

18 March 2008

Committee Secretary
Senate Select Committee on Agricultural and Related Industries
Department of the Senate
PO Box 6100
Parliament House
CANBERRA ACT 2600

By email: agriculture.sen@aph.gov.au

Dear Secretary

**Re: Pricing and supply arrangements in the Australian and
global chemical and fertiliser markets**

Please find attached the NSW Farmers' Association (the 'Association') submission to the Senate Select Committee on Agricultural and Related Industries inquiry into pricing and supply arrangements in the Australian and global chemical and fertiliser markets, the implications for Australian farmers of world chemical and fertiliser supply and pricing arrangements, monopolistic and cartel behaviour and related matters.

Farm costs have increased significantly in recent years, particularly fertiliser, fuel and chemicals. The Association welcomes the Committee's inquiry into this matter and we look forward to the Committee's report.

Yours sincerely



Jock Laurie
PRESIDENT

**Submission to
Senate Select Committee on Agricultural and
Related Industries**

**~ Inquiry into the Implications for Australian Farmers
of the Pricing and Supply Arrangements in
Australian and Global Chemical and Fertiliser
Markets and Related Matters ~**

March 2008

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1. Introduction

The NSW Farmers' Association (the 'Association') is Australia's largest state farming organisation representing the interests of the majority of commercial farm operations throughout the farming community in NSW. Through its commercial, policy and apolitical lobbying activities the Association provides a powerful and positive link between farmers, the Government and the general public.

The previous 12 months have seen a dramatic increase in many farm input costs. The three main contributors have been fuel, fertiliser and chemical prices. Together these three inputs represent 22 percent of the average broadacre farm cash costs for farms in NSW. The 18 percent increase in fuel in the last 12 months together with recent increases in fertiliser and farm chemical costs have had a significant impact on farmers profitability and contribute to the declining terms of trade.

The Association welcomes this inquiry as it provides an opportunity to identify and address the issues associated with increased farm costs, in particular fertiliser and chemical costs. In this submission the Association provides information on the increases in costs and the impacts these are having on the agricultural industry in NSW.

2. The Australian Fertiliser Industry

The fertilizer industry has annual sales in excess of \$2 billion and has a full economic effect on Australia's GDP in excess of \$8 billion each year.

There are many solid, soluble and liquid products used as fertilizers in Australia. Solid mineral fertilizers make up the majority of the fertilizers used although the production and use of liquids is increasing. Significant quantities of nitrogen are also applied as anhydrous ammonia – a liquefied gas. Fertilisers can generally be divided into 3 main nutrients nitrogen, phosphorus, and potassium. These three elements make up about 90 percent of total fertilizer consumption.

In response to a number Member inquiries the Association prepared a briefing note outlining some of the background to the world fertilizer market and some of the contributors to the price fluctuations. This note is included in Appendix 1.

1.1 Fertiliser Production and Demand Forecast

According to an FAO Report¹ fertilizer production will keep pace with forecast increases in land used to support rising food and biofuel production levels. The FAO argues in its report that high commodity prices experienced over recent years led to increased production and correspondingly to greater fertilizer use, this in turn has led to tight markets and higher fertilizer prices. The report further highlights that while it is expected that the demand for basic food crops, fruits and vegetables, for animal products and for biofuel crops is likely to remain strong, FAO expects fertilizer supply to grow sufficiently to meet higher consumption.

Rabobank Forecast

According to Rabobank² high fertiliser prices show no signs of abating in the near term and Australian farmers will need to look to improve efficiencies in fertiliser use to reduce costs and increase productivity in the future. According to the report world fertiliser prices have been driven by an increase in demand for fertiliser which have been compounded by a limited world supply with structural constraints on the speed at which the industry can increase production.

1.2 Fertiliser on farm

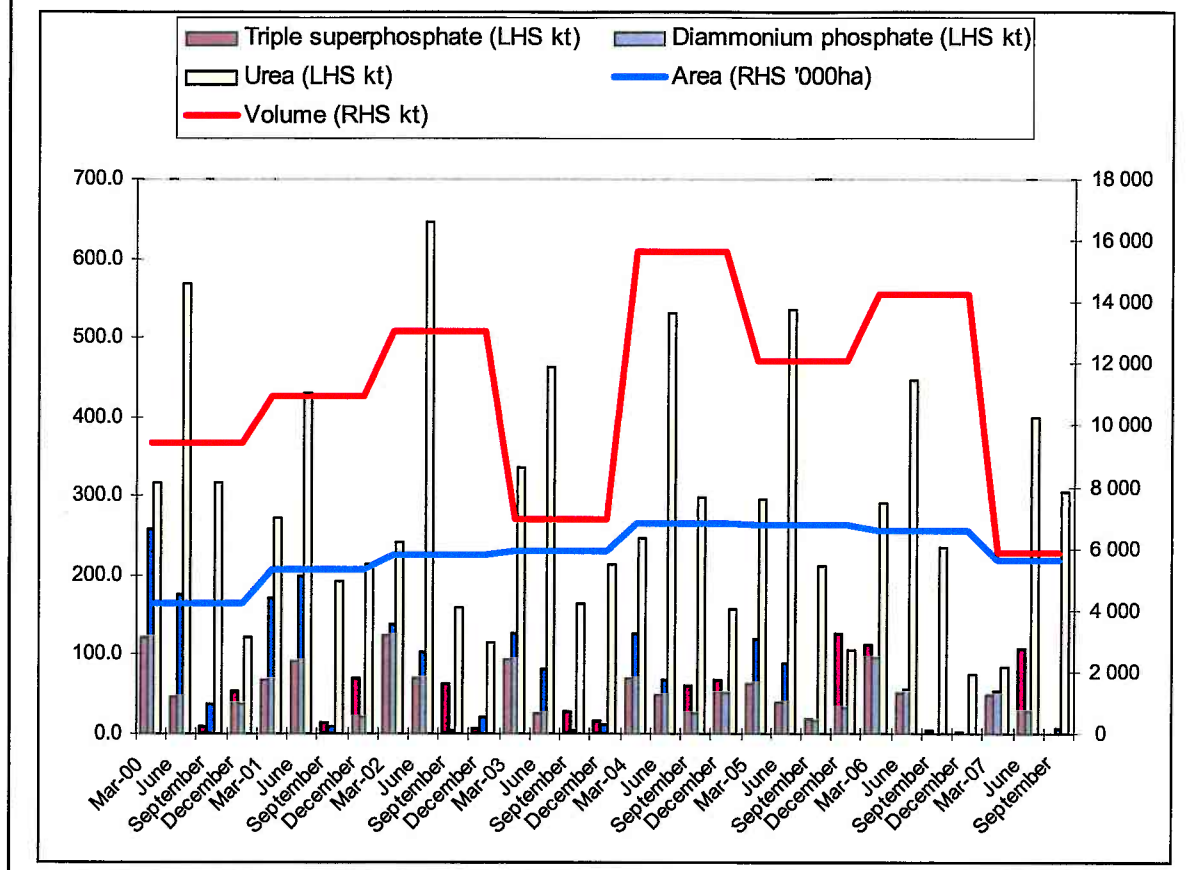
Fertiliser use on farm has grown over the last 15 years. In 1990 fertiliser costs accounted for just under 4 percent of the total cash costs for broadacre farms in NSW. In 2006 fertiliser costs had increased to just over 8 percent of cash costs. In this same period the actual fertiliser costs have increased by 110 percent with a 43 percent increase from the 2005 financial year to the 2006 financial year. These costs are expected to have increased further since 2006.

