

## “The Changing World of Wheat”

Alex Waugh



Good Morning I'm afraid this is going to be a bit technical after the people side of things. I'm not actually going to talk that much about the world wheat market, I just want to talk about a few of the things that are changing in the world of wheat because there are quite a lot of changes to expect over the next few years, and the reason it matters is that, just to give you a feel for the issue, we use about 5 million tonnes of wheat in the UK every year and to personalise that its 80/90 kilos for every man, woman and child, so that's how much wheat matters in our daily diet. I think it could be that after a fairly benign period over the last few years in the 90's and the early 2000's we are in for a change and whilst we have had calm we'll have volatility in the future.

There are different reasons for that, one of them is what we call in lobbying terms the institutional climate is changing. That means the rules that affect the way farmers behave and that grain is traded around the world is changing. You've heard about the WTO I expect, well that's part of it. The bad news is that I won't be offering any solutions to the problems. So these are just a few of the things I want to look at. UK wheat production first of all and this word 'decoupling'. That means that farmers in future will be paid for being farmers, they won't have to plant anything. That in a sense is quite a good thing as it means that they should behave more rationally economically. They should only plant when they can see they are going to make some money for what they've got to do.

We've got to look at the guaranteed price mechanism in the European Union and then move on to what's going on globally and talk a bit about energy which I think - you think about it in a way that affects your day to day business as Mike was just saying but I think it actually has some potential to have a very big impact on the supply of wheat and flour coming through to your businesses, and briefly currency.

First of all the cost of wheat production in the UK. Just in case you don't know 80% of the wheat that the flour millers use in the UK and which comes through then to your businesses as flour is grown here. It's our main source of supply so therefore understanding what's motivating the farmers and the way they are going about things is quite important. I mentioned that in future growers no longer have to plant grain in order to gain their payment from the EU and in those circumstances they should only plant when they can see a profit.

Well as you can see from this chart which has some work done by the Cambridge University department, before these changes came to place, about half of farmers are not making a profit on their wheat if their price they receive is less than £60 per tonne and to give you an idea the basic ex farm price for wheat at the moment is about £65 per tonne. There's not very much profit for quite a lot of these people and quite clearly that means that something has got to change. Either those who are at this end of the chart are going to have to get out or they are going to have to restructure their businesses to bring their costs down, or else, and I should think they are probably hoping for this, the wheat's got to go up so that they move back into the profitability spectrum.

But in logic that means that quite a lot has got to change, that some farmers are going to get out and there is enormous restructuring taking place at the moment, and farmers are going to be able to look ahead a little bit and say I'm planting this year, I'm not planting next year. So we can expect more volatility.

That's the basis wheat price. A lot of you are interested in bread and we use slightly different wheat for making bread which is more expensive for farmers to produce. It's more expensive because they need to put a little bit more effort into it and they get less wheat out of the same amount of ground.

The premium they say they need is represented by that dotted line going across the middle of the chart and as you can see on average that's about what they get. But unfortunately businesses don't necessarily live everyday on averages and what we can see if you look across the years is that the variation seems to be increasing over time. So the variation from year to year, the volatility that farmers are going to cope with, and that is going to come through to your businesses is growing. And that's a bit of a worry, and its variation, not just between seasons, but within a season. You can see there's quite a bit of price movement there which we all have to try and deal with. And that uncertainty about profitability is a key factor for farmers. Whenever you talk to them they always want to know 'how can I lock in my premium', how can I lock in my margin in future. Of course some of it is within their own hands. The

price varies according to supply and demand and we can see here again over the years of how the pattern of what farmers in the UK have planted is changing. We are seeing a gradual and steady reduction in the planting of best quality bread wheat which is represented by this Group 1 figure at the top there, and a decline in this portion here which is the wheat that we traditionally use for exporting and for biscuits. The growth appears to have been in this category here which is the moderate quality bread making wheat. And I think that changing, is quite important because the quality of that will vary quite a lot from year to year, and that's going to accentuate the volatility in pricing that farmers come across.

