Incitec Pivot Limited

ACN 004 080 264

Submission to the Select Committee on Agricultural and Related Industries

Executive Summary

The Australian fertiliser industry has come a long way from the days when single superphosphate (**SSP**) was the main fertiliser used, and the industry consisted of a number of small, state-based manufacturers. Today, the Australian fertiliser industry is just one part of the global fertiliser supply chain, in which a range of commodity products are internationally traded according to world prices, and almost half of Australian demand is met by imports.

Incitec Pivot Limited (**IPL**) is pleased to have the opportunity to respond to the request made by the Select Committee on Agricultural and Related Industries (**Committee**) to make a submission to the inquiry. IPL trusts that its submission will assist the Committee to understand the forces that drive supply and demand for fertiliser products in Australia.

The focus of the Committee's inquiry is on the pricing and supply arrangements in the Australian and global chemical and fertiliser industries and the implications of these for Australian farmers. In order to inform the Committee about these issues, this submission draws attention to the following key factors:

- Fertilisers are widely traded international commodity products with global benchmark prices. Australia represents only a very small part (1.4%) of global fertiliser consumption.
- Strong growth in world demand for food, bio-fuels, animal feed and fibre has led to a surge in the global prices of agricultural commodities such as grain. This, in turn, has led to a substantial increase in demand for fertiliser worldwide as farmers seek to increase production and yields.
- At the same time, rising prices of key inputs for the main fertiliser types such as natural gas, phosphate rock and sulphur have increased costs for fertiliser manufacturers.
- The above factors have combined during 2007/2008 to result in substantial increases in the global price of fertilisers, with prices for many products now at record levels.
- Demand for fertiliser in Australia is highly seasonal and in peak demand periods the domestic production of fertiliser is insufficient to meet farmer needs. As a result, Australia imports a substantial proportion (48%) of its fertiliser requirements and local prices are based on global import prices. Higher global prices have therefore translated into higher prices locally.
- Demand for fertiliser is highly seasonal, and suppliers have traditionally organised supply around seasonal demand conditions. However, in 2007/2008 the global factors described above resulted in significant changes in farmer purchasing patterns. In particular, the significant rise in the price of agricultural commodities such as grain, and an improved rainfall outlook in many areas, led farmers to bring forward their purchases and resulted in an unforeseen level of early season demand for fertiliser in Australia, well beyond forecasts.
- Domestic suppliers moved rapidly to meet this unanticipated demand. However, their ability to source substantial volumes on very short notice was affected as a result of temporary domestic and international production difficulties.
- Historically, the majority of Australian farmers have ordered fertiliser from distributors on a just-in-time basis, and have not placed firm orders until immediately prior to a season. During 2007/2008 this meant that farmers were exposed to both increasing global prices and, in turn, unseasonal demand led to shortages in stocks.
- IPL recognises the concerns of many in the agricultural community about the local impact of these global events. IPL has been pro-active in developing better ways of doing business with its own customers, its business partners, such as new initiatives to provide greater certainty regarding pricing. IPL has also been responsive in dealing with stock shortages, including allocating available product on an equitable basis.
- Despite the impact of the global factors described above and the challenges encountered during 2007/2008, the fertiliser industry in Australia is highly competitive. There are many suppliers, ranging from large players through to traders, as well as new entrants who have taken advantage of readily available import infrastructure and low barriers to entry. The healthy state of competition in the industry means that it cannot be described as monopolistic, or involving any cartel conduct.

1. Who we are

IPL is an ASX listed Australian company involved in the manufacture of fertiliser and industrial chemical products. IPL supplies customers in Eastern Australia including Tasmania, as well as overseas through its recently established trading arm, Southern Cross International.

IPL operates a phosphate mine and ammonium phosphate manufacturing facility at Phosphate Hill in Queensland. IPL also manufactures urea, SSP and anhydrous ammonia fertilisers at sites in Queensland, New South Wales and Victoria. In addition to its manufacturing operations, IPL also imports substantial volumes of fertilisers.

IPL supplies around three million tonnes of fertiliser per annum in Australia. This is distributed to farmers through an east coast network of business partners, comprising independent distributors as well as IPL agents. IPL has approximately 220 contracted business partners. As a key participant in the agricultural sector, IPL recognises the paramount importance of its relationship with its business partners, and offers them assistance to better serve end-user farmers. This includes the provision of an extensive field sales force and customer service team, the supply of agronomic services, as well as IPL's investment in a NATA accredited soil, plant and water testing laboratory. In addition, IPL offers deferred payment options under its FertTerms Plus product.

IPL also contributes to rural Australia in other non-economic ways, such as its involvement in community support programs for drought relief, safe driving for young people and an ongoing depression awareness campaign.

IPL recently announced that it proposes to significantly diversify its business by the acquisition of Dyno Nobel Limited, which is a leading global supplier of industrial explosives and blasting services to the mining, quarrying, seismic and construction industries.

2. What are the major types of fertiliser?

Fertilisers supply nutrients to plants to enable healthy plant growth. There are three main types of fertiliser: nitrogen based (N), phosphate based (P) and potassium based (K).

Nitrogen (N)

Nitrogen fertilisers are used for overall plant yield and quality. Since the 1970s consumption of nitrogen based fertilisers has significantly increased compared to traditional phosphate fertilisers such as SSP. The most common nitrogen based fertiliser is urea. Ammonium phosphate fertilisers (MAP, DAP) also deliver nitrogen.

Almost all nitrogen fertilisers are produced from ammonia. Fertilisers account for around 85% - 90% of world ammonia production. Ammonia is produced by combining natural gas (methane), steam and air. Accordingly, the availability and price of natural gas has a significant impact on the price of nitrogen fertilisers as it comprises up to 90% of their production cost.

62.5% of nitrogen fertilisers are **imported** into Australia.[1]

Phosphorus (P)

Phosphate fertilisers are used for plant growth, and to stimulate flower, seed, fruit and root development. Most Australian soils are phosphorus deficient and historically SSP was the primary phosphate fertiliser used to provide this nutrient in Australia. SSP is still used extensively in pasture industries, however over the last 20 years there has been a significant increase in the use of ammonium phosphate fertilisers (MAP, DAP) which deliver both nitrogen and phosphorus.

A key input in all phosphate fertilisers is phosphate rock. There are very few deposits of phosphate rock around the world, with considerable variability in nutrient content. The availability and price of phosphate rock therefore has a significant impact on the price of phosphate fertilisers.

Although IPL has a phosphate rock mine in Queensland, the phosphate content of the ore it produces is relatively low, and it needs to be blended and beneficiated before use. This is the case with much of the world's phosphate rock supplies. As a result, phosphate rock from Phosphate Hill is only suitable for the manufacture of MAP and DAP, and not SSP. All Australian manufacturers (including IPL) need to import phosphate rock to manufacture SSP to meet state government regulations regarding minimum phosphate levels, and permissible levels of other substances such as heavy metals (eg. cadmium) or odour emitting compounds.

33.1% of phosphate fertilisers are **imported** into Australia.[2]

1. Fertiliser Industry Federation of Australia.
2. Fertiliser Industry Federation of Australia.

Potassium (K)

Potassium fertilisers are used to promote plant flowering. The most common potassium fertiliser is potash (muriate of potash). Production of potash only occurs in 12 countries and there are no deposits in Australia.

100% of potassium fertilisers are **imported** into Australia.[3]

3. Commodity products and pricing

As noted above, the most common fertilisers used to deliver N, P and K to plants are urea, MAP, DAP and potash respectively. These products are manufactured by a large number of major global suppliers, including:

- **Urea:** Sabic (Saudi Arabia), Qafco (Qatar), Petrochemical Industries Co (Kuwait), and a number of producers in China and eastern Europe.
- **MAP/DAP:** Mosaic (USA), OCP (Morocco), PhosAgro (Russia), CF Industries (USA), Wengfu (China) and other producers in North Africa and China.
- **Potash:** PotashCorp (Canada), Mosaic (USA), Agrium (USA), Belaruskali (Russia), Arab Potash Company (Jordan) and ICL (Israel).

The scale of production by these global suppliers dwarfs Australian production. For example IPL's production of MAP, DAP and TSP[4] comprises only 2.5% of global production, and IPL's production of urea only 0.19% of global production.[5] As noted above, no Australian producer manufactures potash.

All of the fertilisers listed above are commodity products that are traded and priced on a global basis. Although fertilisers are not traded on an exchange, the substantial volume of fertiliser and number of producers means that there is a clear and transparent pricing structure, with various global price reference points ('indices'). These indices are published on a weekly basis in widely distributed trade publications such as Fertecon. The indices which are used as the basis for pricing in relation to the majority of IPL's imports are:

- **Urea:** Granular Middle East FOB bulk.
- **MAP/DAP:** Tampa (United States Gulf) FOB bulk.
- **Potash:** Granular Vancouver FOB bulk.

4. Major changes in global demand and supply

As the United Nations has observed, in the past two years, and particularly during 2007/2008, there have been substantial increases in world fertiliser prices to record levels.[6] These increases have, understandably, led to concern in the agricultural sector.

