

## Australian Dairy Industry - An Analysis

**Sandy Murdoch, Managing Director - Australian Dairy Corporation**

| <b>Australian Dairy Industry – Key Measures</b> |         |         |          |            |          |
|---|---------|---------|----------|------------|----------|
| Year ended 30 June                              | 1980    | 1990    | % change | 2002       | % change |
| Milk production (million litres)                | 5,398   | 6,262   | 16%      | 11,271     | 80%      |
| Dairy cows ('000)                               | 1,869   | 1,654   | -12%     | 2,369(e)   | 43%      |
| Farm numbers                                    | 21,994  | 15,396  | -30%     | 11,022(p)  | -28%     |
| Value of Farm Production*(\$mill)               | \$2,044 | \$2,377 | 16%      | \$3,716(e) | 56%      |
| Value of ex-Factory Production*(\$mill)         | \$5,912 | \$5,979 | 1%       | \$9,334(e) | 56%      |
| Estimated value-added*                          | \$1,395 | \$1,786 | 28%      | \$2,800(e) | 57%      |
| Per capita consumption (milk equiv)             | 290     | 260     | -10%     | 250        | -4%      |
| Export Value*(\$mill)                           | \$859   | \$951   | 11%      | \$3,254    | 242%     |
| Export Share of Production                      | 22%     | 30%     |          | 57%        |          |

*Sources: ABS, ADC, State Authorities \*Expressed in 2001/02 dollars. (e) ADC or ABARE estimate. (p) Provisional data % changes relate the previous 10 year period.*

### **Introduction**

The last 20 years has seen the Australian dairy industry change from a fragmented, domestically focussed agricultural industry in decline, to one focussed on growth – largely through export. This change has been underpinned by continuous productivity improvement in all parts of the supply chain, a staged removal of government regulation, and an improving - if still far from ideal - trade policy environment.

Yet, some things remain the same – despite the presence of a number of international players, the Australian dairy manufacturing industry is still largely cooperative and Australian-owned. The industry is still able to act collectively on issues of domestic deregulation and international trade policy reform, as well as investing in research and generic marketing.

### **A Growing Industry**

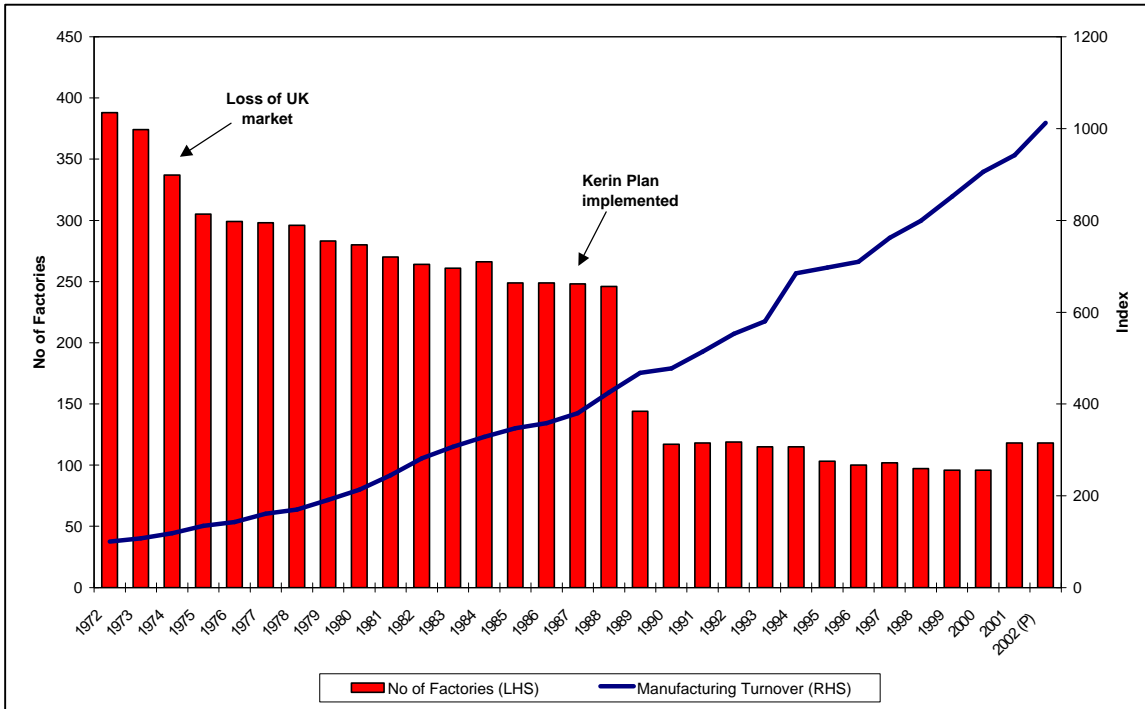
At the beginning of the 1980s the Australian dairy industry was certainly not growing - it was in marked decline. The industry's key UK export market was lost in the early 1970s, and both the manufacturing and drinking milk sectors were highly regulated. At this time the manufacturing industry operated under an equalisation scheme, which pooled returns from domestic and export markets. Returns were also underwritten by the federal government to levels considered 'appropriate'. The drinking milk sector was each state's responsibility, and every step of the delivery of drinking milk from cow to consumer was regulated – distribution areas, margins for processors, distributors and retailers were set and interstate trade restricted. Farm gate prices were also set, often based on estimates of on-farm production costs, and administered via quota or pooling systems for drinking milk production.

