

# AgForce Grains Ltd.

A commodity council of AgForce Queensland ABN: 212 416 791 71

---



3 April 2008

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

Dear Ms Radcliffe,

As the peak grower representative body for the grains industry in Queensland, AgForce offers this submission to the Senate Select Committee on Agricultural and Related Industries for deliberation on 'the 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'.

We have accessed as many sources of information from our growers as possible and we thank the Senate Committee for extending the deadline for submissions. It has allowed us to prepare a far better submission than would have been possible previously.

We are happy to have this information published publicly and we are happy to provide further input into this inquiry if required by contacting us on the details listed below.

Yours Sincerely

Lyndon Pfeffer  
President  
AgForce Grains Ltd.

# **AgForce Grains Submission to the**



## **Senate Select Committee on Agriculture and Related Industries.**

### **For the inquiry into**

'The 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'.

**March 26<sup>th</sup> 2008**

## Table of Contents

Background .....	3
Terms of Reference for the Senate Committee and how they pertain to AgForce Grains.....	3
AgForce Grains support for NFF submission .....	3
The rise in input costs faced by farmers in recent years .....	4
Fertiliser use overview .....	5
Chemical use overview .....	5
Inputs having the greatest affect on farmers' costs .....	6
Glyphosate .....	6
Atrazine .....	7
Urea .....	8
Starter Z.....	8
The effect of rising input costs on the gross margins of grain in Queensland.....	8
The dollar impact of rising inputs.....	9
Fix costs adding to the pain of input cost rises .....	10
Financial stability of Queensland grain farms .....	11
Real change in gross margins .....	12
Conclusion .....	14

## **Background**

AgForce Grains is the peak grower representative body for the grain producers of Queensland. AgForce Grains as a commodity council of AgForce Queensland, act as representatives for the people of rural Queensland.

AgForce has had concerns over the price of fertiliser and chemical inputs into grain production systems for some time, but rapid price rises in recent months has seen the level of concern within our organisation and our members increase markedly. It is a relief to know that members of the Australian Senate have organised this inquiry into the input supplies for agriculture.

The grain farmers of Queensland have much to lose from such input cost increases. Our reliance on low costs of production over broad areas is significantly threatened with rising input costs. Grain farmers in Queensland are particularly reliant on fertilisers and chemicals to achieve the growth required to get a crop that is worth harvesting.

## **Terms of Reference for the Senate Committee and how they pertain to AgForce Grains**

The the Senate Select Committee on Agriculture and Related Industries has stated that its terms of reference for their inquiry shall be,

‘The 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’.

The statement above is broken into three parts:

- The 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 and
- Monopolistic and cartel behaviour and related matters.

As representatives of the grain producers of Queensland our ability to assist the Committee lies in the level of increase in the price of chemicals and fertilisers farmers have seen at the farm gate and how they are affecting the sustainability of the farmers’ businesses and therefore we will have most input into point 2 above.

## **AgForce Grains support for NFF submission**

As a member of the National Farmers Federation, AgForce Queensland supports the submission to this inquiry by NFF. The NFF submission concentrates on the broader supply and pricing arrangements and this submission will support theirs with a more specific farm level case study.

## The rise in input costs faced by farmers in recent years

Farmers have experienced large variability in both prices and shortages in supply for a number of inputs in recent years compared to previous years. The major inputs which have been an issue for farmers are fuel, chemicals and fertiliser. These three inputs make up almost 100% of the variable costs associated with production of grain.

The rise in the price of fertiliser and chemicals has been most pronounced in the past two years. Figures were provided to AgForce Grains by six Queensland grain enterprises and from the Queensland Department of Primary Industries and Fisheries and Grains Research and Development Central Queensland Farming Systems Project as part of the following analysis.

The figures have been analysed from all sources, but for simplicity the analysis is based around a representative set of data taken from a property near Jandowae on the Darling Downs. This data has been adjusted to represent all the data received.

Sorghum has been used to show the affect of rising input costs on summer cropping systems and barley is used to show the affect of input costs on winter cropping systems. Similar results are found when analysis is conducted on maize, wheat or other crops due to similarities in the costs of production.

