Agriculture om Western Australia Now and in the Future
Background notes for a W.A. Week Economic Forum

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"AGRICULTURE IN WESTERN AUSTRALIA: NOW AND THE FUTURE"
BACKGROUND NOTES FOR A W.A. WEEK ECONOMIC FORUM ON 8 JUNE 1983

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With the emphasis on economic considerations, this paper gives a broadbrush description of Western Australia's rural sector and the factors which influence it, and outlines future trends and challenges.
1. Agriculture to Date

1.1 Physical Features

. Although the first European settlement in Western Australia was 154 years ago, virtually all farmland has been developed since 1908, with most of this development occurring in the last 30 years, particularly on the infertile lightlands of the Cereal-Sheep Zone from 1948 to 1968.

. In general, Western Australian soils are inherently infertile with respect to (introduced) crop and pasture species, especially the Cereal-Sheep Zone. Phosphate in particular is needed. Also trace elements. W.A. currently accounts for some 33% of all fertiliser use in Australia.

. W.A. scientists and farmers are noted for their expertise in dryland agriculture, especially in regard to:
  - ley farming (rotation of cereal crops with legume pasture and latterly legume (lupin) crop);
  - minimum tillage of the soil;
  - improved plant species;
  - fertiliser knowledge.

. Soil degradation, notably soil (and stream) salinity and erosion, is of concern to Western Australia's rural sector and soil salinity, for example, is spreading. However:

  - to put the soil salinity problem in perspective, only about 1.9% per cent (or around 300,000 ha) of the State's total area cleared for farming (about 16 m ha) is affected by salinity;
- A concerted drive is already under way against soil degradation in Western Australia aimed at controlling and eventually reversing the problem. The research and extension effort has been stepped up and a new Soil and Land Conservation Act was enacted last year, which provides broader and stronger legislation and aims to achieve greater local farming community involvement in the campaign.

- Minimum tillage combined with chemical weed killers has become an important feature of W.A. cropping in recent years. This trend is helping soil conservation.

- Each year since 1976, various parts of the State's rural sector have been affected by drought. During that time, most Shires in the Agricultural Areas were drought stricken for at least one season. Many parts of the Pastoral Zone also suffered. The drought not only affected adversely the farm sector (reduced output and returns and deferred purchase of inputs), but country towns and industries allied to agriculture also suffered.

- The last few years have also seen in the Agricultural Areas an increase in total area cropped (due to new areas being cropped and a higher proportion of average farm area under crop) and a decline in sheep numbers (due to cropping becoming relatively more profitable than sheep, as well as drought).

1.2 Economic Features

- Average farm size in Western Australia has doubled over the last 30 years and is generally higher than elsewhere in Australia.

- W.A. has about 16 m ha cleared for farming.

- W.A. has approximately 16,000 "commercial" farmers.
W.A.'s gross value of rural production in 1982/83 is estimated to be $2,150 m - the first time it has exceeded $2 billion. Of this total, an estimated $1,294 m will come from crops ($908 m from wheat), $363 m from livestock slaughterings and $493 m from livestock products ($421 m from wool). Wheat ($908 m) and sheep ($546 m) are clearly the two largest income earners together accounting for 68% of gross value of rural production in 1982/83.

With 10% of Australia's farmers, W.A. accounts for around 15% of the nation's gross value of rural production. At present, W.A. produces about 33% of the nation's wheat (although this rose to over 60% in the 1982/83 harvest because of the devastating Eastern States drought), carries about 22% of the nation's sheep and is the leading live sheep exporting State accounting for half of this valuable overseas trade.

The value of rural overseas exports in 1982/83 from W.A. was an estimated $1,650 million. Moreover, Western Australian agriculture is markedly export-oriented, with approximately 70% of total rural production being exported overseas. W.A. exports about 98% of its wool, 95% of its wheat and 50% of all meat produced. W.A.'s rural sector produces about 33% of the State's total overseas exports. W.A. now produces about 17% of the nation's rural exports.

This heavy dependence on overseas exports results in the rural sector being particularly vulnerable to: traditionally volatile international commodity markets; the vagaries of overseas governments and their protectionist policies; and domestic cost pressures (as with other export-oriented sectors, agriculture cannot readily pass on cost rises to global customers).
In the 30 years from 1950/51, total output volume from W.A.'s rural sector more than doubled, rising at an annual rate of 4.4%. Also, the percentage component of total output has altered with the share of cereals and meat increasing and the share of other livestock products, fruit and vegetables decreasing. In addition, W.A. agriculture has been growing at a faster rate than Australia's rural sector - W.A. has been contributing an increasing share of the nation's agricultural output (15% now compared with 10% in 1961) and rural exports (17% now compared with 12% in 1961).

The 4.4% annual output increase since 1950/51 has arisen only partly because of an increase in the volume of inputs (a 1.3% per year rise). The output rise has also stemmed from productivity gains, that is more output per unit of input (productivity gains in W.A.'s rural sector have been 3.1% per year since 1950/51), through: adoption of better technology, improved management and input mixes, economies of scale, and better services. The major input mix change is that agriculture now uses more capital and less labour.

The corollary is that labour productivity (output per man) in the rural sector has increased substantially. Indeed, Australian agriculture as a whole is a world leader in terms of farmer efficiency in that the average Australian farmer provides sufficient food to feed 70 people, compared with 59 people per U.S.A. farmer and 19 people per EEC farmer.