Figure 1 illustrates the level of Australian fertiliser imports represented by Triple and Diammonium phosphate, and Urea and the corresponding area of crop sown in Australia and the volume of coarse grain harvested. The graph shows there is some correlation between crop yields and fertiliser consumption particularly noted in the late 2006 and 2007 figures and also in 2003 figures. It is also evident that the month of June is a high import month for Urea whereas DAP and Triple super tend to be a little more varied in their import patterns.

¹ Food and Agriculture Organisation of the United Nation, 2008. *“Current world fertilizer trends and outlook to 2011-12”*.

² Rabobank, 2007, Rabobank Global Focus, *‘Fertiliser-a precious commodity’*.

Figure 1 Fertiliser imports and Australian crop production



1.3 Possible market distortions

The lack of transparency and clear market information gives rise to scepticism of market distortions and advantageous pricing structures. The Association often receives comments from Members questioning how there can be fertiliser stock piled in sheds or on ships waiting to be unloaded yet the retailers do not have any available for sale or they cannot inform the customer of when it will be available or at what price. As Figure 1 demonstrates, Australian crop production is relatively constant, the area of crop planted actually remains more constant. Similarly one would expect that the demand for fertiliser to be relatively constant, allowing fertiliser suppliers to fairly accurately predict the demand and timeframes of demand. It is difficult to understand why with a relatively constant demand cycle how there can be a shortage of product.

Comments from Members suggest there is a lack of information available, making decisions more difficult. The Association has held meetings with fertiliser companies where it has been explained that there is enough product available for this years harvest however demand has exceeded demand at this stage. It is suggested that the break in the season and to some degree panic buying has led to farmers trying to purchase fertiliser earlier in the season than normal. However, reports from Members suggest that retailers of fertiliser are unaware that there is supply available and they cannot provide indications on when it will be available. Improving market information would assist decision making and prevent the spikes in demand.

There also appears to be a great degree of uncertainty for buyers in the market. Some reports from Members indicate that when they approach their retailer they are unable to get information on when fertiliser will be available. Furthermore when farmers attempt to order

fertiliser they cannot or are given no certainty with price. The Association has had reports that after farmers have managed to purchase fertiliser the price has suddenly increased when the product arrives due to the shortage of supply.

There is some speculation that the increase in prices is coincidental given the increase in grain prices. A similar situation was evident in Canada in 1995 and 1996. As wheat prices rose, fertilizer prices tracked almost in line while natural gas costs remained relatively flat. Fertiliser companies raised prices 75 percent eroding any marginal gains achieved by farmers as a result of increased prices.

Further speculation on fertilizer prices exists in the industry due to the fact that there is a dominant player in the market. Incitec Pivot is a relatively new company, created by the merger of Incitec and Pivot fertilisers in June 2003. In its assessment of the merger the Australian Competition and Consumer Commission ('ACCC') announced that despite the merger leading to the merged party having very high market shares in some product categories, the ACCC concluded that the importation of fertiliser products is likely to operate as an effective competitive constraint on the merged entity, thereby thwarting any attempt to raise the price of fertiliser to farmers.

Incitec Pivot's scale and production capacity was greatly increased in August 2006 with the purchase of Southern Cross Fertilisers, Australia's only manufacturers of MAP and DAP fertilisers. Again the ACCC assessed that the proposed acquisition was unlikely to result in a substantial lessening of competition given the availability and substitutability of imports. Incitec Pivot now supplies more than 50 per cent of Australia's agricultural plant nutrient needs and on 6 March announced that anticipated 2008 earnings before interest and tax would be in the range of \$700 to \$730 million, an increase of up to 135 percent on 2007.

According to the ACCC in 2006 Australia was a net importer and price taker at import parity prices for fertilizer. A number of changes have since occurred in the international fertilizer market that makes Australian farmers more exposed to price increases. If it is the assessment that suitable competition from imports exists there needs to be measures put in place to ensure supply to Australian farmers can be secured from international markets otherwise the resulting effect is a monopolistic market in Australia.

There is merit in considering improving the level of market information available for fertiliser. The fuel industry may be a suitable model where the wholesale price, based on an import parity price is published. Furthermore information on the level of supply available and fertiliser in the system would be beneficial and allow farmers to structure their purchasing habits. Similarly if farmers are assured supply at agreed prices it may be beneficial for the industry to seek a more structured purchasing system where orders can be placed earlier in the season to prevent the spikes in demand.

1.4 Cost of Fertiliser Freight

Freight of fertiliser is a significant component in the final cost of fertiliser. Quirke and Vincent (2001)³ estimated that, of the total contribution of the fertiliser industry to the Australian economy the freight component for the domestic industry was \$117 million and \$50 million for imported fertilisers.

In an attempt to address the high cost of fertilisers, a number of countries including India and Taiwan have looked at the freight component in the fertiliser value chain with a view to subsidising fertiliser freight. A similar program could be established in Australia to provide short term relief and allow for the establishment of crops in a negative cash flow cycle.