Yet despite – perhaps some may argue, because of - all this support, the industry had been through a period of persistent decline in milk production and cow numbers. In 1980, farm numbers had fallen from 48,000 in 1972 to just under 22,000 and milk production had declined by around 30 per cent compared to the previous year (1979). By the mid 1980s there was a realisation in both government and industry that the manufacturing industry would have to become more competitive and responsive to survive – particularly in light of an impending free trade agreement with New Zealand, a large and efficient producer of dairy products.

When it was finally implemented in 1986, the Kerin Plan marked a radical shift in the regulation of the dairy industry. The removal of pooling systems for dairy products linked individual manufacturer returns directly with international prices. This was important, as manufacturers could be rewarded for their own manufacturing and marketing efforts, rather than having them diluted by the pooling of returns. The scheme also featured a phased reduction in support, and ultimately, a sunset date.

Following the introduction of the Kerin Plan there was a wave of rationalisation in the manufacturing industry. Smaller co-operatives merged to form larger ones, in order to achieve increased economies of scale in both processing and marketing they needed to survive in a competitive market place.

Rather than cause the industry to shrink to a 'cottage' industry supplying fresh products to the local market, as many industry observers forecast prior to the Kerin Plan era, this process of rationalisation and consolidation in manufacturing underpinned a change in direction for the dairy industry.