One other aspect of inputs is that agriculture has become increasingly dependent on off-farm inputs (such as machinery, equipment, fertilisers and chemicals) supplied by allied industries.
For several decades, unit costs in the farm sector (input prices paid by farmers) have been rising more rapidly than unit prices (product prices received by farmers), with a consequent long-term decline in the terms of trade faced by farmers - commonly known as the farm sector's "cost-price squeeze". For example, W.A. farmer's terms of trade have declined 19% in the last 3 years. Farmers have been able to offset this decline, to some extent, by achieving productivity gains.

There have also been structural changes in W.A.'s agricultural exports in the last 30 years. The export product emphasis has altered with unmilled cereals, meat and live sheep accounting for an increasing proportion of overseas exports, and wool and flour a declining share. In addition, the last 30 years have seen a decline in the importance of U.K. and European markets as outlets, and a substantial increase in exports to "new" areas, such as the Middle East and Asia.

Most agricultural exports leave in "raw" form, with little processing. Nevertheless, some local processing does occur for subsequent sale on domestic and export markets - agricultural product processing currently accounts for 48% of the State's total manufacturing sector. In addition, a large proportion of agriculture's inputs are imported from the Eastern States. This emphasis on the export of raw products to overseas markets and the import of manufactured inputs from other States is typical of the W.A. economy in general with its large overseas trade surplus and trade deficit with the rest of Australia.

The rural sector in recent decades has been declining in relative terms in that its percentage share of the State's total production, exports and employment has been falling because other sectors (mining and services) have been growing at a faster rate. For example, agriculture now accounts for about 8% of W.A.'s gross domestic product (around 17% 20 years ago), about 33% of the State's overseas exports (around 68% 20 years ago), and about 7% of W.A.'s employment (around 13% 20
years ago). Nevertheless agriculture continues to grow in absolute terms (rising volume of production and exports) and this growth, plus the increasing dependence on off-farm inputs, have boosted industries allied to agriculture, which leads to the next section.

1.3 Links with Other Sectors

Undeniably the rural sector continues to make an important contribution to Western Australia's (and the nation's) economy. It provides a low-cost source of food and fibre for domestic processors and consumers, it remains a major contributor to export earnings, and it has an important influence on the total economy through its close interdependence with other sectors.

The rural sector currently provides some 33% of Western Australia's total overseas exports (and about 42% of Australia's total exports).

In addition, through its close links with allied industries involved with supplying inputs and removing and processing its products (industries such as: transport, machinery, chemicals and fertilisers, merchandising, processing and the service sector), agriculture clearly has a major influence on a wide area of the total economy. An acknowledgement of this was that during the recent drought years in W.A., and particularly the Eastern States, almost every time economic recession was discussed, drought was mentioned as an important contributing factor.

Attempts have been made to measure the interdependence between agriculture and the rest of the economy, and various "multipliers" have been calculated accordingly. A rough guide (W.A. Department of Agriculture) might be that for every job in the farm workforce, at least 1.5 to 2.5 jobs are required elsewhere in the economy. This corresponds roughly with the National Farmers' Federation estimate in 1980 ("Farm Focus", pages 7-8) that approximately one million workers
Australia-wide depend directly (about 360,000 farm workers) or indirectly to some extent on the farm sector for employment, giving rise to one farm job is worth nearly two other jobs. Assuming a 1 to 2 ratio, and given a total farm workforce in Western Australia of roughly 40,000, approximately 120,000 jobs in W.A. currently depend directly or indirectly on the rural sector - that is, some 21% of the State's total workforce (568,900 at 30 April 1983), or one in every five jobs, depend ultimately on agriculture.

Another linkage measure (by W.A. Department of Agriculture) is that each additional $1 million output from the cereal-sheep industry results in additional production economy-wide valued at $1.65 million.

Another aspect to note is the effect of the farm family's consumption of household goods on the economy. Presumably, the effect on the total economy would not change significantly if the farm family moved to the city, but the farming community's purchase of household goods can and does have a major impact on the local or regional economy. (Research at the University of New England in N.S.W., by Dr Roy Powell, suggests the farm family's household consumption effect on the regional economy may even be as great or greater than the farm business effect on the regional economy).

1.4 Production Zones

High Rainfall - South West Zone

- More intensive farming including dairying, horticulture, beef, viticulture, sheep; some irrigation; also forestry.

Cereal - Sheep Zone

- Mixed cropping-sheep farms to predominately cropping farms.

- Crops include wheat, barley, oats, lupins.

- The last few years have seen more cropping and less livestock.
Agricultural Areas
. Usually taken to include Cereal-Sheep Zone plus High Rainfall - South West.

Pastoral Zone
. Beef cattle and sheep.

. Accounts for around 50% of State's cattle and 7% of State's sheep.

. In southern pastoral districts, the recent drought led to a decline in sheep numbers and cost cutting by deferral of input purchases.

. Future viability of Kimberley cattle industry currently under examination. Bovine tuberculosis campaign and rangeland regeneration are most important. In addition, recovery from recent devastating floods is of major concern.

Tropical Agriculture
. Horticulture at Carnarvon. Fruit and vegetable production from the Gascoyne River flats.

