



2 October 2012

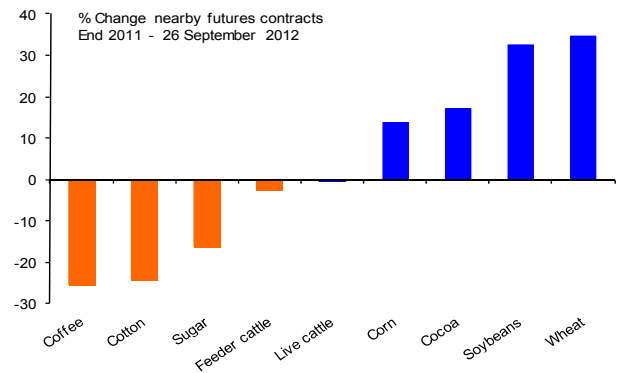
# Agriculture: Harvest Pressure Takes Center Stage

## Commodities Special

- **With supply side estimates stabilizing and in some markets building, market focus has shifted to demand destruction. In addition, improved weather in South America for planting, against the backdrop of the US harvest, as well as concerns over global growth, are providing further pressure on prices.**
- **While sentiment has turned more negative as the quarter comes to a close, we go back to fundamentals. Supply and demand balances are tight, particularly in the soybean complex. Though demand destruction is anticipated, we see minimal evidence of it happening, with the exception of corn exports.**
- **Indeed, we are concerned that the recent fall in grain and oilseed prices amid expectations of sizeable South American crops and large North American plantings next crop year, may prevent the necessary herd reduction in the livestock sector. This might particularly be the case in the better capitalized hog sector.**
- **Even with assumed demand rationalization, we find soybean meal stocks to be extremely tight. Should the livestock sector continue production at current levels, availability in the US, which has the biggest influence on CBOT values, will be scarce.**

The theme in agriculture has changed from shrinking supplies to supply stabilization, or even supply build (on reports of better than expected yields as harvest progresses), as well as demand destruction. Nearby corn and wheat futures closed the quarter up 8% and 18%, respectively. Soybean futures closed the quarter up 4%. Since the end of June and to their price peaks, corn has surged 23.6%, wheat 27.6% and soybeans 17%. Wheat has held up much better since this time and has fallen 4% since its peak. Corn has fallen 9% with soybean prices down 10% from their peak level. As a result since the end of last year wheat and soybeans have been the best performing parts of the agricultural complex compared with extreme weakness in coffee and cotton, Figure 1.

Figure 1: 2012 agricultural scorecard

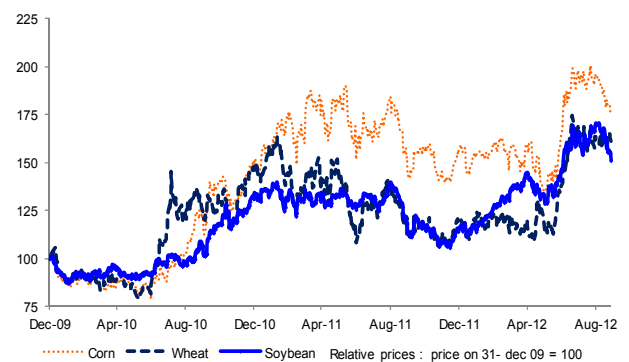


Source: Deutsche Bank, Bloomberg Finance LP (Data as of September 26 2012)

As harvest results come in, the market appears to be more comfortable with availability. Harvest-related pressure, particularly as farmers reportedly are actively selling corn owing to aflatoxin concerns (and a lack of carry in corn/inverted curve in soybeans), as well as improved planting weather in South America have weighed on futures and prompted liquidation into quarter-end, Figure 2. However, lower than expected corn and wheat stocks in the US Quarterly Stocks report led to a strong reversal in price performance in the last day of the quarter.

Our supply demand analysis points to tight conditions, particularly in the soybean complex. USDA assumes significant demand destruction in the livestock sector, but, we have seen very little sign of this as of yet.

