within industries subject to licensing, change the criteria under which licenses are granted. One possibility would be to establish as the first criterion for all licensing decisions, the need to increase efficiency in the economy as a whole, and to explicitly provide that competition is to be encouraged. It could also be worthwhile, in hearings of applications for new licenses, to place the onus of proof on the holders of existing licenses rather than the applicants. In professional services, greater competition could be introduced by banning certain trade practices adhered to by professional institutes or associations. (Although the codes of practice establish minimum scale fees and charge-rates and forbid advertising, it is doubtful whether these elements improve the quality of the professional services they offer to clients. But they

do drastically inhibit competition.)

4. Agricultural price stabilisation schemes would continue to use their present criteria, with no attempt to modify the price-setting in line with forecasts of farm income or market prospects. Relative prices of the major products would thus closely follow the medium-term trend, and periods of both high or low average incomes would be dealt with by alterations in the exchange rate. Pricing systems for non-livestock products would be modified to make them more comparable with the criteria under which the meat, wool, and dairy product price stabilisation schemes are operated.
5. Agricultural product marketing systems would change very little, but an element of private enterprise would be encouraged in marketing all products, especially in the development of new markets.
6. Government services to agriculture would be reduced to those which only the State can best provide. Basic research, and disease and quality certification under international standards would still be carried out by the Ministry of Agriculture and Fisheries, but much of the disease control and quality testing could be subcontracted to co-operative or private organisations (veterinary clubs, dairy companies, etc.) Extension and applied research could be carried out either by co-operatives or private organisations; with the cost borne by the farmer. Provided farming is sufficiently profitable, the service needs of the industry are more likely to be met efficiently when farmers pay the cost and decide what services to use, rather than when government agencies decide what free services should be provided.

In other words, the government would say to the farming industry: "We will see that your incomes are sufficient for you to produce efficiently, make investment, buy the services required, and get a return on your capital and effort equivalent to that received by the rest of the community. You as farmers will decide what to produce and how to produce it, and you will suffer the consequences of your own decisions. No further government assistance or incentives will be made available, and you will pay for everything you need at market prices (apart from the normal social services)".

Monitoring and Planning

The "more market" strategy would need less monitoring and planning than the present system uses. If the government decides not to intervene selectively, and is willing to let the shape of the economy be determined more by market forces, some of the existing administrative apparatus would be redundant. Monitoring would focus on the major aggregates in the economy, and on provision of more accurate and timely data on these.

Assessment

Introduction of the "more market" strategy would involve a major change in the management of the economy. It would be successful only if enough New Zealanders responded to the challenge of a more competitive environment. It would result in a more efficient use of resources than other strategies, and thus increase our chances for economic growth; but at some cost in income distribution.

The "more market" strategy is likely to appeal more to farmers, particularly sheep and beef farmers who have the best market potential and probably the greatest capacity for increasing production. If farmers could be convinced that successive governments were likely to continue such a policy, it would probably be the strategy leading to highest growth in agricultural output.

The strategy is discussed further in Chapter IV.

STRATEGY 2: INSULATION AND MORE CENTRAL PLANNING

The "insulation and more central planning" strategy aims at faster economic growth through more central direction of resource use and business activity. Market forces would play an even smaller part than they do now in the allocation of resources between sectors, but the government would develop a central planning framework into which its measures for different sectors could be fitted. Little institutional change would be required. Agricultural support measures would be brought into a comprehensive system of intervention, and be institutionalised to give more permanence. The strategy is quite similar to the policy on which the Labour Government was elected in 1935, but which was later effectively abandoned because of the balance of payments constraint. Federated Farmers' submissions to government in recent years requesting measures to ensure "income sufficiency" imply a policy of this type.

The strategy differs from present policy in that government intervention is brought into a more coherent system, directing resources more deliberately.

Goal

To maximise growth in export (and import substitution) industries using detailed administrative intervention by government to channel resources into particular sectors, and with a "central plan" to provide a basis for the intersectoral allocation of resources.

Methods

The "insulation and more central planning" strategy involves a shift in the style of economic management further away from the use of market forces. It thus involves policy changes in the opposite direction to those required by "more market" strategy.

Resources would be directed, as at present, by a combination of methods, including:

- selective taxes and subsidies (as with energy now)

- direct controls (as with the various forms of licensing now);
- government investment or activity in particular industries (as with the Development Finance Corporation or Air New Zealand now).

With market forces not being used to any great extent to allocate resources between sectors, there is a danger that patterns of industrial activity will be determined simply by historical accident (as is already happening). Government intervention would need to be based on the relative efficiencies and prospects for growth of different industries and sectors, to prevent haphazard development of the economy, with past patterns of activity remaining fossilised, slow adoption of new technology, and general stagnation through inefficient resource use. The government would need to consider not only what happens within each sector, but the effect of changes, especially intervention measures, on linked sectors and on the economy as a whole. Some form of "central plan" would obviously be needed.

Growth in export industries would be achieved by keeping them economically viable (relative to other sectors, and not necessarily in an international sense). Measures currently used "compensate" export industries for the extra costs imposed by the protection given other sectors, the level of wage rates, and the over-valued exchange rate. Such "compensation" is really a form of protection and is necessary if New Zealand industries are to be able to export under the current internal price situation. The strategy "insulation and more central planning" would remove as many distortions in the present intervention measures as possible and would seek to give them greater permanence to encourage investment in exports.

The policy is one of insulation not isolation. It does not seek to achieve self-sufficiency, nor necessarily to reduce New Zealand's dependence on trade. What it does do is stop exporters being the "meat in the sandwich", between a protective New Zealand environment and the harsh world of international competition. (For similarities with the policy of the first Labour government see Copland [1939].)

The strategy would take the existing measures which provide "protection" for farming, rationalise and extend them where necessary to meet growth targets; and build the extended system into a set of institutional procedures which assure a degree of permanence.

Measures

1. As in the "more market" strategy, farm incomes would be held at a level sufficient to ensure enough investment for growth in output, based on a cost-of-production formula. Incomes would be maintained either by tax measures or by some form of price supplementation involving output subsidies. Input subsidies into agriculture would probably be removed because of their distorting

effects.

As much as possible should be done through the tax system. The use of tax-reduction to increase farm incomes does not have the two major disadvantages of subsidies on product prices: raising the cost of farm products on the local market, and hence increasing the cost of living. Product price subsidies are internationally less acceptable, too, especially with the United States. The most efficient form of tax to encourage production would be some form of land tax rather than tax on income. However, if taxation of agricultural income is seen to be a political necessity, it could at least be applied at different rates from tax on other income. This could retain some element of progressivity in farmers' taxation, and incomes would continue to be redistributed through the tax system.

Tax concessions based on adding to the depreciation allowances which may be claimed as deductions on taxable incomes should be phased out, along with those provisions which enable certain categories of expenditure to be deducted at a rate of more than 100 per cent. The present tax system encourages business to *spend* rather than to *make profits*; it therefore encourages the use, rather than the conservation, of resources, and contributes to the New Zealand problem of inefficient resource use.

2. If taxation concessions were insufficient to provide adequate farm incomes, if they were politically impossible, or if the technical details were insurmountable, price supplementation would need to be used. The existing price stabilisation schemes for major livestock products could be used as a vehicle for price supplementation without causing great distortions or involving major administrative changes. In the case of dairy products, the basic prices for fat and non-fat products would simply be increased, and with meat and wool the same mechanisms would be used for supplementation, but pricing mechanisms for minor products might need modification to bring them in line with the schemes for the major livestock products. Supplementary payments would need to be funded by the government, either by transfers from the consolidated fund to the stabilisation accounts at the Reserve Bank or else by an increase in government indebtedness to the Reserve Bank.

This strategy is based on the hypothesis that the use of such supplementary payments will lead to an increase in agricultural output, an increase in export income, and, therefore, an increase in the growth of real incomes in New Zealand. If this does happen, the increase in tax receipts due to a rise in real income (i.e. specifically excluding the increase in taxation caused by inflation moving nominal incomes into higher tax brackets) would off-set the cost of supplementary payments. Any shortfall would need to be met by adjustments to government borrowing or spending, or an increase in taxation, if the effect were not to be an increase in the monetary base and hence higher inflation.

Price supplementation would involve the risk of New Zealand incurring international displeasure through "dumping" its agricultural exports. However, the dumping of agricultural surpluses (and steel, ship-building and other industrial products) is now so widely practised that it is unlikely to offend any trading partners apart from the U.S. The measures would thus need to be designed in such a way that they would not breach the U.S. legal requirements.

The strategy of "insulation and more central planning" would also require continual review of export "incentives" offered to other sectors of the economy.

3. The mix of agricultural products produced would be determined by deliberate alteration of the relativity of supplementary payments so that the prices offered were in line with government predictions of future market demand rather than past trends. For some products production quotas may be necessary (as with eggs and town milk today), and if introduced, these quotas should be freely marketable.

General stabilisation policy would continue much as at present, but inflationary pressures would be likely to be more severe as even less of the economy is exposed to the restraint imposed by selling at world prices. The aggregate level of demand would need to be managed much more closely than it has been in New Zealand in the 1970s, lest the demand for imports cause a situation similar to that faced in 1938. The system of supplementary payments to farmers could act to some extent as a semi-automatic stabiliser, as the dairy pricing system does at the present time. Supplementary payments would be higher in times of depressed terms of trade and lower during periods when the terms of trade are high, thus tending to reduce fluctuations in the monetary base and in incomes.

4. Other measures compatible with this strategy include a capital gains tax; firm control on aggregation of farm land; and concessional credit from government sources for development.