**Figure 1: Australian Dairy Manufacturing**

Sources: ABS, ADC, Series break 1989

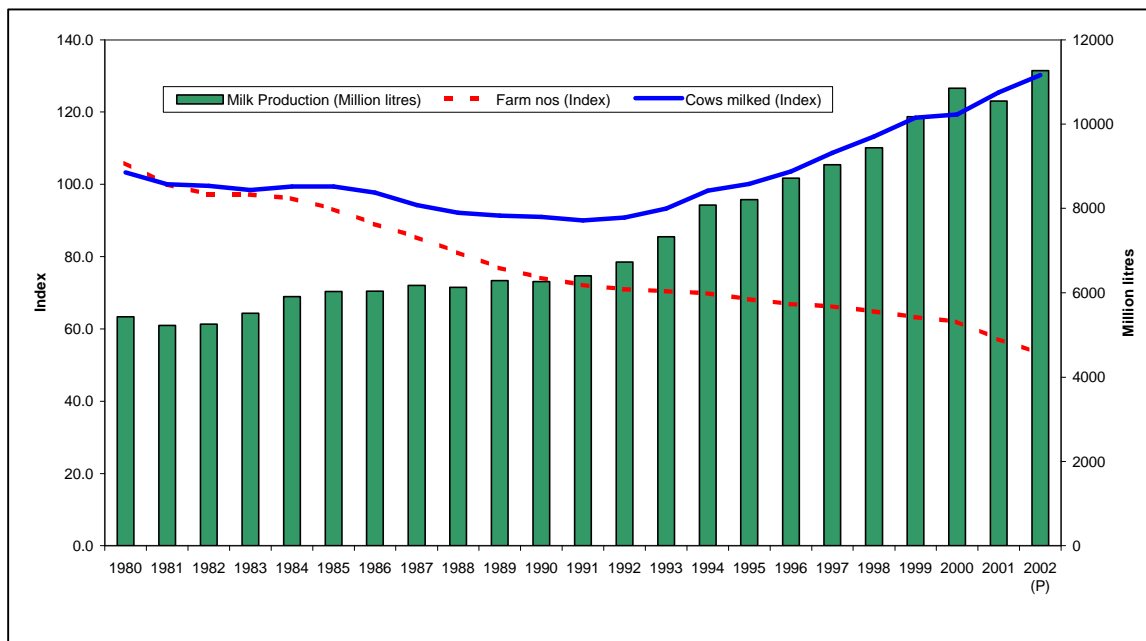
At farm level, there was also on going rationalisation and consolidation. In 1980, the average Australian dairy herd size was 85 cows on 22,000 farms, and by 2002 it had increased to 214 on 11,000 farms. Over the same period, production per cow increased by 68 per cent. While output productivity has increased, the move to higher input systems, particularly increased feeding of grain and supplements has meant that total factor productivity – calculated by dividing an index of total outputs by an index of total input - has actually declined in the last decade. Dairy farmers' terms of trade have fallen at a slightly faster rate over the last decade, as the growth in input costs has outpaced growth in output. This illustrates the continuing pressure farmers are under to continually improve productivity in order to keep pace, a fact that has driven milk production growth in the last two decades and will continue to drive it into the future. As a result, the industry is now producing more than double the milk with half the number of farms.

|                               | 1980s | 1990s |
|-------------------------------|-------|-------|
| Output index (%)              | +3.2% | +5.1% |
| Input index (%)               | +1.1% | +3.9% |
| Total factor productivity (%) | +2.1% | +1.2% |
| Terms of Trade                | -1.1% | -1.3% |

Source: ABARE

The complete removal of government support for both the drinking and manufacturing milk sectors from July 2000 was seen as a crunch time for many dairy farmers to assess their future in the industry. However, the reality has been only a slight escalation in the well-established trend of falling farm numbers, as support had been declining since the mid-1980s. Farmers in the industry today are geared toward continuous growth to offset the effects of declining terms of trade, and are generally larger and more efficient producers of milk.

**Figure 2: Milk Production vs Indices of farm and cow numbers**



This boom in milk production over the 1990s has been met with a mature domestic market for dairy products. Over the last two decades, per capita consumption of dairy products has hovered between 250 and 260 litres on a milk equivalent basis. Drinking milk, which accounts for around 40 per cent of total dairy consumption has been stable, and in recent years, trending slightly downwards. The type of milk consumed has changed markedly over the last two decades, as processors have developed a number of fat modified products, as well as milk fortified with vitamins and minerals. Declining consumption of some products, such as butter has been offset by increased cheese and yogurt intake. In the cheese sector, we have seen a general shift from cheddar to non-cheddar types as consumers have become more multicultural and sophisticated in their eating habits. Yogurts, dairy desserts and ice cream have been areas of intense competition and innovation, in terms of product variations as well as packaging and branding. These have been growth areas for domestic consumption of dairy products during the 1990s, but they still do not require large amounts of milk to manufacture.

