

Spotlight on... Cereal prices

Savills
Research

savills.co.uk/research

savills



While a top performing farmer will tend to produce a higher average crop gross margin than an average-rated one, occasionally in a single year the situation will be reversed. Similarly, a top performing farmer will usually manage to sell at a higher price.

At best, analysis can only give a probability of a price rise or fall but this knowledge in itself can gain an additional edge to produce higher average prices.

The key element is to make sure that there is a rigorous marketing plan based on target profit and constraints such as storage, cashflow and workload.

Risk management may be achieved by marketing in small lots over the entire marketing period, but it is worth defining these periods at the beginning of the season and the extent of any deviation from the plan. It is often useful to sell at least some grain on a tracker system or pool arrangement to provide a comparison with more sophisticated approaches.

The disadvantage of pool and tracker arrangements is that they do not help manage the specific farm situation; an average price may not secure a profit even if a price that would have secured a profit was available for 50% of the marketing period.

While a decisive approach with a single sale can guarantee profit, a feature of farming is that in order to achieve high average profits, taking into account good and bad marketing years, it is necessary to secure very high profits when these are available. This is the place for options or minimum price contracts. It is interesting that at present the cost of an option is only a little more than the difference in price between the current harvest year and next harvest year; it would be possible to sell all next year's crop at a similar price to a sale of this year's crop but with no downside risk. Under delivery is also removed as a serious risk.

For those spotting an opportunity it is possible to register stores as small as 1,000 tonnes for the futures market. While the store has to be registered for rates, needs a stamped weighbridge, and there may be planning issues to resolve, it can allow the farm to achieve a delivered price for its grain.

What a difference 12 months make. Just over a year ago there was a strong possibility that cereal prices would bounce up following the 2009 harvest. Clearly this has not happened and it is important to understand why. In order to do this we need to establish how previous harvests impact on the future. A detailed analysis of the cereals market follows on from our conclusions for 2010.

Conclusion for 2010 harvest

There are a number of factors that tend to suggest that the £10 per tonne premium for 2010 forward prices is a relatively good price. In the context of the 10 year average this will be a very good price:

- Sterling is relatively weak against the dollar (although this looks less like a blip than it did last January).
- There is approximately a £10 per tonne premium for harvest 2010 wheat compared with the corresponding position for 2009.
- There is a slightly greater probability that supply will exceed demand than vice versa. There would need to be a very poor global harvest to return stocks to the levels seen in 2007/08.
- Dollar prices are still relatively high for current and predicted stock levels compared with the recent past.

However, it is marginally more likely that the relative surplus for wheat will decrease compared with that for all grain increasing the premium for the crop, although this will be small compared to the volatility seen.

The opening of the Ensus and Vivergo plants in 2010 resulting in a potential UK change from net exporter to importer is a relatively small positive influence. While the gain might be expected to be equivalent to the saving in the cost of export plus additional cost of import, which could be over £10 per tonne, in practice there are already areas of the UK that occasionally import and other areas, which will continue to export. Therefore, grain surplus areas such as East Anglia will still be in surplus (as they were in the 1960s) and it is unlikely the plants will make more than £3 per tonne difference to the wheat price. ►

► How did 2008/09 impact on 2009/10?

From October 2008 a number of important factors began to dominate:

1. The supply forecasts for 2008 continued to rise as the harvest progressed.
2. The recession began to bite and consumption fell. We hit the biggest global depression of our lifetime. While an increase in wealth increases consumption, a decline in wealth reduces consumption.
3. The profitability of ethanol production in the US continued to fall, stifling maize demand and, in particular, the expansion of bio-ethanol manufacturing capacity. There was an extraordinary drop in the consumption of oil, and while the situation is complex, a reduction in oil consumption means that the volume of ethanol needed to reach mandatory targets, and consequently use of grain for manufacture, is also reduced.

Therefore, the estimated stock levels for the year ending 2008/09 changed from high to exceptionally high, requiring a much higher fall in stock than looked likely in October 2008. But at the same time 2008/09 prices were arguably higher than anticipated as a result of a number of developments.

The futures prices as reported for the March 2009 and March 2010 positions on the London International Financial Futures Exchange (LIFFE)* sheds light on the price changes over the year.