To move on and look at the EU situation. To summarise as far as the UK is concerned, we are getting contradictory evidence. On the one hand the price of bread wheat is fluctuating widely but on the other hand farmers seem to be, in general, planting more of the right kind of stuff for making bread. They need to improve their margins in order to make more profit and they will be restructuring, and are restructuring a lot.

So EU- This is a chart of the basic guaranteed price of wheat known as the 'Intervention Price' which is what the European Agricultural Policy provides the farmers. As you can see over the last 10 years it's gone down quite a lot. That's because of a deliberate policy change to take the support for farmers out of the market, out of the price mechanism and to pay them the money directly. The fluctuations around that line are associated with currency. The way that the £ moves against the Euro and as you can see it would be a much smoother line going through there if it weren't for that. You can just draw it with your mind's eye. At the same time as reducing Intervention price we've also brought down the duties on imported wheat over the last few years and that's very good news. It means that we have much better access to grain from North America, Canada and the United States, maybe from Australia, that is of superb quality and is historically what we used to use for making bread flour in the UK. Even lower quality wheat can now come into the community at virtually no tariff. So there's more to choose from, more on our plate as it were, to make flours and breads that the consumers will really enjoy. So that's good news and should be good for everyone.

But then we come on to look at how much the community actually buys, the famous grain mountains and you can see there's a nice steady fluctuation. The Intervention Price was reduced about here, that's when the changes started to come through in order to bring these stocks down because they are very expensive for all our tax payers. But since the European Union was enlarged in 2004/5 those stocks have begun to grow again and the majority of them are in Hungary and Germany, central Europe, far from the sea, far from the main markets for grain. And the Commission's expectations, they have the job of managing these stocks is that those stocks will continue to grow and place an enormous burden on the budget. You can see here at the very end there are two little bar charts for 2005 and 2006 and that's the

variation in the estimate of where we are going to be at the end of this year. Its about 10 million tonnes difference. 10 million tonnes is an awful lot of wheat when you see it piled up. So they're not going to be able to see that grow, the budget is not going to allow for it, so something's got to give.

At the same time, as I said, the barriers for imports are coming down so there's more access for those say, in Western Europe, western end of France or Spain to import wheat from overseas. So the impact if you talk to anybody involved in it, is likely to be a further downward movement in the guaranteed price that the farmer is going to get and that seems like good news for us as we are buying the grain, and lower prices should help to focus farmers minds very much more on what their customers want. Customers are going to be the market not this guaranteed institution. But of course it could simply put them off growing crops altogether.

Looking globally, wheat, maize and rice are the three main grain crops around the world. If you just look at wheat and maize, rice is treated somewhat separately, you can see there's been a steady increase in demand over the years and maize has been growing rather faster than wheat, but together every year we are consuming about 20 million tonnes more around the world than we consumed the year before. 20 million tonnes a year extra that's required.

There's no reason to suppose that that trend will change. We always say the past is no guide to the future but there's nothing around which suggests there should be a change, and part of the reason is that around the world we are consuming more meat, and meat takes more grain to produce than just feeding grain to people. As people get wealthier they want more meat and we need more grain.

By contrast over the same sort of timescale the area given to planting wheat has been going down. It's down by about 10% over that time line of that chart and that means that farmers are getting better, the yield they are getting is going up and that's compensating for the difference. But actually what's happening is that we are getting the slack that's in the system in farming terms, its being taken up and we are getting more efficient and closer to what can be produced consistently on a regular basis, closer to the maximum and that makes everything a little more sensitive. At the same time, a bit like business around the world, there's been a bit of destocking. The amount of stock we have to cover us over the bad times, or the breakdowns, is going down and that applies just as much in the grain trade. We are seeing reduced levels of stock around the world in maize and wheat and I think six out of the last eight years we've consumed more than we've produced, and clearly that's something that tends to make markets just a little bit spooky when the bad news comes along.

Now energy – interesting subject. This chart only goes up to 2003. In 2005 the US is expecting to use 50 million tonnes of maize to produce ethanol to go into cars, that's more than it exports and the US has always been the big grain exporter, so it is a very significant change and you can see the step increase as we come into the 21<sup>st</sup> century on that chart.