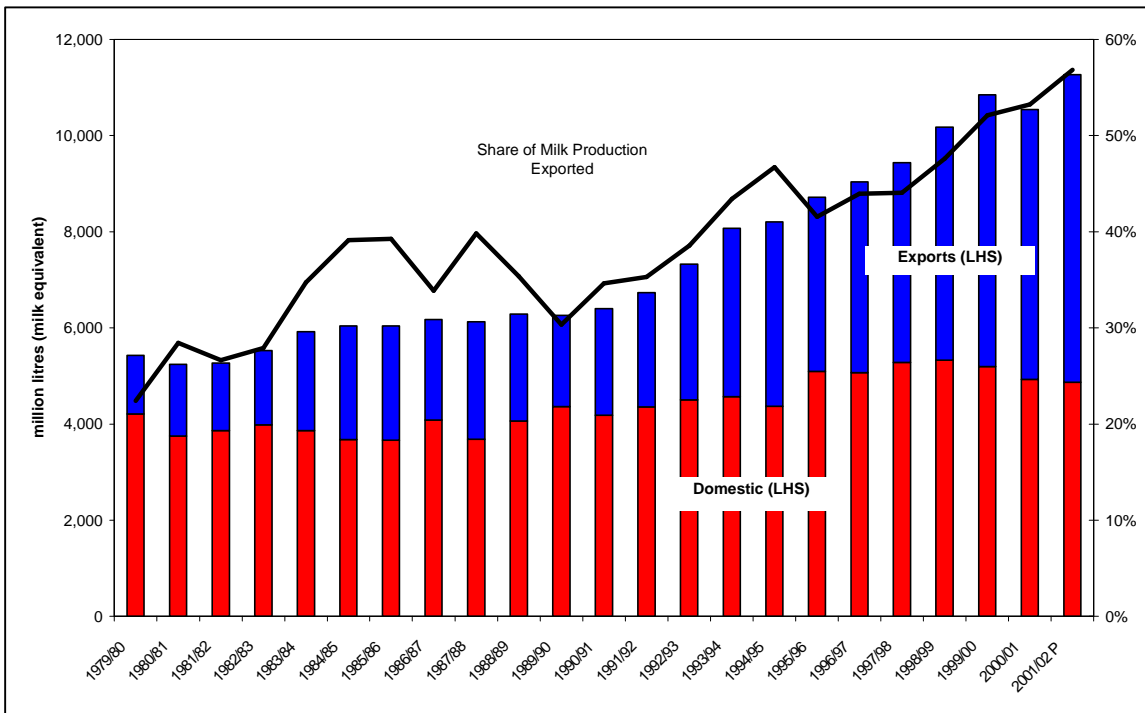
The industry would need to continue to look offshore to absorb the additional production, and for its survival into the future.

**Export for Future Growth**

During the 1980s and 90s, the ‘stick’ represented by reforms in support at home coincided with the ‘carrot’ of increasingly affluent Asian markets to Australia’s north. Improved incomes in these countries, coupled with increased exposure to western influences – including food –improved demand for dairy products. Many Australian manufacturers seized the opportunities offered by increased economies of scale, and reduced government intervention in their business to explore opportunities for growth – particularly in these markets.

Between 1980 and 2002, the value of Australian dairy exports increased by more than 250 per cent in real terms. Dairy is now the largest processed food industry, and the third largest rural export, behind beef and wheat. In 1980, it ranked sixth, behind commodities such as sugar and barley.

**Figure 3: Export vs Domestic Utilisation**



Note: Domestic utilisation includes stocks

**Trading Environment**

Only a small proportion of the world's milk production is traded – around eight per cent. This reflects policies in many countries around the world, which are geared toward domestic self-sufficiency in milk and dairy products. Support of domestic dairy industries in both developed and developing countries has generally been delivered via high internal prices, which can only be maintained by restricting competitive imports. These policies in turn underpin over-production by farmers who respond to distorted price signals. Over-production at uncompetitive prices must then be disposed of in the international market using export subsidies or through aid programs. This type of distortion has characterized international trade in dairy products for most of the last two decades.

The OECD estimates that dairy sectors in developed countries received support totalling \$US 39.125bn in 2000 – almost \$US 10bn higher than rice - the next most subsidised commodity. In fact, the support was approximately 70% higher than the total value of international dairy trade.