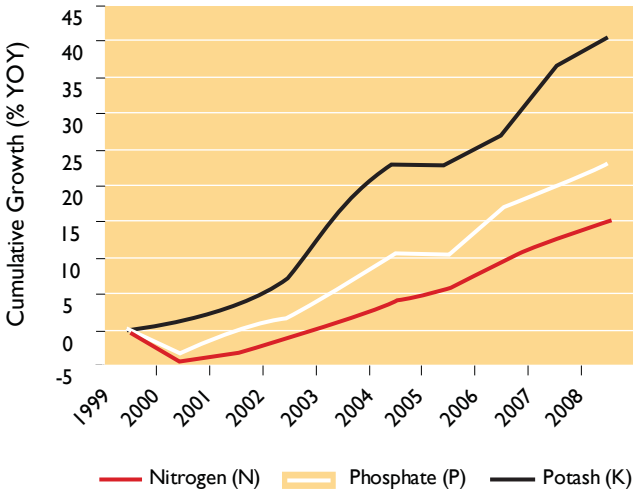
These significant increases in world fertiliser prices have been driven by a number of global supply and demand events. A strong global economy, and a subsequent boom in demand for agricultural commodities, has led to a significant increase in demand for fertiliser around the world. At the same time, the rising costs of inputs such as natural gas, phosphate rock and sulphur have significantly increased input costs to fertiliser manufacturers. As Australia only accounts for around 1.4% of global fertiliser consumption,[7] and is heavily reliant on imports, it has been directly affected by these largely external factors.

Factors affecting global fertiliser demand

The three basic drivers of demand for fertiliser are often said to be food (for humans), feed (for animals) and fibre (for clothing). In addition, fuel has emerged as a new demand source in recent years in the form of bio-fuel crops. As the world population grows, there is greater demand for all four of these basic drivers, as ABARE noted in *Australian Commodities 2008*.[8] This increased demand has led to a boom in commodity prices which has, in turn, created greater demand for fertiliser.

3. Fertiliser Industry Federation of Australia.
4. Triple superphosphate.
5. International Fertiliser Association statistics.
6. Food and Agriculture Organisation of the United Nations, *Current world fertilizer trends and outlook to 2011/2012*, page 1 (***UN Report***).
7. International Fertiliser Association statistics.
8. ABARE, *Australian Commodities*, March Quarter 2008, pages 220 – 221.

Figure 1: World Fertiliser Consumption



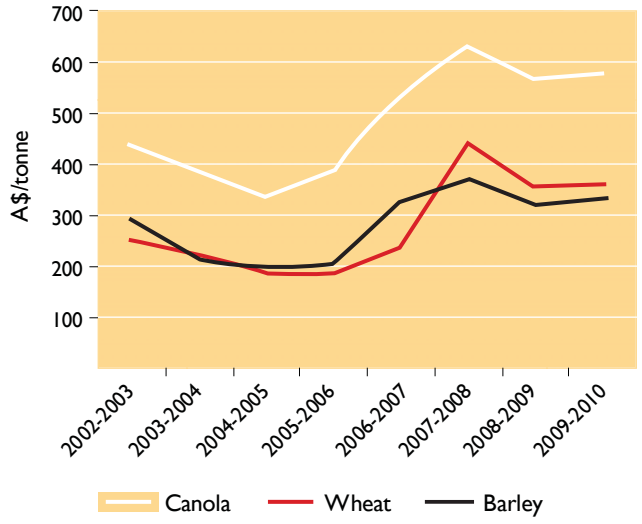
Source: Fertecon

Global agricultural commodity boom

The United Nations has recently observed that there is an 'inextricable link between food production and fertilizer use'.[9] As part of the increased global demand for agricultural commodities, demand for grain has risen significantly in the past two years, with the result that 'the world wheat indicator price has been at record highs'.[10] High prices are expected to remain for several years at least.[11] The increased demand for grain is attributable to a growing population (including an increasingly affluent population) and a shift to production of bio-fuels. However, this escalating demand comes at a time when global grain stocks are at an all-time low.

Increased demand and high prices for grain and other agricultural commodities had led to an increased demand for fertiliser as farmers look to take advantage of the agricultural price boom. ABARE notes that it is forecast that in Australia 'there will be a record area sown to winter crops in 2008-09'.[12] There is evidence that the current commodity market shows no signs of slowing, and so long as the demand for grain grows, the demand for fertiliser is likely to continue to increase.

Figure 2: Australian Grain & Oilseed Prices



Source: ABARE Australian Commodity Statistics

9. UN Report, page 1.
10. ABARE, *Australian Commodities*, March Quarter 2008, page 30. See also UN Report, page 8.
11. ABARE, *Australian Commodities*, March Quarter 2008, page 233.
12. ABARE, *Australian Commodities*, March Quarter 2008, page 40.

Shift in dietary patterns

As part of the growing world economy, the standard of living has increased, resulting in a shift in global dietary patterns. People have more money to spend on food and as a result diets have moved away from traditional staples like cereals and roots towards more livestock products, fruits and vegetables. Demand growth for these products has been strongest in Asia and Latin America, driven by increasing populations and rising middle class wealth and consumption. In particular, increasing urbanisation and per capita GDP growth in countries such as India and China is driving food consumption. It is estimated that 70% of every new dollar earned by consumers in India is spent on food, and in China 40%, compared with 10% in the USA.

This shift in dietary habits affects the global demand for fertilisers in two ways. Increased demand for livestock in turn leads to increased demand for grain as a feedstock (which has the flow-on effect of increasing demand for fertiliser to produce that grain). Further, a shift in demand from grain to vegetable and fruit crops leads to increased fertiliser demand as average application rates for fruit and vegetable production are about double those for grain crops.[13]

Bio-fuels

As a result of record oil prices, and new legislative requirements overseas[14] designed to address global warming concerns, there has been a substantial increase in the demand for bio-fuels. This has in turn led to the creation of new markets for agricultural commodities that can be used as feedstock for the production of bio-fuels.[15] Bio-fuel crops include corn (USA and China), sugar cane (Brazil and India) and palm oil (Malaysia and Indonesia).

The increased production of bio-fuel crops has led to a substantial increase in global fertiliser demand. For example, corn is a fertiliser intensive crop which requires substantial amounts of nitrogen fertilisers for a good yield. Corn alone accounts for more than 40% of fertiliser consumption in the USA, and requires 32 times more nitrogen per acre than an equivalent area of soybeans. Similarly, sugarcane production for the manufacture of ethanol in Brazil has increased substantially and is expected to grow by 50% by 2010. Brazil's soils are nutrient poor and require significant fertiliser treatment. The United Nations has noted that there are some estimates that bio-fuels will account for nearly 30% of global fertiliser demand by 2015.[16]

Reduced arable land

Increases in bio-fuel production mean that less arable land is available for other agricultural production, which in turn puts pressure on supply and prices for food products. To meet renewable fuel standard targets, around 30% of the US corn crop will be required for ethanol production. In addition, a growing world population means an increasing amount of land must be allocated to housing and infrastructure, therefore reducing the amount of land available for crops. World arable land per capita is estimated to be less than half the level it was in 1950.

This means that the increased demand for agricultural products is being met by increasing productivity requirements (i.e. crop yields and quality) on existing arable land.[17] The primary method for extracting greater yields is the application of fertiliser.

13. UN Report, page 5.
14. For example the US Energy Independence and Security Act which was implemented in December 2007.
15. UN Report, page 5.
16. UN Report, page 6.
17. UN Report, page 21.

Factors affecting global fertiliser supply

As noted above, all of the key fertiliser commodities, in particular urea, MAP, DAP and potash, are manufactured using a limited number of basic input sources which substantially influences the cost of the end product. Increases in demand for these basic inputs, combined in some cases with scarce global supply, has resulted in substantial increases in the cost of fertiliser production.

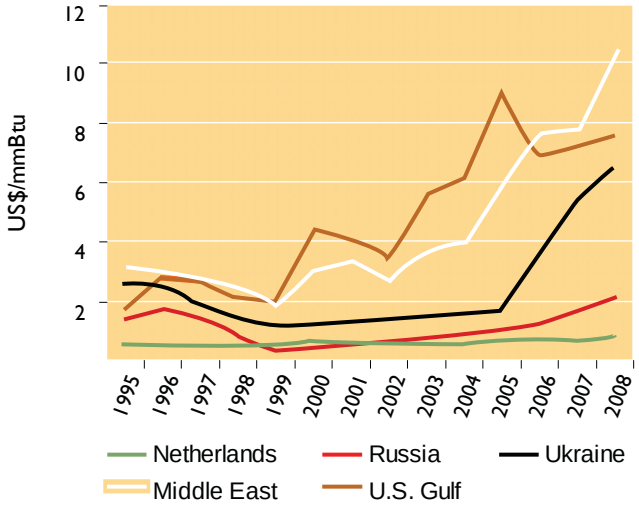
Natural gas prices surge

Natural gas is the basic feedstock in the production of ammonia, and therefore nearly all nitrogen-based fertilisers. Natural gas accounts for up to 90% of the cost of ammonia manufacture.[18] The price of natural gas therefore substantially affects the price of nitrogen fertilisers.

There has been a global increase in demand for natural gas as a result of increasing energy consumption, record high oil prices and the fact that natural gas is a cleaner product than oil or coal in terms of greenhouse gas emissions. Increased demand has led to significant increases in the cost of natural gas.

The increased cost of natural gas has flowed directly through to the price of ammonia, and thus all fertilisers which contain nitrogen such as urea, MAP and DAP.

