Australian agriculture, including the beef industry, is highly dependent on world markets for its future growth and prosperity, with the prices received by Australian producers closely reflecting world prices. Fundamental reform of global policies affecting agriculture would increase world prices and trade opportunities for Australian agricultural producers.

Trade reform could have significant benefits for a range of industries — including beef — over the longer term. In the short to medium term, key issues affecting the Australian beef industry include recovery from drought, changes in consumer preferences, and feed grain availability for the fed beef sector.
Introduction

Australia is highly dependent on export markets, with a significant proportion of agricultural production exported. Indeed, for beef, over 60 per cent of production is exported, primarily to Japan and the United States. Future growth in Australian agriculture will be heavily dependent on continued pursuit of trade reforms that can increase world prices and market access. The current round of multilateral trade negotiations, known as the Doha Development Round, present significant opportunities for Australian farmers. A number of proposals have been put forward, some of which offer more for Australian agriculture (including the beef industry) than others.

Although achieving genuine trade reforms will be critical to the longer term growth and prosperity of Australian agriculture, there are also other issues of more immediate concern for Australian agriculture and the beef sector. Continuing poor seasonal conditions in some areas and patchy relief in others means that the effects of the drought are going to persist for some time to come. Feed grains and fodder are likely to remain relatively expensive, at least until harvest or hay making time, respectively. Once there is a good break to the drought, herd rebuilding will commence in earnest and cattle turnover will fall. Given the severity of the drought it will take a number of years for cattle production to fully recover.

Apart from recovery from drought, there are a number of structural issues facing beef producers and, in particular, grain fed beef producers over the medium term. One of the key drivers in expansion of the feedlot sector is a growing preference among domestic consumers for grain fed beef. Growth in the live export trade, primarily of feeder type cattle to be finished overseas, has implications both for domestic lot feeders and broadacre cattle producers as the composition of the Australian herd adapts to meet changing demand requirements.

Benefits from reform

Australian producers dependent on export markets

Agricultural production has been generally increasing in Australia, primarily as a result of productivity gains. Primary producers have adopted new technologies and efficiency gains have been realised from progressive industry restructuring. In contrast, domestic consumption of many agricultural commodities in Australia has either not kept pace with output increases (for example, sugar and wheat) or has shown little growth (for example, beef and butter). As a consequence many of Australia’s agricultural industries are becoming more export dependent. Using beef as an example, it seems clear that most of the future growth in output will be to service offshore markets.
The influence of world market forces on the prices realised by Australian farmers can be illustrated by comparing agricultural commodity prices in Australia with world indicator prices. World indicator prices are generally taken to be export commodity prices from large exporting nations. While Australian prices may differ in magnitude from world indicator prices because of differences in commodity specifications and transport costs, prices for Australian commodities tend to mirror price movements in world markets.

Short term aberrations in the relationships between Australian and world prices can be caused by supply or demand shocks. For example, drought in Australia may result in increased demand for grain resulting in domestic prices spiking in relation to world prices.

The relationships between Australian and world indicator prices for beef and wheat are illustrated in figures A and B. US prices have been taken as world indicator prices because the United States is a large player in both beef and wheat trade. US prices have been converted into Australian dollars to remove the effect of exchange rate variations. The Australian prices for beef and wheat closely track movements in world indicator prices, with only temporary deviations. Australian agricultural producers, including beef producers, are essentially price takers in a global market and, as shown in the above examples, the prices they receive for their products are inextricably linked to world prices. Consequently, the financial future of Australian farmers is linked not only to world market conditions, but also to the policy settings in other countries that influence these markets.

**Key global policies**

The most obvious impacts of trade distorting policies on Australian beef producers are the market access barriers in Australia’s major beef export markets.

As provided for in the 1994 WTO Uruguay Round Agreement on Agriculture, beef exports to the United States from non-NAFTA countries are subject to a tariff rate quota. (North
American Free Trade Agreement members are Canada, Mexico and the United States. Australia has an allocated quota of 378,214 tonnes. Exports within the quota are subject to an in-quota tariff of US4.4 cents a kilogram, while out of quota exports are subject to a 26.4 per cent tariff. Australia filled its allocated quota in 2001 and 2002. Lower production as Australian producers begin herd rebuilding means that the quota is unlikely to be filled in 2003.