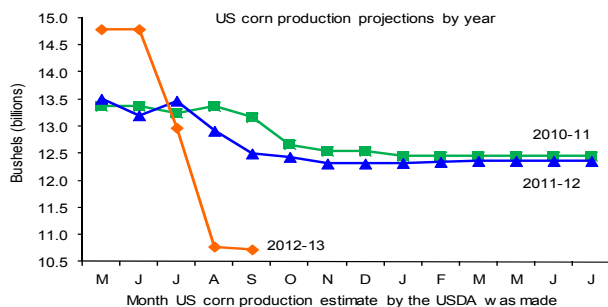
Figure 2: Grain & soybean price performance



Source: Deutsche Bank, Bloomberg Finance LP (Data as of September 26 2012)

On the supply side, it appears that corn yields may still have some downside, though revisions are far much less than what was seen over the summer, Figure 3. Even so US corn harvest projections have suffered from a significant downgrade since the start of the summer following extreme drought. In soybeans, better than expected reports from the field during harvest show an upward bias to yields.

**Figure 3: US corn production projections by year**



Source: USDA

On acreage, using Farm Service Agency (FSA) data, we derive an additional 0.8 million acres for corn, equating to planted acreage of 97.2 million acres vs. the USDA's 96.4 in its September crop report.

Turning to soybeans, the same analysis points to an additional 1.05 million acres for a total of 77.2 million acres, above USDA's September crop report planted acreage figure of 76.1 million acres. For background, the FSA requires that farmers participating in payment programs submit an annual report regarding cropland use on their farms, which is used to determine payment eligibility and calculate losses.

## Corn: Making It Work

### Summary

- **We project tighter corn ending inventories and stocks-to-use than the USDA for the current crop year, even assuming slightly higher acreage.**
- **We believe the USDA's estimate for corn used for the ethanol sector is reasonable. The early pace of production is slightly ahead of this estimate and economics for blending ethanol with gasoline are compelling. However, overcapacity in the sector and imports from Brazil prevent ethanol prices from going high enough for ethanol producers to run at sustainably profitable levels.**
- **On exports, we assume 50 million less bushels of corn are shipped out of the US than the USDA, owing to availability of alternative sources, as well as the ability to substitute with wheat.**
- **The USDA is assuming significant livestock liquidation in its corn for Feed & Residual demand estimate, which is not consistent with its assumptions for animal product production. Based on our estimates of future livestock profitability, the pace of liquidation and the lagged impact on feed demand, we derive 250 million more bushels of corn for Feed & Residual demand than the USDA.**
- **Once harvest pressure abates, corn futures should firm as demand relative to supply is robust. We see the imbalance most acutely manifesting itself in the cash market, but do see modest upside in the order of up to 10% to corn futures.**

We present Deutsche Bank's estimate for US corn supply and demand vs. the USDA's estimate below. We adjust planted acreage based on FSA data, as discussed above. However, the FSA report does not include abandonment, so there is potential for our acreage estimate to be too high.

All in, we derive ending stocks of 628 million bushels, below the USDA's 733 million bushel estimate. Our forecasts translate into a historically low stocks-to-use ratio of 5.5% (or 20 days of consumption), below the USDA's assumed 6.5%. For perspective, the historical average is approximately 14% indicating the tightness of current market conditions.