Advantages

The "insulation and more central planning" strategy would have some advantages. It should give more confidence to farmers and other exporters to invest and increase their production for export, thus leading to a higher rate of growth in national income than would be likely without policy changes. The strategy would have a greater chance of permanence than the "more market" strategy, since institutional structures are so rigid in New Zealand that once they have operated for a number of years, change or removal becomes most unlikely.

Even although central planning is a notoriously sluggish method of allocating resources, it may well be more efficient than our present system of allocating them by historical accident.

The strategy could be politically more acceptable than the "More Market" strategy, since it involves less disruption to existing institutional arrangements, is in line with the trend in New Zealand over the past forty years, and can be made superficially attractive by its emphasis on the role of government in directing resources for the benefit of society as a whole.

Disadvantages

As the New Zealand Labour Party found during its first period in office, a policy of insulation requires firm restraint on government spending and on consumer demand, if a shortage of foreign exchange is not to force an abandonment of the policy.

Belshaw pointed out nearly forty years ago (Belshaw [1939] p. 70-71) that such a policy of "parity" brings real dangers of an inflationary cost price spiral. The effect of this strategy on income and price policies in New Zealand is difficult to predict but it is likely to make prices and incomes more difficult, rather than less difficult, to control.

While government direction of resources between sectors may be made in the light of relative efficiencies of resource use, the "insulation and more central planning" strategy takes some of the pressure off inefficient producers within each sector. Just as farmers form a spectrum of production units with widely differing levels of efficiency, so too do the firms in other sectors. As the whole economy moves to a "cost-plus" basis, inefficient producers are more likely to remain in business and use resources wastefully.

Both the U.S. and the E.E.C. have operated agricultural price support schemes with some similarities to that suggested in this strategy. Such schemes have an inherent tendency to build up surpluses to unmanageable levels. While the New Zealand situation is rather different, great care would need to be taken not to produce too great quantities of those products for which world demand is relatively inelastic. That is to say, unless the "plan" were in line with external market realities, it would ultimately require costly and embarrassing modifications.

Monitoring and Planning

Considerable economic skill and accurate forecasting would be needed to make this strategy work.

Close monitoring of both agricultural and non-agricultural sectors would be required. On the farm side this involves mainly the monitoring of farm incomes and investment while on the non-farm side studies such as those being carried out under the Industries Studies programme would have to be undertaken for all sectors and would need continuous updating, possibly using Domestic Resource Cost criteria. The sectoral plans would need to be fitted into a comprehensive macro-economic framework. Much more comprehensive work would be required than was carried out by the

National Development Council, and a Central Planning Unit with a considerable staff would be necessary. Further medium-term econometric models, particularly forecasting models, would be needed.

Business enterprises and government would each need to have a much clearer appreciation of what the other intended to do in future, and the channels of consultative planning would have to be considerably improved. In agriculture, there would be an annual negotiation of the level of supplementary payments, and greater cohesion would be needed between Federated Farmers and the producer boards (all of which to some extent represent farmers in the political arena).

Assessment

The "insulation and more central planning" strategy would be very difficult to manage. Unless domestic demand were restrained, New Zealand would continue to face the same balance of payments problems as it does now. Reallocation of resources by government requires bold decisions which may not be politically feasible — would any New Zealand government be prepared to take administrative decisions involving the deliberate closure of the number of clothing factories which have been forced to cease operations in the last year?

Nevertheless, the strategy could give better results than the policies adopted during the 1970s which have led to inadequate growth in export volumes and major distortions in resource use.

The "insulation and more central planning" strategy is of interest because the policies of both major parties already lead in this direction to some extent. The farming community appears much more ready today to accept such a "socialist" strategy, and New Zealanders seem generally so addicted to government intervention that more market-oriented strategies may not be so acceptable to the electorate.

The uncertainty inherent in economic forecasting makes central direction of resources somewhat hazardous. Unless the plan allows for uncertainty by spreading the risk (as entrepreneurs do), and unless the planning apparatus responds rapidly to changing circumstances, problems of lost opportunities, shortages and surpluses would occur as they do in the centrally planned economies.

STRATEGY 3: INDUSTRIALISE RAPIDLY

"Industrialise rapidly" is not really an independent strategy, but a variant of the existing policies. It requires no major changes in the style of economic management.

The strategy is based on quickly reducing New Zealand dependence on agriculture. It requires that alternative export-producing industries be developed as rapidly as possible and involves a period of slow growth in Gross Domestic Product and consumption

while these industries are built up. The strategy is similar to that which was followed by Australia, and is an extension of much of the thinking behind the National Development Council; thinking that was seldom fully worked through or made explicit.

Goals

The goals of the strategy are to maintain economic growth in the medium term and to reduce our dependence on agricultural exports. Further import substitution would also be attempted.

In the short to medium term (up to five years), no attempt would be made to increase the level of consumption.

Methods

Agricultural consumption would be kept constant but static, by reducing the resources flowing in to the sector. No encouragement would be given to new investment in agriculture, and social problems arising from a lower level of agricultural incomes would be dealt with as they arose.

Major new industrial plants would be established, mainly based on local raw materials. The pattern of development would be similar to that undertaken in the past, with iron and steel, aluminium, forest products and petrochemical industries expanded or introduced. Further import substitution would also be encouraged, particularly with major industries whose products are the basis of existing manufacturing operations in New Zealand (e.g. plastics), and which also offer export possibilities.

Existing smaller manufacturing industries and the service sector would be given further incentives to expand their exports.

Measures

1. Encourage major international companies to establish resource-based heavy industries and to undertake marketing of the products overseas. The price of the raw materials used, including electricity, should be indexed to avoid the situation which has arisen with long term flat-rate contracts in the forestry and aluminium industries, but prices would still need to be concessional. The export price, where it is negotiated in advance, would also need to be indexed or related to the general level of future world prices. The incentives offered would be primarily taxation concessions on exports, perhaps guaranteed for quite long periods (ten to twenty years) in advance. Much of the capital required would be provided by the multi-nationals and some relaxation of the present attitude to overseas investment would be needed.
2. The rate of planting new forests and the building of new forest processing industries would be expanded. The development would be concentrated in a few regions so as to minimise any disruption to existing rural communities, to take advantage of the economies of scale in the forest service industries, and to concentrate the

environmental problems of the forest processing industries in a few locations.

3. Make no change in existing measures relating to the agricultural sector, and in particular keep subsidies to agriculture at their present nominal values so that their effect is gradually reduced by inflation. As agricultural incomes decline, encourage the amalgamation of uneconomic properties and assist the farmers who are displaced to rehabilitate themselves in other occupations (as with the Australian rural adjustment schemes).

Advantages

In the long term, New Zealand would become less dependent on a narrow range of exports and would not be so subject to fluctuations in export prices or in the terms of trade.

The multi-national companies would bring the most advanced technology in their fields and the new heavy industries would be technically efficient by world standards.

The strategy would not widen income distribution patterns in New Zealand, (although it might help the income of multi-national companies). The price of agricultural products on the local market would not increase and thus affect the politically sensitive consumer price index.

The price of farm land would tend to rise more slowly than with the "more market" and "insulation and more central planning" strategies.

Disadvantages

The success of this strategy would depend on a rapid increase in market access at economic prices for non-agricultural products. While New Zealanders are fully aware of the risks and uncertainties of agricultural markets, they are only just becoming aware of the similar hazards in the export markets for manufactured goods. World markets for forest products, steel, ships, television sets, and clothing (to cite a few examples) have experienced problems similar to or worse than those of agricultural products. A shift from agricultural exports to manufactured exports does not automatically solve the problem of market constraints.

Many of the manufactured exports from New Zealand at the present time appear to be marginally costed. As these exports increase as a proportion of total exports, marginal costing must be reduced or cease altogether. The manufacturing industries will thus increasingly find themselves in the same situation in which New Zealand agriculture is placed today — squeezed between rapidly rising local costs and external market prices.

The encouragement of multi-nationals involves both technical and political problems. Manufacturing in New Zealand for export would only be attractive to an international firm if raw materials are cheaper here than elsewhere (because New Zealand possesses neither

cheap labour* nor a large local market, which are other possible attractions). With both Comalco and Tasman, cheap resources have encouraged multi-nationals to be involved. Conflict therefore arises between the need to obtain the best price possible for New Zealand resources and the need to industrialise. The same conflict occurs with local firms, but to a lesser extent; because local firms are seldom big enough or bold enough to have the same world-wide choice of country for their operations.

Multi-nationals are more difficult to tax than indigenous firms, and trade unions and many farmers are strongly opposed to them (recall the "Kraft affair", and farmers' attitude to Vestey's and Borthwicks). While some of the opposition is not well-founded, multi-nationals can be difficult to deal with, and a policy of encouragement may be politically impossible.

The strategy would be slow to take effect. New heavy industries often take about five years from planning to full production. The existing smaller industries within the "other manufacturing" sector provide a small proportion of existing exports and even if they expand at a faster rate than at present, their effect on total exports would not be sufficient to meet the growth needs of the economy for some years. Substantial increases in the rate of growth of the services sector would also take some time. Exports of consultancy services offer good prospects but currently comprise only a small proportion of invisible exports. The exports of some financial services are to a considerable degree linked with the exports of goods, and are unlikely to expand more quickly than the rate at which the latter expand. Tourism is the other major component of services export, and it too requires the construction of substantial facilities, which also takes time.

In short, the strategy requires a period of low growth in exports, and hence in Gross Domestic Product and consumption, and such a period of restraint lasting perhaps five years is unlikely to be politically and socially acceptable.