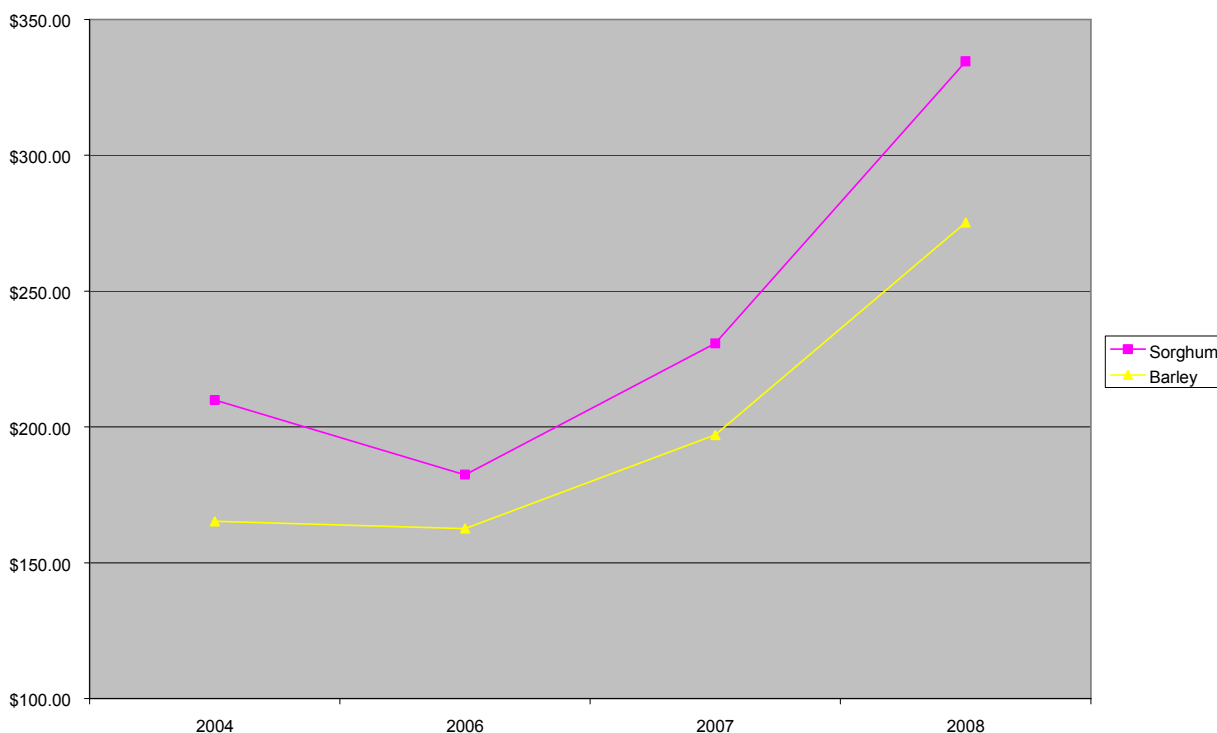


Figure 1: Rise in fertiliser and chemical costs per hectare from 2004 to 2008.

Figure 1 above shows how the increases in fertiliser and chemical input costs have occurred in recent years. Since 2004 it is clear that for sorghum the cost of fertiliser and chemical inputs has risen from \$210/ha to \$335/ha and for barley the cost has increased from \$165/ha to \$275/ha. These represent a 37% (sorghum) and 40% (barley) increase in 4 years.

With the average rate of inflation according to the Reserve Bank of Australia at 2.85% (assuming a 3% rate of inflation for 2008) this rise in costs is well above that of most other goods.

**The rise in fertiliser and chemical input costs for QLD grain farmers is 14 times the rate of inflation over a period from 2004 to 2008.**

## Fertiliser use overview

Grain farmers rely heavily on fertiliser to maximise the yield of their crop. With the rise in costs associated with fertiliser use in recent years all farmers are very careful in their fertiliser management employing soil testing prior to planting and leaf testing of crops where necessary to balance the amount of fertiliser needed by the plant exactly.

The use of these best management practices ensures there are few efficiency gains that can be made by farmers in order to reduce their fertiliser inputs whilst maintaining yield. Loss of soil nutrition and running down the resource base is a real possibility with the price of fertiliser where it currently is.

Figure 2 below shows how the cost of fertiliser and chemicals makes up the total variable costs associated with farming in Queensland. It is clear from this graph that whilst fertiliser costs are increasing as a percentage of the total variable costs for both summer and winter crops, it is the cost of chemicals that is more of an issue for our farmers at the present time.