³ Derek Quirke and David Vincent (2001). 'Contribution of the Fertiliser Industry to the Australian Economy' Fertiliser Industry Federation of Australia, Inc., Conference, Fertiliser in Focus.

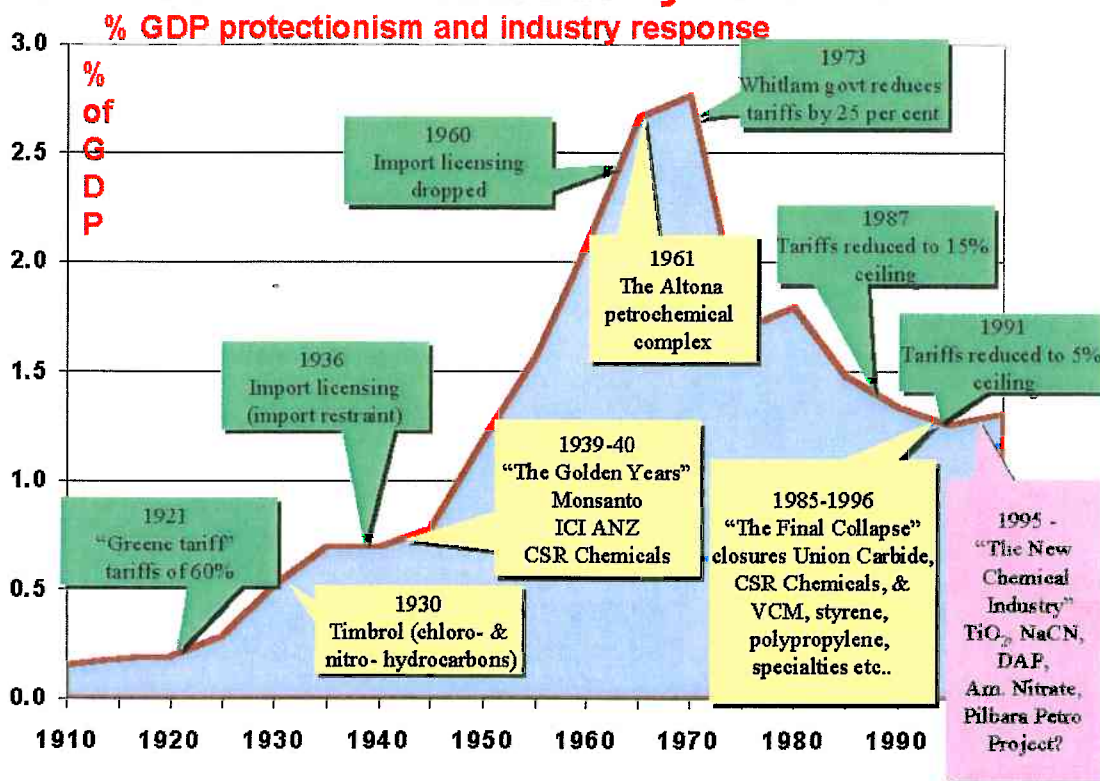
3. The Australian Chemical Industry

By turnover, Australia's chemical industry represents about 8 per cent (4.7 per cent by employment) of Australia's manufacturing sector. This sector employs some 45 000 people with a turnover of A\$18 billion. Its significance to the economy has fallen to represent just 1.3 per cent of GDP.

The chemical industry has changed in size and composition since the mid-1970s. The industry developed under a protected environment through to the early 1970s, see Figure 2. Following removal of protection measures the value of the industry, as measured by its percentage contribution to GDP, declined and the level of imports increased. While undergoing this contraction, the demand for chemicals in the domestic market has continued to grow by around 3 to 4 per cent per year with even faster growth in the nearby Asia/Pacific region. Australia is now a net importer of chemicals with the majority of these originating from China.

Figure 2 Australia's Chemical Industry

Australia's chemical industry 1910 -1998



In response to a number of Members queries the Association developed a briefing note explaining the current situation with the Chemical market and some of the publicised explanations for increases in prices. This note is contained in Appendix 2.

1.5 Price increase in Chemicals

Agricultural chemical prices have been increasing rapidly and the price of Glyphosate based herbicides have seen a considerable price increase in the last few months. Appendix 2 outlines some of the hypothesised explanations for the price increase.

In addition to the price increase the shortage of supply is also causing concern for farmers. As agriculture is being encouraged towards minimum tillage practices the demand for herbicide increases. Together with a wetter than normal spring and summer period the growth in vegetation has meant that more chemicals have been required. This increased demand has not been expected by suppliers and farmers are often reporting that they are unable to source any chemical.

1.6 Potential solutions

The relatively high dependence on a single supplier has had adverse affects on the supply and price of chemical. The Association believes there could be potential for growth in the local chemical industry. A number of ingredients used in the manufacture of chemicals can be sourced in Australia. As an example, Australia is the world's largest importer of caustic soda. Caustic soda is derived from salt, petroleum gas and energy, all of which are significant exports from Australia. Australia's competitive disadvantage however lies in the ability to access cheap labour. As a longer term solution to the supply of chemicals and other manufactured products the Australian labour market needs to be reviewed in the context of its international competitiveness.

Appendix 1 – Fertiliser Price brief

Following the dramatic increase in fertiliser prices over the last three months, this note aims to identify and analyse some of the drivers of fertiliser prices.

Background Fertiliser production⁴

Fertilisers can generally be divided into 3 main nutrients nitrogen, phosphorus, and potassium. These three elements make up about 90 percent of total fertilizer consumption.

Nitrogen

About 97% of the world's nitrogen fertilizers are derived from synthetically produced ammonia. Ammonia is produced using the Haber process with the nitrogen component derived from the air and the hydrogen component usually derived from natural gas although other sources include crude oil, coal or water.

Ammonia is produced in about 80 countries, however the world production is dominated by a small number of countries. Developing countries account for more than 55% of production with over a third of the world's production from China and India. 88% of world ammonia production is processed or used in the countries where it is produced. The remaining 12% of world ammonia production enters international trade directly for all end-users.

