



Food Prices Special

July 18th 2012

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US maize harvest in trouble

Maize and wheat prices rising sharply

KEY POINTS

- The US maize crop has been badly hit by heat and drought in the Mid-West
- Maize futures have climbed 41% since June
- Although the US wheat harvest has been spared drought, wheat futures have surged by 45%, presumably on expectations of substitution for feed maize
- Maize stocks will now not increase. They remain dangerously low, at under 15% of use.
- To date, importers have not panicked: apparently they have the stocks to cope with reduced US maize exports

The facts: extreme weather hits US maize, harvest forecasts cut sharply

USDA cuts forecast for maize harvest by 46M tonnes

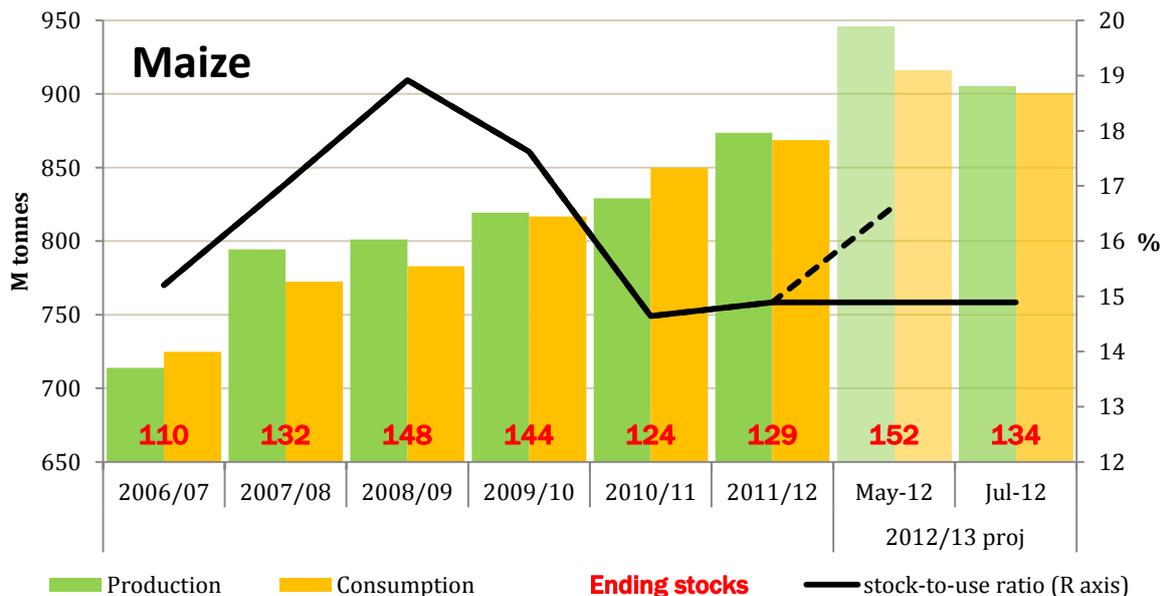
On July 11, USDA shocked observers by cutting the estimates of US maize harvests by no less than 46M tonnes. An extraordinary heat-wave has hit the Mid-West depriving fields of rain and scorching the growing crop (USDA July WASDE 2012¹).

Estimates of world production have accordingly been revised down by almost 48M tonnes.

Maize stocks stuck in the red zone

It had been hoped that that the largest area planted to *maize* since WWII in the US would result in a bumper harvest: large enough to boost stocks by 23M tonnes, taking the stock-to-use ratio from 14.9% to 16.6%. But the worst drought in the US since 1956² has put paid to these hopes. Stocks will remain slightly below 15%: alarmingly low, leaving little scope for adjustment should there be any further harvest failure — or demand increase.

Figure A Global maize production, consumption & stocks: 2006/07 to latest 2012/13 projection



Source: With data from USDA WASDE

¹ USDA, July 11, 2012. World Agricultural Supply and Demand Estimates.

<http://www.usda.gov/oce/commodity/wasde/latest.pdf>

² Stern, Andrew. July 17, 2012. US crop outlook worse than feared as drought set to intensify. Business Day.

<http://www.businessday.co.za/articles/Content.aspx?id=176462>: 'The drought scorching the US Midwest is the worst since 1956, the National Oceanic and Atmospheric Administration said in a report posted on its website on Monday. Drought is affecting 55% of the land mass in the lower 48 states.'

