

FARMERS – JUST WATCH ASIA GROW

FAIR-WEATHER FORECAST FOR RURAL SECTOR

by GUS HOOKE

The directions that world economies take will have a strong influence on the fortunes of Australia's agricultural sector. There are reasons for farmers to smile.

For about two centuries, farming has generally provided a satisfactory living for those Australians and their families who have engaged in it. Of course, through bad luck or bad management there have been many farmers over the years who could not make an adequate profit and have been forced to leave the industry. Nevertheless, for the average farm family, both the level and growth of real income have compared quite favourably with those of family businesses in other parts of the economy.

The satisfactory outcome at the farm family level has occurred despite a relatively sluggish performance by the sector as a whole. The real price of farm products, as conventionally measured, has fallen by an average of almost 1 per cent a year for more than a century. Partly reflecting this, the share of the farm sector's output in Australia's gross domestic product (GDP), which was about 80 per cent in 1800, fell to 50 per cent by 1900, about 25 per cent in the early 1950s and less than 4 per cent in the year to June 1989.

The long-term decline in the real price of farm products has been due to two factors. First, economic growth has been concentrated in the high-income countries of Western Europe and North America. At about the turn of this century, average living standards in those countries passed the level where further increases in real income had much impact on the demand for agricultural products. As a result, for most of the

twentieth century the world demand for these products has increased at approximately the same pace as that of the population.

Second, there has been a relative abundance of unused arable land. Rough estimates suggest that the proportion of the world's arable land under farming was only about 25 per cent in 1900 and was probably still less than 50 per cent mid-way through this century. Hence it has been comparatively easy to increase the supply of agricultural products in line with the growth in the world's effective demand for them.

However, the outlook with respect to both the growth of demand for agricultural products and the expansion of land under farming have changed dramatically. The future of agriculture is no longer what it used to be.

It is likely that the trend of real farm-product prices will bottom out in the early 1990s and will then rise strongly until well into the next century. In Australia, this will lead to high growth of farm output and even more rapid increases in farm income and farm land prices.

On the demand side, the important change has been the shift in the world's growth centre from the OECD countries to the developing countries.

The average annual growth of real GDP in the OECD area fell from 5.4 per cent in the 1960s and 4.8 per cent in

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the early 1970s to 2.8 per cent in the middle and late-1970s and 2.6 per cent in the 1980s. In the developing countries, economic growth increased during the middle and late-1970s, especially in Asia and Latin America. In the developing countries of Asia it continued to rise during the 1980s, to an average annual rate of more than 7 per cent for the decade as a whole (see Table 1).

A World Output Model (WOM) developed by the research unit of the National Farmers' Federation (NFF) suggests that world economic growth will increase during the 1990s but will then decline in the first two decades of the next century. The NFF model generates preliminary forecasts of economic growth in about 100 countries that collectively account for more than 98 per cent of world GDP.

However, growth will continue to be strong in the developing countries of Asia. Japan, then Hong Kong, Singapore, Korea and Taiwan, have shown how fast and how far countries in the region can grow once they master the techniques of economic catch-up. Mainland China and Thailand have demonstrated during the 1980s that they have become very adept players.

There are increasingly strong indications that the larger countries in South Asia are also becoming proficient at the game. The average annual growth rate in South Asia rose from 3.4 per cent in the 1960s to 4.5 per cent in the 1970s and 5.6 per cent in the 1980s.

Over the past decade and a half, Japan has been the strongest growing country in the OECD; however, during that period India's growth rate has been half as high again as that of Japan.

Forecasts generated from the World Output Model have been used as input into the NFF's World Agriculture Model (WAM) to produce forecasts of the demand for agricultural products in the same 100-odd countries.

The implications of the changing pattern of economic growth for the expansion of demand for agricultural products are considerable. Economic growth is slowing down in a part of the world that spends only a small part of its additional income on agricultural products and is speeding up in a part where, at the margin, such products are now, and will remain for several decades, extremely important.