Substitution of manufactured goods for agricultural exports would help reduce fluctuations in export *prices* and the terms of trade, but brings with it increased fluctuation in export *volume* and *employment*.

The strategy would not make use of New Zealand's comparative advantage in agriculture and hence would involve a less efficient use of resources.

If agricultural output remains static, average agricultural incomes decline, and labour-saving technical progress still takes place, farm size would need to increase faster than it has done in the past if the creation of a "peasantry" is to be avoided. Smaller farms will become uneconomic, and to prevent social problems in rural areas, rural

* It seems that the lower hourly rates in New Zealand compared with some other industrialised countries are offset by lower output per man hour.

adjustment policies will be needed. Such policies are costly and politically difficult to handle.

Monitoring and Planning

The strategy "industrialise rapidly" could be implemented under either a market-oriented regime or through a central planning approach. The needs for monitoring and planning would be similar to those of the two previous strategies, but in addition considerable social planning would be needed as part of agricultural adjustment schemes.

Assessment

The strategy may work in Australia where rural exports have already declined from over 80 per cent of total exports in 1954/55 to 44.3 per cent in 1975/76, and where vast mineral resources provide a quickly realizable source of exports; but New Zealand does not have an alternative source of export income to bridge the gap.

Expansion of heavy industry would necessarily involve multinational companies. In the present situation where New Zealand is renegotiating unsatisfactory past agreements, multi-nationals may well demand considerable inducement to undertake high levels of investment.

Most developing countries are seeking to expand their exports of manufactured goods as rapidly as possible, and are in competition with New Zealand, especially in basic consumer goods. New Zealand's isolation, small home market and higher labour costs are all disadvantages. The best long-term prospect amongst the smaller industries would seem to be (as Geoff Datson, deputy-secretary of Trade and Industry has suggested) in products which incorporate an element of high technology, and which have a high value to volume ratio.

Such products, however, represent an even smaller proportion of New Zealand's exports at the present time, and even if very rapid growth occurs, it will be some years before they can provide a significant part of New Zealand's total exports.

Implementing this strategy would mean considerable restraint in incomes and consumer demand for at least five years. It would require a national effort comparable with that of Britain in World War II, or Germany and Japan in the reconstruction after the war. There is little evidence that the people of New Zealand are ready for such an effort, and it is doubtful whether the longer term advantages of the strategy would justify the much higher immediate costs.

STRATEGY 4: TIDY UP EXISTING POLICY

The strategy "tidy up" is based on a continuation of present policies of economic development, but with some changes in measures applied to the agricultural sector. The aim of the changes would be to remove distortions, increase efficiency and increase the growth in output.

Goals

The goal is to restore a reasonable rate of economic growth in New Zealand as quickly as possible, by increasing exports and improving the efficiency with which the resources are used, but at the same time to make as little change as possible in existing institutional procedures.

Methods

The present policies involving selective administrative intervention would be continued. Specific export incentive measures for each sector would be further developed until enough export growth was achieved. The Industries Studies programme would be implemented rapidly to determine the efficiency of resource use in different sectors and to help in designing particular incentives. Some pressure would be placed on the service sector to encourage greater efficiency.

The existing measures relating to the agricultural sector would be extended to achieve the highest rate of export growth possible without substantial institutional changes.

Measures

1. Existing tax concessions on exports would be further extended, with measures specifically designed for each sector. To encourage exporters to *earn* rather than *spend* foreign exchange it would be useful to change the basis of the tax incentives so that net foreign exchange earned is taxed at very low rates (if at all), and no encouragement is given to the spending of foreign exchange in producing exports. This could be done by deducting from assessable incomes the net foreign exchange earned, and taxing it at a much lower rate (possibly zero). The same principle could be applied to farm income by using a different tax scale which reflects the net foreign exchange earned by farming.
2. Alternative taxation incentives for agriculture could include:
 - (a) The use of a tax on land rather than tax on agricultural income, as mentioned in the other strategies.

This measure could be introduced on a voluntary basis, but with farmers not having the option to change back to tax on incomes for a period of say five years. Being voluntary, the scheme would invite less political opposition from farmers, and would mean that those farmers wishing to increase production would pay no tax on the extra production. It would thus provide substantial encouragement for extra production as well as discouraging disinvestment.
 - (b) Farmers who increase their real incomes through increased production could be exempt from tax on the increase. It would not be possible to assess on each individual farm how much of the increased incomes came from changes in farming operations, changes in relative prices of farm products, or changes in the general price level of farm products. For the scheme to be

workable, an index of the change in the terms of exchange of the whole farming sector would be required. No income tax would be payable on income above a base to be established by multiplying the previous year's income by the change in the terms of exchange (an average over two or three seasons might be necessary). The scheme would involve inequity between the different classes of farmer as relative product prices change. For example, if wool and lamb prices moved up and dairy prices moved down, sheep farmers would receive a bonus tax incentive without increasing their volume of production while at the same time some dairy farmers who increased production would be ineligible (this would, of course, encourage farmers to produce the product which is in most demand in particular seasons, but the possibilities of rapid substitution are limited). The measure contains a considerable element of unfairness, but it would at least be practicable; in contrast with measures which involve measuring the volume of production of each farm (the volume of production represented by store stock sales is almost impossible to measure; and substitution of one form of production for another can only be related by considering the gross income from each enterprise in each year — which is too complex a basis for taxation).

- (c) The Livestock Incentive Scheme could be extended either by increasing the incentive offered or by applying the principle to different methods of increasing production (i.e. methods other than a simple increase in stock numbers). The Livestock Incentive Scheme offers the choice of a tax free capital grant or an equivalent reduction in income tax, with the amount payable to an individual farmer determined by his increase in stock numbers. Although the scheme significantly improves the economics of development it was neither designed nor able to offset the declines in farmers' terms of exchange. Raising the level of the incentive would probably encourage development in harder hill country. To move the bias against increases in production per stock unit a bonus payment could be made on increases in lambing percentage (based on lambs reared) or in calving percentage in beef herds. Similarly an increase in milk fat production per cow could attract a bonus payment.
3. The fertiliser subsidies could be replaced by other measures. Reducing the subsidies would present little difficulty, and could be achieved by a phasing out in two or three equal stages over the next three years. Announcing such a phasing out in advance would be unlikely to cause much more hoarding of fertiliser than goes on already because farmers are uncertain whether the subsidy is going to be continued next year. Since the fertiliser subsidy is equivalent to a substantial part of the net income of farmers at the present time, a replacement measure is needed. If the more drastic changes envisaged in the strategies discussed earlier are not used (more

flexible exchange rate policy or output subsidies), a substantial reduction would be needed in the rate of income tax on farm income (e.g. in 1971-72 input subsidies were worth about \$31,000,000 to the farming sector, while income tax paid by farmers and farming companies totalled about \$55,000,000). Removal of input subsidies would require tax rates to be greatly reduced and this would neither help farmers currently on low incomes nor give other farmers high enough incomes to ensure sufficient investment. To remove input subsidies and secure enough investment would probably require the removal of all tax on agricultural income. Even if this were done, problems would still arise because of the distribution of income amongst farmers. Farmers who at present are paying little or no tax would have their incomes reduced while farmers in high tax brackets would receive a disproportionate benefit.

4. The inadequacy of tax concessions to meet the problem of low farm incomes suggests that other measures are necessary. The most effective would appear to be a modification of the price stabilisation schemes (as discussed in the "insulation and more central planning" strategy). Instead of each season's price or floor price for a particular product being within a band of 10 per cent above or 5 per cent below the previous season's actual price, the previous season's price would first be adjusted for inflation to determine the range within the new season's price would be set. This would mean that the *real* price rather than the *nominal* price would be within a band of 10 per cent above or 5 per cent below the previous season's. Farm incomes would thus be protected against inflation while relative prices could still change according to external market conditions. The government would need to accept responsibility for part or all of deficits created in the Reserve Accounts, and yet not exercise any more control than at present over marketing of livestock products.
5. Because of the difficulty in formulating policy measures within the constraints discussed above, a "tidy-up" strategy should seek to reduce the cost of production by providing new technology at a faster rate than at present. An intense programme of agricultural research and extension would be required. Both research and extension efforts would be concentrated on the technology which offers the prospect of the biggest payoff. Judgements would be needed as to the probability of success in developing new technology, the cost of its development, and the costs and benefits of its adoption on farms. Cost-benefit analysis of the alternative possibilities would be undertaken, with a weighting placed on the volume of increased export production likely to be achieved. The major research thrust would be directed towards those technologies which offered the best expected return; whereas other interesting, useful, but less profitable research projects would be delayed for a period of years. To some extent, this

process is merely formalising present decision procedures, but it would imply that research was being redirected, and that more weight was being given to economic factors.

The nature of extension efforts would require a similar change. The justification for a free advisory service is the dependence of the New Zealand economy on agriculture. Since this dependence relates now to export income and hence the volume of agricultural production, the justification for a free advisory service lies in its ability to increase its export income. The aim of government extension services in this intensive programme would thus be to "sell" those management techniques which make farming more profitable to the farmer and at the same time increase production. The advisory service would need to make a much greater concentration of effort, and spend more time with individual farmers rather than on administrative and committee work.

6. Further incentives would be given the processing industries. Incentives would be based on the degree of further processing in New Zealand, and in order to minimise resource use, would require an objective evaluation as in the Industry Studies. If farm incomes were inadequate to maintain investment, some subsidy could be fed into the system through the processing industries and thus reduce killing charges, etc.