One of the OECD's measures of support to agriculture is the Producer Support Estimate (PSE). Expressed as a percentage, PSEs indicate the proportion of farmer income represented by transfers from consumers and taxpayers, arising from government support policies. As indicated in the table below, in most developed countries support for agriculture is high, and support for dairy is higher still. In comparison to other OECD countries, Australia now provides little support for dairying - the remaining support will cease by 2009 - and New Zealand provides none at all. PSE measures have changed little for OECD countries apart from Australia and New Zealand, despite the commitments made under the Uruguay Round of trade negotiations. Many heavily protected countries have adjusted their policy instruments – albeit to less production and trade distorting instruments - rather than removing support altogether.

|                    | Total Agriculture |      | Milk |      |
|--------------------|-------------------|------|------|------|
|                    | 1980              | 2001 | 1980 | 2001 |
| All OECD countries | n.a.              | 31%  | n.a. | 45%  |
| European Union     | 35%*              | 35%  | 59%* | 40%  |
| United States      | 20%               | 21%  | 60%  | 51%  |
| Japan              | 61%               | 59%  | 84%  | 75%  |
| Australia          | 9%                | 4%   | 29%  | 8%   |
| New Zealand        | 15%               | 1%   | 20%  | 0%   |

\*EEC 10 n.a. not available

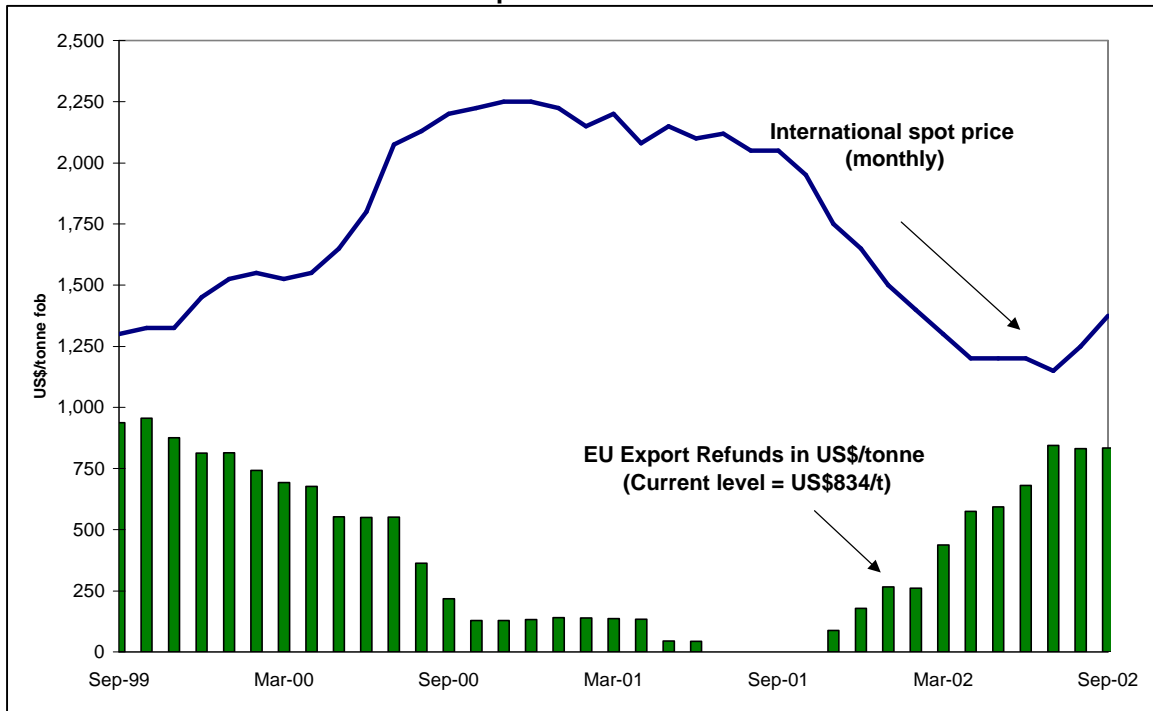
The effects of this policy environment can be clearly seen in the volatility of global prices for skim milk powder (SMP) over the past 15 years (Figure 4.) It is a price pattern typical of those for globally traded dairy produce. Price fluctuations have become increasingly more volatile. The decline rate from the most recent high is verging on precipitous and is certainly the most rapid of that from any of the four 'highs' in the period indicated below.