US wheat barely affected

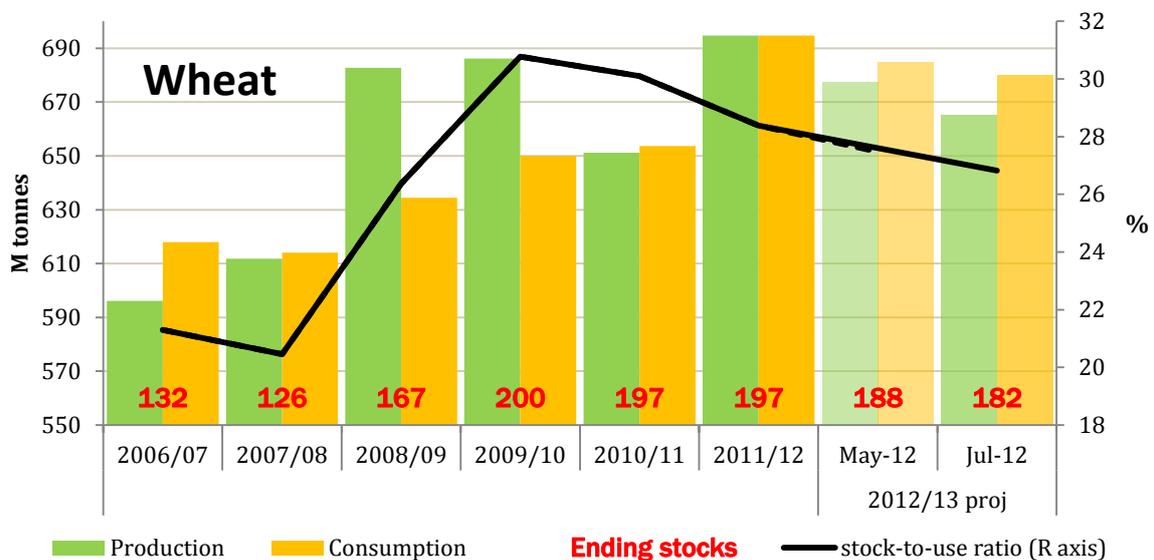
Wheat-growing areas of the US have largely escaped the drought; so much so, that the US wheat harvest for 2012 has been reduced by only 0.28M tonnes.

World production estimates, however, have been cut by 6.7M tonnes, owing to poor weather in China, Kazakhstan and Russia.

Wheat stocks were much higher than those for maize, so that while stock-to-use ratios will fall, they are expected to remain close to 27%: adequate to cope with most shocks — see Figure B.

Recent updates from Russia³ and Kazakhstan⁴ however suggest production, and consequent trade, may be set to shrink further.

Figure B Global wheat production, consumption & stocks: 2006/07 to latest 2012/13 projection



Source: With data from USDA FAS

The consequences: soaring prices for maize ... and for wheat

Sharp rises in futures prices for both maize and wheat

Maize and wheat futures on the Chicago exchange have taken off on the news of the poor US maize harvest.

- Maize futures for delivery over the next 12 months are 41% up on their early-June levels, see Figure C⁵.
- Wheat futures have risen by a similar amount: prices for delivery over the next 12 months up by 45% on their mid-June levels — see Figure D.

³ On July 17, Russia's agriculture ministry cut its forecast grain production from 85 million tonnes to between 80 and 85 million tonnes, and some traders reportedly expect Russian wheat exports to reach only 7 million tonnes, as opposed to the government forecast of 12 million tonnes. [Farchy, Jack & Courtney Weaver, July 17, 2012. Russia and Kazakhstan add to grain fears. Financial Times. <http://www.ft.com/cms/s/0/d3dea69a-d030-11e1-99a8-00144feabdc0.html#axzz20xnb2UXO>]

⁴ Kazakhstan's deputy agriculture minister told reporters that alarming drought would reduce grain output there by 48% compared to the record crop of the previous year. [See reference in footnote above]

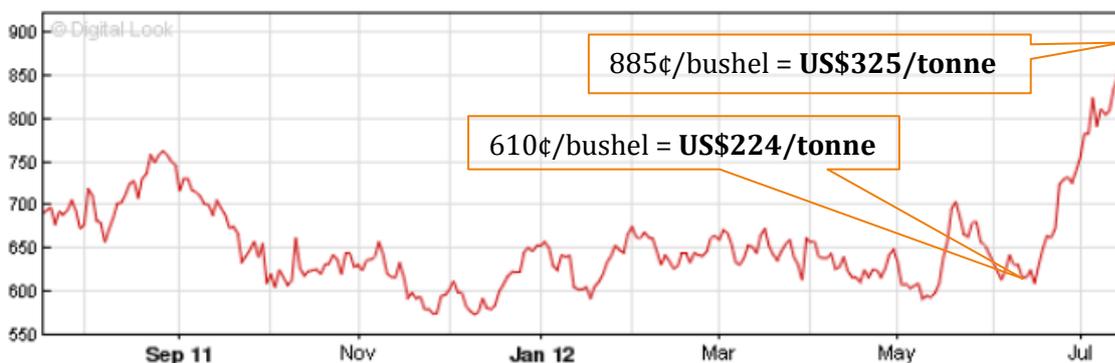
⁵ Maize futures for December 2012 delivery have increased by a 47% over the same time, going from around US\$204 per tonne to US\$300 per tonne, or 47% [CME Website: http://www.cmegroup.com/popup/mdq2.html?code=ZCZ2&title=December 2012 Corn&type=p#month=12-1-2-1;year=2;symbol=ZC_XCBT;period=D;link=daily]