Advantages

The "tidy up" strategy would remove one of the major distortions in resource use inherent in present policies — that caused by input subsidies. Changes in the tax structure which applied across-the-board tax reductions on agricultural income could lead to some increase in the level of production. Replacement of tax on agricultural income by a tax based on land value would be more effective in increasing production but would do little to resolve the problem of low farm incomes.

The main advantage of this strategy is the minimum disturbance to existing institutional arrangements.

If New Zealanders really want economic management to continue on an ad hoc interventionist basis, and if any political party which offers more radical solutions to New Zealand's economic problems is likely to be defeated at the polls, then only strategies similar to this one are possible.

Disadvantages

The strategy is tightly constrained by the policy of fixed exchange rates, and the need to replace input subsidies with less distorting measures. Even if no tax at all were levied on the farming sector, incomes may still not be sufficiently high to attract enough investment to ensure the growth rate in output which is required.

A policy based on ad hoc intervention does not build confidence

among investors. If, in the face of declining terms of exchange, farmers have to rely on additional government measures year by year to ensure the profitability of farm investment, their confidence depends on their past experience of government intervention. Slowness of the response of governments in the past, and the inadequacy of past intervention measures, would make it difficult for future governments to convince farmers of a change of intention.

Incentives based on increasing stock numbers or on improving specific technical co-efficients are a palliative at best, since they do not discourage farmers from disinvesting, and they introduce damaging distortions into investment decisions.

The option of indexing floor prices is free of the disadvantages listed above, but rising deficits in the Reserve Accounts and the consequent drain of the Consolidated Account (or upward pressure on the money supply) would ultimately force devaluation. This could, however, be an advantage.

Assessment

The "tidy up" strategy would improve existing policies to some extent by removing distortions in resource use and by increasing output. It is unlikely to produce the growth rate of agricultural exports achieved from 1950-70, and if the exchange rate remains fixed at unrealistically high levels, more and more "assistance" measures would be necessary for agriculture and for other exporters.

The strategy can thus be viewed as one of short-term expediency, and the failure to restore a reasonable rate of economic growth would mean more drastic changes would be inevitable in the long run.

STRATEGY 5: PUTTING SOCIAL AND ENVIRONMENTAL NEEDS FIRST

The concept of giving higher priority to social and environmental goals at the expense of economic growth is more a set of ideas than a strategy. It stems from a recognition of the high social and environmental costs of some forms of economic development, and is a reaction against blind pursuit of economic goals regardless of the type of society that pursuit is creating.

For many years, New Zealand has been prepared to accept a lower rate of economic growth than would otherwise have been possible in order to achieve particular social goals. Economic growth (as traditionally and narrowly defined) has been retarded by:

- the substantial resources devoted to housing, health services and education;
- the policy of "full employment";
- policies to achieve a relatively egalitarian income distribution but which reduce the rewards for skill and initiative.

New Zealanders seem to have made a deliberate decision as to national priorities in this field.

Awareness of the environmental costs of development have come more slowly. Before the 1950s, there was little concern for protection of the environment, but institutional procedures are now well established to give a fair degree of protection against environmental damage.

A strategy which gives greater weight still to social and environmental goals may be inconsistent and self-defeating. The labour force in New Zealand is predicted to grow at about 1.7 per cent per annum between 1976 and 1985 (New Zealand Planning Council estimates), compared with about 2.0 per cent per annum in the previous ten years. The economy therefore needs to grow about as fast as it did in the past decade if employment is to be provided, real wages are to be increased, and substantial emigration avoided. The social costs of any of these latter options (including that of a mass desertion) are high.

Social Goals and Agriculture

Where social goals have been evident in New Zealand agricultural policy they have been centred on the concept of the family farm. Policies designed to encourage a farming structure based on economic family-farming have included:

- restrictions on land aggregation;
- the purchase (at times compulsory) of large estates for subdivision;
- development of virgin land by the government and its sale as one-man units;
- more recently, restrictions on the subdivision of land into "uneconomic" units;
- lending policies of the Rural Bank which are strongly biased in favour of smaller owner-operated farms.

The policies have been remarkably successful and have contributed to an efficient farm structure in New Zealand, and a country almost free from latter-day squatters or peasants. Some hidden social problems have been involved, however, particularly arising from the extraordinary amount of work contributed by the wives and families of young farmers (and sharemilkers) who are in the process of moving towards farm ownership.

As labour-saving technology has been developed, the net return per unit of production has declined, and the minimum economic farm size has steadily increased. At the same time, farm value per hectare has risen substantially. The cost of purchasing an "economic farm unit" is much more than a young man or woman could expect to save from wages. A person wanting to own a farm has the options of progress through sharemilking, operating a smaller farm part-time, or accumulating capital through another type of business.

The continuation of farming based on the owner-operated farm (although farms may need to be larger to be economic) is important in a strategy which emphasises social considerations. New

institutional arrangements are probably required. Possibilities worth exploring include company structures which enable farm managers to participate in ownership, indexed mortgages with lower capital charges in early years (as have been suggested by Ross), restoration of concessional interest rates for younger farmers purchasing farms, and Rural Bank finance for part-time young farmers to purchase small farms (which would be uneconomic as a full-time enterprise) as stepping-stones to a larger property. More generally, the quality of rural life could probably be best preserved by better roading and communications, to give farmers easier access to urban facilities.

Agriculture and the Environment

The development of New Zealand agriculture has involved a great change in the environment, with unnecessary damage in some instances. Native forest has been destroyed in some areas where farming is unlikely ever to be economic. Adequate control of erosion is a very recent concept. Almost no attention was paid to it in the past, even in the development of North Island pumice lands in the early 1950s. The dairy industry, both farms and factories, together with meat works and wool scouring plants, have contributed to high pollution in rivers.

Existing measures appear to be achieving considerable improvement, and the major environmental problems arising from agriculture are now inherent in the production process itself — pollution from livestock excreta, and “enrichment” of rivers and lakes arising from topdressing and the unpreventable minor erosion of fertile pasture land. Prevention of this pollution would preclude intensive livestock farming, but a strategy which minimised environmental damage might include alternative land use, particularly forestry, in selected high risk areas.

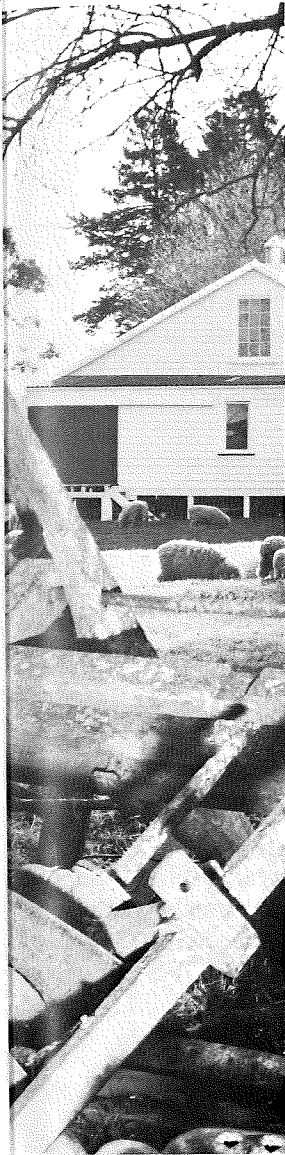
Assessment

Severe social problems are likely to arise from a lower rate of economic growth than New Zealand has achieved in the past. Policies which involved the provision of further environmental benefits or social goods at the expense of consumer goods and services (together with housing) would require a marked change in New Zealand attitudes. The strategy thus depends for its success on a prior change in the expectations and goals of New Zealanders.

Some changes in social policy (e.g., a less vindictive penal policy, or emphasis on community health care rather than hospitals) could bring both social and economic benefits, but if a major redirection of priorities leads away from the products of a reasonable level of economic growth it would seem to be neither warranted nor desired by most New Zealanders.

CHAPTER IV

A NEW DIRECTION



So far, we have examined the following arguments:

- The balance of payments constraint imposes a limit on New Zealand's economic growth-rate, and present economic difficulties cannot be resolved unless extra export income is earned;
- More agricultural output is needed to push back the balance of payments constraint;
- Farming, like exporting generally, needs to be more profitable to attract investment designed to increase production;
- A change in agricultural policies alone is unlikely to be sufficient to achieve a faster growth in output, and a shift is needed in the direction of general economic policy;
- A style of economic management based on ad hoc government intervention is inadequate to solve New Zealand's problems.

Government bureaucracy is often blamed for the high level of administrative intervention in New Zealand (e.g. *Manpress* No. 76/20, November 1977). But it is inaccurate to suggest that public servants believe so deeply in Parkinson's Law that they are fostering administrative controls to increase staff levels and thus win promotion. Nearly all bureaucrats detest the introduction of new schemes, which tend to involve them in complex and tangled administrative procedures.

As the Manufacturers' Federation suggests, the pattern of ad hoc intervention arises from direct pressure by interest groups and individuals who think that solving any problem in the economy and society is the government's responsibility. Since no government likes to admit to impotence in any area, new laws and regulations are introduced. Activities in every area of life are regulated, from multi-nationals to massage parlours. Yet economic growth and virtue are equally difficult to achieve by legislation.

Some years ago McMeekan suggested that New Zealand was following a pattern of decline similar to that of a certain South American country (understood to be Uruguay), whose economy had basic similarities with New Zealand's. How accurate his prophecy was is demonstrated by the events of the past decade. If our export income does not rise and our rate of economic growth continues to remain abysmally low by world standards, New Zealand has little option but to adopt a siege economy, with static or declining living

standards. We will witness the continued mass desertion of citizens with skill and enterprise.