**Figure 4: US corn supply/demand forecast**

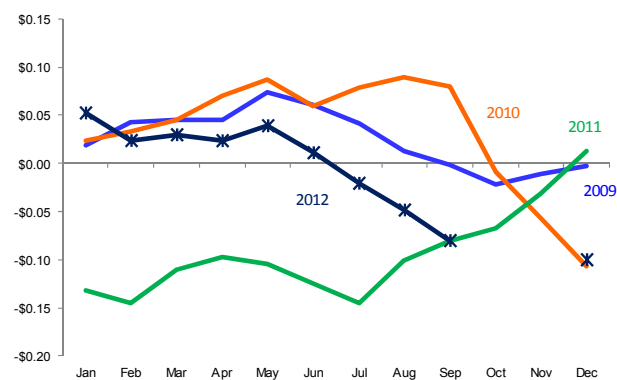
	USDA									
	Projections As Of									
	05/06A	06/07A	07/08A	08/09A	09/10A	10/11A	Sep 11/12E	Aug 12/13F	Sep 12/13F	Deutsche Bank 12/13F
<b>Supply</b>										
Planted Acres	81.8	78.3	93.5	86.0	86.4	88.2	91.9	96.4	96.4	97.2
Harvested Acres	75.1	70.6	86.5	78.6	79.5	81.4	84	87.4	87.4	88.1
	91.8%	90.2%	92.5%	91.4%	92.0%	92.3%	91.4%	90.7%	90.7%	90.7%
Bu. Yield Per Acre	148.0	149.1	150.7	153.9	164.7	152.8	147.2	123.4	122.8	122.8
Bushels in Beg. Stocks	2,114	1,967	1,304	1,624	1,673	1708	1128	1021	1181	1181
Bushels Produced	11,114	10,531	13,038	12,092	13,092	12,447	12,358	10,779	10,727	10,822
Imported Bushels	9	12	20	14	8	28	25	75	75	75
Total Supply	13,237	12,510	14,362	13,730	14,773	14,182	13,511	11,875	11,983	12,078
<b>Demand</b>										
Feed & Residual	6,141	5,591	5,913	5,182	5,125	4,793	4,400	4,075	4,150	4,400
Food, Seed, Industrial	2,981	3,490	4,387	5,025	5,961	6,428	6,390	5,850	5,850	5,850
<b>Ethanol</b>	<b>1,603</b>	<b>2,119</b>	<b>3,049</b>	<b>3,709</b>	<b>4,591</b>	<b>5,021</b>	<b>5,000</b>	<b>5,000</b>	<b>4,500</b>	<b>4,500</b>
Others	1,378	1,371	1,338	1,316	1,370	1,407	1,390	850	1,350	1,350
Total Domestic Use	9,122	9,081	10,300	10,207	11,086	11,221	10,790	9,925	10,000	10,250
Export Use	2,147	2,125	2,437	1,849	1,980	1,834	1,540	1,300	1,250	1,200
Total Use	11,269	11,207	12,737	12,056	13,066	13,055	12,330	11,225	11,250	11,450
Ending Stocks	1,968	1,303	1,625	1,674	1,708	1,128	1,181	650	733	628
<b>Analysis</b>										
% Harvested of Planted	91.8%	90.2%	92.5%	91.4%	92.0%	92.3%	91.4%	90.7%	90.7%	90.7%
Domestic Use/Production	82.1%	86.2%	79.0%	84.4%	84.7%	90.2%	87.3%	92.1%	93.2%	94.7%
Stocks/Use Ratio	17.5%	11.6%	12.8%	13.9%	13.1%	8.6%	9.6%	5.8%	6.5%	5.5%
Non-Feed % of Total Use	26.5%	31.1%	34.4%	41.7%	45.6%	49.2%	51.8%	52.1%	52.0%	51.1%
Exports % of Total Use	19.1%	19.0%	19.1%	15.3%	15.2%	14.0%	12.5%	11.6%	11.1%	10.5%
Stocks to daily consumption	64	42	47	51	48	32	35	21	24	20

Source: USDA, Deutsche Bank  
Note: The marketing year for corn starts in September

Feed & Residual use represents about 36% of total corn demand. Based on the outlook for poor profitability among the livestock sectors and incorporating the lag between liquidation of broiler, hog and cattle numbers and the impact on feed demand, we derive corn for Feed & Residual use of 4.4 billion bushels, above the USDA's estimated 4.15 billion.