Figure 3: World Natural Gas Prices

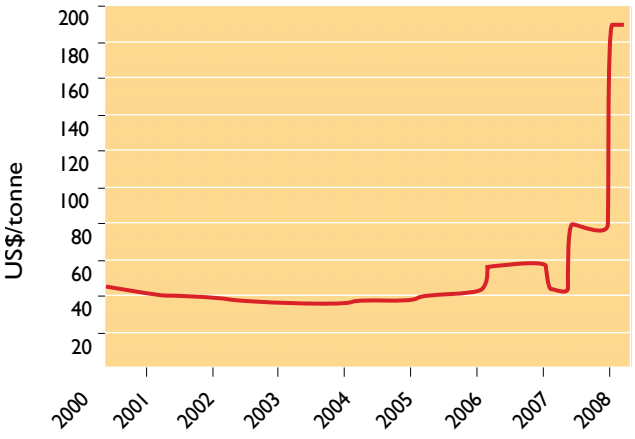


Source: Fertecon

Phosphate rock prices increase 400%

There are relatively few sources of phosphate rock in the world. The significant increase in world fertiliser demand has led to substantial increases in the price of phosphate rock. High quality phosphate rock is now trading at over US$200/tonne, up from US$50/tonne at the beginning of 2007. [19]

Figure 4: Phosphate Rock Prices



Source: Fertiliser Week Phosphate Rock - Bulk (FOB Morocco (65-75% BPL) and IPL data

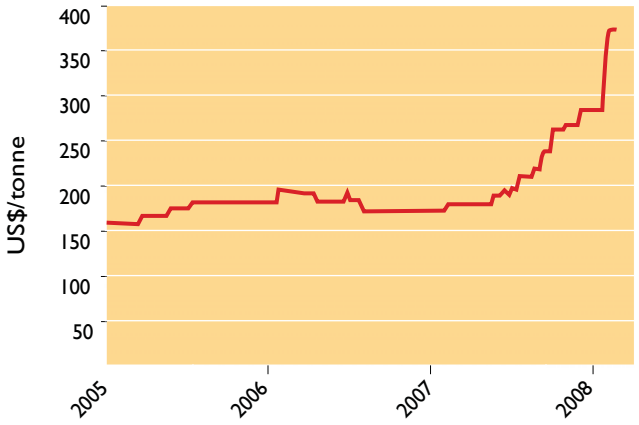
18. Rabobank, page 4.
19. Spot prices for phosphate rock are currently US$350 - $400/tonne

Potash prices increase by 170%

Global potash supply is even more limited than phosphate rock. There are no deposits in Australia, and 100% of demand is imported.

The increase in demand for fertilisers has significantly increased the world price for potash, and projected growth in demand significantly exceeds announced industry greenfields capacity expansions. As a result, producers are looking to increase production capacity at existing mines or invest in new mines.

Figure 5: Potash Prices



Source: FMB MOP Granular Vancouver FOB bulk index

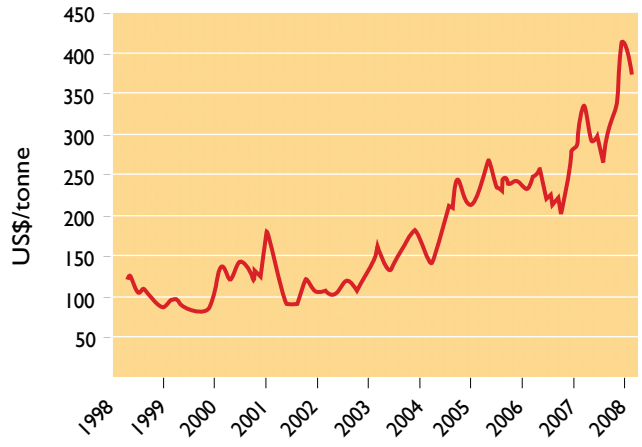
5. Impact on world prices

The global demand and supply factors driving increases in raw material costs and fertiliser demand have led to a sudden and significant increase in world fertiliser prices. The following charts of relevant fertiliser price indices show the dramatic jump in world prices for each of the key fertiliser types during 2007.

Nitrogen fertilisers

The price of nitrogen fertilisers is more volatile than other types of fertiliser, as it is linked to the price of oil and natural gas. As a result of increasing global energy prices, the cost of ammonia has risen substantially over the last few years. This has in turn increased the price of nitrogen based fertilisers such as urea. Fertiliser industry research centre Fertecon has predicted that "[t]he outlook for early 2008 is more increases in ammonia prices".[20]

Figure 6: Urea Prices



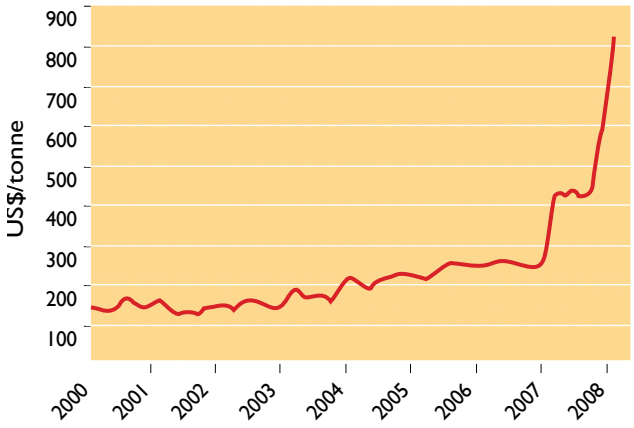
Source: FMB Urea Granular Middle East FOB index

20. Fertecon, Concentrated Phosphates Outlook, 17 December 2007, page 89.

Phosphate fertilisers

The price of phosphate fertilisers has increased substantially over the past two years, and particularly during 2007. This has been driven by increases in phosphate rock and gas prices, as well as strong global demand. The unprecedented rate and extent of the price rise has led Fertecon to recently comment that "[w]e continue to be in unchartered territory in terms of how high phosphate fertiliser prices might go".[21]

Figure 7: Ammonium Phosphate Fertiliser Prices



Source: FMB DAP US Gulf FOB bulk index.

6. Impact of the world boom on Australian fertiliser prices

Australia only represents 1.4% of global fertiliser consumption. The substantial global rises in fertiliser prices have translated directly into higher domestic Australian prices. The increase in local prices reflects the fact fertilisers are freely traded commodity products and that Australian fertiliser prices are therefore inextricably linked with global prices.

Why do international price increases affect Australian prices?

In short, Australian fertiliser manufacturers do not produce sufficient volumes of the key fertiliser types to satisfy domestic demand. This is a result of the seasonal nature of demand, which means that local manufacturing facilities cannot produce sufficient output during peak demand periods. A significant volume of fertiliser is ordered and delivered during a limited number of months of the year (in particular in the lead up to the winter cropping season in March – June). There is significantly less demand during other months. Demand is more cyclical in southern states in Australia than in Queensland.

As a result, there is significant and sustained import of fertilisers into Australia, and prices are based on import parity. Overall, approximately 48% of Australia's total fertiliser consumption is imported.[22]

Fertiliser imports into Australia (2006)[23]

Product Market	(%) Import
Nitrogen based fertiliser	62
Potassium based fertiliser	100
Phosphate based fertiliser	33

21. Fertecon, Concentrated Phosphates Outlook, 17 December 2007, page 85.
22 Fertiliser Industry Federation of Australia.
23 Fertiliser Industry Federation of Australia.

Why are Australian prices based on import parity?

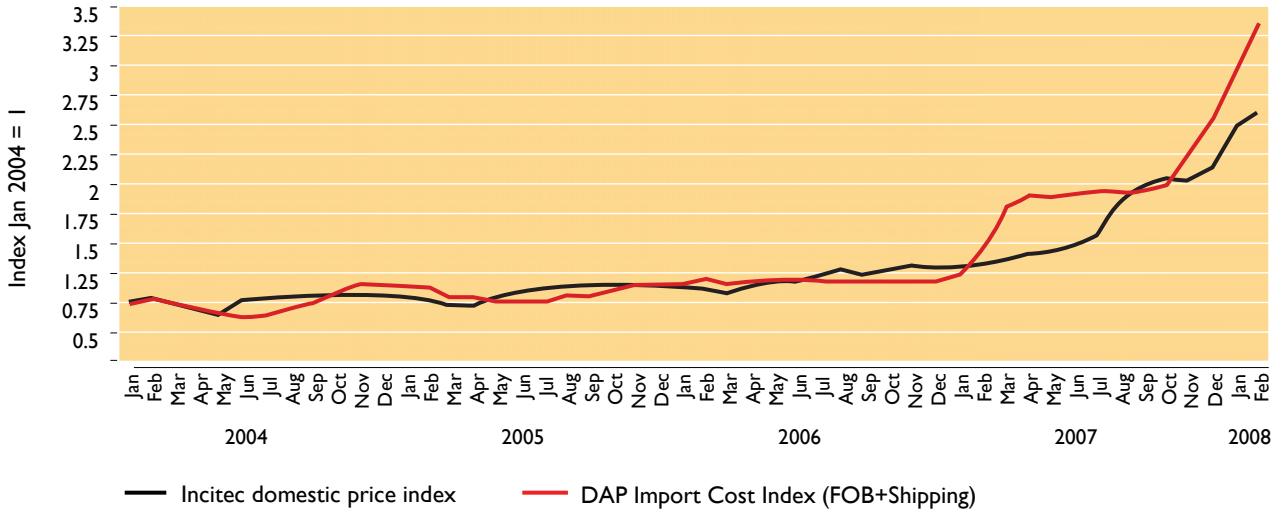
Australia is a net importer of fertilisers. Like many Australian industries where imports are required to meet domestic demand, fertiliser prices are set on an import parity basis. The chart below illustrates the clear link between domestic and international fertiliser prices.

There is accordingly no basis to any allegation that domestic fertiliser manufacturers are responsible for high prices, or are engaging in price gouging of customers. Domestic manufacturers such as IPL are **price takers** – that is, the price they receive for locally manufactured product is determined on world markets, and their individual decisions make no impact on the world benchmark price. If a domestic manufacturer sought to raise local prices above import parity, then customers would simply purchase imported products instead.

Like many agricultural markets, such as the grain and wool markets, in which there are global benchmark prices, it would not be rational for Australian fertiliser manufacturers to price below import parity since it would be more profitable to export the product instead. The fertiliser industry is like any Australian industry which produces internationally traded commodity products - while domestic manufacturers do benefit from high global prices, they are also disadvantaged when prices fall.