Faced with this prospect, New Zealand has no choice but to adopt a new strategy.

The strategies discussed in Chapter III deal more specifically with agriculture but are essentially general economic strategies. Three of these are unlikely to deal adequately with New Zealand's economic problems.

The "tidy-up" strategy might bring forth slightly more exports, but would be unlikely to achieve a significant improvement in the economy.

The "social and environmental needs first" strategy does not deal with basic economic problems, and because it would involve little if any growth in real incomes, would not permit an improvement in living standards as we conventionally understand them. The social problems caused by a failure to improve the way of life of those now on lower incomes are likely to be greater than any benefits achieved through concentration on "social" objectives.

The "industrialise rapidly" strategy involves the development of substantial export markets for industrial goods, and while this may be possible, it would be difficult for a small country like New Zealand with no trading "clout". We could not be certain of success, and the cost of a period of 5-10 years of lower incomes while our industrial exports build up, makes the strategy risky and politically dangerous.

The "insulation and more planning" strategy does appear to offer better prospects than present policies. If governments are prepared to take hard decisions in the allocation of resources, and are able to restrain demand to a level which does not put pressure on the balance of payments, then some central planning of intervention should help us reach a faster rate of growth than at present. Past experience in New Zealand suggests, however, that both these necessary conditions would be hard to achieve. Internationally, rapid growth since World War II has been more associated with market economies than centrally planned economies.

This leaves us one option — the "more market" strategy.

"More Market" — A New Direction

With the New Zealand economy now experiencing a slump (rather than a recession), it would seem to be a bad time to suggest a "more market" oriented economic strategy. But the strategy suggested would probably not cause as severe troughs in the level of economic activity as those which present policies make inevitable.

The "more market" strategy suggested in this publication differs considerably from the market-oriented policies advocated by more conservative economists. We specifically reject the following concepts:

- The need for a pool of unemployment to provide an incentive

- for hard work;
- The idea that a social welfare system is socially and economically undesirable;
- A belief that the private ownership of property rests on a divine right (rather than the needs of people);
- The philosophy that the state should not own or operate any business enterprises;
- A belief that unfettered economic forces can secure social and economic goals.

We advocate market forces as a means of allocating resources for purely pragmatic reasons – the initiative of New Zealanders can be more fully used, more rapid change and adaptation is likely to occur, and our use of resources is likely to be more efficient than if it is determined by bureaucratic decision or historical accident.

The strategy envisages that the social welfare system be further developed both to alleviate individual hardship and to support economic change, e.g. by the state accepting responsibility for redundancy and retraining. Instead of simply paying unemployment benefits and leaving workers to make their own adaptation to industrial change, the government would need to undertake an active programme of training and assistance in resettlement.

The flexibility sought in this strategy should apply to all parts of the economy and not just to the private sectors which produce and distribute goods. Restrictive practices imposed by regulations or trade agreement would need to be gradually dismantled, and would also affect professional services (no minimum fee scales), and state servants. In other words, no section would be protected from the pains of adjustment, but any individual affected would be assisted in finding a new field of work.

Some individuals and firms would face severe losses as the protective environment was removed, and it could be necessary for the state to compensate the worst-affected to reduce hardship. Such compensation would cost us less than the present cost of inefficient resource-use in some industries.

The “more market” strategy is, of all the strategies considered, the one most likely to bring forth more production from the farming sector. Market oriented systems appear to fit in better with the individualistic nature of the sector, as they allow each farmer to adjust his operations to changing circumstances.

Advantages and Disadvantages of “More Market”

The “more market” strategy involves a significant change in the mechanisms of our economy. As a result, its full effects are difficult to predict, since the success or failure of the strategy must depend largely on how quickly farmers, businesses, and service industries could adapt to a different environment. A few groups in the community already operate in an almost free-market environment (e.g. used-car sales, fast-food shops, computer services). Despite forty

years of conditioning there seems to be enough drive amongst New Zealand entrepreneurs for them to respond positively to changed circumstances.

The advantages of the "more market" strategy are:

- The economy would start adjusting to changed external circumstances much more quickly than happens either under the present system, or with a centrally planned strategy where the lag between external events and government decision can be quite long. Demand management would still be undertaken through broad fiscal and monetary measures, but the burden of adjustment to economic fluctuations would be spread more evenly across the community and would not concentrate in the exporting sectors;
- The allocation of resources between sectors should be more efficient and lead to greater productivity in the economy as a whole;
- The strategy does not require prediction of future external events. With the world economic situation becoming less predictable, this is a distinct advantage;
- A market-oriented strategy may well have more appeal to farmers than one based on a central plan.

The "more market" strategy does have a number of possible disadvantages including:

- It implies some widening of the present income distribution, or at least a transfer of income to the exporting sector. The disparity in incomes is unlikely to be greater than that of the 1950s, nor to have as severe social consequences as other disparities in incomes arising through inflation in the 1970s;
- With the New Zealand economy more open to market forces, the number of business failures would probably be higher than New Zealand is used to. Company and business failures do not necessarily mean a loss of resources to the economy, even though great hardship may be caused to particular individuals. In fact, this is one way resources are reallocated from inefficient to efficient firms. The low level of company failure in the past in New Zealand outside the building and retail sectors (the collapse of financial institutions is another issue) may be one reason why resources are not well-used in New Zealand;
- If agricultural incomes are significantly increased, the price of land could rise sharply, particularly if the general rate of inflation is high and the money supply is expanding relatively rapidly. But control on the growth of the money supply, and the present level of interest rates may restrain the increase in land prices. If not, there would be pressure for some form of capital gains tax to prevent substantial transfers of wealth;
- A rapid growth in livestock production requires a build-up in stock numbers, and temporary depression of meat production while this build-up is taking place. Once steady growth is

attained, production levels also increase steadily, but in the first year or two export production increases slowly.

Conclusion

New Zealand's medium-term economic prospects do not appear bright, even if due allowance is made for a recovery from the present recession. Although many of our economic problems are caused by the economy being small and open, and by our geographical isolation from major markets, obstacles have been placed in the way of suitable adjustment to the economy by our traditional style of economic management, widespread government restrictions, and restrictive practices in general. New Zealanders themselves seem reluctant to accept major changes in the way the economy is run, and successive governments have opted for stability rather than progress. Yet both the stability of the economy and the existing level of the standard of living are threatened by economic stagnation.

All is not despondency: we do have feasible alternatives offering. Our essential choice lies between either a greater use of market forces, or more central planning, in the allocation of resources. Either option could lead to a greater efficiency in resource use than that achieved by the present system, ad hoc administrative intervention combined with the rigidity of licensing controls. These can only inhibit change, and fossilise outdated patterns of economic activity. A "more market" strategy offers the best chance of success.

The most effective strategies all require an increase in agricultural production. Such an increase will be forthcoming if farming becomes more profitable, and if farmers are confident that that's the way it will stay.

APPENDIX I

WHY ISN'T AGRICULTURE OUTPUT INCREASING?

The volume of gross agricultural output in New Zealand has been relatively static during the 1970s, after steady growth in the 1950s and 1960s. Four factors have contributed to the changed situation.

- climatic differences;
- economics of farming;
- farmers' attitudes;
- changes in the supply of new technology.

This appendix discusses economic, behavioural, and technological factors, but does not attempt to consider the effects of climate.

THE CHANGING ECONOMICS OF FARMING

1. Factors relating to prices and incomes

The classical economic viewpoint is that farmers will increase their level of production when prices increase, and reduce the level of output when prices fall. With general inflation, it is not sufficient to consider current prices for farm produce; the prices of inputs and the general level of inflation are also relevant. The trend in prices is sometimes expressed as the trend in farmers' terms of exchange (the ratio of output prices to input prices). A better indication of the effect of changing prices is the change in farm income (deflated by an appropriate price index), since this takes account not only of changes in prices but also of changes in output due to increases or decreases in efficiency. Changes in farm income are also affected by changes in farm size, and since our farm incomes are not related to the total assets employed, misleading trends may be noted.

Philpott & Stewart [1958] wrote: "the major factor determining the level of real investment in farming is farmers' net incomes", and because of the strong link between investment and output it would seem that incomes were regarded as a major determinant of future output.

The Ministry of Agriculture and Fisheries [1977a] (p10) attribute changes in farm production to changes in incomes and hence in re-investment.

Philpott [1977] today observes that real net farm income has on average been 12 per cent higher over the period 1971-76 than



in the previous six years, and he concludes that changes in real farm income are not sufficient to explain the stagnation in agriculture.

Johnson [1976] considers aggregate real gross farm income and the terms of exchange of farmers, and suggests that there is some evidence in recent years of a backward sloping supply curve, i.e., that farmers have responded to price increases by decreasing production, and vice versa.

Such a backward sloping supply curve has been observed in some situations (e.g., when farmers are faced with greatly depressed incomes and seek to increase production in order to survive), the evidence for or against it having happened in this country is not conclusive. This phenomenon is usually brought into the argument when farmers want higher support prices in times of a glut (e.g. Hallet [1968], p.148), or on the other hand when government officials are trying to avoid action in times of low incomes and declining production. Even among African peasants who have been considered to be unresponsive to price, farm management studies suggest that when allowance is made for risk and for the slow maturity of plantation crops, their response to price changes is normal.

Farmers and some commentators focus on the rising cost of inputs as a deterrent to increased production. Increases in the cost of inputs may have a significant psychological effect, but the relative rise in that cost compared with the eventual price of farm produce is what should be examined, and in the final analysis the return on investment and effort is more important.