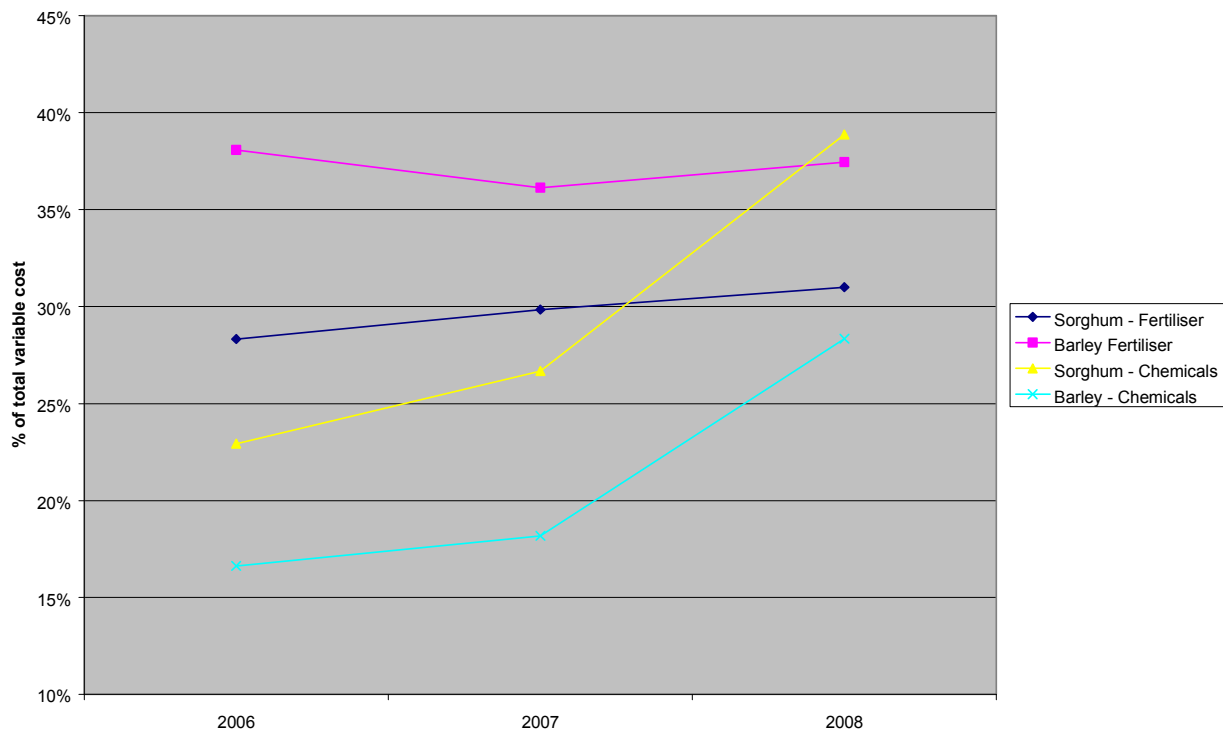


Figure 2: Increases in the cost of fertiliser and chemicals for the production of barley and sorghum on the Darling Downs as a percentage of the total variable cost.

## Chemical use overview

Cheap supplies of chemicals have been one of the major drivers of farmers' moves towards minimum tillage farming, possibly the greatest improvement in farming practices in over a century. Minimum till farming has benefits which are three fold by,

- Lowering greenhouse gas emissions through lower fossil fuel use and decreased loss of carbon as carbon dioxide and nitrogen as nitrous oxide from reduction or cessation of ploughing/tillage.
- Improving soil structure thereby increasing water infiltration and water storage through higher levels of ground cover (stubble retention) and greater soil organic matter content which has benefits for decreasing salinity and erosion.
- Increasing production levels through greater water storage and infiltration and improved soil health.

Minimum or zero till farming systems rely on an easily accessible, cheap supply of a number of chemicals, mainly glyphosate and 2,4D. Without this cheap supply of chemicals farmers' ability to undertake minimum till practices is limited and they have to resort to using the old techniques of weed control involving tillage.

As mentioned above it is the increase in the cost of chemicals, namely glyphosate, which is having the greatest impact on the cost base for farmers in Queensland at the moment.

### Inputs having the greatest affect on farmers' costs

There are two chemicals and two fertilisers used in this case study which are of particular concern to the farmers in Queensland. These are:

- Glyphosate
- Atrazine - Gesaprim
- Phosphate – Starter Z
- Nitorgen - Urea

These are four of the most commonly used chemicals and fertilisers in grain farming in Queensland and the price of them is rising fast with no end in sight.

In this submission four products, glyphosate, Gesparim, Starter Z and urea are used to show the rises in input costs associated with the baseline product. For example Urea is used as an example of nitrogen based fertilisers, but the rise in the cost of urea is closely aligned with the rise in the cost of other nitrogen fertilisers such Anhydrous Ammonia or Ammonium Nitrate.

Figure 3 below shows how the cost of these four inputs has risen over the past three years. It is clear from this graph that the price of some of these inputs is increasing exponentially. Further in-depth analysis of each of these products is contained below.