All Australian fertiliser manufacturers import fertiliser into Australia to supplement their domestic production. In addition, there are a large number of other companies engaged in fertiliser imports. These range from substantial companies such as ABB, Hi Fert (a joint venture between Elders and Landmark), CSBP, Summit and United Farmers Co-operative, through to a number of small traders who procure spot shipments in response to movements in prices and demand conditions.

Figure 8: Index of domestic and import prices, DAP



Source: Incitec data and FMB DAP US Gulf FOB bulk index.

Why does IPL export product if it is also importing product?

IPL exports some fertiliser products, in particular MAP and DAP. Approximately 250,000 tonnes, or 26% of DAP and MAP production from Phosphate Hill, is exported in the second half of each year. During peak demand periods, domestic manufacturers are unable to produce sufficient quantities to meet local demand. At these times they also import product, which is one of the reasons why 48% of Australia's fertiliser consumption is imported. However, during the other periods there is surplus domestic production. At these times, IPL exports product.

7. A competitive local industry

The Australian fertiliser supply chain

Fertiliser products are supplied to farmers by a relatively simple supply chain. There are three main parties involved.

Suppliers: Fertiliser products are imported and supplied in Australia by a wide range of suppliers including:

- companies which manufacture or import large volumes of fertiliser in Australia (Incitec Pivot, Hi Fert, Impact and CSBP);
- other large agricultural businesses such as ABB, Elders and Landmark, which also directly import fertiliser;
- other independent traders (eg Mega Fert) or grower organisations (eg United Farmers).

Distributors: Fertilisers are distributed to end user farmers through:

- large corporate agricultural distributors such as Elders and Landmark;
- independent dealers or agents (small to medium businesses); or
- direct to the end user by the supplier.

Apart from in Tasmania, IPL's business model does not involve direct distribution to farmers and retail pricing is therefore set by business partners not IPL.

End users: Australian farmers. Farmers purchase their fertiliser requirements from distributors. Australian farmers today are increasingly well informed about plant and soil nutrition and make considered decisions about nutrient requirements offered by different fertiliser products and brands.

A competitive market

IPL is unquestionably a large player in the supply of fertiliser in Eastern Australia. However, other large manufacturers and suppliers such as Hi Fert and Impact place a constant and substantial competitive discipline on IPL. Competitive tension is further heightened within Australia by the relatively low barriers to entry in the industry, given readily available port and distribution facilities, limited brand loyalty given the commodity nature of the products, and significant customer switching.

IPL's market share in the distribution of fertilisers has dropped from 73% to 58.5% since 2003, providing clear evidence of the competitive nature of the industry.

In addition to direct competitors, IPL faces competition from numerous large, rural agribusinesses, some of which are also IPL's own customers. These include ABB and Hi Fert, which also directly import fertiliser in competition with IPL.

The supply of fertiliser in Eastern Australia is highly competitive, and cannot be described as monopolistic. The high degree of competition within the supply chain to supply product to distributors also disproves any suggestion of cartel conduct within the industry.

Recent fertiliser demand conditions in Australia

As noted above, demand for fertiliser in Australia is highly seasonal, and suppliers have traditionally organised fertiliser supply around seasonal demand conditions. While fertiliser suppliers can generally anticipate likely farmer demand based on historical consumption and forecast conditions, in 2007/2008 there was a significant change in farmer purchasing patterns which was driven by global factors including:

- the boom in the price of world agricultural commodities such as grain, which led to a significant forecast increase in the area planted for winter crops;
- the unprecedented rise in global fertiliser prices, which resulted in many farmers bringing forward fertiliser purchases.

In addition, there was an improved rainfall outlook across many regions in Eastern Australia after years of drought.

The combination of these factors led farmers to bring forward their fertiliser purchases and resulted in an unforeseen level of early season demand for fertiliser in Australia, well beyond forecasts. In the period October 2007 to February 2008, IPL experienced a significant increase in fertiliser demand compared to the same period 12 months earlier. For example, the increase in demand for MAP is illustrated in the following table.

MAP demand – percentage increase in demand to same month 12 months earlier

	Nov 2007	Dec 2007	Jan 2008	Feb 2008
Increase	81%	520%	139%	150%

Domestic suppliers moved rapidly to meet this unanticipated demand. However, their ability to source substantial volumes on very short notice was affected by global supply chains. Lead times for delivery of imported product meant that during December 2007, and January and February 2008, IPL stocked out of fertiliser at a number of its distribution facilities.

In order to manage this issue responsibly and fairly, IPL allocated available fertiliser stocks amongst its customer base, in accordance with previous year customer demands and forecasts. IPL went to considerable lengths to ensure that its customers, regardless of their size, were treated equitably. IPL also ensured that it released product to the market when it was available to meet minimum perceived forecast demand in the region. Any allegation that IPL has hoarded product to artificially inflate prices is manifestly false.

IPL customer initiatives

Historically, the majority of Australian farmers have ordered fertiliser from distributors on a just-in-time basis, and have not placed firm orders until immediately prior to or during a season. This is a result of a desire for maximum flexibility in volumes ordered, given the potential for seasonal variations to result in sudden variations in demand. While this flexibility has been preferred compared to firmer arrangements such as take or pay, during 2007/2008 it meant that farmers were exposed to both increasing global prices and, in turn, unseasonal demand led to shortages in stocks.

IPL recognises the concerns of many in the agricultural community about their exposure to the effects of the global events which have affected pricing and supply of fertilisers. IPL has been pro-active in developing better ways of doing business with its own customers, its business partners, such as implementing new initiatives to provide greater certainty regarding pricing. IPL has also been responsive in dealing with stock shortages, including allocating available stock on an equitable basis. IPL is confident that its actions have assisted in easing the burden on Australian farmers in dealing with the local impact of unprecedented global supply and demand conditions.

Table of Annexures

ANNEXURE I
MAJOR TYPES OF FERTILISER

Annexure 1 – Major types of fertiliser

Nitrogen based fertilisers

1.1 Nitrogen plays a significant part in the yield and quality of plants. These include:

- as a constituent of the protoplasm in plant cells, which is required for all growth processes within the plant;
- as a part of the plant proteins which determine the food value of crops and pastures; and
- as a component of chlorophyll, the green pigment in the leaves of plants.

1.2 Nitrogen in the soil can only be absorbed by plants when it is in the nitrate (NO3) or ammonium (NH4) form.

1.3 Nitrogen is the most commonly used nutrient in fertilisers used in Australia. Fertilisers containing nitrogen are used predominantly in cereal crop production, in horticulture and for other broadacre crops such as cotton and sugar.

1.4 The main nitrogenous fertilisers such as urea are internationally traded products, and prices in Australia are set according to import parity. 62.5% of nitrogen based fertilisers and imported into Australia.

1.5 Fertilisers containing nitrogen are sold in single elemental form (eg urea), in combination with phosphorus (eg MAP, DAP), or in blends (eg NPK blends, urea blends). The main types of fertilisers containing nitrogen used in Australia are listed below. Some of these fertilisers also contain phosphorus.

1.6 Almost all nitrogen based fertilisers are produced from ammonia, and the majority (80% to 90%) of world ammonia production is used to produce fertilisers. Ammonia is produced by combining natural gas (methane), steam and air. Accordingly, the availability and price of natural gas has a significant impact on the price of nitrogen based fertilisers. Natural gas costs comprise on average between 70% to 90% of the manufactured cost of nitrogen based fertilisers.

(a) Urea

1.7 Urea is the most commonly used fertiliser to provide nitrogen in agriculture. It is a widely traded international commodity product that is quoted on a number of geographic bases including Middle East FOB, Indonesia FOB and Carribean/Mexico FOB. Reference prices are quoted by organisations including Fertiliser Market Bulletin (published by FMB Consultants Ltd (FMB)), Fertiliser Weekly (published by CRU International Ltd (CRU)) and Fertecon Market Summary (published weekly by Fertecon).

1.8 Urea is a soluble organic compound containing 46% nitrogen, and is the most concentrated form of solid nitrogen fertiliser. Urea may be applied in a solid state (granular) or dissolved and applied as a liquid to the soil. Urea provides the majority of all nitrogen used by Australian farmers in broadacre cropping.

1.9 Urea is produced by combining ammonia and carbon dioxide under pressure. IPL manufactures urea at Brisbane.

1.10 Approximately 1,032,066 tonnes of urea was supplied in Australia in 2006 of which approximately 818,066 tonnes or 79.3% was imported.

(b) Anhydrous ammonia

1.11 Ammonia is a widely traded international commodity product. Ammonia is manufactured in an ammonia plant through the combination of natural gas and steam to produce a combination of hydrogen and nitrogen gases which are condensed to form ammonia. Ammonia is manufactured by IPL at Brisbane (primarily to make urea, granulated ammonia and Big N) and at Phosphate Hill for use in production of ammonium phosphate fertilisers.

1.12 In the agricultural industry ammonia is used in the manufacture of other fertilisers and industrial products, and to a lesser extent it is also used as a direct application fertiliser in farming in the form of anhydrous ammonia. Anhydrous ammonia contains 82% nitrogen. IPL is the only supplier of anhydrous ammonia as a direct application fertiliser in Australia (marketed as "Big N", a liquid fertiliser). Approximately 69,812 tonnes was supplied in Australia by IPL in 2006. IPL prices Big N on a delivered nutrient tonne basis at a price that is identical to within a few cents of the price per kilogram of nitrogen to urea.

(c) Ammonium sulphate

1.13 Ammonium sulphate consists of nitrogen (24%) and sulphur (20%). It is produced by combining ammonia and sulphuric acid. IPL manufactures ammonium sulphate at Brisbane. Ammonium sulphate is also produced as a by-product from smelters, such as BHP Billiton's steelworks at Port Kembla. In Western Australia it is produced as a by-product from the nickel processing industry and is sold into agriculture as a source of nitrogen and sulphur.