Fluctuations in farm income are also suggested as being a constraint on growth in output. Yet some overseas evidence suggests that farmers with stable incomes tend to invest less than those with fluctuating incomes. It can work like this: if a farmer regards a peak in his income as a windfall, and does not adjust his personal expenditure upwards, re-investment in "windfall" periods may be a high proportion of his net income. This leads to higher average re-investment by him than by the farmer with a stable income who has higher expectations and hence a higher personal expenditure. (This is, of course, not to say that fluctuations in income are desirable, since the effects on service industries and on the economy as a whole are clearly adverse.) Confidence about long term returns is probably more important to farmers than is stability from year to year.

Neither Maughan nor Philpott (in his 1977 paper) examine the change in farm incomes relative in other sections of the community. The Ministry of Agriculture and Fisheries [1977a], analyses the lower proportion of national income received by the farm sector compared with the non-farm sector. The comparison is awkward because it does not take into account changes in the capital employed in the two different parts of the economy, but it does suggest that declining relative incomes in the farm sector may

partly explain why farming is stagnating.

Farmers' incomes represent a return on capital as well as their labour. Direct comparison between the levels of income in farming and non-farming sectors in any year are thus not meaningful, but the trends in relative incomes are significant.

An attempt has been made to compare farmers' incomes with incomes in the non-farming community. The best long term series is taxable income as reported by the Inland Revenue Department. Graph III shows the ratio between average taxable incomes of the farm and non-farm sectors.

While the ratio between farmers' and non-farmers' incomes has shown some decline, with the period 1966/67 to 1971/72 consistently lower than any year between 1948/49 and 1965/66, farmers' incomes showed a relative increase in 1972/73 and 1973/74. This comparison is of limited value because of the substantial transfers of income which took place within the non-farm sector as inflation accelerated in the 1970s.

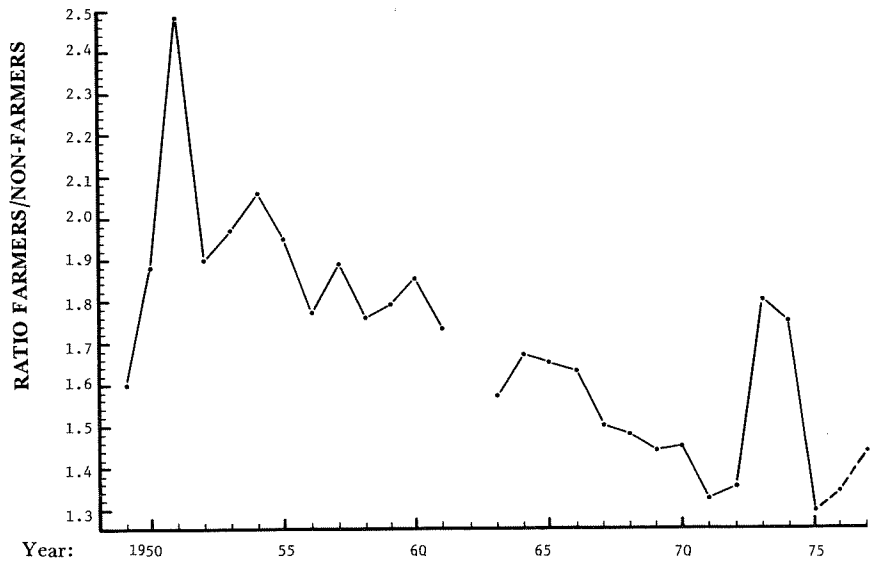
The comparison between incomes of farmers and those of wholesalers and retailers is more interesting. The latter group are in close social contact with farmers in rural towns, so farmers can easily observe their standard of living. Both occupations involve provision of capital and personal effort, and farmers can move relatively easily into retail trade if they give up farming. In the peak year of 1950/51 farmers' incomes were nearly 60 per cent above those of wholesalers and retailers. Their relative incomes have since declined (with some fluctuations) to a low of more than 10 per cent below those of wholesalers and retailers in 1974/75 (see Graph IV).

These comparisons should be treated with some caution since taxation provisions have changed over the period in a way which alters the net income reported, and because the net incomes of both groups includes income from activities other than their main business. Nevertheless, the figures do indicate a decline in farmers' incomes relative to those of a similar occupational group, and may explain some of the feeling of disillusionment felt by farmers. This, in its turn, has probably contributed to farmers' decisions not to increase production.

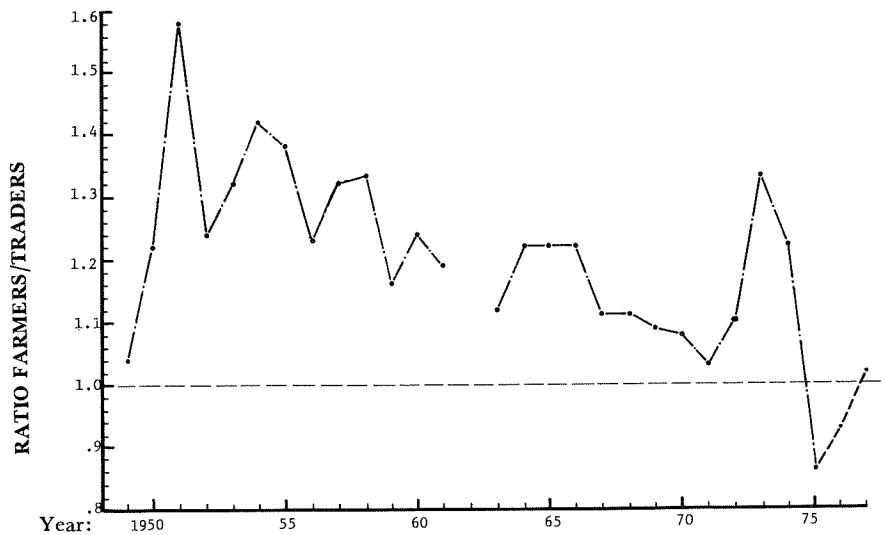
2. Not Enough Investment

The rate of investment is the link between changes in farm income and changes in output. Since much investment is merely replacement of existing capital items as they wear out or become obsolete, the significant figure is net investment (or new capital formation).

Net investment is most difficult to measure and requires a valuation of the total capital stock. The New Zealand work is based on Johnson [1970], and gives an indication of changes from year to year. Calculation of the stock of capital has required a valuation of fixed assets on farms, and nearly half of the basic



GRAPH III FARMERS' RELATIVE INCOME NO. 1
(Ratio of average taxable income of farmers to non-farmers)



GRAPH IV FARMERS' RELATIVE INCOME No. 2
(Ratio of average taxable income of farmers to wholesalers & retailers)

Note: "Farmers" do not include sharemilkers and agricultural contractors before 1975, thereafter these are included. 1976 & 1977 based on preliminary estimates.

Source: Department of Statistics NZ *Official Yearbooks* (Chapters on Incomes and income tax) and Supplement to *April 1978 Abstract of Statistics*

value ascribed by Johnson to this item lies in pasture and fencing. The assumptions which he has been required to make are bold indeed and the absolute values should be treated with some caution. A further difficulty lies in calculation of the real stock of capital, which represents the value of capital in constant prices. Over time, the nature of many capital goods has improved and it is difficult to relate the real value of a rotary cowshed with a walk-through, or permanent electric fences with standard fences, or modern high-capacity machinery with its ancestors of twenty-five years ago. It is also not easy to allocate fertiliser input between maintenance and new capital.

The figures are, however, worth examining. Between 1949/50 and 1968/69 the real net capital stock in farming rose by 2.1 per cent per annum, and from 1968/69 to 1975/76 it increased by only 1 per cent per annum (data from Philpott [1977]). Other things being equal, such a decline in the rate of new investment would be expected to produce a lower rate of growth in output.

Capital employed per man has similarly increased more slowly in recent years, and the capital output ratio appears to be increasing more slowly as extra capital is employed. Philpott rightly regards this indication of diminishing returns as merely a suggestion, but it is certainly worth exploring further, particularly at the micro-economic level.

Several reasons for the lower levels of investment have been suggested:

- the rapid increase in the price of farms in recent years has meant that much of a farmer's return from owning a farm has come in the form of increased farmland prices (tax-free) rather than from the production from the farm. It has thus made sound sense for farmers to seek to expand their holdings rather than intensify their operations. (Data is lacking on the extent of amalgamation.)
- a farm is a very illiquid asset, and farmers approaching retirement appear to have sought some off-farm assets particularly urban real estate. Such assets can be sold on retirement or to meet death duties, and thus they enable the family to continue to own the farm without having to raise further mortgages.

Investment in farming operations may also be taking a form which does not raise the level of production. Capital is invested in equipment which will lower labour inputs (e.g. rotary cowsheds and motorbikes) but may not increase gross output. Reducing the level of inputs can of course increase economic efficiency and the productivity of remaining inputs. Other investment, such as in cars and houses, may be related to consumption rather than production. Finally, when earnings are high, a considerable sum is spent on buildings and facilities. Full use of these facilities may not occur until further farm development takes place, but the capital output ratio is immediately affected.

New Zealand farming has previously experienced diminishing

returns because new technology introduced over the years has increased its efficiency. The possibility that the pool of new technology is drying up will be discussed later.

3. Economics of Development

Farm development programmes are commonly believed to be profitable to individual farmers, especially in view of the tax "concessions" and grants available to agriculture. A simple model has been constructed to test this hypothesis, using a standard development programme based on clearing scrub on a typical North Island hill country farm.