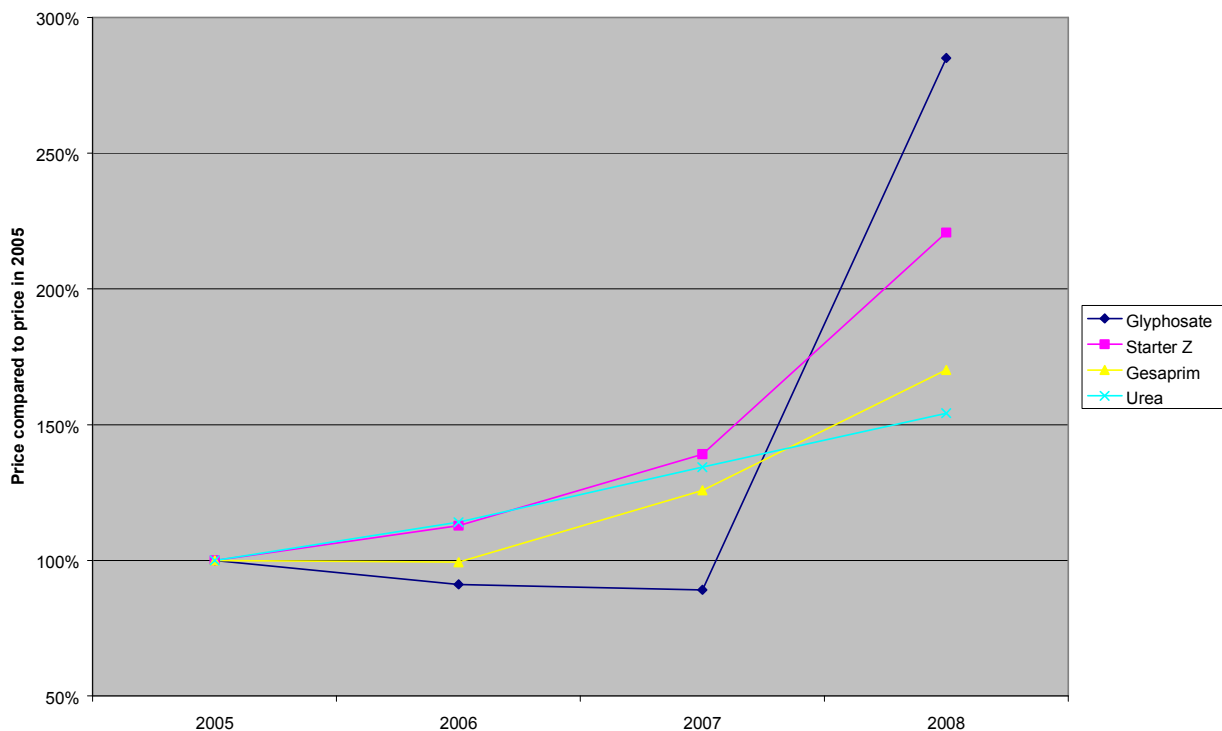


Figure 3: The price of major grain input chemicals and fertilisers compared to their price in 2005.

### Glyphosate

One of the biggest problems with rising chemical costs is the price of glyphosate. Our grain farmers rely heavily on a cheap supply of glyphosate in order to maintain minimum or zero-till farming practices.

Glyphosate has an extremely good efficacy on all plants, has a low toxicity to humans and other animals and breaks down immediately upon hitting the soil surface meaning no chemical residues can leach into ground water systems or into waterways.

With the price of glyphosate now reaching almost \$15/litre farmers are seriously considering resorting to the old farming practice of ploughing. If glyphosate prices rise by any significant amount from their current level there will not only be major consequences for our farmers from loss of future income with destruction of soil structure and organic matter levels, but the local and wider environment will also suffer.

It is not only the price of glyphosate that is a problem, it is the supply. Farmers are facing a situation where they cannot forward plan their budgets and cannot plan their farming activities due to a lack of supplies coming into Australia.

**There is currently a 10 week waiting period for glyphosate with no guarantee of the price that will be charged upon delivery. Other chemicals and fertilisers have a similar lack of supply and price security.**

Possibly the worst example of the supply issue heard to date is one farmer who ordered glyphosate through a major wholesaler in mid-December 2008 and has still not received the supplies. It has been almost four months since the order was placed.

A phone call from a farmer on March 27<sup>th</sup> 2008 to AgForce asked for clarification on whether or not rumours are true that glyphosate, that cost only \$5.25 per litre in 2005, was going to go as high as \$20/litre in the near future. We could not provide an answer to this rumour, but with the rises we have seen recently it is definitely possible.

## **Atrazine**

Atrazine or the product trade named Gesaprim in this example is a residual herbicide for use on summer grasses such as sorghum, maize and sugar cane. It is a chemical which has good efficacy against most weeds and provides a cost effective way of controlling weeds and reduces machinery passes across the paddock.

Lowering the number of passes, even under Controlled Traffic Farming systems now employed by most farmers, helps to reduce fuel use and machinery wear. This is again a win-win for farmers and the environment.

The price of atrazine is difficult to determine at the moment. It is a chemical which is usually applied in spring and therefore no retailer is able to give us a guaranteed price. What we have been told by suppliers is that the price will definitely rise, but by how much we do not know. Currently the price quoted, but by no means assured, is \$12/kg a large increase from \$8/kg last year and \$6/kg only two years ago.

What we do know is that the big wholesalers are putting up their prices month by month and we therefore expect another major price rise of at least 8% on April 1<sup>st</sup>.



## Urea

Nitrogen fertilisers such as urea are the most important fertiliser for our farmers particularly in the South East of the state. Others in the South West and Central regions are lucky enough to have soils that have a naturally high level of nitrogen availability and therefore many do not need to use synthetic nitrogenous fertilisers, however yields in these areas are generally lower.

The price of nitrogen fertiliser in any form has been rising steadily over the past few years, creating a great cost impost on our farmers. Supplies seem to be available at this stage, but from discussions with the fertiliser industry increases in availability and therefore relief from price increases is not likely until new major plants come on line in 2010 or 2011.

## Starter Z

Starter fertiliser is applied in many Northern Cropping Region situations due to the high clay and high pH nature of our soils. This fertiliser is primarily applied to provide a source of phosphate for the plant, but also to provide a source of zinc.

Qld grain cropping soils have a high level of zinc in them, but the high pH in particular restricts the availability of this important micro-nutrient. For this reason many farmers in Queensland are forced to put on Starter fertilisers to ensure good seedling growth, which is inhibited under low zinc conditions.

As well as providing a source of zinc for the plant starter fertilisers, as seen in Table 1 below, also contain significant levels of nitrogen and phosphorous fertilisers. This fertiliser is placed near the seed at, or close to, planting to give the seedling the best possible chance of growth in its early stages of development.

Nitrogen	10.5%
Phosphorus	19.5%
Sulphate sulphur	2.2%
Zinc	2.5%

Table 1: The percentage of each fertiliser element contained in Starter Z.

Starter fertilisers are an important part of maximising the returns from most grain crops in Queensland, particularly on the heavier clay soils and replaces the need for application of two or more fertilisers containing these elements.