1.14 Ammonium sulphate is also imported into Australia. It is sold by fertiliser suppliers in its raw crystalline form and by IPL in a processed granular form (and sold mixed with MAP as "Granulock"). Approximately 288,841 tonnes was supplied in Eastern Australia in 2006. Of this approximately 50,858 tonnes or 17.6% was imported.

(d) Ammonium nitrate

1.15 A small amount of ammonium nitrate is used in agriculture, but it is mainly used as an explosive in the mining and quarry industries. Ammonium nitrate is formed by reacting nitric acid with ammonia and contains 34% nitrogen.

1.16 In Australia, fertilisers containing more than 45% ammonium nitrate are classified as Security Sensitive Ammonium Nitrate (SSAN). Anyone involved in the transport, storage, handling or application of the product must be licensed. IPL has never manufactured straight ammonium nitrate. Incitec Pivot produces Cal-Am and N-Sure using ammonium nitrate solution from other suppliers. Of these, only Cal-Am (which contains 80% ammonium nitrate and 20% calcium carbonate) is classified as an SSAN.

Phosphate based fertilisers

1.18 Phosphorus is essential for plant growth as it stimulates flower, seed and fruit production. It is also the nutrient most responsible for root development and is important to allow growth immediately after planting.

1.19 Most Australian soils are inherently phosphorus deficient. Although phosphorus generally does not leach from soils, it is lost through wind and soil erosion. Phosphorus is used predominantly in cereal production and pastoral applications (dairy, beef, wool).

1.20 There are a variety of fertilisers on the market which provide phosphorus to improve soil fertility. These range from products such as single superphosphate (SSP) to more complex products such as triple superphosphate (TSP) as well as MAP and DAP, which contain high levels of phosphorus in addition to their nitrogen component.

1.21 Fertilisers containing phosphorus of less than 10% (such as SSP) are sometimes referred to as 'low analysis' products, whereas products containing phosphorus around 20% or more (such as DAP) are referred to as 'high analysis' products. SSP is still used extensively in pasture industries, however over the last 20 years there has been a significant increase in the use of MAP and DAP which deliver both nitrogen and phosphorous.

1.22 There are substantial imports of phosphate fertilisers into Australia. MAP and DAP are commodity products, which are priced on the basis of a number of global price indices. The price of these products is set on the world market, and Australian prices are based on import parity.

1.23 33.1% of phosphate fertilisers were imported into Australia in 2006.

1.24 A key input in all phosphate fertilisers is phosphate rock. Until mining of phosphate rock commenced in Phosphate Hill in 1999, all phosphate rock was imported into Australia. The phosphate rock at Phosphate Hill is only used as a raw material in the manufacture of ammonium phosphate at the site, and has never been exported or sold to other parties. The location of the mine and the high iron content of the product means that all Australian manufacturers still use imported phosphate rock to manufacture SSP.

1.25 There are very few deposits of phosphate rock around the world, and many of them do not produce high quality rock. Phosphate rock is a globally traded product and is available in a multitude of grades, which primarily drives price. The majority of imported phosphate rock used by Australian SSP manufacturers comes from Morocco, with additional product from China, Nauru and Christmas Island.

1.26 Table 10 sets out the volume of phosphate rock imported into Australia between 2000 and 2006 by country of origin.

(a) SSP

1.27 Production of SSP is relatively simple, requiring two raw materials, phosphate rock and sulphur. Sulphur, in the form of sulphuric acid, is added to the phosphate rock. The reaction of sulphuric acid with the phosphate rock converts most of the insoluble phosphorus in the phosphate rock into a soluble or available form. The manufacturing process includes a granulation process which produces a semi-granulated product.

1.28 SSP contains about 9% phosphorus and 11% sulphur in the sulphate form.

1.29 Approximately 1,065,488 tonnes of SSP was supplied in Australia in 2006 of which approximately 38,837 tonnes was imported.

1.30 SSP is extensively used in pastures for dairy, wool and beef farming, particularly where there is a requirement for sulphur in the soil. SSP is also used for crops and horticultural applications, although this demand is steadily declining.

(b) Triple super phosphate (TSP)

1.31 TSP contains phosphorus (20%) and sulphur (1.5%). It is manufactured in a similar manner to SSP, however the process is more complex as it involves the further reaction of phosphate rock with phosphoric acid.

1.32 Approximately 106,944 tonnes of TSP was supplied in Australia in 2006, of which 100% was imported.

1.33 TSP is used in cropping situations and as a blend component, as well as in pastures when coated with elemental sulphur.

(c) Di ammonium phosphate (DAP)

1.34 DAP is an ammonium phosphate fertiliser, which means that it contains both phosphorus (20%) and nitrogen (18%). DAP is a widely traded international commodity product. It is priced on a number of geographic bases including Tampa FOB, Morocco FOB, North Africa FOB and Tunisia FOB. Reference prices are quoted by organisations including FMB, CRU and Fertecon.

1.35 DAP is manufactured using a granulation plant which combines ammonia and phosphoric acid to produce fertilisers in a granular form. IPL manufactures DAP at Phosphate Hill in Queensland.

1.36 Due to its chemical, nutrient and physical properties DAP is ideally suited to cropping situations. DAP can be applied "straight" or as a component in fertiliser blends. The presence of significant quantities of phosphorus in DAP means that it is also used as a phosphorus fertiliser.

1.37 Approximately 579,171 tonnes of DAP was supplied in Australia in 2006 of which approximately 236,186 tonnes or 40.8% was imported.

(d) Mono ammonium Phosphate (MAP)

1.38 MAP is also an ammonium phosphate fertiliser, containing both phosphorus (22%-23%) and nitrogen (10%-12%). It is manufactured using the same process as DAP. IPL manufactures MAP at Phosphate Hill in Queensland.

1.39 The global price of MAP is essentially pegged against the price of DAP. There are no published global indices for MAP, instead a small discount or premium to the DAP price is applied, depending on the chemical specification of the particular product.

1.40 MAP is generally applied in granular form. It is sometimes used as an ingredient in bulk blended fertilisers, and is also used in the formulation of suspension fertilisers. MAP is mainly used in cropping situations where phosphorus is required, often in conjunction with products such as urea (for additional nitrogen).

1.41 MAP is an ideal starter fertiliser since its lower nitrogen content means that it does not break down into levels of ammonia which can damage seeds and young growth. MAP is also better suited to the generally neutral to alkaline soil types of the cropping zone.

1.42 The presence of significant quantities of phosphorus in MAP means that it is also used as a phosphate based fertiliser.

1.43 Approximately 676,766 tonnes of MAP was supplied in Australia in 2006 of which approximately 421,056 tonnes or 62.2% was imported.

(e) Ammonium phosphate compounds

1.44 Ammonium phosphate compounds generally contain phosphorus (8%-12%), nitrogen (10%-16%) and sulphur (6%-12%). IPL manufactures a product marketed as "Granulock" which is MAP combined with sulphate of ammonia. Compounds are used in cropping situations when there is a requirement for nitrogen, phosphate and sulphur, sometimes with the addition of trace elements.

Potassium based fertilisers

1.45 Potassium is the third most important plant nutrient, and is particularly important in horticultural crops and in sugar cane to promote flowering. Potassium deficiencies will result in flowering disorders and low productivity. Potassium also plays a major role in highly productive pastures (dairy) and fodder (lucerne hay) crops. In both of these instances the high productivity extracts considerable nutrients from the soil, increasing the requirement from applied potassium. Most of Australia's grain growing areas have sufficient naturally occurring potassium.

1.46 The main forms of fertiliser which provide potassium are:

- Muriate of potash (potash) (K2O) which contains 50.5% potassium;
- Sulphate of potash (K2SO4) which contains 41% potassium and 16.5% sulphur;
- Potassium nitrate (KNO3) which contains 38.3% potassium and 13% nitrogen.

1.47 Fertilisers delivering potassium (primarily potash) are used for pasture, sugar and horticulture. Potassium is involved in numerous biological processes in a plant, including photosynthesis, disease resistance and stem strength. Australian soils are generally well supplied with potassium.

1.48 The muriate (potassium chloride) form of potash is cheaper and more readily available than other forms of potassium based fertiliser, and is the most widely used in Australia. For some horticultural and vegetable crops, sulphate of potash is preferred particularly where the crop is used for processing or grown in saline conditions. Potassium nitrate is also a satisfactory source of potassium, particularly for vegetable crops and tobacco where it is sometimes used for side-dressing both nitrogen and potassium.

1.49 There are no known commercial deposits of potassium in Australia and production of potash only occurs in 12 countries. North America has the world's largest known reserves of potassium mainly due to the large deposits of ores in Canada.

1.50 100% of the potassium based fertilisers supplied in Australia are imported from North America and Europe. In 2006 approximately 299,993 tonnes of potassium based fertilisers were imported into Australia.

ANNEXURE 2
PRINCIPAL SOURCES OF IMPORTED FERTILISER PRODUCTS

Annexure 2 – Principal sources of imported fertiliser products

1.1 The table below sets out the sources and suppliers of the principal fertiliser products and raw materials imported into Australia.