The model assumes that 120 ha of land is developed and stocked with 1200 stock units (in the ratio of three sheep SUs:two cattle SUs), over a period of four years. The basis of the model is the "average" North Island hill country farm from the Meat and Wool Board Economic Service *Sheep Farm Survey 1974/75*, with costs, prices and technical co-efficients of development based on unpublished data from the Advisory Services Division of the Ministry of Agriculture and Fisheries. It is assumed that the farmer borrows about 75 per cent of the cost of land development from the RBFC, but finances all stock increased from his own cash flow.

In calculating the return on investment to the farmer, full account is taken of taxation, and the reduction in the *real* cost of borrowing brought about by inflation. The return is calculated in two situations.

- **Case A**, where the farmer does not require any extra labour, does not receive any grants, and does not take into account the added value of his land due to development and of the increase in stock numbers.
- **Case B**, where extra labour is required, a Livestock Incentive Grant is received, and the added value of the land due to development and of the increase in stock is brought into the cash flow in the fifteenth year.

Calculations are carried out with constant prices as at January 1976 and January 1978. The discount rate used is 10 per cent, and the cash flow stream extends over fifteen years.

Although the return from the programme is under 10 per cent in one case, the calculations are based on *real* returns, i.e. the farmer would receive increases in *money* returns due to inflation as well. The model investment is highly profitable under the assumptions stated.

The results should be tested with some caution, however. No allowance is made for risk, and seasons with adverse climate, such as the 1978 drought, would reduce the return. In addition, the results appear to be highly sensitive to the relationship between product prices and costs.

The conclusion drawn is that this form of farm development

**TABLE III:
PRESENT VALUE OF RETURN ON MODEL OF LAND
DEVELOPMENT ¹**

	Total Investment Cost ³	PV : Case A	PV : Case B
	\$	\$	\$
Constant 1976 Prices	46800	(951) ²	1733
Constant 1978 Prices	57240	8060	13278

1 For basis see text.

2 (951) indicates a negative PV of \$951.

3 Including cost of stock over four years.

can be highly profitable, especially with favourable R B F C terms, the Livestock Incentive Scheme, and present tax "concessions". Although *development* may be profitable, it may nevertheless not be undertaken if the profitability of *existing* farm operations is too low to inspire confidence.

4. Effect of Risk and Pressure

Farmers throughout the world are known to be risk averters, which means they are just as concerned with minimising losses as with maximising profits. Such behaviour is quite rational in context, since the vagaries of climate and markets make farming more risky than many other enterprises. In New Zealand the risks have been severe by world standards. Support prices for most products have been inadequate to maintain farm incomes. The nature of grassland farming with relatively little reliance on conserved feedstuffs, and virtually no concentrates used, means that production is greatly affected by the weather. Bad weather can mean severe financial losses, and the risks are believed to increase substantially at higher stocking rates. The generally less favourable seasons for several years after 1968 caused major problems for farmers who had rapidly increased stock numbers during the euphoric years of the mid-sixties, but who had not made full preparation for the extra stock.

Increases in stock numbers may also place extra burdens on farmers. While no extra costs are shown in the farm accounts, an extra real input of management effort and time is required. The hours worked on farms are still generally higher than those in the rest of the community and so farmers are reluctant to consider production increases which will increase the work load for themselves or their staff.

The cure for this reluctance may be found in new technology (such as "easy-care" lambing, motorbikes, more convenient drenches, or rotary cowsheds) which can permit production

increases with constant or even decreased labour inputs. New farming systems like slow-rotational grazing on sheep farms should also reduce the management load once they become more routine.

The factors of risk and pressure are discussed as economic factors since farmers respond to them in a rational economic manner. Scientists and extension workers at times wrongly attribute the failure of farmers to adopt new techniques to non-rational behavioural factors, but the degree of risk a farmer is willing to take and the effort he decides to exert are related to the returns he receives, and after a period of low incomes or bad seasons, his response to better prices or government incentives is much slower. This probably explains much of why farming is responding so slowly at present.

FARMERS' ATTITUDES

Farming leaders and some commentators (e.g. Maughan) suggest that the main reason underlying stagnation in farming is a set of social and behavioural factors rather than purely economic causes. Like any other section of the community, farmers' attitudes affect the types of choices they make. The influences which some suggest are operating include:

- less "support" for agriculture from the community. Farming is no longer regarded as the backbone of the country and while we still depend on agricultural exports for our standard of living, the rest of the community is not working as hard, is better rewarded and couldn't care less what happens to farmers. And farmers still work much longer hours than most of the community.
- farmers have decided not to be "mugs" any more. If everyone else is going to live off the fat of the land, they might as well too. Their efforts to increase production in the 1960s didn't make them any better off, so now any spare cash will be spent on consumer goods and will not be re-invested.
- The frustration of delays in obtaining killing space for livestock, caused, they think, by sheer bloody-mindedness on the part of freezing works managements and unions, has such an impact on farming operations that it is not worthwhile making any efforts to increase production.
- the farm vote is declining in influence as New Zealand becomes more urbanised, and hence farmers' real needs are being neglected by successive governments.
- the quality of rural life is being lowered as rural schools close down, rural services are withdrawn, and some areas are depopulated.

Few, if any, attempts have been made to measure the extent and significance of those feelings of alienation and disillusionment, but the pessimistic mood is clearly having a significant effect on farmers'

attitudes to increased production.

For all that, the situation is rather different from that painted by farming leaders. Much of the disillusionment arises from a comparison of the level and purchasing power of incomes and is thus purely economic in origin. Spokesmen for the police force and for secondary schoolteachers have expressed similar feelings over issues of pay and working conditions, and have made it plain that improvements in these areas would resolve their disillusionment.

Similarly, the attitude to other sectors "slacking", particularly the meat processing industry, has rational economic foundations. A farmer who has to hold a cull cow worth \$85 for an extra month may lose about \$10 in the cost of expensive winter feed to keep her from losing condition. Avoiding the losses by maintaining a slightly lower stocking rate is quite rational; as is hostility towards those who appear to be causing such losses for trivial reasons.

A decline in the quality of rural life is a difficult concept to measure. New Zealand has always been much more urbanised than the popular myth suggests, and the trend has been for better communications (roads, telephones, radio and TV) to draw rural people into urban society even though they dwell beyond the urban boundaries. Rural nostalgia about the disappearance of the country dance and the isolated general store does not take into account the much wider opportunities for entertainment and shopping now open to all but the most remote rural dwellers. And many urban dwellers are demonstrating the advantages which rural living still holds by their attempts to purchase farmlets.

Some major disadvantages do remain. Schooling often requires children to spend long hours in school buses and hence they are deprived of the chance to join in after-school activities; or else they must board in town. Access to urban medical, shopping and entertainment facilities carries with it a high transport cost. Yet much of the impact of the rural disadvantage falls upon the non-farmers in rural areas. Most farm wives are unable to pursue a career or even earn an income of their own because of sheer distance from town or the cost of transport. While farm owners can claim a large part of their car expenses for taxation purposes, their employees are generally unable to do so.

The extent of the decline in political influence of farming can be over-emphasised. While those actively engaged in farming are now only a small minority of total voters, the economic wellbeing of most secondary cities and country towns still depends largely on the economic fortunes of the agriculture sector. To gain office, either of the main political parties has to do well in these electorates (Whangarei, the Hamilton seats, Rotorua, Gisborne, Hastings, Invercargill, etc.). Leaders of both parties have recognised this fact, and have therefore given more political attention to farming matters than the farming vote itself would deserve. Their failure to create a buoyant situation in agriculture is probably more due to the

timidity of their policies in the face of all the institutional pressures (rural and urban) to which they are subjected, rather than to any urban bias.

To sum up the behavioural and social factors, many of the attitudes are basically economic in origin and require economic solutions, while others require the maintenance and development of rural services for their removal. Some again are pure nostalgia and are best ignored. But attempts to restore economic growth which do not make demands on all sectors, and which leave inefficient practices untouched in the secondary and tertiary sectors, will continue to provoke a reaction from farmers that is strong enough to limit increases in agricultural production.

TECHNOLOGICAL FACTORS

Is the supply of new technology limiting the growth of agricultural output in New Zealand? Many commentators have examined this question in depth.

New Zealand agriculture is remarkably efficient by world standards. The continued growth in efficiency has been due to the rapid adoption of new technologies, including (in roughly chronological order):

- refrigerated ocean transport
- machine shearing
- milking machines
- phosphatic fertiliser
- milk recording of dairy cows
- improved varieties of grass and clover
- application of trace elements (cobalt, copper and selenium)
- aerial topdressing
- slow rotational grazing on dairy farms
- herring-bone cow sheds
- artificial insemination of dairy cows
- new hybrid breeds of sheep
- more effective anthelmintics
- elimination of TB and brucellosis
- use of motorbikes

It is interesting to note that the partial list above does not include any major development in the past ten years (with the possible exception of motorbikes) and the adoption rate of the earlier technologies has flattened out, suggesting that saturation point has been reached. In some cases (e.g. Artificial Insemination) this saturation point is only about one half of the total population of potential farms.

The greater efficiency and higher output achieved by top farmers (and research stations) suggests that considerable progress might be made by encouraging the further adoption of existing technology. But the adoption of new technology by businesses (including farm businesses) is a complex process. It may well be cheaper to develop

advanced technologies to be taken up readily by the most progressive farmers rather than attempt to persuade more conservative farmers to use existing technology.

Technologies currently being adopted include rotary cowsheds and slow rotational grazing for beef and sheep (usually together with electric fencing). New types of production enterprises such as deer farming, and horticultural crops such as kiwi fruit and tamarillos might also be included as new technologies. All of these technologies are at an early stage of adoption.