## The effect of rising input costs on the gross margins of grain in Queensland

The effect of rising input costs from fertilisers and chemicals on farmers' gross margins is clear and has only one answer – negative. The level of severity of this negative affect depends on how good the coming season is.

Figure 4 below shows that in 2008, compared to 2007, it is likely that there will be a 25% decline in returns for sorghum whilst for winter crops such as barley there will be a 30% reduction in gross returns due to the increased cost of inputs. This figure is difficult to determine perfectly as the price of chemicals is expected to rise and yields are not certain, but this is a best case scenario based on average yields and the predicted prices for 2008.

In Figures 4 and 5 the yield and price received for the grain has been set at the same level, only the input costs have been changed to reflect current and recent input cost increases. Given the fact that for spring 2008 planted sorghum the price of most inputs will rise further (no price can be assured at this stage), this situation is only likely to worsen.

**In 2008 Queensland grain farmers will face a 40% reduction in returns for sorghum due to increases in the price of fertiliser and chemicals since 2004.**

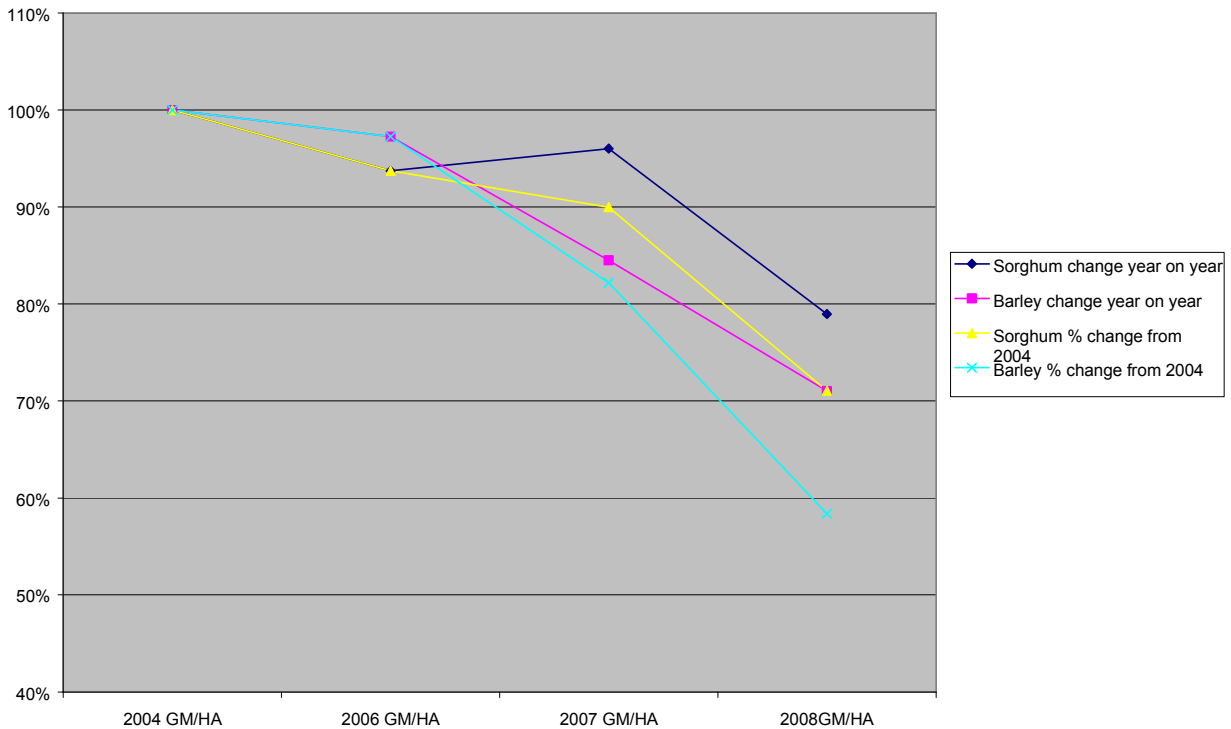


Figure 4: The percentage change in returns for sorghum and barley solely due to the rise in input costs year on year and against 2004 returns expressed as a percentage.

**The dollar impact of rising inputs**

Whilst the figure above shows the affect of rising input costs on the gross margins as a percentage, when this figure is related back to dollar terms the effect on the farmer’s bottom line is clear.

Figure 5 below shows the effective drop in gross margins from rising input costs and the returns from grain production in Queensland since 2004 in dollar terms. This figure shows that the impact on farmers has been increasing over time with a sharp increase reflecting the input cost price increases from 2007 to 2008.