Principal sources of imported fertiliser products

Product	Sources	Suppliers
Phosphate rock	Morocco	OCP
	Togo	International Fertilizer Group (IFG)
	China	Wengfu
	China	Kaolin
SSP	China	ICL
		Wengfu
Ammonium phosphate	USA	Mosaic
	Morocco	Mississippi Phosphates Corporation
	China	CF Industries
	China	OCP
	South Africa	Wengfu
		Kaolin
		Foskor
Urea	Qatar Peninsula	Qatar Fertiliser Company (Quafco)
	Saudi Arabia	Saudi Basic Industries Corporation (Sabic)
	Kuwait	Petrochemical Industries Corp (PIC)
	Malaysia	Gulf Petrochemical Industries Corp (GPIC)
		Mitco
Potash	Canada	PotashCorp
	USA	Mosaic
	USA	Agrium
	Russia	Belaruskali
	Jordan	Arab Potash Company
	Israel	ICL

ANNEXURE 3
GLOBAL FERTILISER SUPPLIERS

Annexure 3 – Global fertiliser suppliers

1.1 The global fertiliser industry comprises a large number of significant manufacturers of fertiliser products. For some fertiliser products which have limited input sources, such as potash, there are a relatively small number of global producers, whereas there are substantially more producers of nitrogen based fertilisers given the fragmented nature of ammonia production.

1.2 A description of the principal suppliers of imported fertiliser products and their operations is set out below.

(a) OCP

1.3 OCP is the world's leader on the phosphate rock and derivatives market operating in five continents.[1]

1.4 OCP extracts raw phosphate from the Moroccan subsoil in either open cut or underground mines. Approximately half the production is exported as raw material (phosphate rock) to some forty countries throughout the world. The other half is delivered to OCP's chemical industries which process it into marketable derivative products: basic phosphoric acid, purified phosphoric acid, solid fertilizers.

1.5 In accordance with its international development strategy, OCP Group has struck long-lasting partnership arrangements with other international fertiliser companies, including SRIW (Belgium) and Chambal-Fertilize (India.). This co-operation includes both medium and long term supply agreements and construction of new production units.[2]

(b) Mosaic

1.6 Mosaic was formed through the merger of two respected and successful industry leaders, IMC Global and Cargill Crop Nutrition to become one of the world's leading producers of concentrated phosphate and potash crop nutrients with annual revenue exceeding $5.8 billion in 2007.[3]

1.7 Mosaic operates 16 phosphate rock mines and plants, five potash production facilities, one nitrogen production facility and key distribution facilities in 11 countries which serve customers in 33 countries.[4]

(c) Foskor

1.8 Since 1951 South African based Foskor has grown from a single phosphate mining operation to become one of the world's largest, most dynamic phosphate and phosphoric acid producers. [5]

1.9 Foskor's 2007 Annual Report Indicates that it recorded its second highest operating profit in their 56 year history in 2007.

1.10 Foskor exports its phosphate based products to India, Japan, Brazil and Australia.

(d) Qatar Fertiliser Company (Quafco)

1.11 Quafco was formed as part of Qatar's industrial diversification program to utilize its abundant natural gas resources. Quafco has become one of the main producers and exporters of ammonia and urea in the world.[6]

1.12 Following the completion of the Quafco-4 plant, Quafco became the world's largest single site producer of urea and ammonia with a production capacity of 2 million tonnes of ammonia and 2 million tonnes of urea.[7]

(e) Saudi Basic Industries Corporation (Sabic)

1.13 Sabic is a world leader in the production of chemicals, fertilisers, plastics and metals and is one of the world's largest producers of crop nutrients and the world's largest exporter of granular urea.[8]

1.14 Sabic has three fertiliser manufacturing affiliates: Saudi Arabian Fertlizers Company, Al-Jubail Fertilizer Company and National Chemical Fertilizer Company. Their combined capacity is 5.6 million tonnes per year of ammonia, urea, phosphate and liquid fertilizers.[9]

1.15 Sabic exports fertilisers to markets in Africa, Australia, New Zealand and the United States.

1. http://www.ocpgroup.ma/english/jsp/qui_sommes/index.jsp
2. http://www.ocpgroup.ma/english/jsp/partenariats/index.jsp
3. http://www.mosaicco.com/ABOUT_MOSAIC/Quick_Facts/index.html
4. http://www.mosaicco.com/ABOUT_MOSAIC/Quick_Facts/index.html
5. http://www.foskor.co.za/library/Foskor%20Annual%20Report%202007.pdf
6. http://www.qafco.com/history.html
7. http://www.qafco.com/history.html
8. http://www.sabic.com/corporate/en/binaries/brochure_tcm4-1610.pdf
9. http://www.sabic.com/corporate/en/binaries/brochure_tcm4-1610.pdf

(f) Petrochemical Industries Company (PIC)

1.16 Leveraging off Kuwait's natural gas resources PIC produces ammonia and urea for both local and global use. PIC has also established external affiliates for the production of a wider range of chemical fertilisers.[10]

1.17 PIC operates ammonia plants that produces liquid ammonia with total capacity of 858,000 tonnes a year and three urea plants with total capacity of 792,000 tonnes a year.[11]

(g) Gulf Petrochemical Industries Corp (GPIC)

1.18 GPIC is a joint venture between the Government of Bahrain, Saudi Basic Industries Corporation and Petrochemical Industries Company which manufactures fertilisers and petrochemicals.

1.19 GPIC uses natural gas as a feedstock for the production of 400,000 tonnes per annum of ammonia, 600,000 tonnes per annum of urea and 400,000 tonnes per annum of methanol.

(h) MITCO

1.20 The MITCO Group of Companies is the marketing, trading and procurement arm of Petronas, the national petroleum corporation of Malaysia. Since its incorporation on 17 August 1974, Petronas has grown dynamically to become a fully integrated multinational petroleum corporation engaged in a broad spectrum of oil and gas activities in more than 30 countries world wide.[12]

1.21 The Petronas Urea Research Committee (URC) was formed to establish Petronas' granular urea as a reliable and economic source of nitrogen. URC conducts research and development to achieve optimum use of urea and urea-based fertilisers for crops in Malaysia as well as to identify problems associated with their usage and provide solutions to them.[13]

1.22 MITCO offers the following fertilisers for sale: ammonia, granular urea, ammonium sulphate, prilled urea, NPK fertilisers, melamine, phosphate, potash and sulphur. [14]

(i) PotashCorp

1.23 PotashCorp is the world's largest fertilizer enterprise, producing the three primary plant nutrients: potash, nitrogen and phosphate. Amongst these, potash is the primary focus of the business, delivering the highest-quality earnings.[15]

1.24 PotashCorp has an unmatched ability to meet the needs of North America and growing offshore markets and has plans to significantly expand capacity and make strategic global investments.[16]

1.25 PotashCorp operates on a Potash First strategy focusing capital to build world class potash assets to meet the rising global demand for potash. The potash business is complemented by operations focussed on nitrogen and phosphate that emphasize the production of high-margin products with stable and sustainable earnings potential.[17]

(j) Agrium

1.26 Agrium Inc. is a major retail supplier of agricultural products and services in North and South America, a leading global wholesale producer and marketer of all three major agricultural nutrients and the premier supplier of specialty fertilizers in North America.[18]

1.27 Agrium operates 14 major production facilities in North America and Argentina and produces, markets and distributes close to ten million tonnes of fertilizer products annually. This includes about 6.1 million tonnes of nitrogen, 2.1 million tonnes of potash and 1.3 million tonnes of phosphate. [19]

10. http://www.pic.com.kw/introduction.asp
11. http://www.kuwait-info.com/sidepages/economy_oil_pic.asp
12. http://www.mitco.com.my/mitcoGroupOfCompanies.html
13. http://www.mitco.com.my/researchDevelopment02.html
14. http://www.mitco.com.my/chemicalsFertilisers.html
15. http://www.potashcorp.com/about_potashcorp/
16. http://www.potashcorp.com/about_potashcorp/
17. http://www.potashcorp.com/about_potashcorp/
18 http://www.agrium.com/
19 http://www.agrium.com/company_profile/our_business.jsp

(k) CF Industries, Inc

1.28 CF Industries is a subsidiary of CF Holdings, Inc., and is one of North America's largest manufacturers and distributors of nitrogen and phosphate fertiliser products.[20] It produces MAP, DAP, urea, anhydrous ammonia and a range of custom fertiliser products.

1.29 CF Industries operates nitrogen fertilizer manufacturing complexes in Los Angeles and Alberta; phosphate mining and production operations in Central Florida; and a network of fertilizer distribution terminals and warehouses, located primarily in major grain-producing states in the U.S. Midwest.

1.30 CF Industries exports a significant portion of its phosphate output to the Latin and South American markets. It also owns a 50 percent interest in KEYTRADE AG, a global fertilizer trader headquartered in Switzerland.

(l) Belaruskali

1.31 Belaruskali is a large producer and supplier of potash mineral fertilisers. It's operations include four mine and refinery complexes, auxiliary shops and servicing units. Each of the four mine and refinery complexes comprises a potash ore mine and the dressing factory to process that ore and produce the mineral potash fertilizers in the form of fine, fine crystallized and granulated concentrate of the potassium chloride.[21]

1.32 Belaruskali's potash fertilizers are delivered to Europe, East Asia, Mediterranean countries, South Africa, India, China, South and North America. [22]

(m) Arab Potash Company (APC)

1.33 APC was formed to develop the minerals of the Dead Sea. Currently APC and it's subsidiaries are producing potash for agriculture, industrial potash for the chemical industry, industrial salt, bromine and NPK fertilizers.

1.34 APC produces 1.8 million tonnes of potash a year.[23]

(n) Israel Chemicals Ltd (ICL)

1.35 ICL is one of the world's leading fertilizer and specialty chemical companies. With exclusive concessions to extract high quality, low cost minerals from Israel's Dead Sea and rights to mine the Negev Desert, ICL is a major producer of potash, compound potash and phosphate fertilizers, food grade phosphoric acid, elemental bromine, magnesium and a major player in specialty chemical high margin niche markets.[24]

1.36 ICL's 2006 fertiliser revenue was US$1.45 billion, accounting for 45% of the ICL's total revenue. [25]

1.37 ICL's major markets include Western Europe, Brazil, India, China and Israel.

(o) Mississippi Phosphates Corporation

1.38 Mississippi Phosphates Corporation operates a DAP production facility in Mississippi in the USA. This facility has the capacity to produce 870,000 tonnes of DAP per annum.