. Cropping in East Kimberley. Experimental and commercial (28 commercial farms) crops include rice, soybeans, maize, peanuts, mung beans, sorghum, sunflower, bananas, cucurbits and sugar. Establishment of sugar industry is currently under examination.

1.5 Individual Agricultural Industries

Cropping
. Wheat is the single most important contributor to the State's rural sector. A record area planted to wheat in 1982/83 of 5.08 m ha produced a record crop of 5.7 m tonnes valued at $908 m - 42% of W.A.'s total value of rural output.

. Barley and oats are also important, with annual output, together, now valued at nearly $200 m.
W.A. farmers have shown a big increase in interest in growing lupins in the last two years. In 1980/81, lupin production was 37,000 tonnes, in 1981/82 95,000 tonnes, and an estimated 182,000 tonnes in 1982/83. The area sown to lupins was 202,000 ha in 1982/83 and this is forecast to rise to about 350,000 ha in 1983/84. Farmers have come to recognise the value of lupins as a legume crop in a rotation, as an alternative to a legume pasture.

Sheep

At 31 March 1983 there were 31.2 million sheep in W.A., with about 7 per cent in the Pastoral Zone and the remainder in the Agricultural Areas. Total flock numbers declined from about 35 million head a few years ago, because of increased cropping profitability and the drought.

W.A.'s sheep industry continues to be a major component of the State's rural sector. Value of production from wool, sheep and lamb slaughterings and live sheep exports in 1982/83 is estimated to total around $546 m ($421 m from wool) - 25% of total value of rural production in W.A.

W.A.'s lamb industry has become more export-oriented in recent years with up to two-thirds of annual output being exported.

Live sheep exports are now about 3 million head per year, about half the total from Australia. The increased live trade in the last few years has led to a higher proportion of breeding ewes in the State's flock and a lower overall average age of the flock.

W.A.'s sheep industry continues to be underpinned to a large extent by the live sheep trade, which has acted in the last 3 or 4 years to place a very effective floor in the saleyard price for sheep generally - indeed, without this trade, the State's sheep flock may well have declined from the 35 million head figure of a few years ago to around 25 million head, instead of the current 31 million head.
Beef Cattle

Total cattle numbers in W.A. at 31 March 1983 are estimated to have been 1,810,000 - 1,685,000 beef (93%) and 125,000 dairy cattle (7%). Of the beef cattle, 920,000 are in the Pastoral Areas (mostly the Kimberley) and 765,000 in the Agricultural Areas.

The State's total cattle herd has declined from a peak of 2.65 m head in 1976, to the current 1.81 m head - due largely to less beef cattle in the Agricultural Areas resulting from depressed and fluctuating export prices. For the first time since 1969, there are now less cattle in the Agricultural Areas than in the Pastoral Zone.

Value of cattle and calf slaughterings in 1982/83 is an estimated $175 m.

W.A. currently produces about 100,000 tonnes of beef and veal per year, about half of which is exported.

Dairy

There are about 125,000 dairy cattle in W.A. at present and 607 producers. In 1982/83 dairy production was valued at an estimated $46 m.

The State's dairy industry has undergone considerable structural change in the last 30 years. The number of producers, number of cows and total milk production have all decreased, although production per farm has been rising. The industry has been relatively stable for the last few years.

Today, almost all (96%) producers remaining in the industry have a share of the more profitable market milk sector.

Pig Industry

At 31 March, 1983, there were 265,000 pigs in W.A., producing an output valued at an estimated $38 m in 1982/83.
Fruit

The output from the State's fruit industry was valued at an estimated $40 m in 1982/83 with apples contributing $20 m and grapes $4 m.

There is increasing interest in high density planting and mechanical harvesting.

Growing markets are emerging in South East Asia for: canning and dessert stone fruit, apples, and grapes (a seedless red berry grape is most preferable and a search is currently under way for a suitable variety).

The apple industry is currently undergoing a restructuring program - to offset the loss of traditional "at risk" European markets (via a tree pull and replanting program), to improve disease control, and to seek better storage and handling techniques. The aim is to replace Granny Smith apples (which had a market in the past in Europe) with red apples (popular in South East Asia) or other favourable varieties. Outlays totalling $1 million are scheduled for the 4 year scheme, commencing 1981/82, with funds provided by the Commonwealth and State Governments on a $1 for $1 basis.

Vegetables

W.A.'s vegetable production in 1982/83 was valued at an estimated $40 m.

Production and export are expanding. The Middle East and Hong Kong in particular, and South East Asia generally, are now taking more supplies.

To meet the requirements of growing local supermarket outlets and expanding export markets, increasing emphasis is being placed on ensuring high quality uniform produce and continuity of supply. To achieve this, production is becoming increasingly specialised.
Floriculture

. Output from W.A.'s floriculture industry in 1982/83 was valued at an estimated $20 m.

. The industry is now quite large, with a big increase having occurred in nursery production up until the last year or two. The wildflower industry is still growing, with an expansion of wildflower farming now underway and increasing interest being shown by overseas outlets.

1.6 Roles in Agriculture

. Farmers and graziers in Western Australia: regarded as among the most innovative and productive in Australia.