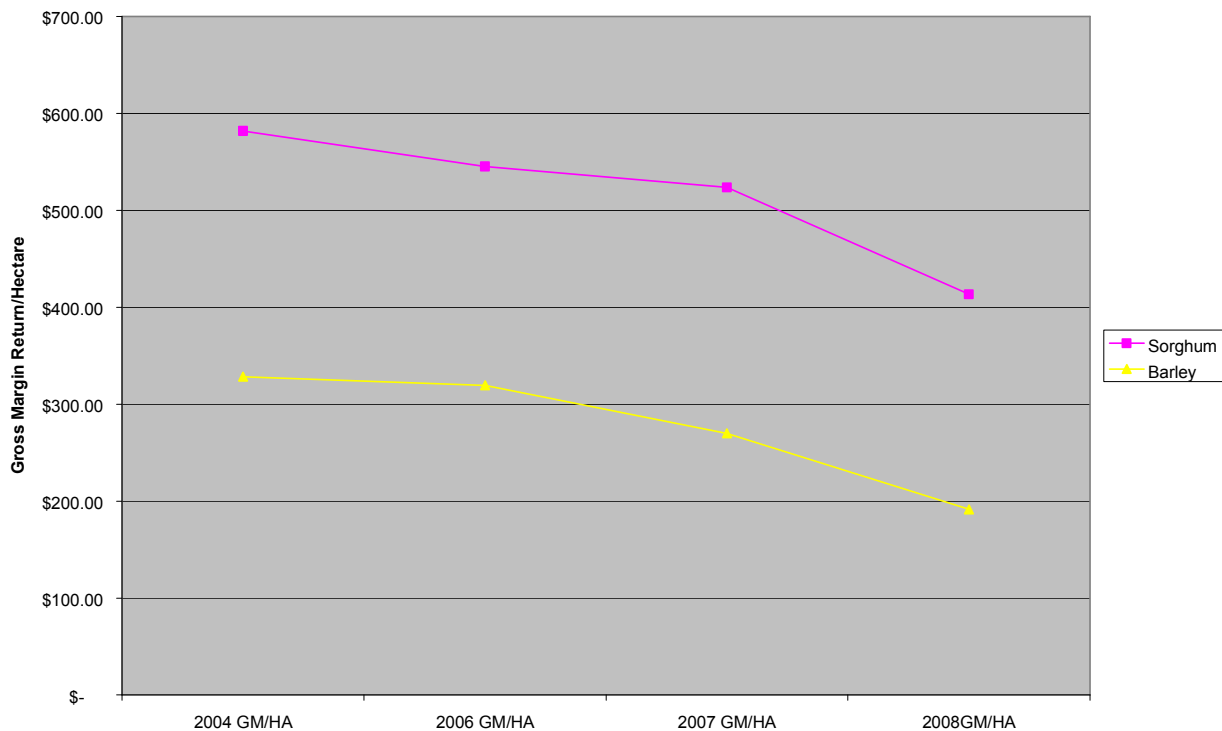


Figure 5: The gross margins of sorghum and barley in Queensland from 2004 to 2008 in dollars solely due to input costs.

According to the ABARE March 2008 Commodities Outlook:

*'In response to the forecast dramatic improvement in production, grain prices in Australia are likely to fall in 2008-09 as drought induced price premiums in the domestic market disappear. Nevertheless, prices are expected to remain relatively high. The pool return for Australian premium white wheat (APW 10) is forecast to decline by around \$80 a tonne to average \$359 a tonne in 2008-09. Australian feed barley and canola prices are forecast to fall by 13 per cent and 10 per cent respectively to average \$276 a tonne and \$568 a tonne.'* ([www.abare.gov.au](http://www.abare.gov.au))

These are the values used as a basis for the above analysis. Given the above estimate a price of \$250/tonne delivered depot was assumed for sorghum for the coming year, a value reflected by the futures market.

The gross margins in the figure above seem to paint a reasonably positive picture, however when fixed costs are taken into account you can understand why farmers are becoming concerned about input price rises.

### **Fix costs adding to the pain of input cost rises**

Not only have variable costs been increasing in recent times, but farmers have faced large increases in fixed costs such as wages, debt servicing and asset costs. This is clearly outlined in the NFF submission and further information on the fixed cost rises should be sought there.

After looking at a number of farms' fixed costs it is clear that in excess of \$300 per hectare is common. This means that farmers will need a gross margin of over \$300/ha from any one crop to make a profit on their business.

With the returns in 2008 shown in Figure 5 likely to be \$415/ha for sorghum and \$190/ha for winter crops very little or no profit will be made by QLD grain farmers in Queensland in 2008/09. Given the last 10 to 15 years history and even with improvements in production techniques and technology, it is doubtful that a large percentage of the cropping area of QLD will be double cropped, i.e. a summer and winter crop in the same year, meaning growers are left with the base gross margin from one crop only.

**In 2008-09 the high cost of inputs means that with average yields and forecast prices farmers will struggle to make a profit due not only to input price increases, but also fixed costs such as interest payments.**

The chance of making a profit lies, as always, with good yields and high prices.

### Financial stability of Queensland grain farms

With costs, both fixed and variable, rising rapidly how will Queensland's grain farms fair? One way to determine the financial well-being of farms is to look at the Federal Government administered Farm Management Deposits.

In the figure below based on data obtained from DAFF it is clear that in the past 4 years of the analysis undertaken above, farmers have been eating into their deposits and therefore savings to keep their businesses viable.