20 http://www.cfindustries.com/CompanyProfile.htm.

21 http://www.kali.by/english/bel_main.html.

22 http://www.kali.by/english/buying.html.

23 http://www.arabpotash.com/inside.php?src=ml&ml_id=1#

24 http://www.icl-group.com/iclgroup/Pages/CorporateProfile.aspx.

25 http://www.icl-group.com/iclgroup/Pages/ICLFertilzrs.aspx.

ANNEXURE 4
DOMESTIC FERTILISER SUPPLIERS

Annexure 4 – Domestic fertiliser suppliers

1.1 Fertilisers are imported into Australia both by domestic manufacturers, and numerous other importers (sometimes referred to as "traders"). The larger importers such as IPL, Impact, Summit, Hi-Fert, and CSBP essentially value add the services of bagging and blending bulk fertiliser once delivered to port, as well as in some cases distributing of fertiliser. These value adding services are not sophisticated, and have low barriers to entry or exit, essentially requiring only storage facilities and a small amount of equipment. Smaller traders generally sell bulk quantities of straight fertiliser direct to farmers.

(a) Impact Fertilisers Australia

1.2 Impact Fertilisers Australia Pty Ltd (Impact) is a joint venture between Impact Fertilisers Pty Ltd of Hobart, Tasmania and the multinational Swiss-based company Ameropa AG.

1.3 Ameropa AG is a corporation with fertiliser operations throughout the world, operating in 75 locations in 23 countries with sales of US$2.7 billion annually. Ameropa AG operations are supported by their robust auxiliary infrastructure in shipping and storage.

1.4 The two companies entered into the joint venture in 2006 in order to supply a full range of high analysis fertilisers to independent fertiliser dealers on the eastern seaboard of Australia in addition to the SSP manufactured by Impact in Tasmania.[26]

1.5 Impact has production capacity of over 210,000 metric tonnes of SSP per year from its Hobart manufacturing facility. Approximately 120,000 metric tonnes of this SSP is supplied to eastern Australia each year, including Tasmania.

1.6 Impact manages a network of dispatch sheds in Newcastle, Melbourne, Geelong, Lara and Portland. This concept has been welcomed by independent dealers as substantial orders followed the implementation of the dispatch sheds.[27]

1.7 Impact supplies all of the major fertiliser products, including DAP, MAP, SSP, Urea, MOP (muriate of potash), TSP and ammonium sulphate.

1.8 Impact's Australian based customers include independent dealers and Hi Fert.

(b) Hi Fert

1.9 Hi Fert is an importer and distributor of imported and locally manufactured fertiliser products. It is owned by ELF Australia which is a joint venture between Landmark Rural Holdings (a wholly-owned subsidiary of AWB Limited) and Elders Limited (a wholly–owned subsidiary of Futuris Corporation Limited).

1.10 Hi Fert describes itself as being a leader in the Australian fertiliser industry.[28] Hi Fert markets and distributes fertiliser in eastern Australia (South Australia, Victoria, New South Wales and Queensland).

1.11 Hi Fert has traditionally sourced most of its MAP and DAP from SCF at Phosphate Hill, although recently it has imported large shipments of MAP and DAP. Hi Fert also sources other fertiliser products by imports from overseas suppliers.

1.12 Hi Fert has five distribution plants in South Australia, two in Victoria, two in New South Wales and one in Queensland. It operates storage, manufacturing and bulk dispatch facilities together with a 200+ dealer network across south-eastern Australia. It distributes more than 500,000 tonnes of fertiliser products each year.

1.13 Hi Fert does not manufacture its own fertiliser products but does create high value fertiliser products by blending and coating a variety of base fertilisers with trace elements.

1.14 Hi Fert supplies the full range of fertiliser products in eastern Australia through its dealer network.

(c) ABB Fertiliser

1.15 ABB Grain provides a diverse range of services spread across the entire agricultural supply chain, including accumulation, storage, malt, trading, logistics, fertiliser, agchem, financial services, wool and livestock.

1.16 ABB Grain acquired Direct Fertilisers in December 2004, and now supplies a range of fertiliser products across each of the three product categories, including urea, ammonium sulphate, potash and DAP. ABB imports urea.

1.17 ABB distributes its fertiliser products across Australia, including South Australia, Western Australia, Victoria and New South Wales.

26 IMPACT newsletter, summer edition 2006.

27 IMPACT newsletter, summer edition 2006.

28 www.hifert.com.au/about/

(d) Grow Force (Ruralco)

1.18 Grow Force is owned by Ruralco Holdings Ltd and is involved in the wholesaling, distribution and retailing of rural merchandise (including fertilisers) in Queensland and NSW.

1.19 Grow Force imports significant volumes of fertiliser products. Its principal suppliers include: Terra Fertilizers (international); IPL (Australia); Yara International (international); and Kemira GrowHow (international).

(e) Megafert

1.20 Megafert is a supplier of a range of fertiliser products including specially formulated products for post seeding applications, early crop boost and increasing pasture growth. These products are predominantly nitrogen or nitrogen and phosphorus based with sulphur.

1.21 Megafert supplies its products throughout South Australia, Victoria and New South Wales. Megafert imports a full range of fertilisers to Adelaide, Portland, Geelong and Kwinana (WA).

(f) Summit Fertilizers

1.22 Summit has grown from its early days as an importer, to having a strong manufacturing base with a range of innovative products and services.

1.23 Summit is based in Western Australia and has five depots located at Kwinana, Geraldton, Bunbury, Albany and Esperance.

1.24 Summit supplies a broad range of fertiliser products, ranging from traditional products such as urea, MAP and DAP, through to prescription blends.

(h) Whitfert Pty Ltd

1.25 Whitfert is a privately-owned family company operating in Western Australia.[29]

1.26 Whitfert supplies and stores bagged fertilisers and trace elements, primarily for agricultural and industrial use, specialist horticulturists and soluble fertilisers. The majority of its products are nitrogen, phosphorus and sulphur blends.

(i) United Farmers Co-operative Company Limited (UFC)

1.27 UFC is a company incorporated by a group of Western Australian farmers in 1992 with the aim of establishing an independent business that provides competitively priced, quality fertilisers and chemicals to fellow farmers.[30]

1.28 UFC offers a range of fertiliser products including those developed for broadacre farming, horticulture and dairy farming. Supply of these products is only available to shareholders (or 'members') of the UFC.

1.29 The majority of the products supplied are nitrogen and sulphur based, but UFC also supplies other products.

1.30 UFC has proposed to merge with Ravensdown Fertiliser Co operative Limited (Ravensdown). Ravensdown is a New Zealand company which supplies more than 50% of all fertiliser used in New Zealand and is 100% owned by New Zealand farmers.

(j) CSBP

1.31 CSBP is a wholly owned subsidiary of Wesfarmers Limited, an Australian public company which is listed on the Australian Securities Exchange. Wesfarmers is a highly diversified company with operations in energy (gas processing and coal mining), hardware retailing, industrial and safety operations, forest products, fertilisers and chemicals, insurance and rail transport.

1.32 CSBP operates the fertiliser and chemicals business of the Wesfarmers group in Western Australia. It is involved in the manufacture and supply of fertilisers primarily to the broadacre cropping, horticulture, pasture and dairy sectors in Western Australia, as well as providing soil and plant testing and agronomy services. It is also involved in the manufacture and supply of chemicals and acids for industry, mining and mineral processing. For the financial year 2005/06 it had operating revenues from all sectors of $594.5 million.[31]

1.33 The main liquid fertiliser marketed by CSBP is urea ammonium nitrate solution (UAN), which is marketed as Flexi-N. CSBP currently imports almost all of its Flexi-N product. However, CSBP has indicated that a proportion of the increased capacity at the recently upgraded Kwinana ammonium nitrate plant will be directed towards the manufacture of Flexi-N.[32]

1.34 CSBP manufactures and distributes SSP fertilisers and compounds from Kwinana, western Australia. CSBP also imports a range of other fertilisers including DAP, muriate of potash (potassium-based fertiliser), UAN and urea.

29 http://www.wfk.com.au/profile/aboutwhitfords.php

30 United Farmers Co-operative, 2006 Annual Report, p1.

31 Submission by CSBP Limited to the Australian Competition and Consumer Commission in support of an exclusive dealing notification, 14 February 2007.

1.35 CSBP's fertiliser products are distributed via distributors such as Elders and AWB Landmark.[33] It currently employs 26 regional sales representatives and 154 sales agents.

(k) Landmark

1.36 Landmark is one of Australia's leading national retailers of fertiliser supplying 1.2 million tonnes of fertiliser annually to a customer base of over 100,000 producers. Landmark also offers customer services which include fertiliser and chemical recommendations. Approximately half of Landmark's stores operate as franchises.[34]

1.37 Landmark sources its stock from major suppliers, including IPL, Impact, CSBP and Summit.

1.38 Landmark is also part of a joint venture with Elders Ltd, through the joint venture company ELF Australia, which owns Hi Fert.