Figure C CBOT Corn Futures: US cents/bushel, 12 months to July 18, 2012



Source: BBC Market data. US\$/tonne added

Figure D CBOT Wheat Futures: US cents/bushel, 12 months to July 18, 2012



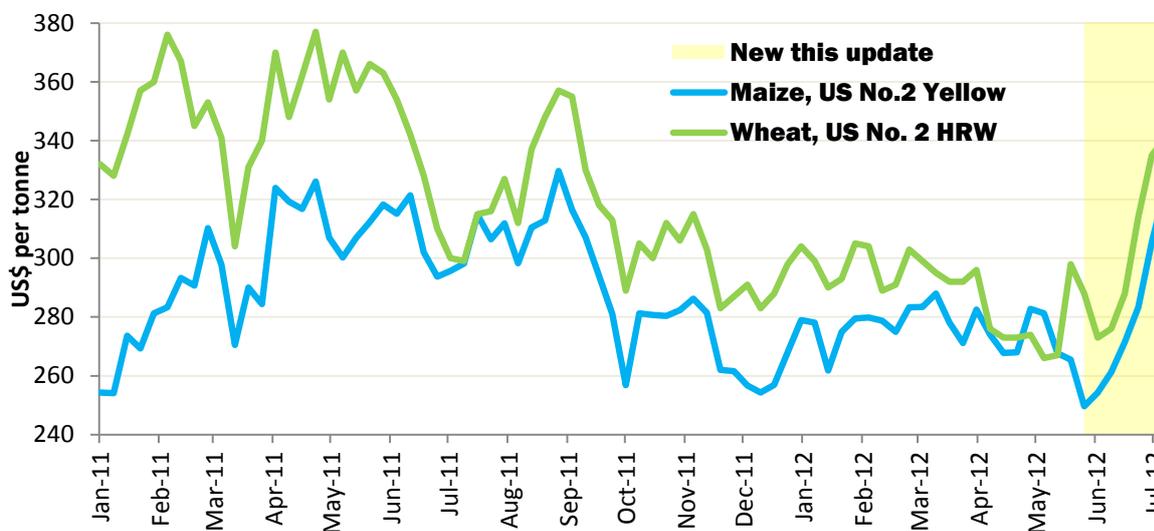
Source: BBC Market data. US\$/tonne added

Spot prices up as well

Spot prices for both maize and wheat have also been dragged upwards.

- Maize price has increased from around US\$250 per tonne in late May to US\$324 per tonne by mid-July — an increase of 30%.
- Wheat price has gone from around US\$275 per tonne in early June to about US\$340 per tonne, an increase of 25%

Figure E Maize and wheat prices, Jan 2011 to week ending July 13, 2012



Source: Constructed with data from FAO ESC. Note: The last 7 weeks are new data for this update.

The rise in maize prices does not surprise: the expected loss of 46M tonnes of output from the dominant exporter to the world market — in 2011/12 around 125M tonnes of maize were traded — is a massive shock. The only surprise here is that futures prices have not risen more.

But a glance at Figure A may explain why: even though the US harvest estimate has been cut savagely, world production is still expected to be greater than last year — by almost 4%,⁶ and to exceed consumption.

Wheat prices rising on expected substitution with maize

That wheat prices have increased by almost as much as the maize prices surprises, given the buoyant stocks of wheat and the relatively minor reduction in the production estimate. Part of the explanation for this lies in substitution: as maize prices rise, so too does the demand for wheat as a feed to replace the now costly maize.

But again, a look at Figure B shows that the wheat crop for the current year was expected to fall, and to less than consumption: hence the small reductions in forecasts lead to a wider gap between consumption and production. Even if there are stocks to cover this, it is then not surprising to see some risk-averse wheat buyers hedging against any further tightening of the market and bidding up the price.