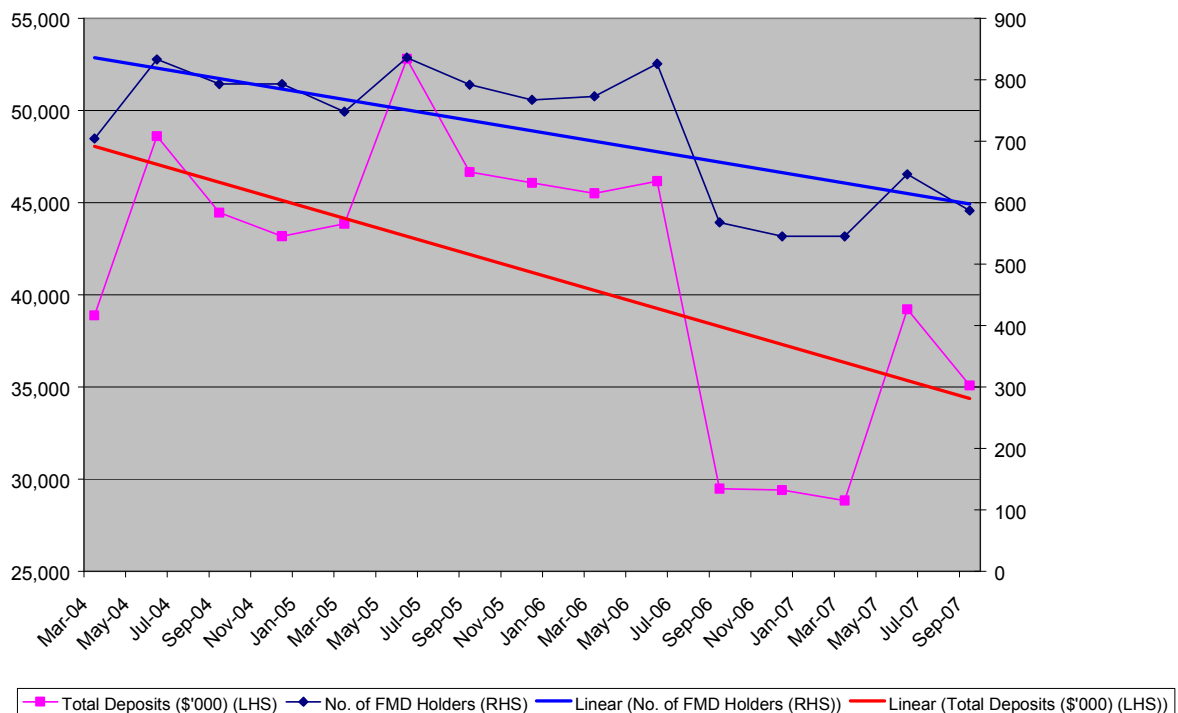


Figure 6: The number and value of farm management deposits held by QLD grain farmers from 2004 to 2007.

**With both the number and value of Farm Management Deposits falling since 2004 it is clear that environmental factors, debt levels, interest rates and more recently rising input costs are having serious detrimental affects on QLD grain farm viability.**

## Real change in gross margins

In reality the summer cropping season was a good one for many farmers across Queensland, particularly across the Darling Downs. However, as mentioned above there have been significant crop losses due to the floods in Central Queensland which ruined many crops ready to harvest and some farmers in Southern regions of the state did not receive enough rain to get decent yields or even plant a crop.

From 2004 to 2007 we have seen an increase in the gross margin as yields have remained high and the price per tonne received for grain has risen. This has been fortunate for some such as the farmer used in this example, but for others the gross margins for the period from 2004 to 2007 are not as good.

This is because many farmers have had both failed summer and winter crops in the past 4 years. Drought, early and late frosts and floods have all taken their toll on our farmers in many areas across Queensland. A lack of planting rain has extremely detrimental effects on a farmer's income and business sustainability but failed crops, which have been common, are a huge cost impost on farmers.

Table 2 below shows the change in gross margins for the property on the Darling Downs used as an example in this submission including changes in price and yield. Farmers who received good seasonal conditions in 2007 have been reaping the benefits, literally, of good crop yields and decent prices, something that is rare to say the least.

The table shows how the gross margins for sorghum increased greatly in 2007 and farmers hoped they were finally seeing a light at the end of a long dark tunnel of drought and low returns. Flying in the face of this optimism however has been the increase in the input costs they require to get their next crop. With budgets for the coming season based on average yields and reasonable prices, the input costs are likely to cause massive reductions in 2008 compared with 2007.

Crop	2004 GM/HA	2006 GM/HA	2007 GM/HA	2008GM/HA
Sorghum	\$130.85	\$340.45	\$1,267.69	\$345.22
Barley	\$48.40	\$79.54	\$613.35	\$191.70

Table 2: The gross margins for sorghum and barley in Queensland 2007 and 2008.

As previously mentioned the reduction in gross margins for these crops makes it extremely hard for our farmers to service their debt levels and whilst it appears the world price for grain has reached a new plateau, there is no guarantee they will stay there and therefore no guarantee that the price used in the previous analysis is secure.

Figure 4 below shows how volatility in the world wheat market is continuing to rise over nearly a 30 year period. A trend line has been added to the figure to show the increase. This is making it more and more difficult for farmers to predict pricing in determining budgets.