It looks like big numbers, doesn't it and the new set of the grain against the amount of energy, oil, this is just oil that is traded globally, we think they are big potatoes, but look at that. We're just dwarfed by the scale of trade and that doesn't include gas or coal. So once grain becomes an energy source and it gets treated in that way, the potential is enormous, really enormous and it will have a big impact upon us. Of course its encouraged by the price movements and I don't want to depress anyone further but the change in energy prices isn't a one year phenomenon, it's been growing over the last five years. We shouldn't have been completely surprised at energy pricing rising on a practical level and if you look at the futures market nobody's expecting a fall so what they're telling us is that relatively high prices are here to stay for a little while. And that of course provides further incentive to the development of bio-fuels. When you've got an oil price at \$60 or \$50 a barrel then its worth looking at alternatives even if they are relatively expensive. If it goes to \$70 or \$80 then things get really, really interesting.

And of course this change in energy prices which you know about in your businesses has an impact lower down the chain. It also has an impact on the price of grain per se, and the price of production so that it increases demand for grain and increases the cost of grain going into the future.

So what is the potential on our side of the pond. The EU set a target of about 6% of road transport fuel to be bio-fuel by 2010 and in round numbers that means 17-20 million tonnes of fuel from bio-fuel. And to give you an idea of what that means in terms of cereals, that's about 30 million tonnes which is twice the amount of wheat that we produce in the UK every year. It's quite a big story.

The UK's just introduced a requirement that by 2010 5% of the fuel that's used for road transport will be from renewable sources. It'll come from lots of different sources, some of it will be imported, some will be imported from ethanol made out of sugar cane in Brazil. But just again to give you a feel for what that means here are some figures assuming that it all came from wheat in the form of ethanol, or from oil seed rape in the form of bio-diesel and as you can see to hit that 5% target if it all came from wheat, which it wont, and if it were all grown in the UK, which it wont be, we'd be talking about 7 million tonnes which is about half the UK crop. More

realistically if you are talking about 1% or 2% that's still 2-3 million tonnes and the impact, again to give you an idea of what that means, that's about what we export from the UK every year. So in theory that will be enough to move the UK grain market from one which has to have a price which allows it to export to one which is based on the value of grain to import, and these things are always a bit rough and ready, but roughly speaking that means £20 per tonne in terms of difference. That's quite a significant change for all of us if it happens, if it turns out that way.

Now, boring subject, but again it matters. Currency fluctuation. This is setting out the chart that charts the variation in the Pound against the Dollar and the Euro. They both matter. The Dollar matters because that's the currency in which grain is traded internationally and the Euro matters because that's the price at which the European Union guarantees farmers their support. To give you an indication of how much that means – if you were looking at the pink line which is the Dollar variation, top to bottom that's about £20 per tonne. So that variation over time, whether its up or down has a very significant impact on the cost of getting grain into the UK from overseas.

Lots of different factors. Some of them negative in terms of pulling prices down, some of them more likely to move prices up. This is an attempt to summarise that for you. There are probably other things you could add to the list; I know I've been quite selective. There are lots of things I haven't talked about, GM for example. The necessity or the impact of that if we had to segregate supply chains coming from overseas for wheat or within the UK for wheat, would be enormous. Actually I think that's something we will have to think quite hard about over the next five years because going back you remember that chart which shows a steady 20 million tonne increase in demand every year, some of that's been achieved by the introduction of Gm maize in the States and if we are going to see that increase in demand carrying on year after year after year then it seems likely to me that GM technology is going to play a part and we will have to think quite hard about our attitude to that.

As you look at this balance of things overall you could say that the balance seems upwards and this rather complicated chart tends to confirm that. What we've done here is look at grain markets, there are forward markets, futures markets in the United States, in London, in Paris and they give you an idea of where prices are going to move. Here we are now and these different markets whether for corn or for wheat over the next couple of years, the traders are all expecting prices to go higher. Well I suppose they would say that, wouldn't they. But that's what you can buy now, you can go out and buy grain at a higher price and it seems to confirm that the general expectation is for prices to move up across the board, at least for the time being.