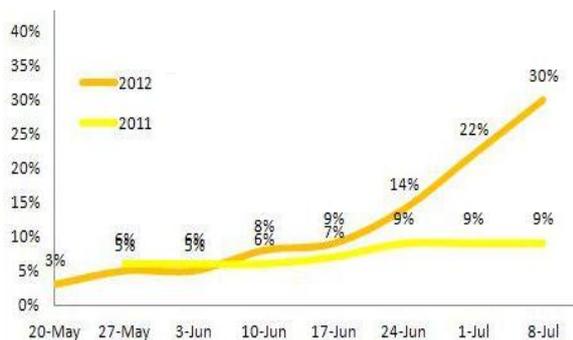
The future: could it get worse?

Conditions in the US corn belt have worsened ...

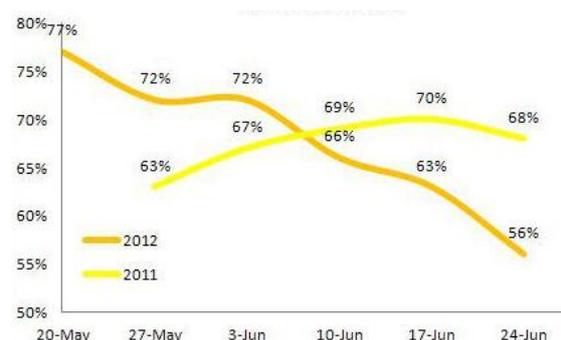
US maize crop condition ratings continue to deteriorate. Figure G shows a rising proportion of US maize crop rated very poor and poor, while the share rated good-to-excellent falls — compared to the 2011 figures over the same time. USDA's latest Crop Progress figures on Monday 16th of July rated 38% of the corn crop poor to very poor, and only 31% good to excellent.

Figure G Change in US maize crop condition ratings: 2012 figures compared to 2011 figures

Percent rated 'Very Poor' to 'Poor'



Percent rated 'Good' to 'Excellent'



Source: Mays, 2012, data from USDA Crop Progress⁷. **Note:** 5 ratings exist: Very poor, Poor, Fair, Good, & Excellent.

⁶ The largest year on year increase for global production over the last 10 year period was from 2006/07 to 2007/08 – 11%, while the smallest was less than 1% from 2007/08 to 2008/09

⁷ Mays, G.C. June 26, 2012. Corn Crop Conditions Deteriorate, Sending Crop And Fertilizer Stock Prices Higher. The Mays Report. <http://seekingalpha.com/article/684641-corn-crop-conditions-deteriorate-sending-crop-and-fertilizer-stock-prices-higher>

... but hard to say if they will continue to deteriorate

Could it get much worse? Perhaps not: some (unofficial) forecasts at last predict a break in the drought — although there may be the danger that August will see thunderstorms with potential crop damage. The US national weather service, however, is highly cautious on forecasting much beyond the next week or two. Hence the answer to the question is that we don't know.

Implications for developing countries

Some domestic food prices may be set to rise, particularly for those countries which require large imports of staple grains.

For countries well integrated into world markets for wheat and maize, international price rises would be expected to transmit fairly strongly to domestic markets, after some lag. Impacts could be felt through direct consumption, for instance in countries such as South Africa or Mexico where maize is consumed as a staple; as well as for countries importing large quantities for animal feed — again places like Mexico⁸, and also some Asian countries including Thailand.⁹

It is still early days to be seeing US maize and wheat price rises transmitting to domestic markets, but when they do, poor consumers are likely to be hardest hit.

Most of the poverty impact of the 2007/08 global food price crisis came from deepening poverty for those already poor, rather than an increasing number of people classified as poor¹⁰.

Will importers panic?

No signs of panic buying so far

When news as bad and unexpected as that for US maize breaks, panic may set in so that prices spike much higher than might be expected. This is what happened to rice prices in early 2008.

So far, however, there are no reports of panic buying. State buyers from major grain importers such as Egypt, Iran, and China cite large stocks. Egypt for example reportedly has 6 months' worth of stock, good until January 2013.¹¹

Mays, G.C. July 10, 2012. Only 40% Of This Year's Corn Crop Rated 'Good,' Crop And Stock Prices Move Higher. The Mays Report. <http://seekingalpha.com/article/711741-only-40-of-this-year-s-corn-crop-rated-good-crop-and-stock-prices-move-higher>

⁸ While Mexico imports mostly yellow maize for animal feed and produces close to sufficient white maize for human consumption, the prices of the two commodities still move together as they are substitutes