4. Prior to harvest 2008, supply and demand for both the 2008 (ie. March 2009 position) and 2009 (March 2010 position) harvests were largely speculative and consequently the delivered prices were similar at around £150 to £160 per tonne (see Graph 1).
5. As the large size of the 2009 crop became progressively more certain, both the March 2009 and March 2010 prices fell (see Graph 1).

Graph 1. LIFFE wheat futures price for March 2009, March 2010 and March 2011 (to date)



Source: HGCA



6. However, a larger premium developed for the March 2010 futures position compared with the March 2009 position of around £20 per tonne (see Graph 1).

7. By January 2009 sterling was exceptionally weak against the dollar (Graph 2) and since traded crop was primarily priced in dollars, UK prices were higher than had been expected in the autumn.

8. The rise in price from November 2008 (Graph 1) was largely due to weakening currency (Graph 2). Since the price move was similar for both it appears that the market made very little distinction between the spot exchange rate and the exchange rate at the position close. Compared with May 2008 the weak exchange rate had increased prices by around 40% or £40 per tonne. ►

Graph 2. Impact of weakening sterling exchange rate against the US dollar on prices as compared with May 2008



Source: Bank of England

*The futures prices are a delivered price and for a number of technical reasons are not identical to the delivered market price but they are a good indicator of ex-farm values. The March position has been used to illustrate the price changes since it is approximately half-way through the marketing year. It also covers a period where price is largely due to speculation on production and a period when all the major supply and demand information has become reasonably clear.



- The combined impact of the market premium and exchange rate was around £60 per tonne in January making a sale a logical reaction.

9. Prices were also high compared with historic prices at the same stock levels and nearly 50% above the historic relationship shown in Graph 3. The suggestion was that stocks were being rebuilt, but nonetheless the premium seemed unsustainable. More recently the continuing weakening of the dollar against a basket of currencies has perhaps made importing grain affordable for a number of countries. This has helped to maintain dollar prices at higher levels than historically had been the case.

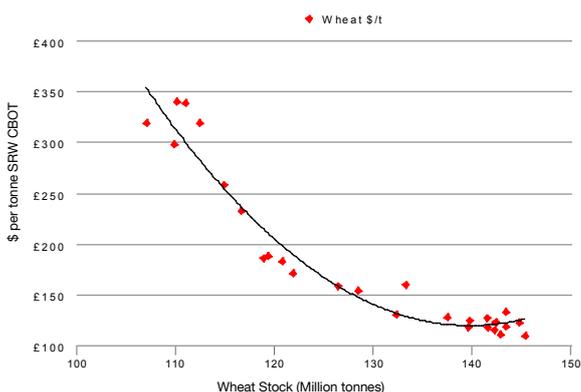
In contrast, the recession was expected to have a big impact on production, particularly in those parts of the world where farmers depended on credit to plant crops.

10. However, fertiliser prices fell over the autumn of 2008 compared with earlier prices for 2009 supply, returning spring wheat and maize production to high profitability and encouraging planting despite the recession. Forward prices were high and for those with low fertiliser costs potentially a highly profitable year beckoned.

11. Global cropped area was high for the 2008 harvest and while the squeeze on credit meant that little extra land was brought back into production the cost of maintaining land in production was relatively small. This impact was under-estimated by many of the forecasters (including ourselves) although the evidence was clear in retrospect.

While we were still bullish about the forward price for harvest 2009 in January 2009 and the early spring, in dollar terms, there were far too many factors that were likely to reduce the price, so that even if dollar prices rose we might fail to see the benefit. Prudence suggested that sales should be made and for many of our clients this was the recommended action. Some large volumes were sold with the benefit of options or other minimum price contracts. The cost was deemed high at between £10 and £15 per tonne but potential movement was far greater. Consequently, wheat sold forward netted a minimum price of £115-120 per tonne.

Graph 3. Historic relationship between stock level and price for wheat (\$ per tonne)



Source: USDA and CBOT analysed by Savills Research



Of course, as things currently stand a sale without an option would have been even more profitable. At the time however, we thought that there was still scope for an upwards price movement. In any case it was unlikely that all the crop would have been sold without provision for any upside movement.