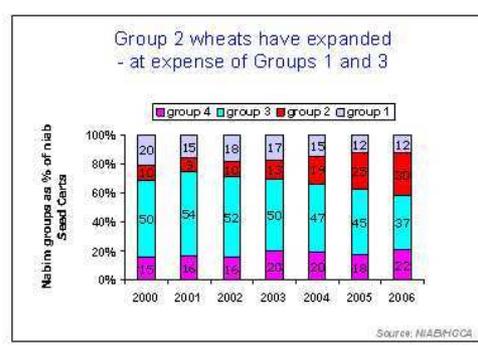
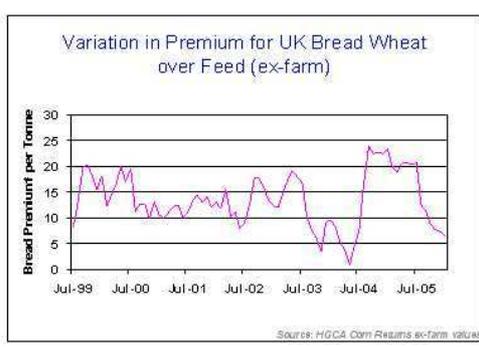
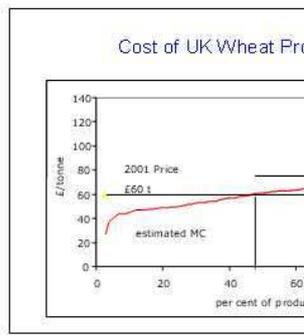
But within that I think there's going to be, I think, significant seasonal variability. You see that more and more in the newspapers, there are reports of droughts here, or fantastic growing conditions there, the story this year has been about the lack of snow in Russia, and well yes, that could be an issue I suppose. And we are going to see increased volatility I think within a season as growers take a view as to whether or not they should be selling now or later, they can move the market here and there. And because farmers within the European Union have got this novel situation of relying on the market for their income in future, there are going to be some things they choose to grow and some things they don't choose to grow. And if you are a user of what is less likely to be grown, then I think we're going to see more growing contracts coming into place, more longer term relationships. Its not going to be the whole market, its going to be a bit of the market and that means whereas in the past we might have thought of the wheat market as the wheat market, its going to become much, much more sub-divided for qualities and particular characteristics and its not always going to be very obvious sitting as you may be in the bakery, what's going on in your supply chain back down there and getting clarity on pricing. I think its going to be quite difficult.

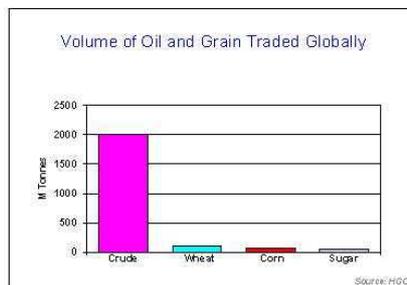
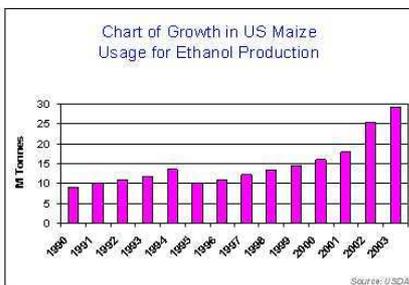
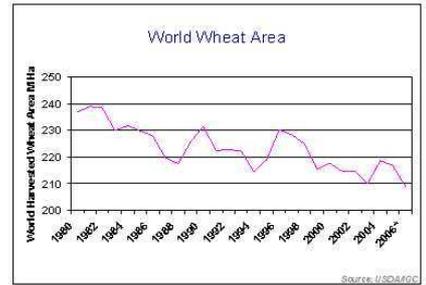
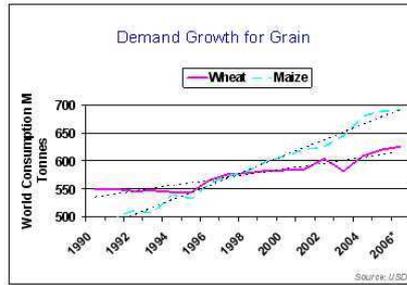
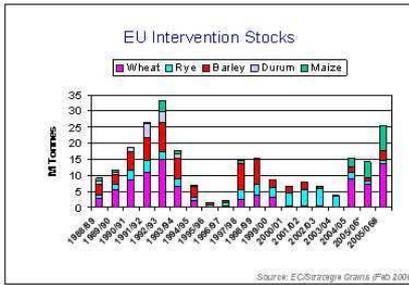
Thank you very much