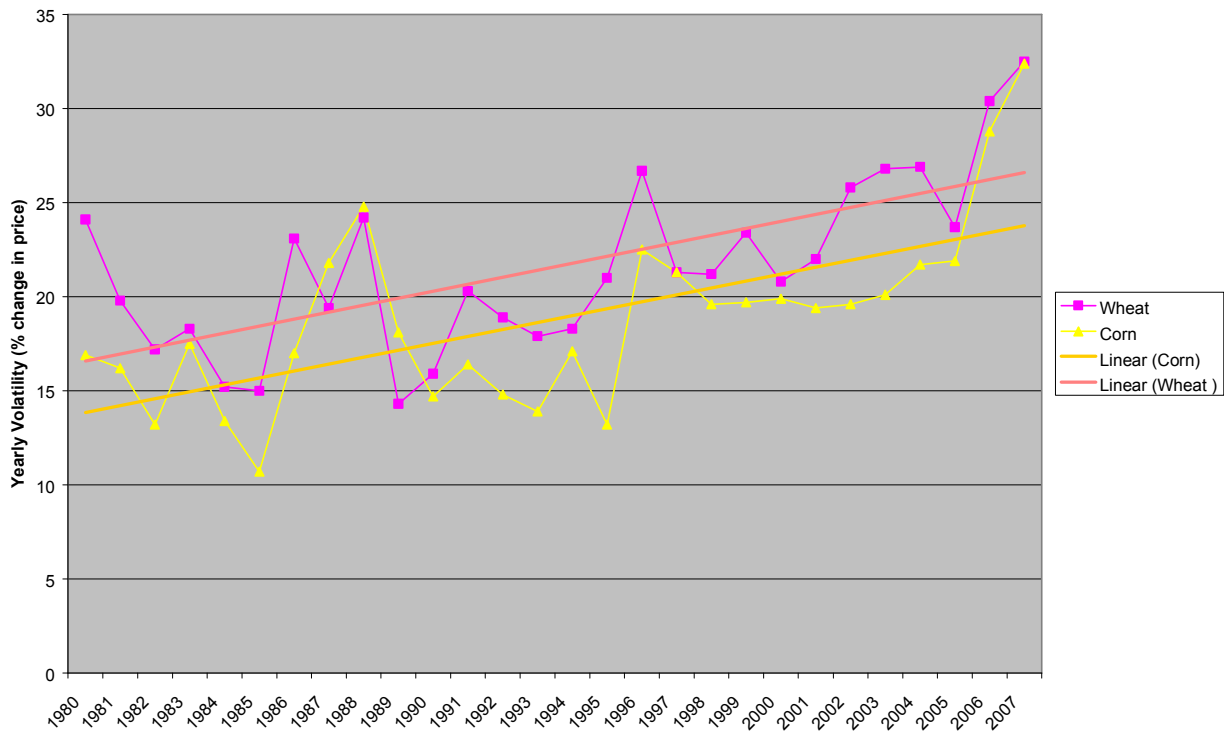


Figure 6: The increasing volatility in world corn and wheat markets (source [www.cbott.com](http://www.cbott.com))

The world has seen a huge increase in the price of wheat, as shown in Figure 6 below, and all other grains in 2007-2008, but given the wide volatility in prices and the fact that volatility is increasingly large the price of wheat could easily slide back below US\$10 per bushel and head closer to the longer term average of around \$4-\$5 per bushel.



Figure 7: The world wheat price based on data from the Chicago Board of Trade (source [www.cbott.com](http://www.cbott.com))

The volatility shown in Figure 6 means that in 2008-09 the change in price is likely to be higher than 25% over the year. Given that wheat is currently around US\$10/bushel, an Australian dollar price of around A\$400/tonne, a 25% decrease in the coming financial year could result in wheat returning to closer to US\$7.50/bushel or A\$300/tonne.

In this scenario feed barley and sorghum would not reach their \$279/t and \$250/t respective levels as quoted above but would be closer to \$200/t, leading to a further decrease in the returns.

At \$200/t for barley and sorghum the gross margins become \$240/Ha for sorghum and \$38/Ha for barley, well below the level needed to maintain a viable business.

**Given the increasing volatility in the world market for grain there is a real chance that prices could fall significantly in 2008 leading to a situation where it is unlikely that QLD grain farmers will make a profit. With no certainty on input costs the risk of making a loss in 2008 is even greater.**

## Conclusion

It is clear from the analysis above that input cost increases with regards to chemicals and fertilisers are posing a real threat to the financial viability of many grain farms in QLD. There is compounding effect coming from a situation where drought, flood and other environmental conditions have reduced the cash on hand so greatly, added to rises in interest rates and recently exponential rises in chemical and fertiliser input costs meaning profitability in 2008 is questionable.

Lack of security of supply and no security on prices that will be asked upon delivery up to 4 months in advance makes budgetary planning almost impossible for our farmers. With most farmers budgeting on around \$7/L for glyphosate, a price closer to \$15/L will stretch cash flows to their limits.

Whilst there seems to be little direct evidence of collusion or restrictions on competition AgForce Grains' members are hopeful that the Senate Select Committee will investigate this issue closely. Farmers are concerned that anti-competitive behaviour exists, particularly in the fertiliser market but do not have the resources or scope to investigate and prove it. The NFF submission covers this concern well.

The profitability of QLD grain farmers in this time of high input costs lies with the climate and the market, two things almost completely out of the control of individual farmers. However, whilst these two things will be major drivers of profitability in 2008 and beyond the lack of control over input cost prices and the lack of clarity on when their cost will fall may be the final nail in the coffin of some QLD farming businesses.