The Western Australian Farmers Federation (Inc)

Submission

To The

Senate Select Committee on Agricultural and Related Industries

Inquiry Into

The implications for Australian farmers of the pricing and supply arrangements in the Australian and global chemical and fertiliser markets and related matters.

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The Western Australian Farmers Federation (Inc) (WAFarmers) is WA's largest and most influential rural lobby and service organisation.

WAFarmers represents West Australian farmers from a range of primary industries including grain growers, meat and wool producers, horticulturalists, dairy farmers and beekeepers plus rural small business owners.

It is estimated that collectively our members are major contributors to the $6.1 billion gross value of production that agriculture in its various forms contributes to Western Australia's economy (WA Agri-Food Industry Outlook – August 2005).

Additionally, through differing forms of land tenure, our members own, control and capably manage many millions of hectares of the State's land mass and as such are responsible for maintaining the productive capacity and environmental well being of that land.

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Introduction

In the last two years the price of grain, and in particular wheat, has soared. Real prices are better now than anytime since the mid- 1990's, and the worldwide stocks to use ratio is at levels not seen in over thirty years.

Many factors have merged to cause this price rise but the underlying factor is, as always, the forces of supply and demand.

For the ten years up until 2006 fertiliser prices remained fairly stable. So stable on the low side, that many fertiliser manufacturers shut down excess capacity. In the USA 17 nitrogen (N) fertiliser plants were closed between 2000 and 2006, and currently 25 plants lie mothballed in that country. These closures were largely brought about by the fact that there was excess capacity, but also due to the fact that many countries turned to importing N based fertilisers, from countries with cheaper costs of production.

In Australia we have three plants that produce ammonium nitrate, and we have actually seen some small rises in capacity in the same period, however there is competition for ammonium nitrate from explosives manufacturers servicing the mining industry. We produce around half of our own fertiliser needs, and import the rest.

So with fairly stable demand for most of the last decade, and annual consumption growing at a manageable rate, the productive capacity had stabilised and in many areas gone backwards.

However from mid 2006 the price signal to growers has been huge, and now farmers are expanding existing cropping programs, and many farmers are planting large crops that have replaced livestock as their main source of income. Moreover our dairy and beef producers members require fertiliser for pasture growth. Without fertiliser this productivity increase would be unachievable, so there is currently a huge strain on the fertiliser supply chain.

Despite these supply constraints, unless the current high prices and demand is sustained it is unlikely that companies will invest the billions of dollars needed for new infrastructure, as most of the players have been exposed to the boom / bust cycle of agriculture for a long time. If investment does take place[1] there will be lag until it affects prices. There is not an immediate shortage of raw materials, although phosphate (P), potassium – potash – (K) and natural gas, are getting more expensive to extract, and supply of these inputs has contracted to a few countries.

While researching this submission I have spoken to farmers who will need to spend in the order of $200 -300 000 extra to get the same amount of fertiliser as they bought in 2005, this represents around a 25% increase. Growers are able to limit there use of

[1] There are already stirrings of new investment. Incitec Pivot has looked at ways to continue building the ammonium nitrate plant at Moranbah, Qld, which Dyno Nobel had already sunk $280 million into, before stopping due to cost blowouts and subsequently being taken over by Incitec. Also some more ammonium nitrate plants are being recommisioned in the US, aswell as growing investment in fertiliser plants and phosphate mines in the Middle East and the Western Sahara.

other inputs such as fuel, but are loathe to decrease fertiliser application rates (even using current best practices) due to the productivity losses. This increased level of borrowing is a real issue for those struggling with reduced equity, and after two years of crop failures in many parts of Australia this would amount to a high proportion of farmers.

WAFarmers believes that any loss of productivity due to unsustainable fertiliser prices could be a sizable blow to Australia's fortunes, both domestically and overseas. Any reduction in this country's exportable surplus could, as in 2007, see lifts in international grain prices, and see a rise in inflationary pressure at home. However with shrinking stocks to use of wheat and other grains, and global consumption consistently exceeding supply, it is the lack of grain available to the inhabitants in the economic powerhouses of India and China, that concerns us. There have already been a number of protests globally about the rising cost of food, but a continued shift upward in grain prices, due to falling supply, for countries that have got a taste for Western diets rich in protein over the last two decades, will more than likely see a negative trickle down effect to other areas of those countries economies. We cannot expect countries to continue producing at the same levels, and consuming our mineral exports, if they are having problems feeding their populations.

WAFarmers believes that although the current high prices are the catalyst for this Inquiry, now is a good time for the government to look at ways we can make an industry, which for the most part is reliant on the exploitation of finite resources, sustainable for the future.

WAFarmers has compiled some recommendations for how we believe this can be achieved.

Recommendation 1
Provide all market participants with information about the supply chain.

It is simple economics that the more transparency there is in an industry the more efficient it is, and thus there is less likelihood there is of the need for Inquiry's such as this one. If there is a greater level of transparency in pricing, and better information flows to all market participants then a greater level of trust develops.