Alexander Waugh  
 The Changing World of Wheat  
 British Society of Baking  
 20 March 2006  
 nabim

Factors to Consider

- UK wheat production, decoupling
- Intervention and EU institutional change
- Global grain supply and demand
- Energy and biofuels
- Currency





### EU Bioethanol Potential

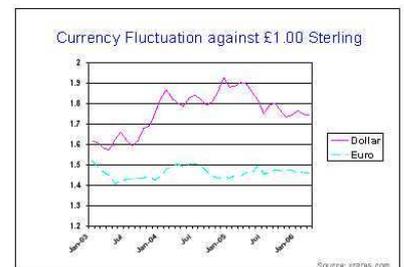
	2005	2010	2015	2020
Road Fuel Usage(MT)	274	304	336	371
% to be biofuels	2	6	7	8
<b>Biofuels (MT)</b>	<b>5.5</b>	<b>17.5</b>	<b>23.5</b>	<b>29.7</b>

Source: HCCA

### UK Feedstock Requirement

Inclusion %	Wheat tonnes	OSR tonnes	Wheat Ha	OSR Ha
1	1.6m	1.3m	200,108	374,671
2	3.2m	2.6m	400,217	749,341
3	4.8m	3.9m	600,325	1,124,012
4	5.8m	5.2m	727,667	1,498,682
5	7.3m	6.6m	909,583	1,873,353

Based on 100% petrol or 100% diesel  
Source: HCCA



### Impact of Trends on UK Wheat Price

Build up of EU intervention stocks	-
Removal of export subsidies/WTO reform	-
Developing demand for bioethanol	+
Decoupling of farm payments	+
Growth in global grain demand	+
Currency movement	+ or -
Higher energy costs	+
Seasonal effect on supply	+ or -



- ### So what can we expect?
- In general, higher wheat prices – but with significant seasonal variability
  - Increased volatility both within and between seasons
  - Greater use of growing contracts for specific qualities to ensure availability

Sessional Chairman

Thank you Alex. Alex I know will love to take questions, so do we have some from the floor please.

Question: Sir Mike Darrington

Thank you Alex for a very interesting presentation. The use of bio-fuels I think is really very important and I don't know if you think there's enough being done in this country of lobbying Government to put pressure on them to encourage it to happen is probably my first question, but secondly from a personal point of view I'm very nervous about our becoming more and more dependent on the international market for food. I think things like food, water and energy to a certain extent are absolutely vital to our survival and I think if we say we are going to depend on the Russians for gas and Hungarians for wheat, if ever there was a shortage all I can say the lights will go out and we will all starve. So I think why can't we be putting pressure on them to make sure that we don't just let market forces be dominant factors, do you have a view on that as well.

Answer: As far as the UK is concerned, the major change has been Gordon Brown's announcement in the autumn that there would be a requirement for road fuel to contain 5% renewables, so we're moving away from tax incentives to 'you will do it' which is great, if you are in Government you can do that kind of thing. And the result of that has been the announcement in the UK of plans to build ethanol plants and bio-diesel plants. Slightly unconnected businesses, but starch extraction is related to ethanol and we've seen announcements that there are two new plants coming in and they'll be using 1 million tonnes of wheat. They should come on-stream in 2007. So there are the beginnings of something. Whether or not it's enough I'm not sure.