**Figure 4: International SMP Prices**



These prices are not typical of normal demand and supply cycles for agricultural produce. Rather they are the result of the distortionary effects of the EU's export subsidy arrangements. The market reacts to, or acts in anticipation of, changes in export refunds.

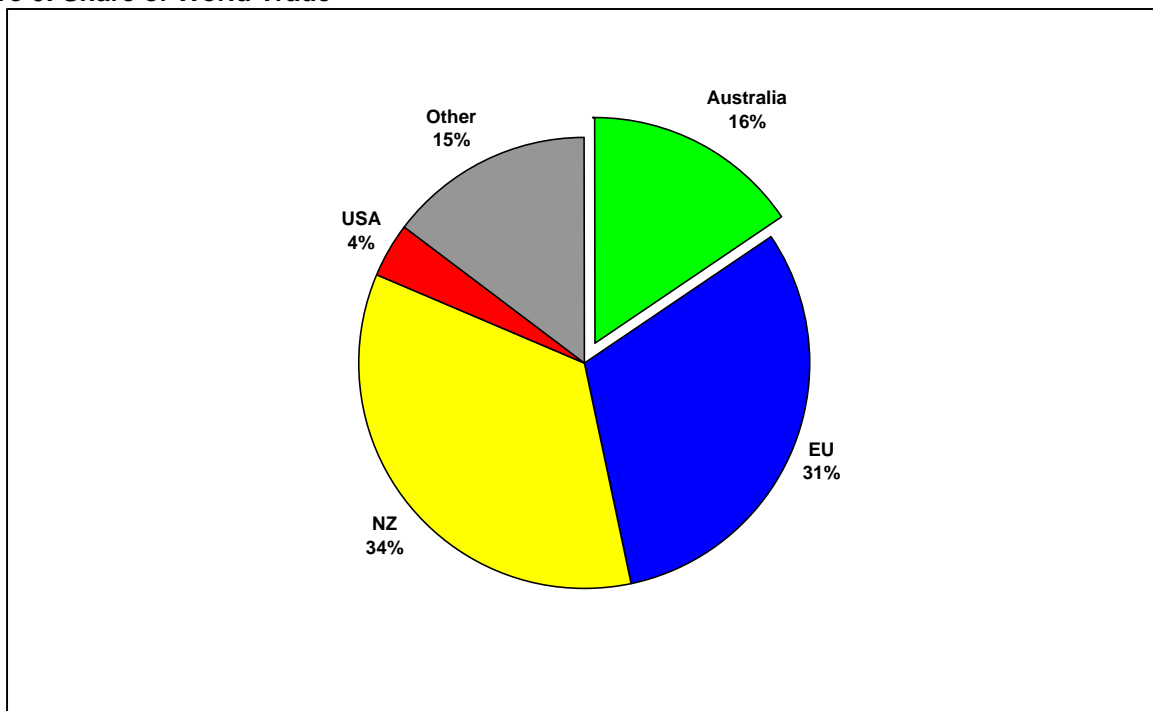
**Figure 5: International SMP Prices vs EU Export Refunds**



Focussing on the last three years of the period, Figure 5 clearly demonstrates the close inverse relationship between movements in EU refunds and SMP prices.