In the chicken sector, which consumes about 33% of estimated corn use (in terms of breakdown by species of livestock), based on spot calculations, producers are losing about USD0.10/lb. However, with US Delta/Southern corn available and some prior coverage, we believe some producers are currently profitable.

We forecast producers will be losing roughly USD0.10/lb by December, Figure 5. With the recent drop in corn and soybean meal prices, this loss estimate is USD0.04/lb better than our prior estimate, just three weeks ago. For perspective, losses of USD0.10-0.15/lb prompted a 6-8% production cut in 2011.

**Figure 5: US chicken operating profit, X = forecast**

Source: Deutsche Bank, Urner Barry, WSJ, Georgia Dock  
Note: Data as of September 10, 2012

However, eggs set (an approximate 10 week forward indicator of supply) have now moved above year ago levels, despite the likely future losses, Figure 6. We believe that as US Delta/Southern corn is worked through, producer losses will accelerate and participants will be pressured to reduce production in the fourth quarter of this year.

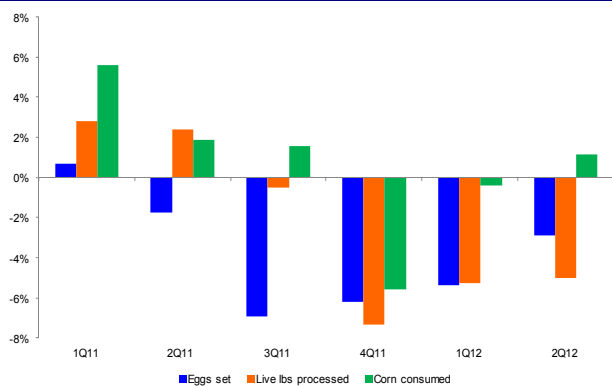
**Figure 6: Weekly broiler eggs set ('000)**



Source: Deutsche Bank, USDA

There is an approximate two-and-a-half to three month lag between a reduction in broiler eggs set and lower demand for corn. Assuming production cuts come in October and accelerate in November and December, we would expect corn use by the chicken sector to begin to decline in the first quarter of next year.

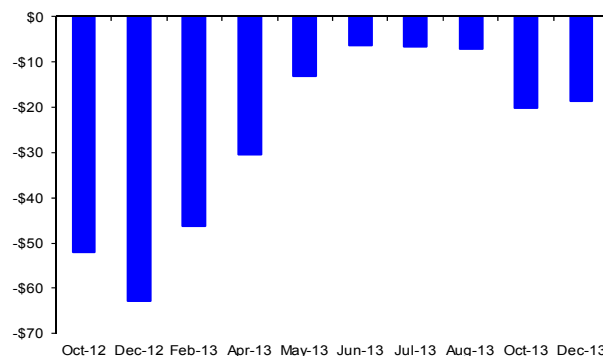
**Figure 7: QoQ change in eggs set, production, broiler corn use**



Source: Deutsche Bank, USDA

The hog sector is forecast to account for 20-25% of US corn consumed by the entire livestock sector this crop year. We estimate that hog producers are losing about USD20-25/head currently. This should more than double to USD55-60/head by October-December, Figure 8. We do not project a profit in the summer, but if corn and soybean prices continue to slide, this could change. We are concerned that well-capitalized hog raisers, with the support of their bankers, may attempt to "wait it out" until new crop corn comes in.

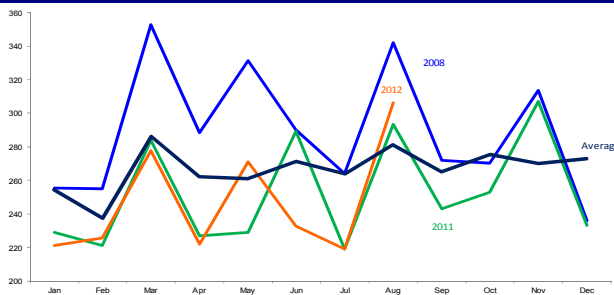
**Figure 8: Future hog raising margins (USD/head)**



Source: Deutsche Bank, Bloomberg Finance LP, Iowa State University  
Note: Prices as of September 26th.