⁹ 'Thailand, Asia's biggest exporter of frozen chicken, expects higher prices of corn and soybeans to stoke food inflation as the cost of feeding animals climbs.' [Brown, Veronica & Nigel Hunt, July 12, 2012. Food crisis looms as importers sit out grain price highs. Reuters. <http://uk.reuters.com/article/2012/07/12/uk-global-grain-idUKBRE86B0UB20120712?feedType=RSS&feedName=GCA-GoogleNewsUK>]

¹⁰ Compton, Julia, Steve Wiggins & Sharada Keats, 2010. Impact of the global food crisis on the poor: what is the evidence? ODI. <http://www.odi.org.uk/resources/details.asp?id=5187&title=impact-global-food-crisis-poor-evidence>

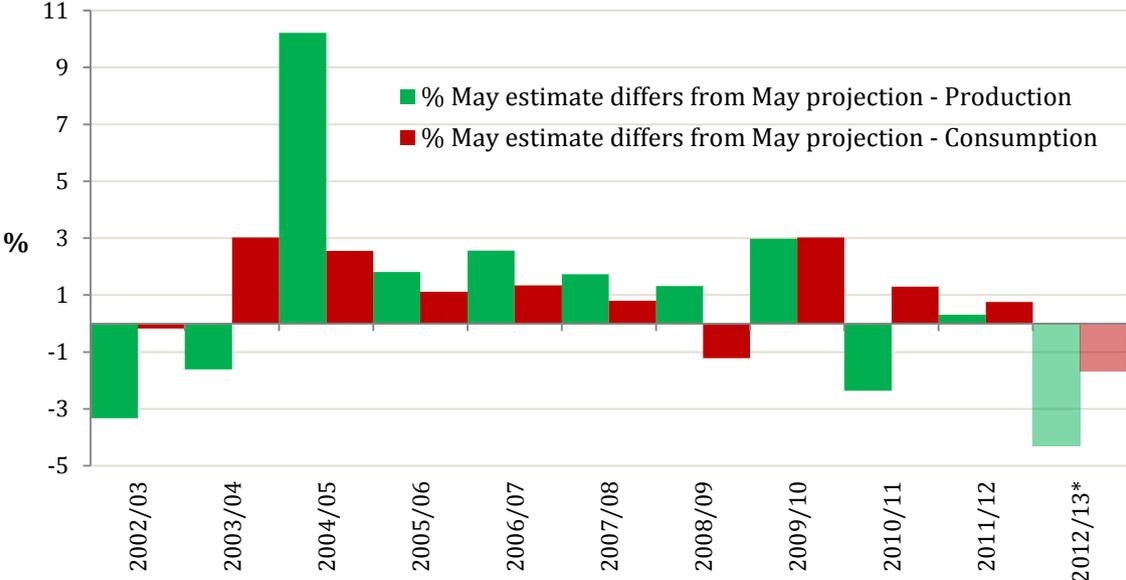
¹¹ See reference in earlier footnote – Brown et al., July 12, 2012

Technical detail

How often are harvest forecasts cut this heavily?

Presently the global 2012/13 maize crop looks set to fall more than 4% below initial projections. Over the last 10 years, USDA’s initial May projections for maize production have not been downgraded more than 4%; indeed in most years they have tended to slightly understate production — see Figure H.

Figure H Percent the estimated production at the end of the crop year differs from the projected production at the beginning of the crop year – 2002/03 to present.

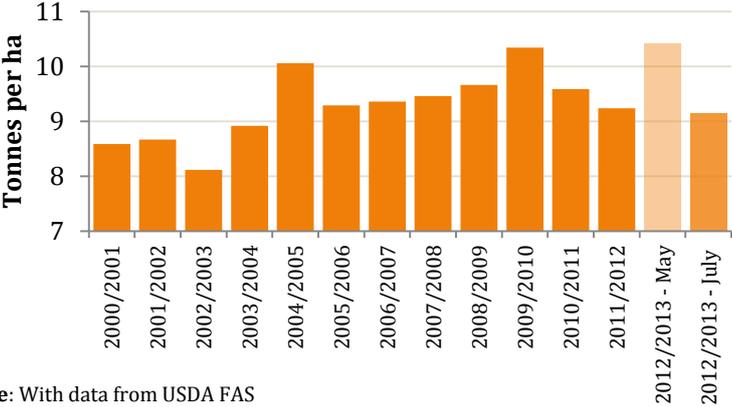


Source: With data from USDA WASDE. Note: *Bars for 2012/13 show % July projection differs from May projection

How much are US maize yields expected to fall?

Yield is now projected on average at 9.16 tonnes per hectare, only slightly below the 9.24 tonnes achieved per ha on average in 2011/12 — see Figure F.

Figure F Maize yield in the USA: 2000/01 to 2012/13 projection in July



Source: With data from USDA FAS

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