Approximately 85% of world ammonia production is used for nitrogen fertilizer production. The remainder is used in various industrial products including fibres, animal feed, explosives. Ammonia can be applied directly to crops as a nitrogen fertilizer or it can be used as a building block to make other nitrogen fertilizer products, including urea, ammonium nitrate, ammonium sulfate and water-based liquid nitrogen fertilizers.

Since 1973 Urea has become a more popular form of nitrogen fertilizer and its market has increased from 20% to 50%. Urea is commercially produced from two raw materials, ammonia and carbon dioxide. Urea is by far the dominant nitrogen fertilizer used in developing countries and is continuously increasing its share in these markets. Urea is produced in about 60 countries.

Phosphorus

Phosphorus is almost entirely derived from phosphate rock which is found in a limited number of countries. The main producers of phosphate rock and phosphate fertilizers are the USA, China, and Morocco, which account for 58% of world production. The production of phosphate rock peaked in 1988 at a level of 166 million tonnes product, since then it has been falling and is now approximately 125 million tonnes.

More than 75% of the world's commercially exploited phosphate rock is surface mined. Overall, mineral fertilizers account for approximately 80% of phosphate use, with the balance divided between detergents (12%), animal feeds (5%) and specialty applications (3%). Approximately 85% of world phosphate fertilizers are manufactured by reacting phosphate rock either directly with sulphuric acid or indirectly with phosphoric acid produced using sulphuric acid.

Potassium

Potassium, or potash, is mined from naturally occurring ore deposits that were formed when seas and oceans evaporated. Unwanted minerals are removed from the ore in the manufacturing process and the product is then granulated for application.

⁴ Sourced from International Fertiliser Industry Association <http://www.fertilizer.org/ifa/default.asp>

Most of the world's potash deposits are found in Canada, Russia, Belarus, Germany and the United States. Canada and the Russia alone account for 55-60% of production and about 66% of world exports. European production dropped significantly when reunification of Germany took place and more recently the deposits in France were expected to be exhausted in 2004.

Production and Consumption of Fertilisers

The growing in world population has resulted in an increase in production requirements from the limited agricultural land and a resultant increase in demand for fertilizers. **Error! Reference source not found.** demonstrates that there has been a steady increase in the consumption of nitrogen and phosphate over the last 10 years.

Figure 3 World Fertiliser Production, Consumption and Prices¹

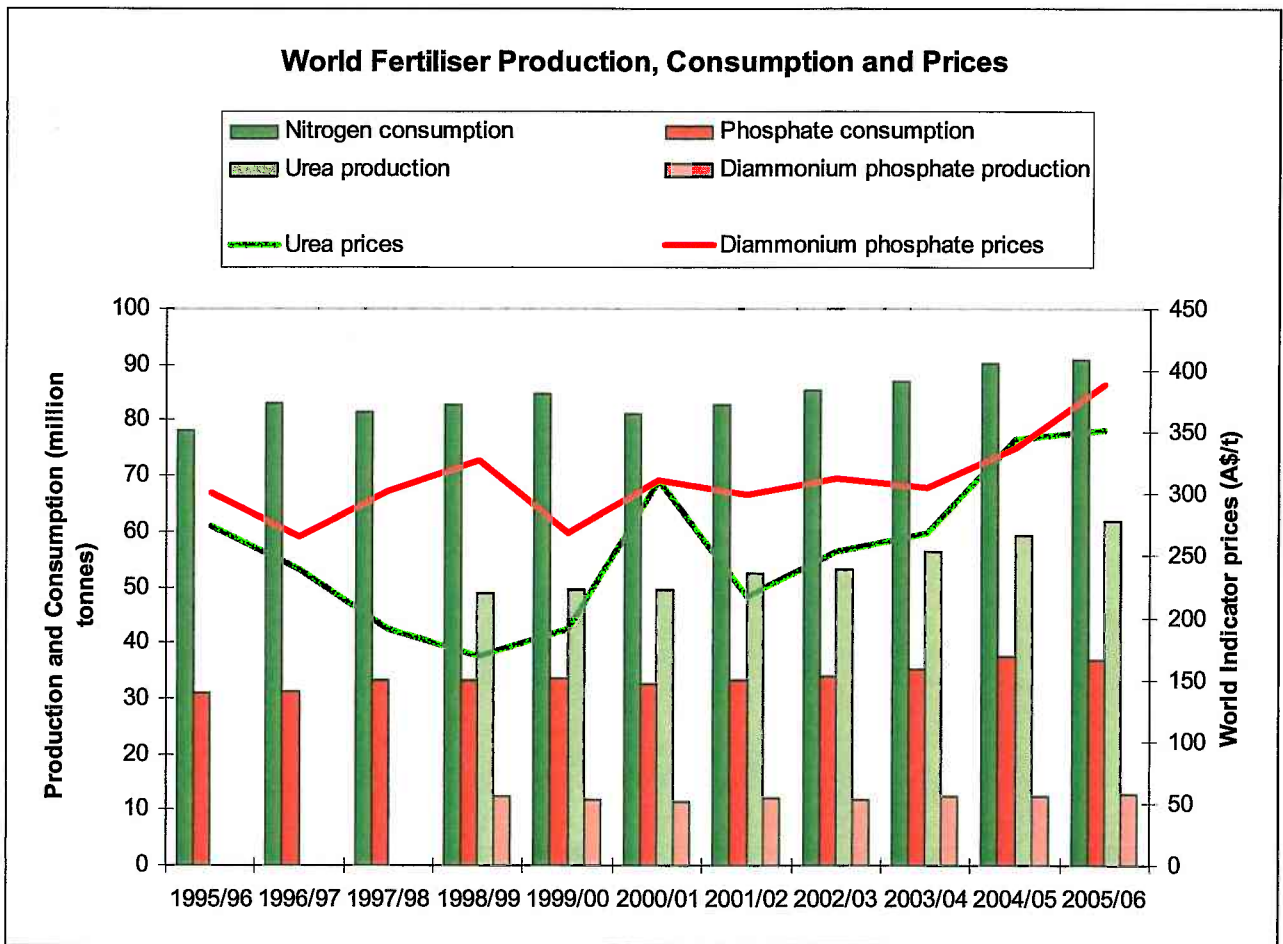


Figure 3 also illustrates the production and price of Urea and Diammonium phosphate. The greater rate of increase in the prices suggests that demand is increasing faster than supply, placing upward pressure on prices. The increase in production of Urea over the last 6 years is reflective of the increased production capacity of Asian countries.