To some extent this was the right action for the wrong reason. The exchange rate did not strengthen as much as had been feared (although sterling is still stronger against the dollar than it was at the beginning of the year) but other factors were more important than had been expected.

What next for 2009/10?

The relative strength of sterling against the dollar has been the major determinant of price movement since August. There is some scope for demand to increase beyond current estimates as the recession ends. However, even if it increases to the highest point over trend previously seen, it will not reduce stocks to the point where prices rise significantly.

While prices in sterling terms are not as low as four years ago they are in Euro terms and consequently intervention is now a serious option for feed barley. Intervention, is fixed at €101.31 per tonne (ie. a little over £90 per tonne) for November delivery plus an increase of €0.46 per tonne for each subsequent month. This is a delivered price and cost of haulage needs to be deducted reducing the price by another £5 per tonne or more. The minimum lot size is 100 tonnes. Barley has already entered intervention in the more landlocked surplus areas of the EU. In the UK the discount to wheat is sufficient for some farmers to sell wheat intended as stock feed and purchase in barley.

Wheat now makes up a larger proportion of the total grain stocks and this has resulted in a smaller premium for wheat over maize than in some years (and our research shows that maize and wheat prices are converging). The November 2009 USDA estimate of production for the current year was relatively unchanged from October, but the world wheat closing stocks estimate was increased again from 186.73 million tonnes to 188.28 million tonnes. Total grain stocks were estimated to reduce very slightly.

On balance, there would appear to be a greater likelihood of a fall in price for the current crop than a rise: although a major change will now depend on the very unpredictable sterling exchange rate. ►



► ...and for 2010/11

The 50-year production and consumption trends for total grain suggest a small increase in stock following the 2010 harvest and consequently a small fall in price, although this is still obviously subject to considerable uncertainty. Stock levels are only likely to fall to 2007/08 levels if the 2010 harvest proves relatively poor.

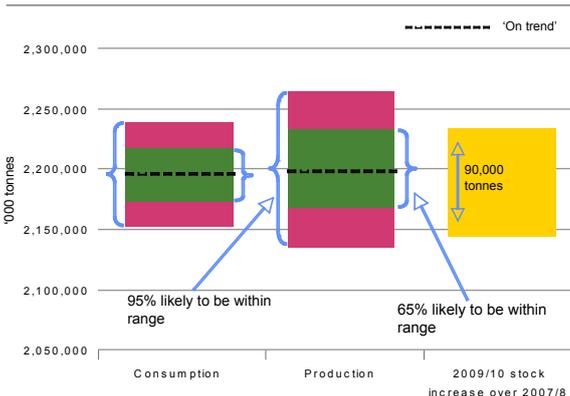
Graph 4 shows the expected production for 2010 and the likely range and a more extreme range. This is based on historical information and assumes that the deviation from the trend is entirely random. The narrower green banding indicates the range expected on around 68% of occasions and the wider red banding the production and consumption bandings on 95% of occasions.

To put this into perspective (as at November 2009) forecast (2009/10) year-end stock levels were 451.53 million tonnes while estimated stock levels for 2007/08, when prices rose, were 361.53 million tonnes. As can be seen changes in production levels are more likely to determine grain shortage, and consequently a rise in prices, than changes to consumption. It is also worth noting that on trend production and consumption is likely to have a marginally positive impact on stocks (and a negative impact on prices).

Production

However, the variations from the trend are not entirely random. For example, the change in grain area tends to be accumulative: ie. if the area increases in one year, it is more likely to increase in the next (and vice versa) and production is more likely to move above trend. Therefore, over the last 50 years grain area increased more or less consistently from 1960 to around 1982 and then fell until about 2002 when it rose again. During the past 50 years the area of grain planted has been nearly 8% above and below the average area but the greatest change between years is around 4% with the average change being only 1.47%. Grain area has been above average for the last few years although current estimates suggest that the area has now levelled off. Conversely, between-year yield variation appears to be random.

Graph 4. 2010/11 trend for consumption and production and the likely deviation from trend and the increase in stock levels from 2007/08 to 2009/10 on the same scale.