The petrol companies are much, much keener on bio-diesel than they are on ethanol and the cynics say that's because they've got a surplus of petrol refining capacity but a bit short on diesel, so it would make sense for them.

There is also another school of thought which intellectually you would have some sympathy with which is these plants, these ethanol and bio-diesel plants are first generation bio-fuel plants and they're using goods which could have another purpose and actually the future is in developing plants that will digest straw and waste products and use those for energy because then you're really using something that would otherwise have little value. And there are those who say wait five or ten years and these things will come along. An interesting point. Again the slightly worrying thing is that that tends to be a point of view promoted by the petrol companies as well who perhaps have an interest in delaying the development of these technologies.

So are we doing enough? I'm not so sure but there is a bit of momentum beginning.

Self sufficiency for food - I think that the UK, if we are talking about grain, is quite an efficient producer. I think there's a pretty good chance farmers will move rapidly to hit that £60 per tonne target and you don't see the changes in the way that you would when factories close and restructuring of other industries because farmland is still there but the size of the acreage that's being farmed by a given amount of machinery is going up a lot, the people involved is going down and you see a lot more contract farming going on where one farmer will take on another's land, it will stay in the other's name so it looks the same, but actually its changing quite rapidly. So I think that's quite good news for us.

Question: Paul Heygate, Bugbrooke

To take on what Sir Michael said and to take that a little bit further, do you see a lot more with your last two or three slides probably showed that one could turn into speculators and take views a lot further forward, and because of the pressure from the likes of certain large companies who might hold a similar view to Sir Michael, do you see a lot of people doing a lot more supply chain contracts?

Answer: I think people will do more supply chain contracts. I'm not sure that the majority of grain will be sourced that way. There'll be, as I tried to say, I think people will be quite selective about what they contract for. I do think that there are consumer trends which might make supply chain contracting more valuable if the development of provenance becomes a marketable commodity, a marketable value, then you can see that there's a need to contract that in order to guarantee it. On the product development side there might be some interest and on the guaranteeing availability side there'll be some interest, but I don't think the majority is going to go that way.

Actually interestingly if you look around the world wheat is the commodity which is least likely to be contract grown. All the other agricultural crops are much more often contract grown. For wheat its about 5% grown under contract, even soya beans is 25% and so on as you go through the chain.

Question: Duncan Monroe, Carlisle

Do you think as an industry, and I'm talking throughout the supply chain from farming through to baking, do you think as an industry we are doing enough to look at ways of reducing energy costs throughout the chain?

Answer: I can't really speak for bakers but I think the answer would be the same as it would be for millers. If you've got an item which is such a big element of your cost, of course you look at it. You do everything you can to minimise the cost while still producing the product that you know the customers want. Now the question is - are there opportunities that we've overlooked for one reason or another, have we not been looking hard enough. I don't know, I think there's quite a lot of time being spent on looking at that and I think the introduction of the climate change levy has introduced an extra incentive to do that.

On the farming side I think that that hasn't been a top priority and part of the reason for that has been the availability of tax free diesel which means that it hasn't loomed large in farmer's minds as it might have done but now the price is going up so sharply that that helps to focus the mind. So some and some is the rather weak answer I'm afraid.

Question: Andrew Williams, London

I was just wondering what your thoughts were about the cost of organic flours as Tony Reed was talking about earlier?

Answer: Well organic flours or organic bread, different things. Organic wheat is fantastically expensive and that's partly a supply and demand thing and partly because if you want to make organic meat you need organic grain to go into that, and as I was saying earlier on the relationship between grain and animals, the need more than we do because they've got to convert it to meat and then we eat the meat. Where I might differ a bit from Tony I think is in saying well, if the relationship between the cost of organic and non-organic is wrong that might be because organic is too expensive, it might be because the non-organic is too cheap and they can play that from both ends. But if you are saying do I think the cost of non-organic grain is going to come down, I don't. I think it's quite high and that's the way it going to be for a while because we have a shortage. If demand really takes off we still have a shortage and they can't just switch it on. We only produce grain, unfortunately, once a year and it takes quite a long time to turn that around.