Consumption of fertilizers has also shifted towards Asian countries. Figure 4 illustrates the large growth in fertilizer consumption between the mid 70s and the early nineties. A drop in consumption in the early nineties corresponds with a reduction in fertilizer production from central Europe. Of important note is the increase in the Asian component of consumption and the underlying implications this has on world supply and demand.

The role of fertiliser in supporting the continued growth in agricultural production is well established. Over the last 30 years there has been a positive correlation between cereal production and fertiliser use.

Causes of fertilizer price increases

The following is a critical evaluation of the reasons that have been quoted as affecting the current increase in fertiliser prices:

1. Sourcing of raw products - The limitations of fossil fuels and the resulting increased prices.

Liquid natural gas is one of the main components in ammonia production. As an indicator of world prices **Error!**

Reference source not found.⁵ shows the import prices for natural gas into the US. Since 2002 these have seen a dramatic increase with a minor correction in 2006.

Australia is a net exporter of natural gas. As seen in Figure 7⁶ production has been steadily increasing since the 1980s. Domestic consumption has also been steadily increasing albeit at a slower rate with the

difference accounting for the increase in exports.

Any increase in Australian nitrogen based fertiliser prices could therefore be assumed to be due to international price fluctuations and not a domestic supply constraint.

Australia produces about 1,000kt of single superphosphate per year and sources about 500kt of imported phosphate rock (Figure 6) predominantly from Morocco.

Australia also imports about 1,000kt of phosphates including diammonium phosphate.

Figure 4 World Fertiliser Consumption¹

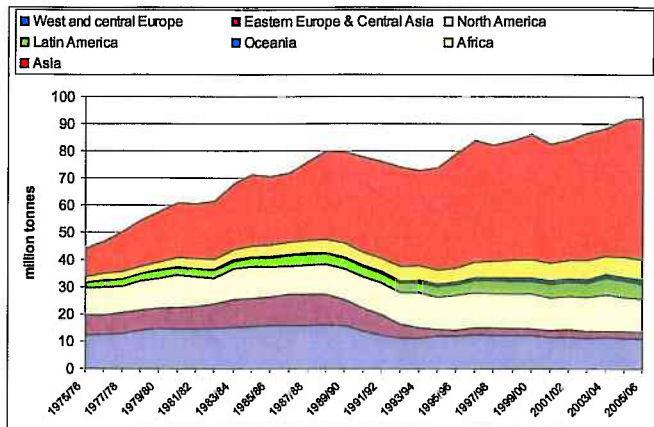


Figure 5 US import prices for Liquid Natural Gas²

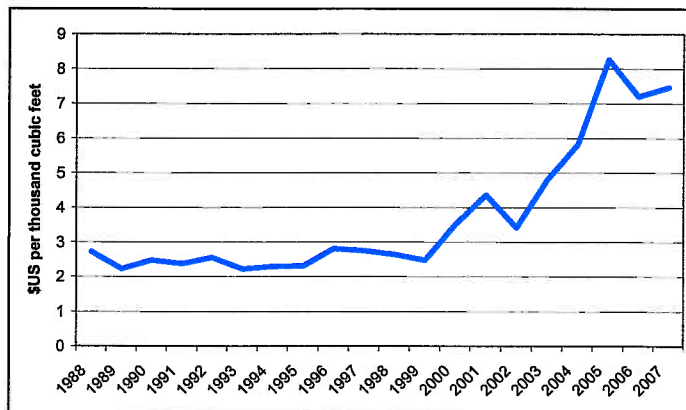
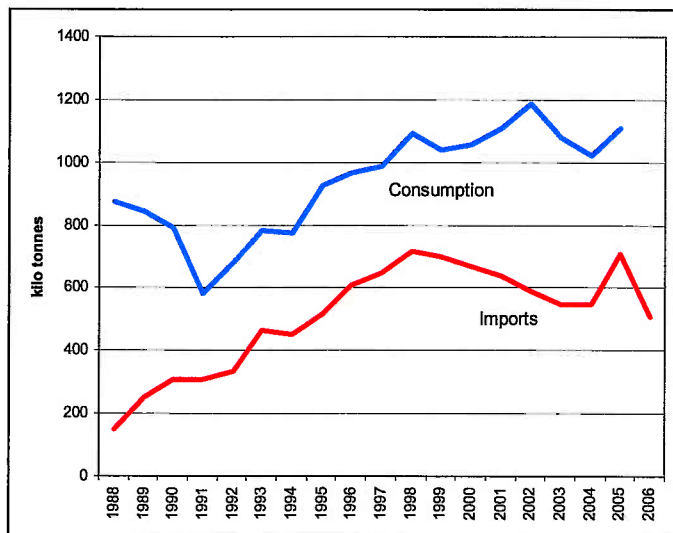


Figure 6 Australia Consumption and Imports of Phosphate



⁵ sourced from Energy Information Administration <http://www.eia.doe.gov/>

⁶ Sourced from ABARE Commodity Statistics <http://www.abare.gov.au/>

2. World demand for fertiliser and each countries population growth. Figure 4 illustrates that world demand for fertilisers has steadily increased in the last 30 years with a greater demand developing in Asian countries.

This growth in demand for fertiliser reflects the increased production of grain and oilseeds (Figure 8) and the reduction in area planted to grain and oilseed (Figure 9). It could also be speculated that as the population increases, the size of population dwelling centres increase. This in turn places pressure on fertile agricultural land, forcing more marginal land to be utilised for agricultural production and therefore a greater reliance on fertilisers.

The development of Asian countries and subsequent increase in wealth of these countries would also contribute to the increased demand for fertilisers. As incomes increase, it becomes possible to purchase more costly inputs that assist in production.

Figure 8 and Figure 9 both indicate an increase in the area planted and a subsequent increase in production for grains and oilseeds in the US for 2007/08. Such an increase has been driven by the increased cropping for

ethanol fuel.