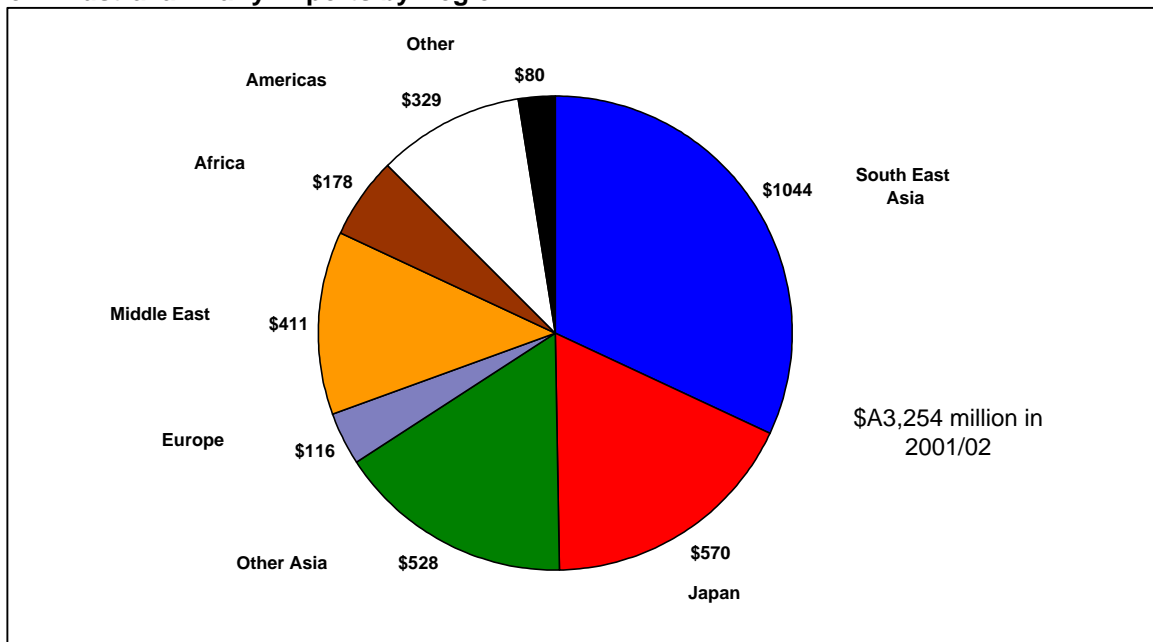
The fact that Australia and New Zealand together account for 50 per cent of international trade in dairy products reflects the competitiveness of these industries– based on efficient production rather than government subsidies. The European Union remains a large trader in dairy products with 31 per cent of world trade, down from 60 per cent in 1980. Its use of export subsidies is now being curbed by Uruguay Round commitments (Figure 6.)

**Figure 6: Share of World Trade**



Restrictions on access to some of the world's largest dairy markets – notably the European Union and the United States have meant that the focus of Australian exports remains overwhelmingly in Asia. Indeed, Asian markets accounted for 66 per cent of Australia's dairy exports during 2001/02 (Figure 7.)

**Figure 7: Australian Dairy Exports by Region**



### **Future Directions**

The Australian dairy industry will continue to look for growth in export markets. Increasingly, Australian manufacturers are looking to move away from traditional commodity products into more specialised ingredients. This strategy depends on being at the leading edge of processing technology, through investment in research and development and forging close - almost inter-dependent - relationships with key customers.

The industry must also continue to invest in improving the trading environment for dairy products, through bi-lateral and multi-lateral negotiations to maximise trade access and protect trade entitlements. While government trade reform moves at a glacial pace, strategic relationships with multi-national companies provide a commercial imperative for changes to be made, and are important for our industry in the future.

The industry must maintain and continue to further develop its excellent reputation as a reliable supplier of quality, clean dairy products at world competitive prices. To do this, investment in research and development of cost-effective and "environmentally-friendly" production techniques at each stage of the supply chain is essential.

At home, as in many countries around the world, consumers are more aware than ever of health and nutrition issues, and increasingly concerned about the safety of their food. The dairy industry must continue to provide a balanced view of the importance of dairy products in the diet, and work to dispel myths and misinformation surrounding dairy products.

The industry is well placed to meet the challenges of the future.