Sows are adult female hogs that have farrowed at least one litter. Slaughter of these breeders would indicate shrinking future hog supplies. While sow slaughter has ticked up above year ago levels and the 10 year average, it is still below levels reached in 2008, Figure 9, which was the last period of liquidation.

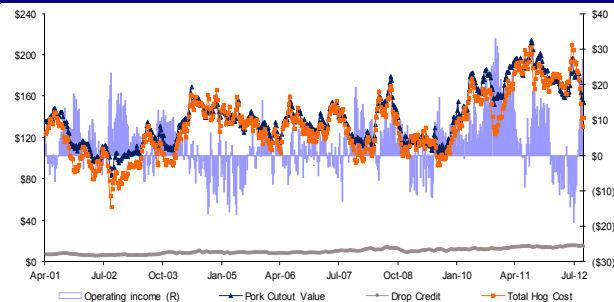
**Figure 9: Weekly sow slaughter ('000 heads)**



Source: Deutsche Bank, USDA

The cash hog market appears to be tightening up as the market has worked through hogs that were delayed in being marketed this summer (owing to the heat) as well as hogs that were pulled forward for slaughter due to high feed costs. Pork processors, who are enjoying strong margins after weakness from January through June of this year (Figure 10) have just recently been willing to pay up for cash hogs, suggesting the hog supply has tightened. This recent incremental tightness in the spot market may deter producers from liquidating their herds.

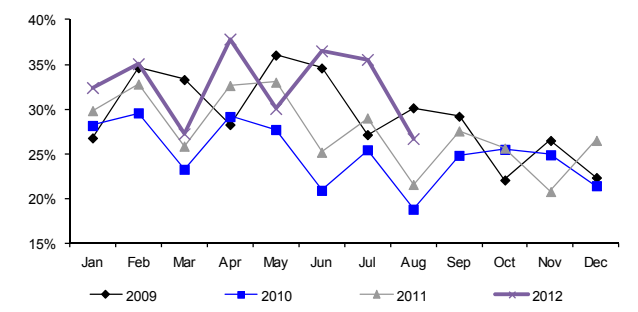
**Figure 10: US pork processing margins (USD/head)**



Source: Deutsche Bank, USDA, Smithfield

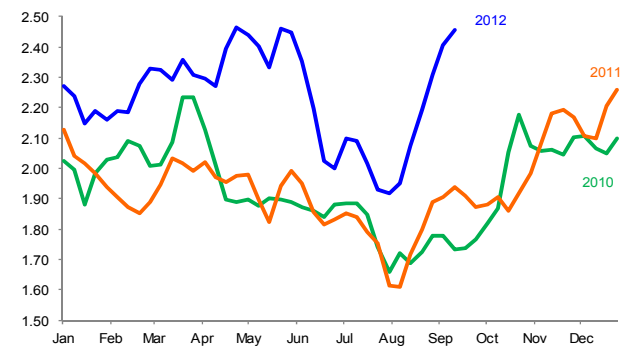
However, pork in cold storage (freezer inventory) is high, Figure 11, thus potentially placing a ceiling on pork prices. A possible offset to this heavy inventory situation is the record ratio of wholesale beef prices compared to pork prices, Figure 12. Given the high level of beef prices relative to pork, we may see a pick-up in featuring of pork at retail.