3. Ethanol Production. The increase in demand for ethanol and other biofuels is placing an increased demand on agricultural products. The Energy Policy Act of 2005 mandated that renewable fuel use in gasoline (with credits for biodiesel) reach 7.5 billion gallons by calendar year 2012, US tax laws also provide incentives for biofuels. To meet this demand, land used for pasture, land in fallow, acreage returning to production from expiring Conservation Reserve Program (CRP) contracts, and shifts from other crops, have been used in corn production. In the last 3 years the area planted to corn has increased by 15% and the tonnage produced has increased by 17%⁷.

Figure 7 Australian Natural Gas Production³

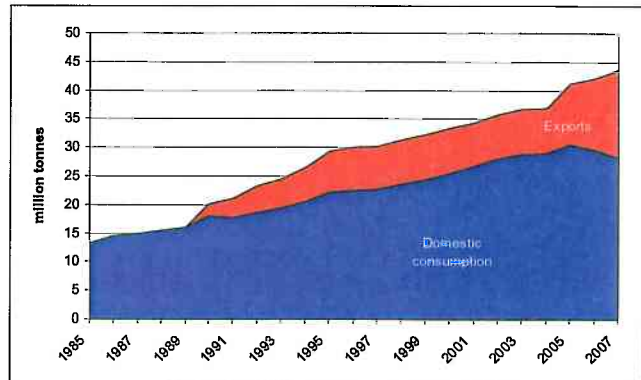


Figure 9 World grain and oilseed plantings

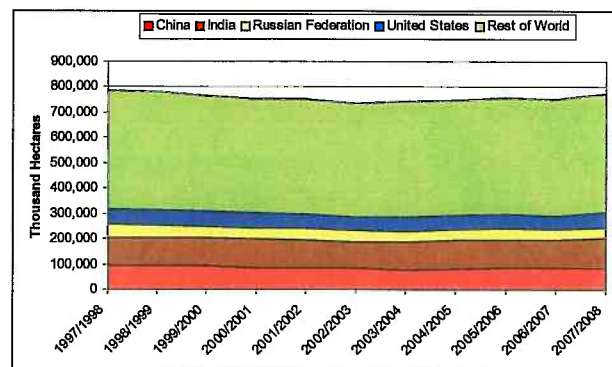
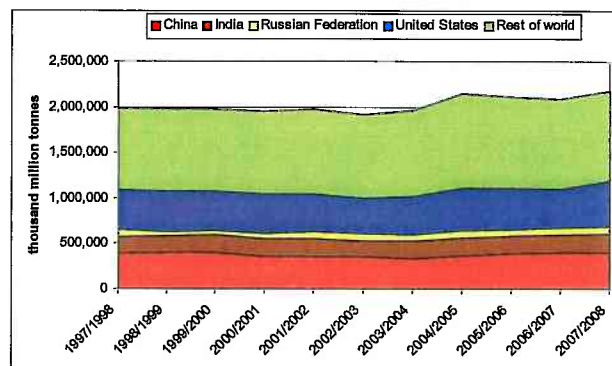


Figure 8 World grain and oilseed production



⁷ Sourced from USDA <http://www.fas.usda.gov/psdonline/psdQuery.aspx>

Appendix 2 - Chemical Price brief

Agricultural chemical prices have been increasing rapidly and the price of Glyphosate based herbicides have seen a considerable price increase in the last few months.

Background

Glyphosate is a main ingredient in many knockdown herbicides, used to kill the majority of annual and perennial plants. Glyphosate is a contraction of an amino acid Glycine and the chemical Phosphorus. Glyphosate comes in two main forms, a free acid form and various salt forms. The salts forms include isopropylamine, trimesium, diphenylamine and mono-ammonium. The most common form of Glyphosate is the isopropylamine salt.

Glyphosate based herbicides work on absorption by the plant, mainly through its leaves or soft stalk tissue which have come into contact with the herbicide. The herbicide is transported throughout the plant and hinders various enzyme systems of the plant, restricting the production of the EPSPS enzyme which is required for plant growth and inhibiting a plant's amino acid metabolism known as the shikimic acid pathway. The shikimic acid pathway converts simple carbohydrate precursors derived from glycolysis and the pentose phosphate pathway to the aromatic amino acids.

Glyphosate is a contact herbicide and does not prevent new weeds from germinating. It is therefore common for Glyphosate based herbicides to include residual herbicides such as atrazine and simazine which prevent the germination of new weeds.

Production and Consumption of Glyphosate

Glyphosate based herbicides are one of the most commonly sold herbicides in the market today. With demand increasing rapidly Glyphosate occupies more than 30% of the world herbicide sales volume⁸.

China is the largest producer of Glyphosate. In 2007 China was accountable for more than one third of the global production⁹. Other than China there are around 70 other countries that produce Glyphosate around the world, including the dominant Monsanto Company. Within China the main producers are Zhejiang Xinan Chemical Industrial Group Co. Ltd, Anhui Huaxing Chemical Industry Co. Ltd, Zhejiang Longyou Greenland Pesticides Co. Ltd and Nantong Jiangshan Agrochemical & Chemical Limited Liability Co.

China has been the largest production base of Glyphosate technical in the world and it was estimated that the output of Glyphosate in China was over 240kts and the export volume was up to 200kts in 2007². 80% of China's total production of Glyphosate is exported to over 90 countries and regions worldwide. In recent years Glyphosate has accounted for around 70% of total herbicide exports¹⁰. Global consumption of Glyphosate was over 600kts in 2007 and it is expected to increase by a compound annual growth rate of over 12%.

Australia's consumption of herbicides and other chemicals has been growing steadily over the last 30 years. Figure 10 illustrates the increase in sales of herbicides, pesticides and fungicides. Of particular note herbicide sales have seen significant growth with total sales doubling in the last 12 years.

⁸ China Glyphosate Industry Report, 2007-2008 sourced from <http://www.researchinchina.com/Report/Agriculture/5290.html> [accessed on 18 February 2008]

⁹ The Future of Glyphosate Industry in China - 2010-2015 sourced from http://www.researchandmarkets.com/reportinfo.asp?report_id=573807 [accessed on 18 February 2008]

The predominant source of Glyphosate consumed in Australia is China. Figure 11 illustrates that in the last 12 months there has been a general trend in the quantity of Glyphosate imports into Australia and a corresponding increase in the price.