In the OECD countries, the average annual growth of demand for agricultural products is projected to be 1.4 per cent

**TABLE 1: World economic growth
(average annual rates, in per cent)**

	1960-69 (A)	70-79 (A)	80-89 (A)	90-99 (F)	2000-09 (F)	10-19 (F)
OECD	5.4	3.6	2.6	2.4	1.6	1.0
W. Europe	5.3	3.3	2.2	2.8	1.6	1.0
N. America	4.2	3.1	2.6	1.8	1.2	0.5
W. Pacific	10.2	5.6	3.8	3.4	2.5	1.8
COMECON	6.1	5.1	2.9	2.3	2.2	1.6
USSR	6.6	4.9	3.0	2.4	2.3	1.7
E. Europe	5.1	5.6	2.6	2.0	1.8	1.5
Asia	3.9	6.4	7.1	6.8	6.7	6.5
East	4.4	7.5	7.8	7.3	7.2	7.0
South	3.4	4.5	5.6	5.6	5.5	5.2
Latin America	5.2	5.9	2.2	5.2	5.0	4.5
Africa	3.8	5.0	2.8	4.0	5.1	4.5
Middle East	6.2	6.0	-0.3	4.5	3.6	3.4
Total	5.4	4.1	2.8	3.2	2.8	2.7

Source: International Monetary Fund; NFF World Output Model.

(A) is actual, (F) is forecast

in 1990-99, and then to fall to only 0.4 per cent in 2010-19. Declining population growth, to negative rates in about half of the OECD countries by the second decade of the next century, account for most of the fall. Only in the poorer countries of Western Europe, such as Turkey, Ireland and, to a lesser extent, Spain and Portugal, will demand grow reasonably strongly after the next decade.

In Developing Asia, a 10 per cent rise in per-capita income causes the farm-gate demand for agricultural products to increase by about 6 per cent. This relationship will not change greatly until per-capita income, which is currently about (US) \$400, reaches approximately \$3,500.

Per-capita income in Developing Asia is projected by the model to rise by about 5 per cent a year during the coming few decades. The per-capita demand for agricultural products is thus estimated to increase by around 3 per cent a year. Even though population growth is forecast to decline from 1.7 per cent a year in 1980-89 to only 0.8 per cent a year in 2010-19, the growth of demand for agricultural products in Developing Asia is expected to exceed 4 per cent

a year over the next three decades (see Table 2).

However, it is on the supply side that the more important changes are expected to occur. In Developing Asia, over the past two decades, the supply of agricultural products rose at an average annual rate of more than 3 per cent. However, land under farming has virtually ceased to increase in that region. The land utilisation ratio (actual land under farming to potential land under farming) has reached almost 100 per cent in many parts of North-east Asia and South Asia and withdrawal of land in these areas is roughly offsetting the expansion in South-East Asia. The potential supply of farming land will keep declining as industrialisation results in the withdrawal of land for factory and office sites and for road and other transport links.

Land productivity in Developing Asia has been rising by about 1.5 per cent a year. This rate will probably also decline. An important characteristic of industrialisation is that it provides rural labour with alternative and more remunerative employment in urban areas. As workers leave the rural areas, output per worker on

the farms grows more quickly but output per hectare naturally rises more slowly.

Demand and supply developments in Asia suggest very strong growth of imports of agricultural products into that region. However, the scope for expanding supply in the Americas, Europe, Africa and Oceania is much greater than in Asia and Australia will face competition in supplying these imports.

Implications for Australian farmers

Over the long term, the real income of the average small business in Australia has increased by about 2 per cent a year. If the real price of farm products and the real exchange rate were not to change, this would be about what the average Australian farmer could expect in the future.

On present relationships, a real price increase of 1 per cent a year would cause real farm output to increase by a further 0.5 per cent a year. Compared with the recent trend, gross farm income would rise by about 1.5 per cent a year.

Net farm income would rise by a greater percentage. The rise in gross farm income due to the price increase

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costs farmers nothing. With net farm income averaging about a third of gross farm income, a price rise of around 1 per cent a year, would, by itself, add about 3 percentage points a year to the growth of net farm income.