. Scientists and economists: have a vital role in researching and developing new technology for farming (plant breeds, chemicals, disease and pest control, machinery, farm economics, marketing) and spreading the word to farmers.

. Governments: also have a major role in research, extension, services, regulation and financial aid.

. Allied industries: have an essential role in providing inputs for agriculture and removing and marketing farm products.

2. Factors Influencing Agriculture

2.1 Physical

. Various physical factors, such as land type and the weather, have a major impact on agriculture, but no more will be said here as this report has an economic orientation.

2.2 Farm Management

. Ability of farmer to provide sound physical and financial farm management also clearly affects farm performance.

2.3 Costs and Prices

. Input (unit) costs relative to product prices, and scope for productivity gains to counter adverse terms of trade.
Competition from other sectors for capital, land and labour increases the cost of these inputs to farming.

2.4 Market Outlets

- Price, access (particularly for exports) and predictability are all important aspects. Also, the export policies of competing exporter nations, especially in regard to export assistance measures, are also relevant.

- Constant need to retain existing markets and/or find new outlets.

2.5 New Technology

- On-farm (plant breeds, plant and animal disease control, machinery, chemicals, computers, etc).

- Off-farm (marketing innovations, new techniques in transport, handling, storage, processing, etc).

- Marketing innovations:
  - electronic and computer aids, such as computer sale of livestock;
  - carcase classification;
  - sale of wool by description.

2.6 Statutory Bodies

- A range of semi-government and statutory bodies are involved in agriculture, particularly in marketing and promotion areas.

2.7 Government Policy for Agriculture

- Commonwealth and State Government policies (and even Local Government) directly affect agriculture.

- These policies cover: funds for research and extension activities; provision of services (e.g. inspection); regulatory activities (e.g. quarantine); funds for industry adjustment and aid for natural disaster effects; rates and taxes.
The Commonwealth's Industries Assistance Commission inquiry process has been used extensively to canvas rural policy and assistance subjects.

Specially commissioned Commonwealth reports, such as: the 1982 Balderstone Report on agricultural policy; the 1974 Green Paper on agricultural policy; the Kelly Report on meat inspection.

Specially commissioned State reports such as: the 1982 Dairy Industry Royal Commission in W.A.; the Kimberley pastoral industry investigation.

Government lobbying industry:
- lobbying of Commonwealth and State Governments by industry groups and special interest lobbies has become a growing and increasingly sophisticated industry in recent years.

2.8 Macro-economic and Global Factors
- Australian agriculture is far-removed from being a subsistence industry, and has a great deal of interdependence with other sectors of the economy. Our rural sector is also heavily export-oriented (70% of Western Australia's total rural output is exported).

The consequence of these two features is that economic events beyond the farm gate, both in Australia and overseas, can and do have a huge influence on net farm incomes. Moreover, nearly all of these economic events or measures are beyond the control of farmers.

Some of these economic factors are:
- exchange rates
- inflation rates
- the cost and availability of finance
- tariffs and other barriers to trade
- wage rates and employment levels
- level of industrial unrest
- rural output and exports by other countries
- rural and general economic policies in other countries.
Of relevance at present is:
- the ability and willingness of the Federal Government to come to grips with Australia's economic problems, particularly high rates of inflation, unemployment and interest.
- timing and extent of economic recovery in the USA (the US accounts for around one quarter of total global production from all sectors combined).
- the agricultural and trade policies of the major rural producing/exporting nations, especially the EEC and the USA.
- the difficulty of the international financial system to handle the current massive level of Third World debts, now a staggering total of more than $600 billion US. (with Brazil and Mexico accounting for more than $80 billion US. each). The world's biggest 10 foreign banks together now have loans to heavily-in-debt Third World nations exceeding the total value of their capital assets! These countries are having great difficulty meeting their repayment commitments and if they start to default (so far this has been avoided), the global repercussions could be devastating with a possible collapse of the international financial system and all the implications that would have for international trade and commodity prices. However, provided an economic recovery in the Developed West can be sustained, interest rates in the US (and other developed nations) should remain at lower and more acceptable levels and Western demand for Third World exports should increase, with the potential crisis being averted.

3. The Next Two Years

3.1 Total Rural Sector

Difficult, if not impossible, to predict future fortunes of rural sector because of the many uncertain variables, not the least being the weather. There are, however, some pointers to the next two years or so.
The gross value of rural production in Western Australia in 1983/84 is forecast (Department of Agriculture) to be $2,192 m, with crops contributing $1,261 m, livestock slaughterings $395 m, and livestock products $536 m. The final outcome will, of course, depend very much on the coming season.

The cost-price squeeze confronting the rural sector can be expected to continue.

Because of the heavy reliance on exports markets, exchange rates will continue to be a big factor in returns to Australian farmers. The 10% devaluation of the $ Australian in March 1983 boosted returns to farmers, but subsequent gradual revaluations (in response to capital inflows) lessened the initial benefit. Nevertheless, there appears little chance that further substantial revaluations will occur over the next few months — indeed, it is possible that the value of the $ Australian could decline to levels corresponding to a net effective devaluation of even greater than 10% by the end of 1983.