**Figure 11: US Pork inventory as % of production**



Source: Deutsche Bank, USDA

**Figure 12: Historical beef-to-pork price ratio**

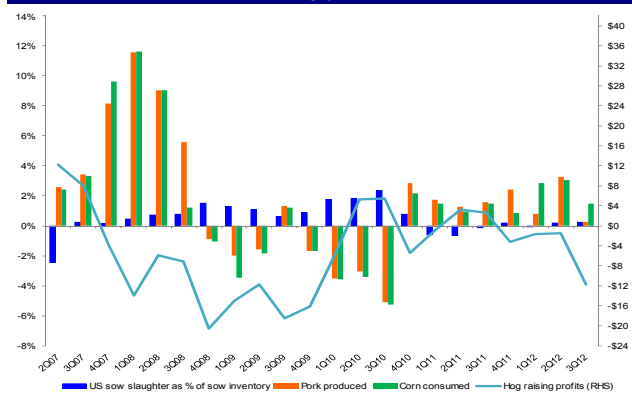


Source: Deutsche Bank, USDA

It is important to note that even if sow (breeder hog) liquidation happened today, the impact on feed usage would not be evident until March, at the earliest. From sow slaughter to the impact on feed takes about seven months. We do not project a significant drop in corn demand from the pork sector until the second quarter of next year when we assume a 3.5% decline vs. the USDA's 1.1% assumed decline.

However, given the fact that (1) sow liquidation has been modest, (2) the cash hog market is firming somewhat and (3) pork prices should be supported by high beef prices, we believe there is risk that our feed estimate for hogs may prove too low. As a result, there could be upside to our assumed 4.4 billion bushels in corn used in Feed & Residual demand.

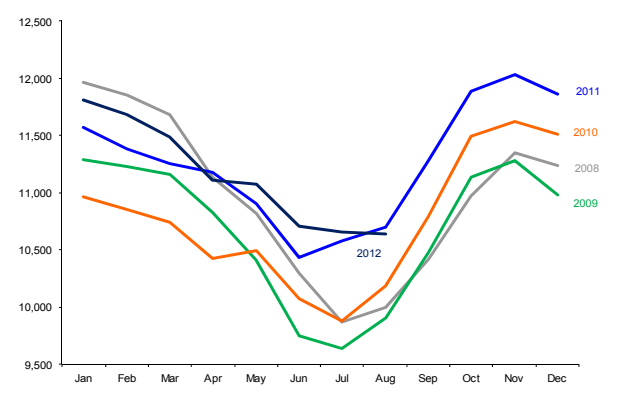
**Figure 13: Changes in sow slaughter, pork production, corn consumed, hog raising profits**



Source: Deutsche Bank, Dr. Ron Plain (University of Missouri), USDA, University of Iowa

In cattle, we utilize cattle on feed to derive our corn demand for the beef sector. While cattle in feedlots had been higher than year ago levels for most of this year, owing to drought conditions, which pushed cattle off of devastated pasture lands, and imports of feeder cattle from Mexico and Canada, numbers fell below year ago in August, Figure 14. For perspective, this represents only the second time in the last 28 months that feedlot inventories have dropped below year ago levels, according to Dr. Derrell Peel at Oklahoma State University.

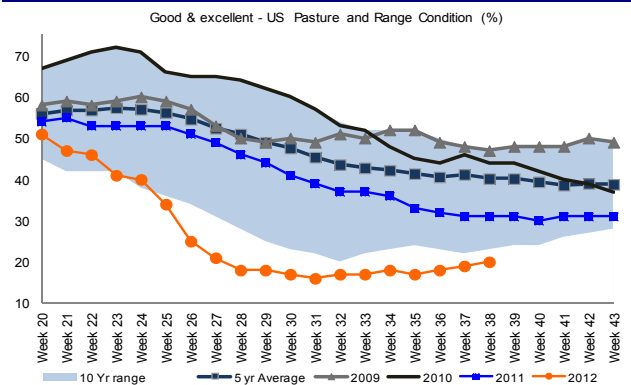
**Figure 14: Monthly cattle on feed ('000 head)**



Source: Deutsche Bank, USDA  
Note: feedlots of 1000 head and larger

U.S cattle inventory is at historical lows. Though weights have increased consistently, leading to a higher supply of beef than cattle numbers imply, the US needs to see the beef cattle herd rebuild. This rebuild started, to a limited extent, in the first quarter of this year with solid profitability at the cow-calf producer level. However, this rebuild has now reversed on higher feed costs and poor pasture and range conditions, Figure 15.