Cause of Glyphosate price increase

1. Chinese production

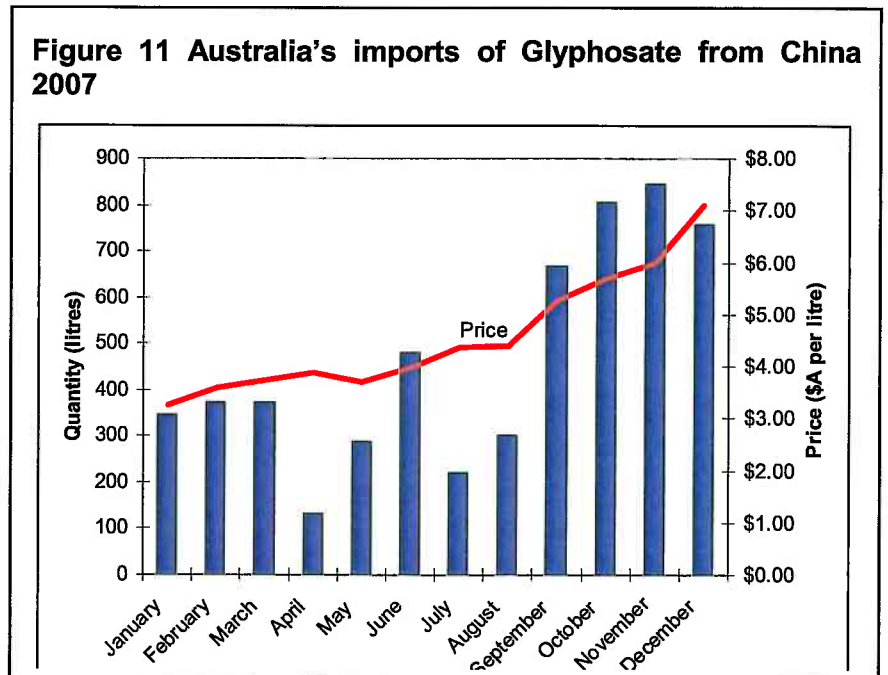
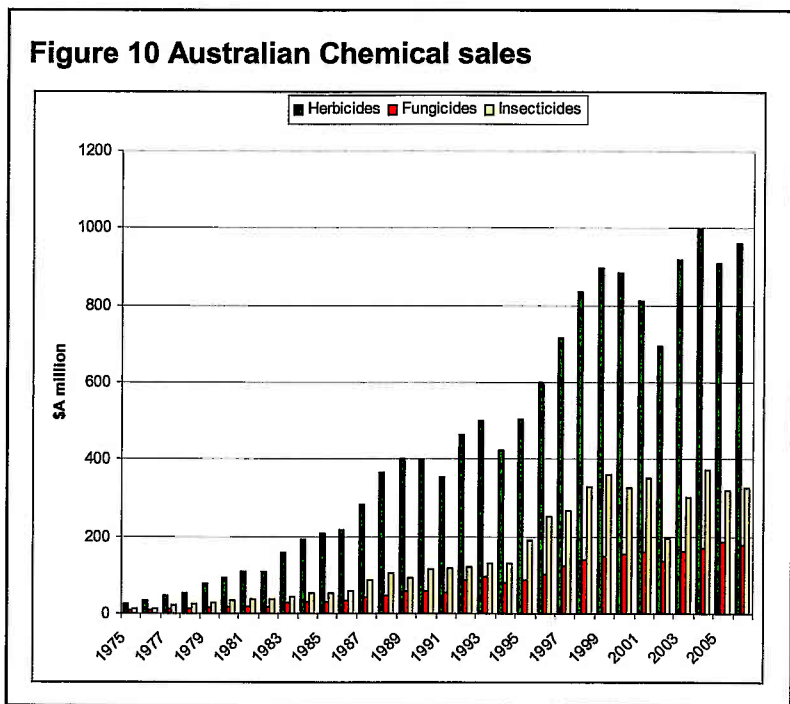
China is a major source of Glyphosate, exporting around a third of global consumption. Chinese supply is currently experiencing a range of influences that affect their manufacturing and hence the Glyphosate supply availability and prices on the global market. Figure 12 illustrates over the last 3 years the price of Glyphosate has seen a gradual increase with an exponential increase in the latter part of 2007.

China is currently undergoing preparations for the 2008

Olympic Games that are going to be held in Beijing and commence on the eighth of August 2008. For China to win the rights to host the Olympic games it provided a commitment that it would deliver a 'Green Olympics'. As a result, Beijing undertook environment initiatives to clean up the city. Polluting factories have been moved or closed, this included several small Glyphosate manufactures around Beijing. In addition the biggest Glyphosate manufacture of Mengshan has shut down part of its production capacity, which has further constricted supply in a market with fast growth in demand.

China's campaign for a green Olympics has required local officials to raise electricity prices to discourage the growth of large energy consuming industries and forcing inefficient companies out of business. The increase in electricity is a cost that carries throughout the industry.

Not only does it affect the manufactures of Glyphosate but also the cost of their inputs. An important ingredient in Glyphosate production is Yellow Phosphorus. The price of Yellow Phosphorus has fluctuated

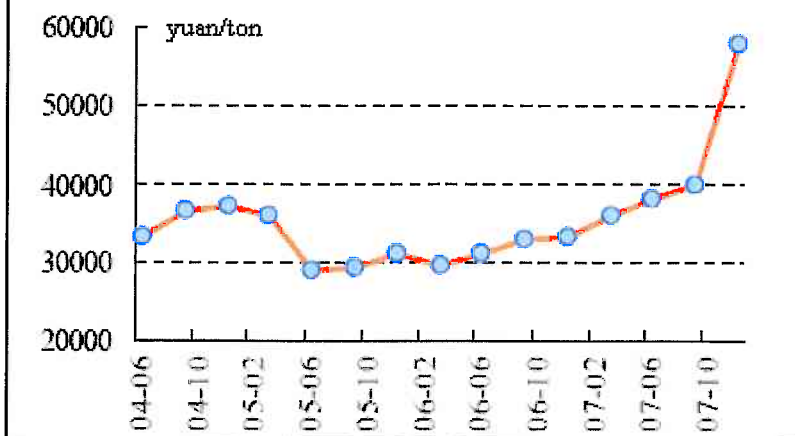


recently due to supply which is influenced by the availability of hydraulic power and the change of production capacity.