Despite the benefits of the recent 10% devaluation to our rural and other exports, a big worry is whether Australia's inflation rate (11.5% in the year to March 1983) can be pegged back. This is especially so given the large inroads our major trading partners and competitors have now made into their inflation rates. For example, in the year to March 1983, Australia's 8 major OECD trading partners (USA, Japan, FRG, France, UK, Italy, Canada and New Zealand) as a group had an average inflation rate of 4.6%, with the UK posting 4.6%, the USA 3.6% and Japan 2.3%. If Australia is unable to reduce significantly its relatively high inflation rate, upward pressures on our real effective exchange rate (a measure of our international price competitiveness) will remain — to the detriment of our export industries.
. Another aspect of the economy needing urgent attention is the cost of finance, but given the likelihood that USA interest rates may well not decline significantly in the near future, together with the large budget deficit looming for Australia, there appears little chance of a large and sustained decline in interest rates in the next few months.

. Global economic recovery may well have commenced but it may not be until late 1983 or 1984 before a significant improvement, especially in the US economy, occurs. Once global economic recovery is under way, commodity prices can be expected to improve, with ensuing benefits to export-oriented economies such as Australia's.

. One other development deserving comment is that in the past few months the EEC has shown signs of seeking ways to reduce its large excess of agricultural product supplies, such as cereals. The overhang onto world markets of large and subsidised EEC supplies in recent years has had a major price depressing effect on world markets for products such as grain, meat and sugar. It has led the USA to consider retaliating (although the prospects of this now appear to have receded) which would result in a trade war no-one would win in the long run.

3.2 Individual Agricultural Industries

Cropping

. 1982/83 estimates and 1983/84 forecasts are given in Table 2 (the season will, of course, have a major bearing on grain production).

. The Department expects a substantial increase in lupin area and production in 1983/84.

. Production trends are likely to continue into 1984/85.
Future grain prices (particularly wheat) will depend on factors such as: world production (and extent of EEC subsidised exports), world economic conditions, USA support crop policy programs and exchange rates.

In short, while global wheat and coarse grain prices are not likely to fall much, if at all, in the next two years, they are not likely to improve a great deal either. The most likely outcome is for small global price rises. The movements in the $ Australian will be an important factor in the price to Australian growers.

The current Wheat Marketing Plan ends with the 1984/85 season. Arrangements to apply from 1985/86 on will need to be negotiated during the next two years.

Sheep

Current estimates and predictions (assuming average seasonal conditions for the next three years) are given in Tables 3, 4 and 5.

The predictions for the next three years assume no significant build up of sheep in the Cereal-Sheep Zone and South West, as well as average seasons occurring. However, the predictions do assume some build up in southern Pastoral Areas, where numbers were decimated by the 1976/79 drought.

Cattle

Total W.A. cattle (beef and dairy) estimates and predictions for the next three years are given in Tables 6 and 7.

Total cattle numbers in W.A. have declined by 32% from the peak level of 2.65 m head in 1976, to the current level of 1.81 m. Nearly all the decline has occurred in the Agricultural Areas. The reduction in the W.A. herd in recent years, mainly because of depressed prices, has also occurred at the national level.
. The number of cattle in the Agricultural Areas is expected to decline a little further in the year to March 1984, then stabilise, and rise slightly in 1986.

. Pastoral Areas cattle numbers are expected to rise slightly (by 10,000) over the next three years.

. Cattle slaughterings and beef and veal production are expected to fall sharply in the next 12 months (ending 31 March 1984) followed by a small fall in the ensuing year. After that, slaughterings and production are expected to stabilise for three years.

. Around 25% of Australia's beef production is exported to the USA (and a further 25% to other countries). The US market is a price setter for our saleyard cattle prices.

. Hence, the expected improvement in US beef prices, together with the increased competition for Australia's reduced beef supplies, should lead to some improvement in our saleyard prices for cattle for the rest of 1983 and place upward pressures on prices for several years to come.

Dairy

. W.A. dairy producers can expect higher milk prices during 1983, although increases in real terms are unlikely, especially for manufacturing milk. Significantly higher prices for dairy beef should occur in 1983, due to higher beef prices in general.

. Producer returns for manufacturing milk in future years will depend on: productivity gains in dairy industry; effect of recent Eastern States drought on dairy exports; dairy production and exports by EEC and USA; implementation of recommendations of Honorary Royal Commission into W.A. dairy industry; policy outcome of 1983 IAC dairy inquiry.

. The stability achieved in the dairy industry in recent years is likely to continue as no substantial changes are foreseeable at present.
Pigs

- The number of pig producers in W.A. is likely to decline further over the next 2 or 3 years. However, over the same period no significant change in the total number of pigs is anticipated.

- Expected increases in beef prices over the next 12 months or so, will make pig meat prices more competitive.

Fruit

- The W.A. fruit industry will continue its current adjustment process over the next few years, involving a levelling off (or even a slight fall) in total production, together with a change in variety emphasis. After a few years, total output is expected to be back to levels of the recent past, but with a different product mix.

- Markets in South East Asia are expected to expand.

Vegetables

- The Department expects total vegetable production to rise over the next few years.

- Good potential exists for expanded exports, particularly to Hong Kong and the Middle East, as well as South East Asia generally.

Floriculture

- The growing interest in wildflower farming and overseas exports of native flowers is expected to continue.