Source USDA analysed Savills Research

The 2008 harvest was without doubt spectacular. Global yields of wheat and maize two of the three most important grains (rice is the other) were over the 50-year trend lines and together with an increasing grain area, resulted in exceptional overall grain production.

Table 1. Crop yields relative to 50-year trend

	2008	2009 (forecast)
Maize	+2.6%	+1.6%
Rice	-1.4%	-3.5%
Wheat	+0.7%	-3.3%
All grains	+2.9%	+0.1%

This was unlikely to happen again in 2009 and it appears that it has not. However, crop areas were still relatively high and overall production (although still depending at the time of writing on the actual out-turn of the US maize crop) looks likely to be almost exactly on the 50-year trend-line. This, in itself, is perhaps surprising given the global downturn, high price of fertiliser and the shortage of credit in some areas. However, for many of the financially squeezed farmers, planting conditions were actually good.

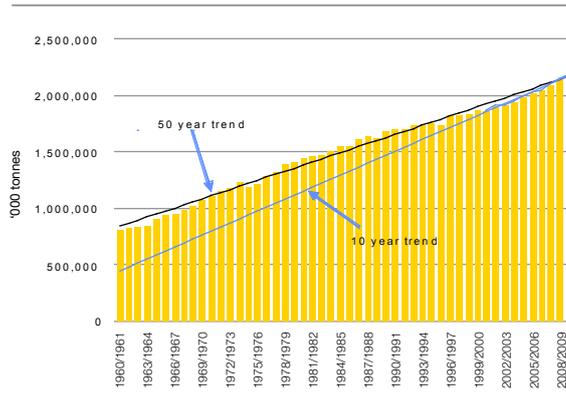
Some information on planting and winter survival becomes available during the year and later in the season the impact of droughts are known allowing some refinement to the production estimates.

Consumption

The variation in consumption is also not entirely random. It appears, in part, to be limited by production so is not independent of production. In high production years consumption increases over trend, but not proportionately ie. additional demand is quickly satisfied. Conversely, consumption falls in a year of low production. Consumption and production both rose above trend when plantings were above the 50-year average in the 1980s.

Growth in consumption (as illustrated in Graph 5), net of biofuel use, has been relatively small over the past 10 years compared with earlier years. In addition ►

Graph 5. Total grain consumption



Source: USDA



► (and despite an increase in food availability per head of world population), growth in consumption had fallen below the long-term (50-year) trend-line. The 10-year trend-line suggests a much steeper increase in consumption than the longer term trend, although both trends roughly coincide at present. Longer term, biofuel growth looks critical in determining demand.

Biofuel is not a long-term solution to fuel shortage (since it cannot remotely meet demand for motor fuel) and better alternatives will be necessary if our current lifestyle is to be maintained.

It is unlikely if production fell, that consumption would also increase. This makes it even less likely than Graph 5 suggests that stocks would collapse in a low production year since it is likely that consumption would also fall.

Longer term

In the longer term there is considerable scope to increase grain area. The statistics are unexpected. As illustrated in Graph 6 the most significant fall in area is in the Former Soviet Union (FSU) since the end of Communism, although policies towards fallow land have also decreased the area of grain grown in Europe and North America. The FSU land was often derelict and there was a cost to return it to agriculture, but once back in production the cost of maintaining it in crops was small. The relatively small, static, grain area in South America is also perhaps surprising given the perception of the rate of increase at the expense of the rainforest.

The regional changes in crop area do not mirror change in production. US production has increased by more than any of the other blocks, and remains one of the highest producers. It is really only the FSU where production has actually fallen, although the EU increase in production is small.

The rate of increase in overall crop yields has been slightly less in the past 25 years (at 0.0370 tonnes per hectare per year) compared with the previous 25 (0.393 tonnes per hectare per year). However, this average disguises two different trends. Maize yields are actually increasing more rapidly now than previously, and maize is growing as a percentage of grain area, while wheat and, particularly, rice yields have been increasing far more slowly. The difference in rate of yield growth is

“Maize yields are actually increasing more rapidly now than previously, and maize is growing as a percentage of grain area, while wheat and, particularly, rice yields have been increasing far more slowly.”