**Figure 15: US pasture and range conditions (% good/excellent)**



Source: Deutsche Bank, USDA

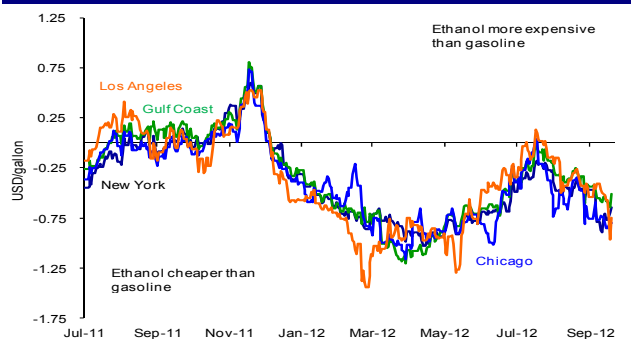
In terms of cattle availability, lower US calf production has been partially offset by higher imports of feeder cattle from Mexico and Canada. However, Mexican cattle imports are expected to slow in the near future as the impact of herd liquidation from the country’s drought into 2011 takes hold. Looking at the weight breakdown of placements into feedlots, the reduction in lightweight cattle suggests that cattle on feed will stay below year ago levels.

**Corn for ethanol demand likely to remain brisk**

Like Feed & Residual use, we do not see any downside to the USDA’s corn for ethanol estimate of 4.5 billion bushels. In fact, the very early pace so far this crop year points to 50-100 million bushels of upside, but at this early stage, the USDA’s estimate is reasonable, in our view.

Even if the EPA was to grant a temporary waiver of the ethanol mandate (with a decision expected in mid-November), economics point to the continued use of ethanol. Ethanol is trading at a significant USD0.50-0.80/gallon discount to gasoline, depending on the regional market, Figure 16. Moreover, ethanol is about USD0.50-0.70/gallon cheaper than alternative octane boosters.

**Figure 16: Ethanol – gasoline prices (USD/gallon)**



Source: Deutsche Bank, OPIS, Bloomberg Finance LP

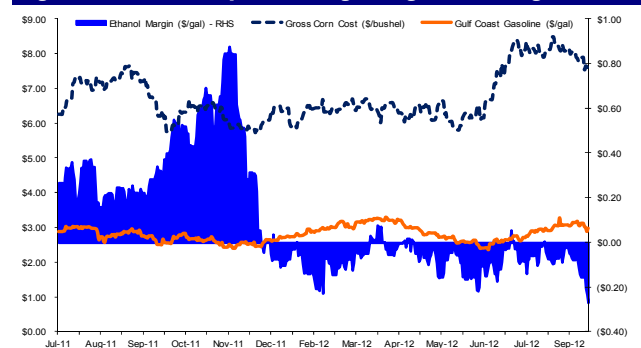
As a result, short of the EPA banning corn use for ethanol, we do not see demand destruction over and above what is currently forecast in this sector. With respect to the waiver request, there is a high hurdle for the EPA to grant a waiver as shown in its denial of Texas Governor Perry’s request in 2008. Specifically, the EPA has noted that implementation of the mandate must be responsible for severely harming the economy, rather than just contributing to such harm.

In its notice requesting comment on the petition, the EPA asked for comments on a number of items, including information that would enable the EPA to “determine to what extent, if any, a waiver approval would change demand for ethanol and affect corn or feed prices...” Even if the EPA agrees that the RFS is responsible for harming the economy rather than contributing to the harm, it is this point – determining whether a waiver approval would change demand for ethanol – that would be difficult to support.