4. Longer Term Outlook

4.1 Total Rural Sector

- Wheat and sheep are likely to remain the two largest components of the W.A. rural sector.
The cost-price squeeze which the rural sector has been facing for several decades is unlikely to cease in the foreseeable future. Farmers will need to continue to adopt new technology to help offset this.

The rural sector is likely to face increasing competition from other sectors for land, capital and labour.

The heavy dependence of the rural sector on overseas markets is likely to continue, and South East Asian and Middle East markets are likely to be even more important.

Growing use of increasingly sophisticated new technology will occur in areas such as: new plant varieties and species; increased emphasis on biological control of pests and weeds; farm computers for budgeting and decision-making, taxation, market and other information, sale of products (e.g. livestock) and purchase of farm and household foods; and improved machinery and equipment. As a result, further productivity gains will almost certainly occur.

4.2 Production Zones

High Rainfall - South West Zone

Has considerable potential for further agricultural change and growth, stemming from changing markets and new technology. This zone may contribute a larger share of the State's total rural output in future.

Cereal-Sheep Zone

May not see much further substitution of cropping for sheep, especially if grain profitability ceases to improve relative to sheep (several big Russian crops would see to this).

Nevertheless, unlikely to see sheep numbers increase substantially over the next few years at least.

Continuing emphasis on minimum tillage cropping and chemical weed control.
Pastoral Zone

. Sheep numbers expected to build up in southern pastoral areas (weather permitting).

. Southern pastoral areas stations not in position to make any more substantial cost cuts. Will need continuing vermin control, adequate wool prices and reasonable seasons, to continue in business.

. Kimberley cattle industry investigation to continue aimed at seeking a long-term viable and stable industry. Pasture re-generation and bovine tuberculosis, in particular, must be addressed.

5. Challenges

Western Australia's (and Australia's) rural sector faces a number of challenges and its response to these will help chart the future course of the rural sector. Some of these challenges are:

. The continuing need to maintain at adequate levels the stock of farm capital and inputs, which have been run down somewhat recently because of input purchase deferrals due to drought years.

. The maintenance of adequate levels of research and extension.

. The continuing need for adoption of new technology, both on-farm and in industries allied to agriculture.

. The search for improved farming systems and the campaign against soil and land degradation will need to continue.

. The retention/expansion of existing markets and/or development of new export markets. We should look increasingly to our heavily-populated near-neighbour countries in Asia, the Middle East and the Western Pacific basin - a region occupied by half the world's population. In particular, Western Australia is in close proximity to and has rapid and frequent air and sea access to the South East Asian nations. The five ASEAN members - Thailand, Philippines, Malaysia, Singapore and Indonesia - now comprise the fastest growing market area in the
world, with a total of 270 million consumers. Although their purchasing power and personal disposable incomes are still well behind that of countries such as USA and Japan, ASEAN's economic potential is colossal. The gross domestic product of the 5 member group has increased 7% per year for the past decade. Not only is the ASEAN region expanding more rapidly than other developing areas, but it is growing at twice the rate of the industrialised countries. Moreover, demand for agricultural products is projected to continue to be very strong - due to increasing industrialisation, expanding urbanisation, rising incomes and growing population. In addition, there is the traditional market of Japan (120 million people), and scope for expanded trade with the newly-industrialised countries of the Republic of Korea (40 million people) and Taiwan (19 million people). Then there is Hong Kong with 6 million people and China with 1,000 million. And all of this is on our front door step! However, just how well we can tap into this huge potential remains to be seen, but one thing is sure, it will not have escaped the notice of our competitors, such as the USA.

The rural sector, perhaps in concert with other sectors such as mining, must continue to press for long term and gradual reform of Australia's tariff and other barriers to imports. The cost these trade restrictions impose on the farm sector, a sector unable to pass on such a cost because of its heavy reliance on sales to export markets, is intolerable. For example, the NSW Livestock and Grain Producers' Association estimates ("The Great Tariff Debate", January 1983, page 9) that our tariff wall imposes a cost to grain, sheep and beef producers of $13,500 per producer, per year - or $260 per week. And that is only the cost of tariffs - it excludes the effect of other barriers to trade, such as import quotas. Moreover, other countries have even used our import restrictions as an excuse to thwart our search for expanded export opportunities by denying us access to their markets - to protect their local producers. It is true, and regretabbly so, that the current global recession has led to an increase in protectionism worldwide, with increasing restrictions on trade. However, we should not blindly accept a current argument that "now is not the time to lower import barriers - wait till the economy improves". Rather, such barriers are
contributing to the recession and now is the time more than ever before, provided reform is gradual. Moreover, with a more trade-oriented economy than most States, W.A. particularly stands to gain from tariff and other trade barrier reform.

More generally, the rural sector faces the continuing challenge of redressing the disproportionately high levels of assistance afforded other sectors of the economy, vis a vis agriculture. For example, the effective rate of protection for the manufacturing sector in 1980/81 was 24% - far in excess of the 4% figure for the rural sector. If these high levels of protection to other sectors, particularly the tariff, are not reduced, the rural sector has no choice but to, and indeed is justified to, seek its fair share of assistance measures, especially those measures operating on income.

The rural sector will also need to ensure that maximum and eternal vigilance is maintained against the possibility of imports of exotic pests and diseases. Such an outbreak would overnight have a huge and adverse impact on exports.