(l) Elders Ltd

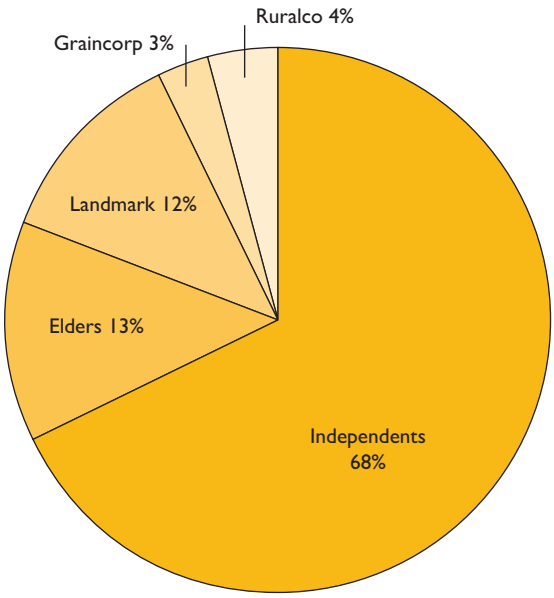
1.39 Elders is one of Australia's leading distributors and retailers of products and services in agriculture. It provides fertilisers, chemicals and agronomic advice from locations all over Australia.

1.40 Elders is a wholly-owned subsidiary of Futuris Corporation Limited and is Australia's leading service provider across a range of agribusiness products.

1.41 Elders is the other 50% participant in the ELF Australia joint venture (the owner of Hi Fert).

1.42 The chart below demonstrates that each of Elders (13%) and Landmark (12%) has a large share of the retail market in eastern Australia. Although they remain as competitors in that retail market, their combined buying power, together with their ability to source fertiliser products from Hi Fert (and directly by way of importation if they chose to), highlights their combined countervailing power in eastern Australia.

Retail fertiliser market in eastern Australia



32 Wesfarmers 2007 Annual Report.

33 Wesfarmers 2007 Annual Report.

34 http://fertiliser.landmark.com.au/terms-and-definitions/

ANNEXURE 5
TABLES

Annexure 5 – Tables and graphs

TABLE 1

IPL Manufacturing Facilities

Plant	Location	Product	Production capacity pa (tonnes, non-shutdown years)
Phosphate Hill	Queensland	DAP	540,000
		MAP	360,000
		Ammonia	190,000
	Mt Isa	Sulphuric Acid	1,000,000
Gibson Island	Queensland	Urea	280,000
		Granulated SOA	200,000
		Ammonia	300,000
Cockle Creek, Boolaroo*	NSW	SSP	250,000
Cockle Creek, Geelong	Victoria	SSP	450,000
		Fluosilicic Acid	
Portland	Victoria	SSP	250,000

* IPL announced in 2006 that it intends to close the Cockle Creek plant at Boolaroo for environmental remediation and re-development. The closure of the plant is intended to occur by September 2009.

TABLE 2

IPL Principal Fertiliser Products (2006-2007)

Product	Total production pa (tonnes)
SSP	588,669
Urea	215,373
Ammonia	126,766
MAP	298,370
DAP	679,762
SoA	189,586

TABLE 3
MAJOR PRODUCTS (NPK) 2006

Tonnes	Imports Australia	Domestic Australia	Total Australia
Nitrogen based fertilisers			
Urea	818066	214000	1032066
Sulphate of Ammonia	50858	237983	288841
Anhydrous Ammonia	0	69812	69812
Total N	868924	521795	1390719
Phosphate based fertilisers			
DAP	236186	342985	579171
MAP	421056	255710	676766
TSP	106944	0	106944
SSP	38837	1026651	1065488
Total P	803023	1625346	2428369
Potassium based fertilisers			
Potash/Total K	299993	0	299993
Total Major Products (NPK)	1971940	2147141	4119081
Minor / Speciality Products			928032
Total Fertiliser Products			5047113

Source: Fertiliser Industry Federation of Australia

TABLE 4
MANUFACTURE AND IMPORT ANALYSIS (DERIVED FROM TABLE 3)

Product Market	Volume (kt)		(%)	
	Mfg	Import	Mfg	Import
Nitrogen based fertiliser	521795	868924	37.75	62.25
Phosphate based fertiliser	1625346	803023	66.93	33.07
Potassium based fertiliser	0	299993	0	100

TABLE 5
AUSTRALIAN FERTILISER CONSUMPTION, BY ELEMENT

	Phosphate (P2O5) kt	Nitrogen (N) kt	Potash(K2O)kt
2000–01	1 096.6	1 002.0	202.6
2001–02	1 178.7	1 082.0	250.0
2002–03	1 064.1	986.4	259.5
2003–04	1 026.0	1 005.0	268.1
2004–05	1 185.0	1 105.6	297.9
2005–06	NA	NA	NA
2006–07	NA	NA	NA

Source: ABARE - Rural Commodities 2006, Table 99, page 98.

TABLE 6

VOLUME OF AUSTRALIAN IMPORTS OF FERTILISER, BY ELEMENT

	Phosphate (P2O5) kt	Nitrogen (N) kt	Potash(K2O)kt
2000–01	637.1	703.4	207.5
2001–02	588.7	749.4	250.0
2002–03	545.1	645.6	259.5
2003–04	546.1	682.3	268.1
2004–05	706.3	795.9	297.9
2005–06	506.1	617.5	242.1
2006–07	NA	NA	NA

Source: ABARE - Rural Commodities 2006, Table 100, page 98.

TABLE 7

PERCENTAGE OF AUSTRALIAN FERTILISER CONSUMPTION (BY ELEMENT) IMPORTED (DERIVED FROM TABLE 5 AND TABLE 6)

	Phosphate (P2O5) kt (%)	Nitrogen (N) kt (%)	Potash (K2O) kt (%)
2000–01	58.1	70.2	100
2001–02	49.5	69.3	100
2002–03	51.2	65.5	100
2003–04	53.2	65.5	100
2004–05	59.6	67.9	100
2005–06	NA	NA	NA
2006–07	NA	NA	NA

TABLE 8

VOLUME OF AUSTRALIAN FERTILISER IMPORTS

	TSP kt	DAP kt	MAP kt	Ammonium fertilisers		Urea kt	Potash kt	Phosphate Rock kt
				Sulphate kt	Nitrate kt			
2000–01	224.1	447.4	647.4	12.0	10.7	1 139.5	346.0	822.7
2001–02	280.2	271.0	659.2	18.4	57.1	1 295.8	416.9	933.2
2002–03	188.1	237.2	691.3	28.3	43.6	1 072.8	432.6	711.3
2003–04	163.5	211.6	740.5	4.3	53.8	1 156.6	447.0	723.1
2004–05	231.8	286.7	926.3	4.9	175.3	1 288.6	496.7	797.0
2005–06	310.3	202.5	528.2	8.8	135.5	1 056.2	403.7	654.7
2006–07	165.6	83.0	443.3	8.6	99.3	794.2	309.1	469.2

Source: ABARE - Rural Commodities 2007, Table 103, page 101.

TABLE 9

VOLUME OF AUSTRALIAN TRADE IN MANUFACTURED FERTILISER, BY TYPE

	Imports						Exports	
	Triple Superphosphate kt	Diammonium Phosphate kt	Monammonium Phosphate kt	Other Ammonium kt	Urea kt	Potassic fertiliser kt	Nitrogen fertiliser kt	Ammonium phosphates kt
1990-91	157.8	347.3	141.1	42.9	388.8	247.4	96.6	0.1
1991-92	264.6	355.0	206.2	90.2	364.5	244.4	60.8	0.8
1992-93	259.9	482.7	250.0	116.8	367.2	258.4	50.8	0.2
1993-94	204.2	501.2	237.5	133.7	526.5	301.0	76.6	0.4
1994-95	306.8	548.5	232.6	124.9	554.3	367.8	66.0	0.4
1995-96	269.3	715.4	291.5	154.0	594.9	366.0	40.0	0.3
1996-97	335.5	706.0	317.3	197.3	850.7	329.3	32.1	0.1
1997-98	351.8	757.1	391.6	118.1	953.3	435.0	43.2	0.2
1998-99	284.9	771.7	413.6	78.5	1038.2	357.1	65.0	0.6
1999-00	240.4	570.2	580.0	74.9	1399.8	353.3	75.2	23.0
2000-01	224.1	447.4	647.4	22.6	1139.5	346.0	107.7	283.7
2001-02	280.2	271.0	659.2	75.5	1295.8	416.9	101.3	180.2
2002-03	188.1	237.2	691.3	72.0	1072.8	432.6	172.8	255.9
2003-04	163.5	211.6	740.5	58.2	1156.6	447.0	134.8	264.6
2004-05	231.8	286.7	926.3	180.2	1288.6	496.7	205.5	313.5
2004-06	310.3	202.5	528.2	144.2	1056.2	403.7	186.6	312.3
2006-07	165.6	83.0	443.3	107.9	794.2	309.1	236.6	154.9

Source: ABARE - Rural Commodities 2007, Table 102, page 100.

TABLE 10

VOLUME OF AUSTRALIAN IMPORTS OF RAW MATERIALS FOR FERTILISER PRODUCTION, BY SOURCE

	Sulphur		Phosphate rock						
	Canada kt	Other kt	Christmas Island kt	China kt	Morocco[35] kt	Nauru kt	Togo kt	Other kt	Total kt
2000-01	435	46	0	293	145	119	0	266	823
2001-02	539	4	0	266	94	27	243	303	933
2002-03	559	21	0	200	48	16	244	202	711
2003-04	660	24	44	179	198	0	253	49	723
2004-05	568	24	38	210	381	0	163	5	797
2005-06	543	6	101	86	405	0	48	15	655

Source: ABARE - Rural Commodities 2007, Table 101, page 99.

35 Representatives of the people of Western Sahara, including the Polisario Front, have raised issues concerning the sovereignty of the Western Sahara, one of the world's largest deposits of phosphate rock and the source of much of the phosphate rock imported into Australia. IPL has been in discussions with various groups about these matters for over 18 months.