WAFarmers welcomes this Inquiry so that the anecdotal accounts of price gouging and profiteering, that have been reported in relation to the rapid rise of fertiliser prices, can be examined. If, as Senator Heffernan has stated, there is "something strange going on", an Inquiry provides a suitable forum for this sort of evidence to be examined in the cold, harsh light of the day.

As mentioned previously, WAFarmers believes it is high time for the government to invest in ensuring the sustainability of the industry, and in taking seriously the fact that current N,P, and K compound fertiliser manufacturing technologies involve the use of finite resources. However there is concern amongst farmers that fertiliser manufacturers will use the finite resources argument to increase prices over and above what is a fair level given possible resource constraints.

In compiling this submission I recently (20.03.08) sent two emails to CSBP and Incitec Pivot respectively. The following questions were asked;

- Given that fertiliser is derived from finite resources (it seems many people struggle with the word finite), what work is CSBP doing on improving the efficiency of fertiliser use by both plants, and human application?
- Does the use of GM technology offer benefits for the above? Any examples?
- Is any work being done in Australia at trying to covert nitrogen to ammonia at ambient temperatures? As I understand it the Haber-Bosch process is very energy intensive.
- Are there any supplementary (or alternative) technologies available that CSBP are looking at? I have heard about organic tea's and Biochar.
- If government funds were funnelled to fertiliser research were would you like to see it spent?

I have not received a reply from either.

I contrast this with a visit WAFarmers received from farm chemicals supplier Nufarm on 5.03.08, where they explained the current situation in relation to chemical supplies and gave some background on where chemicals, or the tech components, required to make them, were produced and the obstacles for sufficient supply that were being encountered. They provided us with information to pass on to farmers, to enable them to ensure supply when they needed it.

This sort of information flow is an example of what would be welcomed by WAFarmers and all industry participants.

While we did not ask Incitec Pivot about the reasons as to the spectacular rise in their share price a simple analysis of the Incitec Pivot share price history it indicates to WAFarmers that this company and its shareholders are receiving tremendous financial benefits from the current rise in fertiliser prices. Since Oct 2007 the ASX S&P index is down around 15%, yet in the same period the Incitec Pivot share price has gone from $81.75 on 01.10.07, to $140.32 on 03.04.08, a 75% gain. The rise of their share price can only be attributed to the return on their investment, based on the profits they are receiving in the running of their business. While we believe that there are supply and demand issues that are driving up fertiliser prices, and we would welcome any capital investment that Incitec Pivot is making in regards to extra capacity, such large stock price gains can only lead us to believe that huge profits are being made at the growers expense. The fact is WAFarmers does not know, and nor do most farmers, as there is not adequate information flow to all market participants.

Recommendation 2
Increase research and development into fertiliser.

The majority of fertiliser used around the world is wasted. Due to climatic and soil conditions plants do not take up the nutrients that the fertiliser is meant to deliver.

Worldwide, N use efficiency by cereals (and most plants) is about 33%. That means about two thirds of fertiliser is wasted. N use efficiency in Australia is higher at between 50 and 60%, but this still results in waste. The levels of use efficiency are even lower for P and K, however N use is one of the most limiting factors for plant growth.

The holy grail of plant science is to breed cereals that can fixate N out of the atmosphere, which is 79% N, presently this can only be accomplished by legumes. A legume plant's ability to use nitrogen from the air is the best known benefit of growing legumes but the least understood. In reality it is not the plant that removes N from the air but *Rhizobium* bacteria which live in small tumour like structures called nodules on the legume plant roots. These bacteria can take N gas from the air in the soil and transform it into ammonia (NH_3) that converts to ammonium (NH_4) which can be used by the plant. This ammonium is the same form as in ammonium nitrate (34-0-0) and ammonium sulphate (21-0-0) fertilizer.

There is considerable research into the symbiotic relationship between legumes and the *Rhizobium* bacteria, and scientists are hopeful that a way to apply this science to other plants is found. Positive steps in the development of genetic modification in crops will help.

Genetically modified plants have created an uproar around the world and in Australia, but WAFarmers believes that many anti-GM arguments do not bear fruit when a rigorous science based approach to there safety, is taken. Furthermore WAFarmers believes that genetic modification will provide pathways for many advances in plant science that will lessen the need for a range of inputs, including fertiliser. The CSIRO recently reported that the US biotech company ARCADIA has developed a GM approach to fertiliser efficiency with proof-of-concept in canola. GM canola plants with this technology show a drastically increased N use efficiency allowing for 50-70% reductions in N applications. Last year the CSIRO and the ACPFG have partnered with ARCADIA to evaluate their GM technology in wheat and barley.

Beyond this there are a number of supplementary and alternative technologies being examined to increase nutrient use efficiency. Just to use a couple of examples, there is Kelpak an organic growth hormone derived from kelp seaweed, humic acid which helps unlock greater nutrients for plants to uptake, and Biochar a soil amendment that is a form of charcoal derived from biomass.