Another challenge now facing the rural sector is that it needs to be increasingly alert to the growing influence of one-issue pressure groups and the need for considered argument and strategic lobbying to counter any irresponsible threats to agriculture.

There is also a constant need for both farm and country town people to ensure they receive their fair share of community services and benefits. An aspect of this is that country people will need to be involved actively if they hope to gain maximum benefit from the rapidly expanding array of new electronic technology and communication facilities.
### Table 1.

Economic indicators for the agricultural sector in Western Australia

<table>
<thead>
<tr>
<th>GROSS VALUE OF RURAL PRODUCTION*</th>
<th>Estimate* Forecast*</th>
</tr>
</thead>
<tbody>
<tr>
<td>($ million)</td>
<td>1977/78 78/79 79/80 80/81 81/82 82/83 83/84</td>
</tr>
<tr>
<td><strong>Crops—</strong></td>
<td></td>
</tr>
<tr>
<td>Wheat</td>
<td>293 547 571 507 754 908 875</td>
</tr>
<tr>
<td>Barley</td>
<td>68 69 74 74 78 108 105</td>
</tr>
<tr>
<td>Oats</td>
<td>31 30 29 54 53 86 63</td>
</tr>
<tr>
<td>Lupins</td>
<td>3 4 3 8 11 27 50</td>
</tr>
<tr>
<td>Hay</td>
<td>28 30 34 46 54 57 62</td>
</tr>
<tr>
<td>Apples</td>
<td>11 17 18 18 20 20 21</td>
</tr>
<tr>
<td>Grapes</td>
<td>2 3 3 4 4 4 4</td>
</tr>
<tr>
<td>Other fruit</td>
<td>12 14 12 15 13 16 13</td>
</tr>
<tr>
<td>Vegetables</td>
<td>27 35 38 41 40 40 40</td>
</tr>
<tr>
<td>Floriculture (e)</td>
<td>8 10 13 17 20 20 21</td>
</tr>
<tr>
<td>Other crops</td>
<td>5 5 9 8 7 8 8</td>
</tr>
<tr>
<td><strong>TOTAL CROPS</strong></td>
<td>488 765 804 792 1,054 1,294 1,261</td>
</tr>
</tbody>
</table>

**Livestock slaughter—**

| Castle and calves (e)            | 81 167 195 185 146 175 180 |
| Sheep and lambs (e)              | 40 56 69 75 50 46 50 |
| Pigs                             | 19 22 27 36 38 38 39 |
| Poultry                          | 20 2 26 30 32 34 35 |
| Live imports (e)                 | -6 -11 -15 -10 -6 -10 -6 |
| Live exports (e)                 | 43 65 68 96 91 80 97 |
| **TOTAL LIVESTOCK SLAUGHTER**    | 197 322 390 412 351 363 395 |

**Livestock products—**

| Wool                             | 270 293 357 411 385 421 459 |
| Dairy products                   | 30 33(e) 33(e) 36 41 46 49 |
| Eggs: honey, other               | 16 18 19 24 26 28 30 |
| **TOTAL LIVESTOCK PRODUCTS**    | 316 344 409 469 450 493 536 |
| **GRAND TOTAL**                  | 1,001 1,431 1,603 1,673 1,855 2,150 2,192 |
| **TOTAL AT CONSTANT DOLLARS (deflated by index of prices paid)** | 1,401 1,858 1,864 1,873 1,866 1,777 1,661 |

**PRICE INDEXES (Base 1980/81 = 100)**

**Prices received by farmers—**

| Wheat                            | 59 68 92 100 101 105 105 |
| Wool                             | 72 79 95 100 105 107 110 |
| Castle                           | 47 83 112 100 88 111 114 |
| Sheep                            | 57 81 89 100 105 93 94 |
| Pigs                             | 74 80 86 100 119 127 131 |
| **TOTAL PRICES RECEIVED**        | 66 75 93 100 103 105 107 |

**Prices paid by farmers—**

| Fertiliser                       | 65 65 77 100 111 120 130 |
| Chemicals                        | 75 77 86 100 104 109 113 |
| Fuel                             | 45 57 79 100 109 118 127 |
| Machinery                        | 81 86 89 100 110 120 130 |
| Wages                            | 80 85 92 100 110 117 125 |
| Rates and taxes                  | 61 72 81 100 116 128 140 |
| Marketing                        | 75 82 89 100 114 128 142 |
| **TOTAL PRICES PAID**            | 71 77 86 100 112 121 132 |
| **RATIO OF PRICES RECEIVED TO PAID** | 93 97 107 100 92 87 81 |

**W.A. TRADE IN AGRICULTURAL PRODUCTS ($ million)**

<table>
<thead>
<tr>
<th>Imports</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Overseas</td>
<td>15 16 21 24 32 40 45</td>
</tr>
<tr>
<td>Interstate</td>
<td>184 217 251 278 315 350 380</td>
</tr>
<tr>
<td>Exports</td>
<td></td>
</tr>
<tr>
<td>Overseas</td>
<td>863 894 1,376 1,218 1,355 1,650 1,660</td>
</tr>
<tr>
<td>Interstate</td>
<td>22 13 17 28 29 35 42</td>
</tr>
</tbody>
</table>

