Agronomy and the future of agriculture

D.B. Trebeck

Deputy Director, National Farmers' Federation

Australian agriculture remains overwhelmingly export-orientated. As such, its future survival depends crucially on the maintenance and improvement of its international competitiveness. In this paper I propose to review the components of international competitiveness in order that the agronomy profession can be assessed in an appropriate perspective. There are essentially three components.

First, on the revenue side, there needs to be sufficient demand for the product so that users will pay an adequate price for it. This involves factors such as the global level of economic activity, over which an Australian Government, let alone Australian farmers, has virtually no influence, and political interferences to world trade, where an Australian Government can, by its actions, contribute to the fostering of a more favourable trading environment. The record of successive Australian Governments in this area, notwithstanding repeated overseas trade missions and frequent lectures (given overseas) on the evils of protectionism in general and agricultural protectionism in particular, has been dismal. Also relevant are more commodity-specific effects, such as the state of inter-fibre competition (for wool), the impact of dietary preference changes (for red meats) and northern hemisphere weather patterns (for grain). Furthermore, the prices paid for Australian rural exports in overseas currencies must be converted to Australian currency to yield revenue for farmers. Thus are introduced the variety of factors affecting the exchange rate.

Second in influencing overall competitiveness is the level of costs. The general cost level in the economy is part of this, which is why farm organisations have been to the forefront in stressing the importance of 'sound economic management'. In addition, it is important to focus on the level of farm costs, especially when, as in recent times, the rate of increase in farm costs has been about 50 percent higher than the general inflation rate as measured by the c.p.i. This disparity, should it persist, is of grave concern. It means, for example, that a general competitiveness index for Australia may have little bearing on the competitiveness of the rural sector as a whole or of particular rural industries.

Third, farmers can play a part, a very major part, in maintaining international competitiveness by virtue of their own managerial ability, their efficiency, their productivity and their adoption of new technology - in short, working smarter and not necessarily working harder. It used to be popular for farmers to criticise economists who took this line, especially in its more acerbic (and oversimplified) form 'get big or get out', but there is ample evidence to demonstrate how important such adjustment has been: e.g., farm amalgamation, bigger tractors, better drenches, new forms of capital investment including computers, power wool presses, larger sheep flocks, etc. The Bureau of Agricultural Economics' continuing work in this area has also quantified performance differences between the top and bottom group of farmers. The results should be of fundamental importance to extension workers and others.

I believe the role of industry organisations, such as NFF, is to encourage the establishment or continuation of an environment which is basically conducive to individual production. Having done this, the individual is then free to pursue his own interests and to sink or swim according to his own abilities and initiative. It is for this reason that NFF speaks out on behalf of farmers generally for those aspects of international competitiveness which are beyond the individual's capacity to influence, such as factors affecting the exchange rate and domestic economic management.

I emphasise the importance of factors beyond the farm gate in determining the competitiveness of rural industries and hence the capacity of individual farmers not only to prosper, but even to survive, in the years ahead. In my view, there is no doubt whatsoever that the basic structure of Australian agriculture and of individual farming units is broadly appropriate.

This compares with obvious failures in the structure of sections of the Australian manufacturing sector and in the agricultural sectors of a number of overseas countries. The problems of Australian agriculture largely arise beyond the sector itself, which is why 'rural policy' needs to be seen in a broad context and not in the narrower sense that has dominated discussion in the past.

Revenue Effects

Let me develop these influences on farmers' competitiveness a little further, starting with the revenue effects.

First, the degree to which our agricultural trading pattern has changed over the past 20 years is often overlooked. At the end of the Second World War, the UK took 90% of our butter exports and 80% of our beef. Many rural industries, such as canned and dried fruit, had been specifically developed for the UK market. All this changed with UK entry into the EEC. Beef was diverted to the US and other markets. Japan became a much more important trading partner. New opportunities opened in oil-rich Middle East countries. Increasing living standards in developing Asian countries provided the potential for new markets. The Soviet Union and Eastern European countries sought to trade with us, albeit not always on a stable basis.

Some industries have been better able to adjust than others. The dairy industry regrettably has found it difficult to develop new and profitable markets to the extent necessary to absorb the produce previously exported to the UK; its size has therefore diminished, although the economic position of those producers who have survived is now much more robust than previously. Conversely, the sheep industry has benefitted from the expansion of markets for live sheep and sheepmeat. Coarse grains have developed substantially, both for domestic and export consumption. And, perhaps most important of all, the wheat industry has continued to expand into new areas, especially in Queensland and Western Australia. There is obviously considerable further potential in both these States.

All these changes, of course, have profound implications for the agronomy profession in the directions and priorities with which research resources should be allocated. There is no suggestion that the past changes are suddenly about to stop, so those responsible for future planning must, as I am confident they do, ensure that they are as well-informed as possible on the broader and longer term trends.

For its part, NFF seeks to influence the direction of future change by encouraging Governments or undertaking its own activities. Thus we have stepped up a campaign encouraging reform of the EEC's Common Agricultural Policy, especially insofar as the CAP leads to the production of export surpluses and their dumping on third markets in competition with our own exports. In addition, we are now undertaking a review of Australia's trading relationships with the Soviet Union, following a brief visit I had to Moscow last month. We intend to discuss the issues involved with the Government shortly.

Second, the factors bearing on the exchange rate determine the Australian dollar revenue which is obtainable from a given price in overseas currency. It is not possible, certainly not realistic, to seek a particular value for the Australian dollar as an end in itself, as the exchange rate is a residual after its various components have been determined.