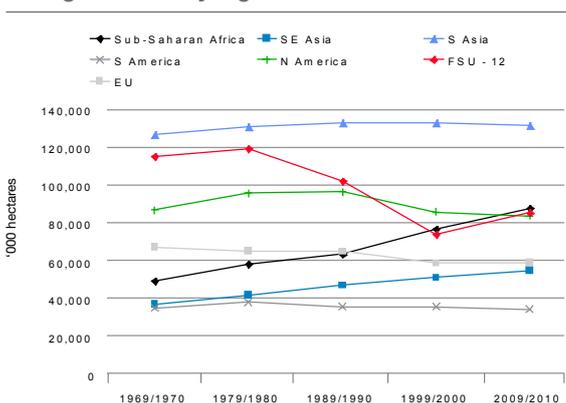
small compared with the annual variation from trend. The arguments for the difference in rate of yield increase are complex. Maize has benefited from greater genetic modification than wheat or rice, but it is also a more efficient plant. However, while the detractors correctly point out that none of the commercially available GM crop varieties have a genetically higher yield potential, the simplification and increased flexibility of management has allowed yields to increase.

Newer developments, such as drought resistant maize (already in the US and Canadian approvals process) and drought resistant wheat development taking place in Australia, are likely to reduce environmental impact on yields. While GM wheat is likely to become more common, it is unlikely that progress will be as rapid, for the simple reason it will take time to multiply up seed and create new varieties containing the introduced gene.

Over the past 50 years, yield variation as a percentage of the trend yield is either decreasing or remaining the same. Absolute variation from trend in tonnes per hectare has increased very slightly. Maize to date has shown more annual variation than the other major grain crops although there is at least speculation that newer varieties are less prone to variation.

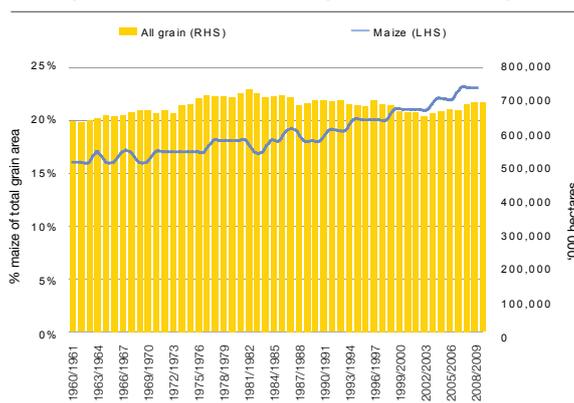
However, maize area is increasing at the expense of wheat and barley (see Graph 7). Maize yields far more than either wheat or barley and consequently an increase in maize tends to have a big impact on grain production and allows a higher increase in production to be sustained. ■

Graph 6.
Changes in area by region



Source: USDA

Graph 7.
Total grain area and percentage area producing maize



Source: USDA





For further information please contact a member of Savills agri-business team...

Research
contact:



Ian Bailey
Head of Rural Research
01797 230156
ibailey@savills.com

Agri-business contacts



Keith Preston
National
01865 269170
kpreston@savills.com



Steve Hollis
South
01722 426853
shollis@savills.com



Ashley Lilley
West
01242 548012
alilley@savills.com



Robert Hall
East
01522 508982
rhall@savills.com



Simon Britton
North
01904 617824
sbritton@savills.com



Tom David
South
01722 426810
tdavid@savills.com



Andrew Wraith
North
01522 508973
awraith@savills.com



Giles Hanglin
East
01223 347276
ghanglin@savills.com



Jonathan Henson
Scotland
01738 477511
jhenson@savills.com

Savills plc

Savills is a leading global real estate service provider listed on the London Stock Exchange. The company established in 1855, has a rich heritage with unrivalled growth. It is a company that leads rather than follows, and now has over 200 offices and associates throughout the Americas, Europe, Asia Pacific, Africa and the Middle East.

This report is for general informative purposes only. It may not be published, reproduced or quoted in part or in whole, nor may it be used as a basis for any contract, prospectus, agreement or other document without prior consent. Whilst every effort has been made to ensure its accuracy, Savills accepts no liability whatsoever for any direct or consequential loss arising from its use. The content is strictly copyright and reproduction of the whole or part of it in any form is prohibited without written permission from Savills Research.