We may claim, therefore, that the pool of new technology has partly dried up, or at least that the process of development and adoption has slowed down. No development with an impact like that of cobalt, or of phosphatic fertilisers (especially when combined with aerial topdressing) seems to be available.

New technology is important because increases in productivity are usually based on it. Without technical progress, any industry is subject to diminishing returns and thus where, as in agriculture, the supply of one input (land) is almost fixed, a stage is reached where extra production is uneconomic. As already noted, Philpott's macro-economic work tentatively suggests that this stage may be approaching in New Zealand agriculture.

Some new technology does not, of course, result in extra production. Certain innovations like motorbikes or rotary cowsheds may simply reduce the total level of inputs, thus lowering the unit cost of production and increasing productivity. From the viewpoint of a farmer whose aim is to maximise profit, the achievement of greater productivity through lowering unit costs can have the advantage of achieving higher profit without increasing management responsibilities or risk. From the national viewpoint such increases in productivity through lower resource use are equally desirable since they enable the resources released to be used for production elsewhere. But fewer opportunities exist outside agriculture for resources to be used to increase exports, and this type of increase in productivity does not help to shift the export/import constraint.

A comparison of agriculture in New Zealand with other countries shows that we have achieved efficiency mainly through reducing the labour input per unit of production, rather than by increasing production per unit area of land. Changing this long-term trend would mean a considerable reorientation of farming, but this is what we must do if we are to achieve vital increases in the volume of production.

Of two clearly discernible new technologies, rotary cowsheds offer increases in production only where dairy farms are at present not fully producing because of too heavy a work-load. (If automated cup removal and stimulation can be developed to the point where they improve milking efficiency and increase production per cow, this would not be so.) Slow rotational grazing on sheep and beef farms does offer the prospect of significant increases in

production.

Other technology is available "off the shelf" from overseas, but has not been adopted by local farmers for economic rather than technical reasons. Intensive feeding of concentrates to stock (both milking cows and steers for fattening) is an example of the type of available technology which may never be economic in New Zealand. However, many small technologies are likely to be adopted if the profitability of farming is increased. These would lead to greater production if not to increased productivity.

Various scientific developments suggest that we may anticipate breakthroughs in several areas, including:

- super-ovulation and embryo transplants
- the use of bacteria to release bound phosphate in soils or to fix nitrogen in association with grasses
- pre-determination of the sex of animal offspring

Achieving these developments at a cost which would make their adoption economic is a worthwhile goal for researchers, but planning for the future of New Zealand agriculture should not depend on such technological leaps.

While they wait for a new technical miracle, the best hope for farmers would seem to be in better understanding of the technology which has enabled some farmers (and the research stations) to achieve levels of production much above the average. They must aim, too, at finding out why existing technology is not being adopted as fast as it might be, and correcting the situation. The aim would be both to speed up the adoption of innovations already under way, and to lift the saturation level of technology which is partly in use but no longer being adopted.

Some of the prospects for increased production lie in changes to farm management systems. Slow rotational grazing is now widely adopted on dairy farms, but is only just starting on sheep farms. The adoption of new *systems* is much slower than the adoption of technology such as aerial topdressing, the use of cobalt, or the use of improved anthelmintics, which involve little or no change in farming practices.

Farmers as a group hold widely differing attitudes to innovation. Their willingness to adopt new practices depends on the degree of risk and change involved, the costs and benefits of the new technology, and the adequacy of their information about it. Yet the official attitude to the adoption process in New Zealand at the present time appears quite naive; with a confidence in the benefits of "science" similar to that of the late nineteenth century. Study of the economics of research work, of the process of adoption and of the reasons why farmers — often quite rationally — are slow to adopt new techniques, are all given low priority.

Processing Technology

The meat and dairy industries have adopted much new technology

in the last ten years. Dairy processing is now almost fully automated and technical developments include processes to produce a significant range of more sophisticated products. The lion's share of government funds for research in processing has gone to the dairy industry, helping to make it technically well-equipped to cope with difficult market conditions.

The meat processing industry has not been so fortunate. Not only has government funding for research been more meagre, but major technical change involving vast capital expenditure has been required by the imposition of high product quality requirements by the E.E.C. and U.S. While a lamb carcass produced today may not look much different from its counterpart of twenty years ago, it incorporates considerable technical change. How much this has benefited the consumer is another question. The effect of the hygiene and inspection requirements, together with the bad industrial relations of the meat industry, has been to direct attention away from technical change designed specifically to increase productivity.

Wool processing beyond the point of scouring is usually regarded as a purely manufacturing rather than a primary processing operation, although the distinction is becoming a more arbitrary one with all products. Little technical change has taken place in the way wool is taken from the woolshed floor through to the time it leaves the wool-store. One major innovation — sale of wool by sample — has been adopted much more slowly in New Zealand than in Australia. The slow rate of adoption of sale of wool by sample is largely caused by pricing inefficiencies in the marketing system, which does not immediately pass on benefits of increased efficiency to the farmers who adopt it. Similar inefficiencies exist with meat in that farmers who produce a new product (a heavy lamb) for DEVCO are not fully rewarded in the schedule; and in dairy where the margins received by dairy companies for new products are traditionally kept very low.

Conclusion

Our agricultural output appears to be stagnating for primarily economic reasons. We are unlikely to see any increases in output unless farm incomes are higher in future than they have been during the 1970s.

Behavioural and social factors have some significance, but some of the feeling of alienation amongst the farming community arises from economic causes.

The availability and rate of adoption of new technology does appear to be holding back the growth of agricultural production, but it is a constraint which could be moved. The better the new technology, the lower the cost of extra production.

APPENDIX II

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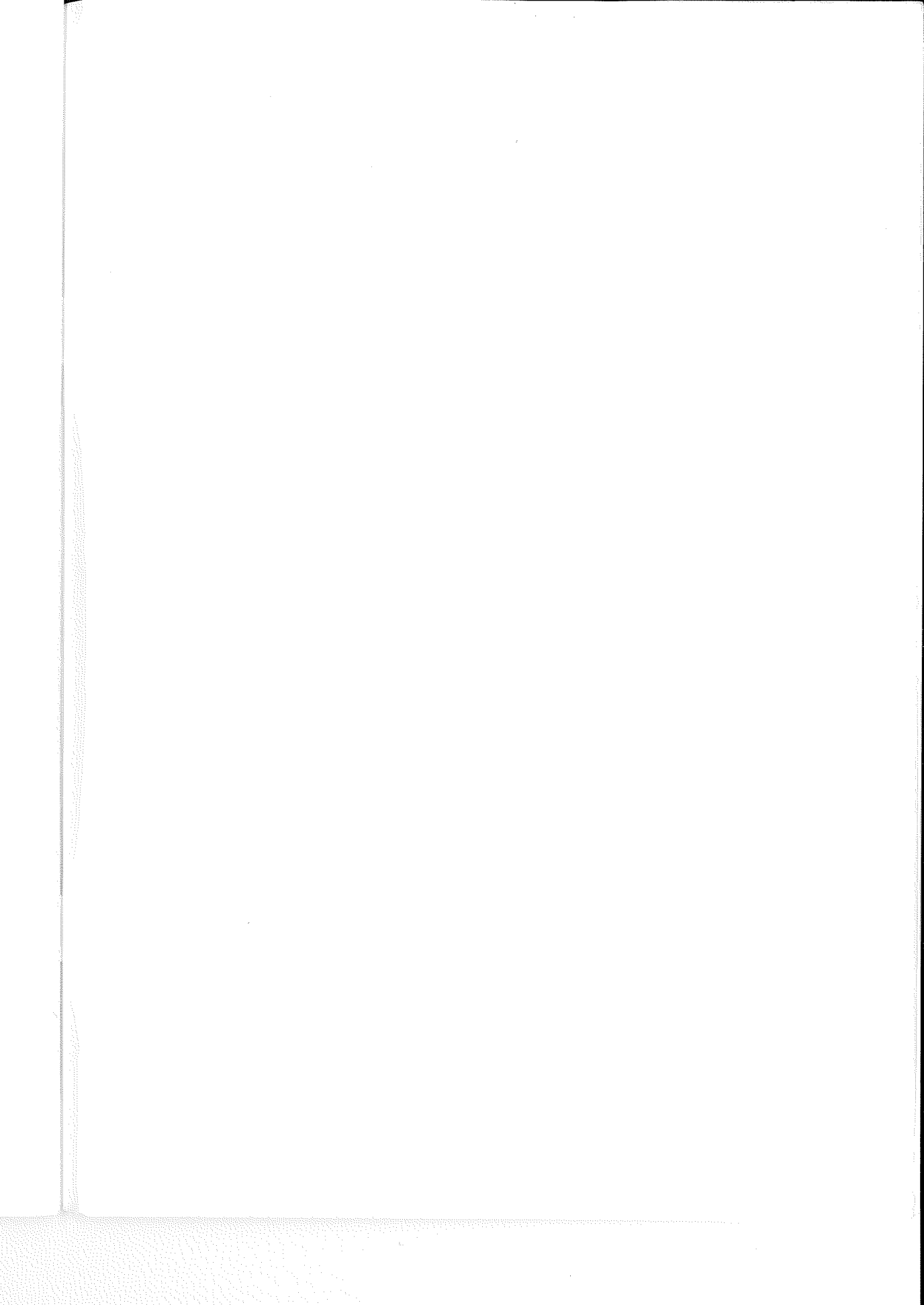
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