Farmers themselves are very keen to learn new ways to decrease their use of fertiliser, and are always looking at new technology to adopt. However there is always a bit of the 'snake oil' tag attached to new technologies, whether from fear of change or as a result of 'patch protection' by existing industry players. Widespread education of growers of all the different options available is needed.

Furthermore, the fact is that increasing nutrient use efficiency in plants, decreases the level of nutrient run off in to rivers, which has been of great concern to governments at all levels.

WAFarmers believes the government should invest in research aimed at supporting greater fertiliser efficiency.

Moreover we believe the government should cooperate with other governments as they have done on Kyoto, to improve these levels worldwide. With a growing population and less arable land, the main way of increasing agricultural production is by the increased application of fertiliser. In 1973 Asia used less than a fifth of fertiliser, by 2005 they were consuming over half. By increasing fertiliser use efficiency, productivity can be boosted, fertiliser use made more sustainable, and their will be less pollution.

Recommendation 3

Transparency must extend to all levels of the supply chain and farmers must be involved in all future decisions about the future of fertiliser use in Australia.

Previously in this submission WAFarmers has made the point that by increasing plant use efficiency of nutrients, and thus decreasing our current application rates (with particular reference to phosphates), there are benefits to be had in terms of decreasing nutrient run off into rivers.

WAFarmers believes there is a perception that farmers are anti-conservation, or anti-Green. This is patently false. Farmers have a very significant stake in conserving the productive capacity of farmlands, and there are many examples of farmers being involved in environmental rehabilitation projects. Perhaps this perception is brought about by the growing divide between the cities where the majority of people live, and rural and regional Australia, and a lack of understanding about modern farming practices. People on the whole don't see the environmental conservation efforts of farmers, because on the whole the farmlands in the WA Wheatbelt are not as 'sexy' as the Styx River Valley, or as 'edgy' as saving whales in the Antarctica.

Currently in Western Australia there are two plans being developed by government appointed committees to manage the use of fertiliser.

The Fertiliser Action Plan, which comes under the bailiwick of the WA Dept. of Environment and Conservation (DEC), is workshopping ways to phase out the use of water soluble fertilisers on the Swan Coastal Plain by 2011. Neither the Joint Working Party (convened in 2006), nor the Technical Advisory Panel have any farmer members. The Background to the Plan was published in February 2007, and recommended that a Technical Advisory Panel with representative membership from fertiliser industries, government agencies and other relevant organisations be formed as a way forward. Despite 12 months lobbying the DEC and the government, farmers (the biggest user group of fertilisers, and a major stakeholder in any decision) are yet to be recognised as a relevant organisation.

The same lack of recognition of farmers as relevant industry group, can be said about the Draft Water Quality Improvement Plan for the Rivers and Estuary of the Peel-Harvey System, which is being prepared by DEC and the Environmental Protection Authority.

The facts are that although the WA Government is clearly targeting agriculture to bear the greatest burden in undertaking remedial actions to improve water quality, they fail to;

- recognise that many farmers are already well down the path of on farm management of nutrients and fertiliser usage
- give any clear direction of the involvement of farmers in policy development, research and trials for improved outcomes
- provide the required level of equity across the community for undertaking remedial works and
- recognise that changes to agricultural practices to meet community expectations come at a cost and provide no financial incentive to assist farmers to change current practices nor is there any mention for compensation in relation to lost productivity caused by using inferior alternative fertilisers.

It is true that WAFarmers has been consulted on both Plan's, but we believe that when decisions are made about fertiliser use, which as stated previously is the number one input in determining productivity for farmers, farmers need to be members of the committee's that are making recommendations on future fertiliser uses.

We feel that the lack of farmer representation is skewing the farmers capacity to farm, and ignoring evidence that doesn't fir with their arguments. We have highlighted the fact that in the case of both Plan's, evidence that has been compiled over a number of years by the Dept. of Agriculture & Food WA (DAFWA) on the subject of water solubility of fertiliser which relates to the areas included in both Plan's, has not been given full consideration by either working party.

WAFarmers believes that the ongoing exemption of farmers as a stakeholder group, by the WA government in their deliberations on fertiliser use, sets a bad example to an industry that could benefit from a greater level of transparency across all levels of the supply chain.

Conclusion

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Countries are increasingly investigating ways to reduce their reliance on crude oil, yet we are yet to see the government commit to ensuring the sustainability of agricultural production through access to fertiliser or investigation into alternatives and WAFarmers believes that it is time to start.

However if farmers are not granted a place in any groups that are determining a way forward, WAFarmers feels that the it will not provide any positive direction.

WAFarmers would welcome the opportunity to provide answers to any further questions the Senate Select Committee has, and would be more than willing to present any further evidence of our ongoing research on this issue to a Senate hearing, if that is the direction the Committee deems necessary.