Assuming that half of the additional revenue attributable to the expansion of output were allocated to costs involved in generating that output, the growth of net farm income would be raised by about 3.75 percentage points a year.

The prospective movements in real price could therefore increase the real growth of net farm income by a little under 2 percentage points a year in the 1990s and by 7.5 percentage points a year in the two decades beyond 2000.

Any forecast covering a long time period is subject to a considerable degree of uncertainty. The main uncertainties with the forecasts in this paper probably relate to economic growth and protection in Developing Asia, technical progress and the real exchange rate.

Protection normally harms the country providing it. By favouring less efficient over more efficient industries it moves resources from higher to lower productivity uses. It therefore lowers national output, national income and living standards.

Unfortunately, countries that grant protection to, or impose costs on, some of their own industries not only hurt themselves, they also harm other countries. It would be unfortunate for Australia in general, and its farmers in particular, if the developing countries of Asia were to intensify their policies of agricultural protection.

Nevertheless, because of pressure exerted by special-interest groups, failure to take adequate account of the costs that protecting some industries impose on other industries, and sometimes reservations about continued and reliable access to foreign supplies, protectionist pressures will continue in Developing Asia. As in most Northern Hemisphere countries, agriculture will continue to be the largest sector for protection.

Technical progress is always the sleeper with any form of economic activity. However, it is easy to overestimate the contribution it will make to the growth of agricultural production. Processes that generate large increases in productivity under controlled laboratory conditions and when costs are largely irrelevant often can be applied on a large scale or in an economical manner in only limited parts of the world.

Exchange rates: perhaps the major threat to the forecast of strongly rising real farm incomes is the potential for a "Gregory Effect".

TABLE 2: growth of world demand for agricultural products, 1990-2019 (average annual rates, in per cent)

	1990-99	2000-09	2010-19
OECD	1.4	0.8	0.4
Western Europe	1.3	0.7	0.3
North America	1.1	0.8	0.6
Western Pacific	1.9	1.0	0.4
COMECON	1.5	1.4	1.0
USSR	1.6	1.5	1.0
Eastern Europe	1.2	1.1	0.8
Developing Asia	4.9	4.6	4.1
East	5.1	4.8	4.2
South	4.5	4.2	3.7
Latin America	3.2	2.9	2.2
Africa	4.6	4.5	3.8
Middle East	3.4	2.8	2.2
Total	3.0	2.9	2.7

Source: NFF World Agriculture Model.

Rapid economic growth in Developing Asia will cause the demand for agricultural products to accelerate and their real price to rise.

But it could do the same for minerals. In Australia, rising incomes may induce some people to trade up from, say, a Commodore to a Mercedes. This change will not have much effect on the demand for minerals. But in the rapidly growing developing countries, the comparable change will soon be from a push-bike to a Commodore. And that change will have a major impact on the demand for minerals.

The danger for Australian farmers is that the real price of minerals will increase faster than will the real price of farm products. If that were to occur, the additional export income generated by the minerals sector could produce an appreciation of the Australian dollar that more than offsets the effect on farm income of the rise in the real price of agricultural products.

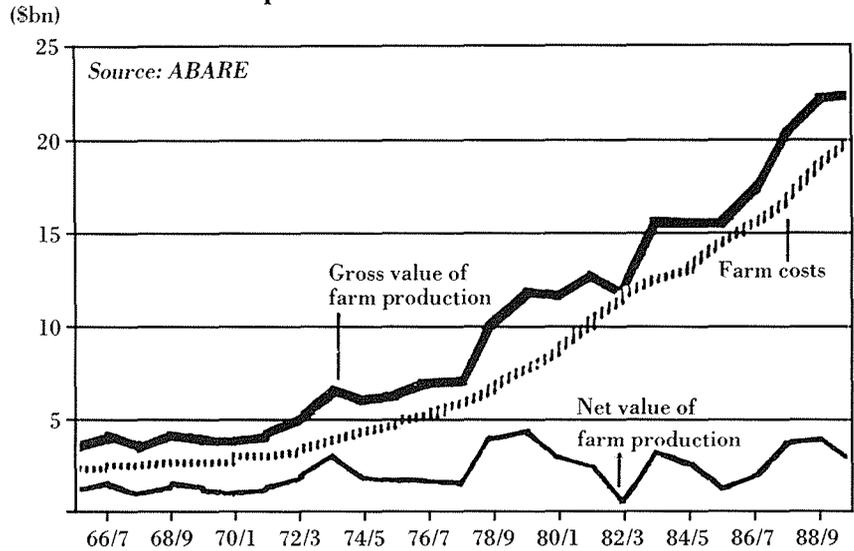
However, there will be two other factors tending to push the real exchange rate down. They are the recent swing from deficit to surplus in the Australian public sector's budget balance and the potential for economic growth to be much stronger in Australia than in the major OECD countries over the next few decades.