Japan is the largest export market for Australian grain fed beef. As part of the WTO agreement, Japan applies an *ad valorem* tariff of 38.5 per cent on beef imports. However, Japan is permitted to increase (‘snap back’) the tariff to its 50 per cent bound rate as a safeguard measure where cumulative quarterly imports of beef increase by more than 17 per cent from the same period of the previous year. This safeguard measure applies separately to chilled and frozen product. Japan implemented the safeguard on chilled product on 1 August 2003. The 50 per cent tariff will apply until the end of the Japanese financial year on 31 March 2004.

Australian exports to other markets are also subject to market access barriers. Imports of beef by the Republic of Korea are subject to an *ad valorem* tariff. The tariff rate was bound at 41.4 per cent in 2000 and will reduce to 40 per cent in 2004. Exports to Canada are subject to a tariff rate quota of 35,000 tonnes. However, in recent years Canada granted supplementary permits allowing Australian exporters to ship well over the quota allocation without incurring the out of quota tariff. The European Union is a very small market for Australian beef exporters, with exports limited by a 7000 tonne quota.

**Multilateral trade negotiations: progress to date**

**Outcome of the Uruguay Round**

The Uruguay Round of trade negotiations was the first time that agricultural trade had been brought fully under international trade rules. To facilitate the negotiations, most agricultural policies were dealt with under three broad headings: market access; domestic support; and export competition. Market access was concerned with tariffs, import quotas and other nontariff barriers that restrict access to domestic markets. Domestic support covered direct payments to farmers, price support schemes, farm input subsidies, and the like. Export competition included policies related to export subsidies, export credits and food aid. Developing countries were able to commit to less demanding policy reforms, with longer time periods for implementation than was the case for developed countries.

Although, the Uruguay Round agreement still allows substantial protection, it was significant that, for the first time, WTO members made a commitment to reduce subsidised exports, cut the value of trade distorting domestic support and further reduce...
market access barriers. Details of the main elements of the Agreement on Agriculture are provided in box 1.

Despite the commitments that were made to cut subsides and reduce policy related market distortions, the amount of support that can be provided in countries such as the United

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**Box 1: What was agreed in the Uruguay Round**

Under the Uruguay Round of multilateral trade negotiations, separate disciplines were negotiated for market access, domestic support and export measures (WTO 1995).

**Market access**

- Nontariff barriers that previously existed were converted to tariff equivalents as at the specified 1986–88 base period — a process called tariffication. The resultant tariffs were bound in the WTO and, along with existing tariffs, were then reduced over the implementation period by an average of 36 per cent, with minimum cuts for specific tariff items of 15 per cent.
- For items that were subject to tariffication, minimum access levels for imports were to rise from 3 per cent to 5 per cent of base consumption, and current access levels were assured. These measures were implemented through applying tariff quotas (reduced tariffs on imports up to specified quantities, with the normal tariff applying for additional imports).
- The tariff cuts and tariff quotas have been applied at the individual product or tariff line level.

**Domestic support**

- Levels of nonexempt forms of domestic support were determined for agriculture as a whole for each member country in what is termed an Aggregate Measurement of Support (AMS). This AMS has been termed ‘amber box’ support and was subject to an agreed reduction of 20 per cent from its 1986–88 base level, over the implementation period. There are two constituents of the AMS. One is price support determined from differences between administered support prices and fixed external reference prices, multiplied by quantities eligible for support. The other is nonexempt domestic subsidies.
- A range of support payments was exempted from any limitation or reduction. These fell into two categories. One was support under production limiting arrangements, termed ‘blue box’ exemptions. The other, termed ‘green box’ support, was support through government services, support for stockholding for food security purposes, domestic food aid, and a range of payments including decoupled income support, government assistance to income insurance and safety net programs, drought relief, structural adjustment payments, investment aids, environmental programs and regional assistance. Green box support was deemed to be minimally distorting.
- In addition, where commodity specific and non-commodity specific support each fell below a specified proportion of the value of production (5 per cent for developed countries and 10 per cent for developing countries), the support was exempted from cuts. These were termed de minimis exemptions.