The three issues which are most involved here are: industry protection, whether by tariffs, quotas, dumping duties, or preference in Government procurement; the effect of mineral development, where discussion has become strangely muted in recent months; and capital inflow, which is expected to have totalled a staggering $10,000m in 1981/82. All these factors affect the profitability of rural and other activities and hence the capacity of particular firms and industries to compete for resources.

There is not time in this paper to go into further detail, except perhaps to note that in 1980/81 we calculated that adverse exchange rate movements cost the rural sector $400m in lost revenue, and that in the last 12 months, despite a devaluation in the nominal exchange rate against most currencies, the real effective exchange rate (i.e., after adjusting for inflation) rose by a further 5 percent. This happened

because Australia's inflation rate has been and is much higher than in our major trading partners, and it means that the international competitiveness of rural industries is continuing to decline.

Cost Effects

This brings me to a few more comments on the cost side, which I will confine to rural costs. I have already said that the farm inflation rate in Australia has been much higher than the general inflation rate. Any action, especially collective action, that farmers can take to redress this situation is obviously vital. Part of NFF's continuing responsibilities is in the industrial service it provides, which, apart from assisting individual members, also includes participation in national wage cases and major industrial forums: e.g., last week's tripartite meeting between the Government, the ACTU and employers, and representation in rural award hearings.

Another area, and one which I believe will become increasingly important in the future, is to use NFF's influence to reduce, or at least to contain, farm input costs. Fertilizer, of course, is the topical example. NFF was able to persuade the Government that the superphosphate bounty should be extended to imports and, although the Senate deferred consideration of the Bill a few weeks ago, I am confident it will be passed in the Budget session. Our aim is to apply some pressure so that the local manufacturers are kept more on their toes. We have no desire, as some have suggested, to wipe them out with imports. But we have been monitoring Australian and overseas fertilizer prices closely and have been disturbed to note a widening price disparity. This is unacceptable when our members are simultaneously being severely squeezed on the revenue side.

Further in the future, it may be possible to use the very substantial commercial muscle of Australia's farmers in a more direct way, by obtaining bulk purchase discounts on a range of inputs. It is, after all, a very large market nationally. Some of our State organisations already do this to varying degrees - with drenches, machinery, insurance, fertilizer and so on - but I am sure more can be done if it is coordinated nationally. The prospect was scarcely imaginable even three years ago, just before NFF's formation.

Individual Action

I come thirdly to the area of individual action by farmers. The fundamental general proposition is that, the more adverse the overall environment, the more individual farmers have to do, by way of greater productivity and efficiency, to maintain comparative income levels and, in some cases, to survive. The overall environment is most often measured by the terms of trade of farmers - the ratio of an index of returns to an index of costs - which has been in decline for at least the last 30 years, punctuated by some spectacular, if all too brief, resurgences.

In the decade of the 70's the average decline in farmers' terms of trade accelerated, So also did the average rate of productivity increase. Since 1968/69 productivity of the rural sector as a whole has increased at an annual rate of 3.8%, compared with 1.1% annually for the previous 15 years. It is only this collective effort of individual farmers that has enabled them to remain in business in the face of severe external shocks of various origins.

But the improvements must continue. New breakthroughs will be made, although they are becoming more difficult and more expensive to achieve. Equally important is the extension of existing research findings and new technologies to the slower innovators among the farming community.

Implications for Agronomy

Let me endeavour to draw together the threads of this address and identify some implications for agronomy. To recapitulate: the maintenance of the international competitiveness of Australian farmers depends importantly on factors beyond the farm gate and often beyond Australia. For various reasons, that environment is becoming increasingly difficult. Some of the reasons are beyond the Government's

influence but for those which are not, the Government's performance in the last few years has been, to put it mildly, less than spectacularly successful.

In turn, a less favourable overall environment increases the pressures on individual farmers to lift their performance if income and living standard aspirations are to be met. The contribution of agronomists will therefore be vital in achieving farmers' objectives.

But before you begin to polish your halos, as Bert Kelly would say, let me offer three concluding and sobering thoughts. First, the role of agronomy is not simply, if it ever has been, to grow two blades of grass where one grew previously. The optimum on the relevant production function must be assessed in economic and not in physical terms.

Second, agronomy is not the only profession or research area which holds out hope for farmers. Apart from the other traditional areas of agricultural science, three which might be mentioned are agricultural engineering, research into improved handling, transport and processing, and the impact of computer technology. Thus, just as agriculture as a whole missed out recently on gaining distinction, and additional Government funding, as university research centres of excellence, so agronomy may find greater pressure in competing for an increasingly scarce research dollar. Those who may still be relatively relaxed on this score may care to read Alistair Mackenzie's book (1), which notes that virtually all post-war wool industry research breakthroughs were initiated by practical farmers and not by research workers.

Third, research funding in general, and rural research funding in particular, is coming under increasing scrutiny in a number of ways. After all, research is one of our more labour-intensive industries, the cost of which is rising more rapidly than the c.p.i., an industry's capacity to fund, or even a Government seeking to maintain a tight fiscal policy. Studies have been done, among others, by the IAC, ASTEC, CSIRO and the Commonwealth Council for Rural Research and Extension. The subject is one of the more important which will be discussed in the forthcoming Balderstone Committee Report on Rural Policy, where there is pressure to have farmers fund a higher proportion of rural research. The implications of Plant Variety Rights for publicly-funded research are also highly relevant, the importance of which I guess will not have been lost on individual researchers with an eye to future employment possibilities. NFF has addressed all these issues in its research submission to the Balderstone Committee and we await its outcome with interest. I shall conclude by saying that the report itself will be of considerable relevance to all agronomists who are concerned for the future of their industry.

References

1. Mackenzie, A. and Burrow, P. (1979). Innovation in the Australian Woolgrowing Industry.