The forecasts made in this paper are quite favourable for the Australian economy and its farmers. I would like to offer two prescriptions aimed at promoting our exploitation of the potential offered by the expanding markets for agricultural products. The first prescription is directed at the Government; the second concerns mainly the farm sector.

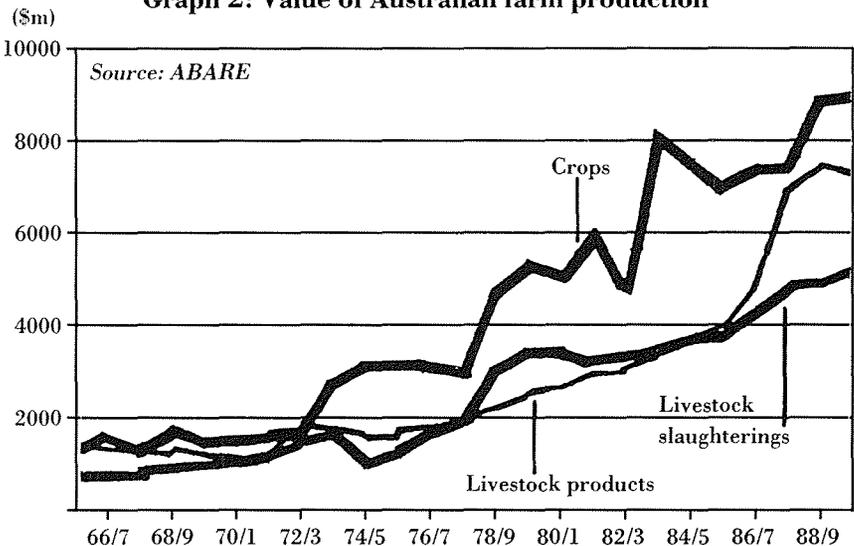
First, we should phase out as quickly as possible our policy of protecting inefficient industries. Independently of what is happening in the rest of the world, we owe it to ourselves to stop penalising our high-productivity export industries by providing tariff protection for lower productivity, import-competing industries.

But developments abroad make it even more important that we do so. Developing Asia's comparative advantage is in labour-intensive, manufactured products. Barriers against these products both retard growth in Developing Asia and encourage countries in that region to set up barriers against the goods and services in which we have a comparative advantage.

Graph 1: Australian farm returns



Graph 2: Value of Australian farm production



Australia should eliminate industry protection. It should do so on a top-down basis over a reasonably short time. It is difficult to think of any industry which, legitimately, would need an adjustment period of longer than five years.

Second, the education and training of farmers, and the research that is associated with farming, must be upgraded.

Farming will become one of the most challenging occupations of the 21st century. Farmers will need to be aware of market developments and prospects at home and abroad, have an understanding of domestic and international financial markets, keep abreast of production and environmental technologies and be excellent managers.

Change is becoming increasingly rapid. Given that about 80 per cent of the scientists the world has produced are alive today, this is not surprising. Further, average lifespans are increasing and will soon be approaching 80 years. Working lifespans will increase considerably.

Farmers now need a support system that allows them easy access to lifetime education and training. An on-campus college diploma or university degree should be only the first step. It should be followed up with distance learning programs, perhaps interspersed every 20 years or so with short, on-campus courses that upgrade basic skills or enable farmers to develop new skills. □