**Export subsidies**

- The volume of subsidised exports was to be reduced by 21 per cent and budget outlays on export subsidies by 36 per cent on an individual commodity basis. The reductions were from levels in a base period of 1986–90 and were applied over the same implementation period as the commitments on market access and domestic support.
States, the European Union and Japan remains large. This means that the objective of substantially advancing international agricultural policy reform remains to be achieved.

Progress in the Doha Round
A new comprehensive round of trade negotiations, called the Doha Development Round, was launched at the fourth WTO Ministerial Meeting, which was held in Doha, Qatar, in November 2001. Significantly, the Doha Ministerial Declaration provided a strong mandate for agricultural negotiations. On agriculture, the Doha declaration committed WTO members to ‘comprehensive negotiations aimed at: substantial improvements in market access; reductions of, with a view to phasing out, all forms of export subsidies; and substantial reductions in trade-distorting domestic support’ (WTO 2003). Integral to these negotiations is special and differential treatment for developing countries.

The Doha Ministerial Mandate set a deadline of 31 March 2003 for negotiators to agree on the ‘modalities’ for the agricultural negotiations. These are the rules about issues such as the size and method of cuts to tariffs, export subsidies and domestic support, the time frame for phasing in the cuts, and the nature and extent of any concessions for developing countries. As part of this process, the Cairns Group and the United States both put forward comprehensive and ambitious proposals for liberalisation of agricultural trade. However, other WTO members such as the European Union put forward only minimalist proposals.

In an attempt to bridge the gap between the positions of many of the WTO members, chairman of the WTO agriculture negotiations Mr Stuart Harbinson put forward a draft modalities paper in February 2003. The Cairns Group and the United States, while not satisfied with the extent of ambition in the Harbinson proposal, signaled that it at least provided a basis for negotiations. However, the European Union and Japan regarded the Harbinson draft as too ambitious. Consequently, agreement on modalities was not possible by the 31 March deadline. Negotiations on technical issues on agriculture continued in the leadup to the Cancun Ministerial Meeting in September 2003.

Potential impacts of trade reform
The effects on Australia of the Cairns Group proposal for agricultural trade reform were modeled using ABARE’s global trade and environment model (GTEM) (further details of this analysis and the effect of trade reform on Australian agriculture can be found in
Andrews et al. 2003). GTEM is a dynamic computable general equilibrium model of the world economy that provides a suitable framework for analysing international and domestic policy reforms as it takes into account the interactions between sectors within countries and the linkages between countries brought about by trade and investment.

The model results show that global trade reform leads to gains for many countries. For some countries, such as the European Union and Japan that have relatively inefficient highly supported agricultural sectors, a large portion of the gains would come from reducing the misallocation of resources within their respective economies. National incomes rise because resources are moved into more profitable activities. For other countries that have efficient agricultural sectors, such as the United States, Canada, Australia, Brazil and Argentina, a large part of the likely gains stem from an increase in the prices of exports relative to prices of imports.

**Impacts on Australian agriculture**

It is estimated that the implementation of the Cairns Group proposal would lead to an increase in Australian gross national product of A$2.1 billion a year by 2010. Global reforms result in less distorted markets and higher export prices for Australian products. This translates into higher farm gate prices, which provide an incentive for producers to increase production. The estimated price changes for Australian broadacre agriculture and dairy commodities, relative to the 2010 baseline, are presented in figure C. These price changes would be a permanent consequence of global policy reform. While prices will continue to fluctuate in response to other factors in the market, prices will continue to be higher as a result of global reform than they would in the absence of reform. Higher prices for Australian agricultural products generally would be expected to result in an appreciation of the Australian dollar. The price impacts shown in figure C are after an assumed exchange rate appreciation in the policy change scenario.

When discussing the likely impact of trade reforms, it is important to note that any permanent or sustained increase in farm gate returns will lead to resources shifting into agricultural production from other sectors. In practice, existing producers will invest and expand their agricultural production, while new farmers and investors will also be attracted to the sector. At the same time, the number and structure of agricultural enterprises in Australia will continue to be influenced by other...
factors, including technology change, economic growth and incomes in other sectors and lifestyle choices. However, in general, sustained higher and more stable farm gate prices in Australia brought about by agricultural trade reforms will lead to higher and more stable farm incomes. This will clearly be beneficial to agricultural producers, along with rural communities more generally.