A Chinese subsidy for several export products including Glyphosate has also recently been reduced from 11% to 5%. The subsidy named the Chinese Value-Added Tax Subsidy (VAT) has played an important role in keeping export prices low. Any change to the VAT refund rate will impact the prices charged on export goods as well as the profitability of the exporters.

The Chinese currency has appreciated increasing the cost of Chinese exports. The average value of the Yuan, a denomination of China's currency also known as the renminbi, had a record high against U.S. dollar since the reform of the Yuan exchange rate regime in 2005 with a rate of 7.2566 on January 14. The Yuan has appreciated about 12 percent since that date.

Figure 12 China Glyphosate Price, June 2004-Oct 2007 (Yuan/ton)

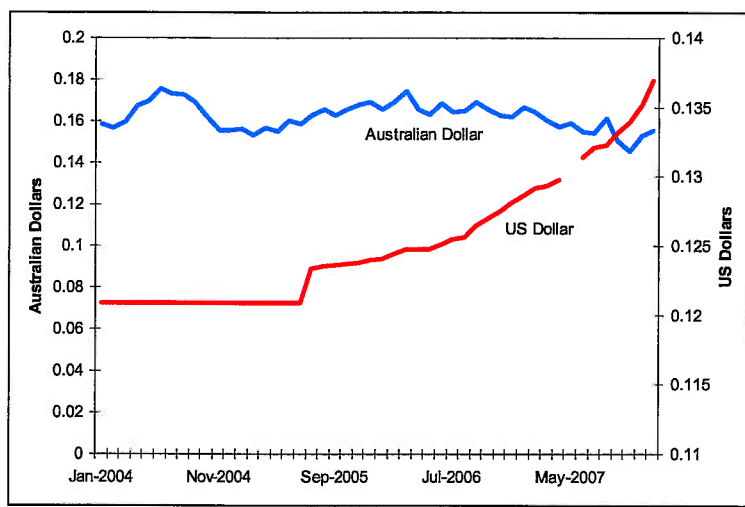


Statistics from the Chinese Academy of International Trade and Economic Cooperation under the Ministry of Commerce show that when the Yuan appreciated 7 percent against the U.S. dollar, China's export-oriented companies had lost about 10 percent in profit. Because of renminbi appreciation, many companies will be forced to upgrade or transfer to other production. Moreover, as their product prices become less competitive in the international market, some previously profitable companies will suffer losses. Central Bank Governor Zhou Xiaochuan pointed out the recent Yuan appreciation was mainly driven by surging international oil prices, domestic inflation and mounting trade surplus.

2: The demand for Glyphosate:

Australia's stock of Glyphosate based herbicides has been depleted due unexpected extra applications of knockdown herbicide this season. Normally there are two applications of knockdown herbicides, the first usually in September and the second before sowing. The large amount of pre-Christmas summer rain stimulated plant growth and warranted an extra application of herbicide. This was followed by further rain after Christmas which also justified another application of herbicide. The end result is that Australia has applied a lot more Glyphosate based

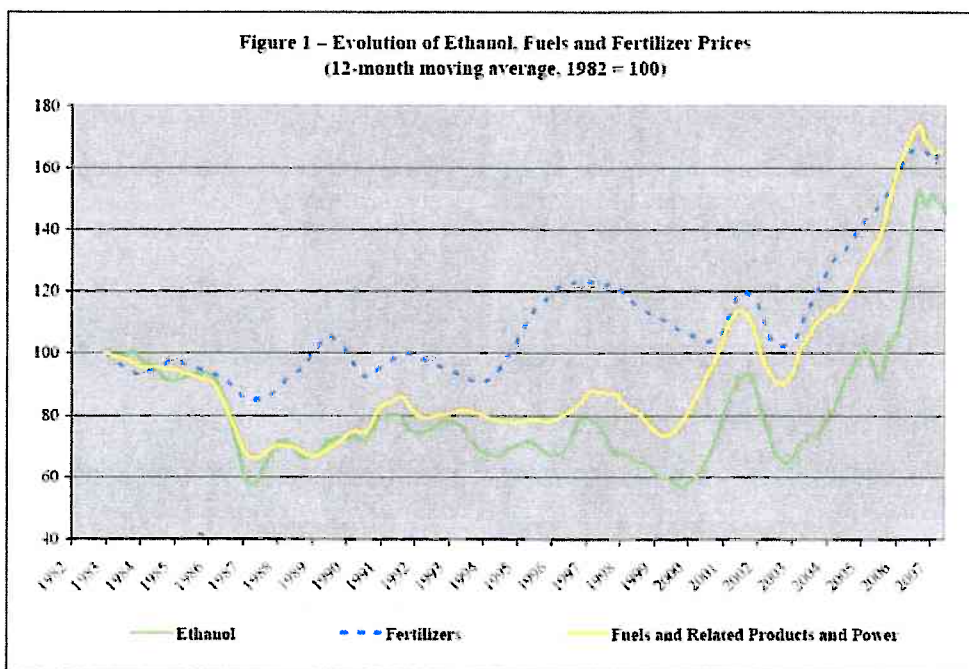
Figure 13 Chinese exchange rate



herbicides than producers estimated causing a shortage of Glyphosate based herbicides in the Australian market.

Additionally farmers are taking advantage of current ethanol prices. Many farmers especially in the US are switching from livestock enterprises or are having larger plantings due to the biofuel production. This switch of enterprises has drastically increased the area of land that needs to be prepared and sprayed with herbicides, increasing demand of Glyphosate based herbicides. As **Error! Reference source not found.** illustrates there is a strong correlation between Ethanol, Fuel and Fertiliser prices and they have all experienced an increase in the last 4 years.

Figure 14 Evolution of Ethanol, Fuels and Fertilizer prices



Data sources: US Bureau of Labor Statistics and Nebraska Energy Office
<http://www.parl.oc.ca/information/library/PRBpubs/prb0702-e.htm>