**AUSTRALIAN EXCHANGE RATE**

(at end of financial year—)

| U.S. dollar                      | 1.148 1.121 1.158 1.148 1.022 0.981 |
| Japanese yen                     | 235 243 251 260 260 230 |
| U.K. pound                       | 0.616 0.516 0.492 0.590 0.587 0.605 |
| **Trade weighted index**         | 86.2 83.1 85.0 92.9 88.2 83.4 |

**AUSTRALIAN RURAL LENDING**

(at end of financial year—)

| Major trading banks—             | 122 250 350 469 571 |
| Terms loans                      | 461 586 715 860 970 |
| Farm development loans           | 976 944 1,037 1,199 1,181 |
| Overdrafts                       | 1,559 1,780 2,102 2,528 2,722 |
| Stock firms                      | 280 244 325 325 384 |
| Commonwealth Development Bank    | 280 292 312 337 368 |
| Insurance Companies              | 80 30 67 74 77 |
| Government agencies and ex service | 840 916 966 1,096 1,173 |
| **TOTAL ALL ABOVE LENDERS**      | 2,959 3,302 3,772 4,360 4,724 |

**Interest rates**

(at end of financial year—)

| 180 day commercial bills        | 10.45 10.35 13.10 15.15 18.35 11.50 |
| 2 year Commonwealth Bonds       | 8.83 9.94 11.50 13.10 16.40 14.25 |

*_estimates and forecasts by W.A. Department of Agriculture, Market Information Service*

*Source: Australian Bureau of Statistics*

**Source: Bureau of Agricultural Economics**

**Source: Reserve Bank**

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-25-
### Table 2: Cropping

<table>
<thead>
<tr>
<th>Crop</th>
<th>Area (ha)</th>
<th>Production (tonnes)</th>
<th>Value ($ m)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1982/83</td>
<td>1983/84*</td>
<td>1982/83</td>
</tr>
<tr>
<td>Wheat</td>
<td>5.08 m</td>
<td>5.3 m</td>
<td>5.7 m</td>
</tr>
<tr>
<td>Barley</td>
<td>657,000</td>
<td>700,000</td>
<td>700,000</td>
</tr>
<tr>
<td>Oats</td>
<td>500,000</td>
<td>450,000</td>
<td>575,000</td>
</tr>
<tr>
<td>Lupins</td>
<td>202,000</td>
<td>350,000</td>
<td>182,000</td>
</tr>
</tbody>
</table>

* Forecast

### Table 3: Sheep Numbers

<table>
<thead>
<tr>
<th>Number at 31 March (million)</th>
<th>1982</th>
<th>1983</th>
<th>1984*</th>
<th>1985*</th>
<th>1986*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total sheep population</td>
<td>30.3</td>
<td>31.2</td>
<td>31.6</td>
<td>32.0</td>
<td>32.3</td>
</tr>
</tbody>
</table>

* Forecast

### Table 4: Sheep Turnoff

<table>
<thead>
<tr>
<th>Turnoff for year 1 April to 31 March (million)</th>
<th>1982/83</th>
<th>1983/84*</th>
<th>1984/85*</th>
<th>1985/86*</th>
<th>1986/87*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total slaughtered</td>
<td>3.8</td>
<td>3.9</td>
<td>4.4</td>
<td>4.5</td>
<td>4.6</td>
</tr>
<tr>
<td>Live exports</td>
<td>2.7</td>
<td>3.2</td>
<td>3.1</td>
<td>3.1</td>
<td>3.0</td>
</tr>
<tr>
<td>Total sheep turnoff</td>
<td>6.5</td>
<td>7.1</td>
<td>7.5</td>
<td>7.6</td>
<td>7.6</td>
</tr>
</tbody>
</table>

* Forecast
### Table 5: Wool Production

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total wool production</td>
<td>149</td>
<td>150</td>
<td>159</td>
<td>160</td>
<td>161</td>
</tr>
</tbody>
</table>

* Forecast

### Table 6: Cattle Numbers

<table>
<thead>
<tr>
<th>Year</th>
<th>1982</th>
<th>1983</th>
<th>1984**</th>
<th>1985**</th>
<th>1986**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural Areas</td>
<td>1,019</td>
<td>890</td>
<td>870</td>
<td>870</td>
<td>880</td>
</tr>
<tr>
<td>Pastoral Areas</td>
<td>923</td>
<td>920</td>
<td>923</td>
<td>930</td>
<td>930</td>
</tr>
<tr>
<td>Total W.A. cattle population</td>
<td>1,942</td>
<td>1,810</td>
<td>1,793</td>
<td>1,800</td>
<td>1,810</td>
</tr>
</tbody>
</table>

* Beef plus dairy
** Forecast

### Table 7: Cattle Slaughterings and Meat Production

<table>
<thead>
<tr>
<th>Year</th>
<th>1982/83</th>
<th>1983/84**</th>
<th>1984/85**</th>
<th>1985/86**</th>
<th>1986/87**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number cattle slaughtered ('000)</td>
<td>676</td>
<td>520</td>
<td>490</td>
<td>490</td>
<td>490</td>
</tr>
<tr>
<td>Total meat production ('000 tonnes)</td>
<td>126</td>
<td>97.5</td>
<td>91.5</td>
<td>91.5</td>
<td>91.5</td>
</tr>
</tbody>
</table>

* Beef plus dairy
** Forecast