Short to medium term issues in Australian agriculture
While genuine global trade reform has the potential to deliver substantial gains to Australian agriculture over the longer term, in the short to medium term there are substantial challenges facing Australian agricultural industries including the lot fed beef sector. The widespread drought has had a significant impact on the Australian cattle herd as producers have been forced to cut back their herds due to dwindling feed supplies. There are also ongoing adjustment issues facing the agricultural sector.

Drought to have long lasting effects
During the past year Australia has experienced the most widespread drought since at least 1982-83. The drought has had a significant impact on the Australian cattle herd. Strong saleyard prices for cattle, fueled by strong global demand and a favorable exchange rate resulted in herd building activity in the leadup to the drought. Cattle numbers at 30 June 2002 reached 27.9 million, the highest since 1978. However, poor seasonal conditions in 2002-03 across most of the country had a big impact on the Australian cattle herd, with the national herd declining to an estimated 26.5 million at 30 June 2003. This decline was driven by high slaughter rates and live exports, in combination with increased stock mortality and lower calving percentages. While some cattle regions have received good falls of rain and some producers are beginning the herd rebuilding process, many areas are still firmly in the grip of drought, with some farmers being forced to continue offloading stock they cannot afford to keep. This has been demonstrated by the continued high proportion of cows and heifers making up kill numbers. This coupled with low calving rates, as result of cows being in poor condition at joining, is likely to slow herd rebuilding activity, and consequently the Australian cattle herd is forecast to rise only slightly to 26.6 million head by June 2004.

Once the drought has broken fully, it is expected that producers will attempt to rebuild their herds as quickly as possible. However, given the biological restraints (for instance, retained heifer calves would not produce marketable progeny for about three years) it will take several years for the cattle herd to recover to predrought levels. The rate of recovery will be affected by such factors as actual and expected returns from beef relative to alternative farm enterprises, and by seasonal conditions over the next few years.
Feeder cattle availability
For lot feeders, one of the key effects of the drought has been the availability of feeder cattle. During a drought there is typically a large margin between the prices of finished and store animals. Once the drought breaks, herd rebuilding is likely to restrict the supply of feeder cattle as these cattle types are retained by breeders and keenly sought by restockers. The steep rise in price for young cattle will reduce the margin between store and finished stock.

Feed grain costs
The other major impact of the drought on beef producers, both extensive and lot feeders, has been the rise in the cost of feed grains and fodder. Availability has also been a major problem in many regions, with hay and straw in particular having to be sourced from relatively distant locations. Irrigation areas have typically been a key source of supplementary fodder during drought periods, but limited supplies of irrigation water have affected output of such feeds.

The cost of feed grains (and fodder) increased substantially from the beginning of the drought (figure D). This was driven by a sharp increase in demand as farmers were forced to handfeed stock. On top of this, supplies were cut, with production in 2002-03 of wheat and coarse grains falling by 62 per cent and 58 per cent to 9.4 and 5.5 million tonnes respectively. Grain prices are forecast to average lower over the next year as production recovers.

Other issues for Australian lot feeders
In addition to the continuing impacts of the drought there are a number of other issues facing Australian lot feeders over the short to medium term.

Increasing domestic demand
The proportion of cattle on feed destined for the domestic market has undergone fairly steady growth over the past decade (figure E). In June 2003 the Australian Lot Feeders Association’s survey showed that there were 335 300 cattle on feed destined for the domestic market, accounting for just over 50 per cent of total numbers on feed. In contrast, in 1991-92 there were around a 100 000 cattle on feed destined for the domestic market, accounting for less than a third of total numbers in Australian feedlots.
From a short term perspective, there are two principal underlying reasons for the high proportion of cattle on feed destined for the domestic market as at June 2003. First, the downturn in the Japanese market resulting from the 2001 outbreak of BSE (bovine spongiform encephalopathy or ‘mad cow’ disease) in Japan constrained the number of cattle being fed for the Japanese market. Second, the drought has severely limited the ability of producers to use pastures to finish cattle to domestic specifications. The need to maintain consistency has forced retailers to increasingly source grain fed product to satisfy their requirements.

Over the longer term, the main reason for growth in the number of cattle on feed destined for the domestic market is the underlying increase in demand for consistent high quality beef by domestic consumers. Increasingly it seems, consumers are prepared to pay a premium for beef that is of consistent high quality. The inability of consumers to determine product quality prior to purchase and consumption has been a significant issue in the domestic beef market. Competing meats, such as poultry have tended to offer greater product consistency, or in the case of lamb have legislation in place that prohibits the substitution of mutton for lamb.

To address consumer concerns and ensure product consistency, sales of branded beef are rising. These brands offer consumers of beef certain specifications that assure consistency and quality. The success of such brands is crucially dependent on the establishment and maintenance of reputation. Similarly, retailers can build the reputation of their own beef supplies by stocking consistent high quality product. The increasing demand by Australian consumers for consistent quality beef represents a significant growth area for the Australian fed beef sector.

**Competition with live exports**

As with the expansion of the lot fed sector, there has been significant growth in the live cattle trade over the past few years. The bulk of the live cattle trade is in feeder cattle that are lot fed in the destination country. The majority of cattle for live export are sourced from northern Australia with the Northern Territory, north western Queensland and the Kimberley and Pilbara regions of Western Australia accounting for 75–80 per cent of the live cattle trade (Gleeson et al. 2003).

Although the live export market is likely to remain the key target market for producers in the north and north west of the country, for many northern cattle producers there is some
ability to market cattle to either the live trade or domestic feedlots. These decisions will be driven by the relative returns in each market.

The growth in the production of feeder cattle (for both export and domestic feeding) has prompted a significant structural change in the Australian cattle herd. As the turnoff from feedlots and the export of live cattle has increased over the past decade, the turnoff of grass fed steers and bullocks has decreased markedly (figure F). Increasingly, pasture is being used to run breeders and produce feeder steers, either for export or domestic feeding.

Feed grain supply
The growth of the Australian feedlot industry, along with that of the pig, poultry and dairy industries has resulted in an increase in demand for feed grains in Australia. The expected future growth in turnoff of grain fed beef is expected to place regional pressures on feed grain supplies.

It is estimated that within five years there will be significant regional supply deficits in the key beef feedlotting regions of northern New South Wales and southern Queensland (Connell and Hafi 2003). This means that as the feedlot industry expands, grain supplies will need to be sourced from further afield, thus incurring additional transport costs.

Rationalisation in Australian agriculture
Rationalisation and productivity improvement in Australian agriculture is essential if industries are to survive and remain profitable in the longer term. Australian farmers have managed to continually increase production of the major commodities despite facing declining terms of trade (that is, in an environment where input costs have increased over time relative to output prices) (figure G).

Producers have been able to maintain profitability through productivity increases (that is, by increasing the value of output for a given value of inputs). Over the period
1977-78 to 2000-01, productivity for all broadacre farms, on average, increased by 3.5 per cent a year (Hooper et al. 2002). Productivity growth has been highest in the cropping sector, averaging over 4 per cent a year. In contrast, productivity on beef properties has averaged less than 2 per cent a year. Much of the productivity gains have come from increases in the size of agricultural establishments. Larger enterprises are typically more profitable because of the significant economies of size that exist in most agricultural sectors. The trend toward larger agricultural enterprises is likely to continue.

**Concluding comments**

The current Doha round of WTO negotiations represent a significant longer term opportunity for Australian beef producers to achieve expanded market access at prices that are less distorted by government intervention. Significant proposals such as that put forward by the Cairns Group have the potential to increase Australian gross national product by $2.1 billion a year by 2010. However, if past experience is any guide, the process of achieving significant policy reform may be relatively slow.

In the meantime, there are other more immediate issues facing the beef industry. The continuing poor seasonal conditions in some areas means that the effects of the drought are going to persist for some time. Feed grains and fodder are likely to remain expensive and in short supply, at least until the latter months of 2003. Once there is a solid break to the drought, herd rebuilding will increase and cattle turnoff will fall. In the absence of other adverse events, it is likely to take several years for cattle production to recover to the predrought situation.

The growing preference among domestic consumers for grain fed beef will be one of the key drivers of growth in the feedlot sector. The growth in both the live export trade and domestic fed beef production is adding to the competition for feeder cattle. The growth in beef feedlotting is also having an effect on the Australian grain industry. If the livestock feeding sector continues to grow strongly there could be regional supply deficits of feed grains in the major feedlotting areas later this decade.
References