While economics for ethanol use are attractive to gasoline blenders, two issues should prevent US ethanol production from ramping up significantly:

- (1) Ethanol margins are under pressure (Figure 17) and are unlikely to improve materially owing to overcapacity in the industry. Specifically, nameplate capacity stands at 14.7 billion gallons with 13.9 billion gallons operating. The USDA’s estimate for corn used for ethanol equates to an annual run rate of 12.375 billion gallons. Hence, industry participants compete profits away whenever corn prices move lower. We have seen this occur over the last two weeks with spot corn prices falling by 7%, while ethanol prices plunged by 14%.

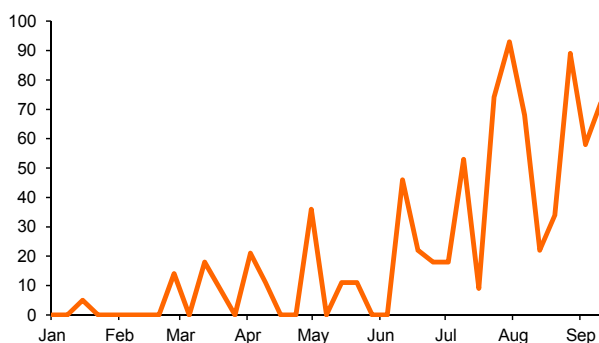
**Figure 17: Ethanol processing margins (USD/gallon)**



Source: Deutsche Bank, OPIS, WSJ, Bloomberg Finance LP

- (2) Sugarcane ethanol imports from Brazil have picked up, helped by the US advanced biofuels mandate (for which sugarcane ethanol qualifies) and the associated credit, or RIN. Though volatile on a weekly basis, the four-week moving average picked up in June, but has accelerated quickly to the 51-64kbd level since mid-August.

**Figure 18: US ethanol imports (kbd)**

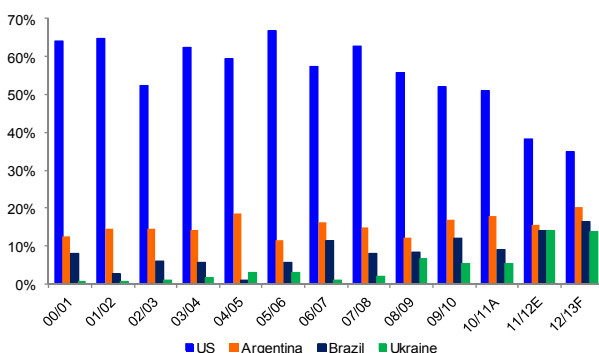


Source: Deutsche Bank, EIA

### More rationalization outside the US

We assume modestly lower corn exports than the USDA at 1.2 billion bushels. The US is losing global corn export share to Brazil and the Ukraine, Figure 29. Specifically, the US share of global corn exports has fallen from the historic 52-67% range to an estimated 35% this year. Argentina's share has risen from 12-14% to an estimated 20%, while Brazil will achieve 16.5% share this year and Ukraine will contribute 13.7%.

**Figure 19: Historical corn export market share by country**



Source: Deutsche Bank, FAS

Current outstanding sales and accumulated exports account for 32% of the USDA's crop year estimate compared to 38% as the same time last year. However, corn export inspections the last two weeks came in ahead of the pace needed to achieve the USDA's estimate. That being said, there is some flexibility for global customers to source corn from alternative destinations or to substitute with wheat.

## Soybeans: Higher Crush Needed

### Summary

- We derive soybean ending stocks of 103 million bushels, which is tighter than the 115 million estimated by the USDA. Our forecast equates to a historically low 3.7% stocks-to-use ratio, or only 14 days worth of consumption.
- We assume a higher pace of soybean crushing (processing) than the USDA. Based on the livestock liquidation analysis presented above, soybean meal ending stocks will be negative without higher production.
- We believe soybean meal supplies will still be intolerably tight with only 170,000 short tons in ending stocks vs. typical levels that approximate 300,000 short tons.
- We find the most value in the soybean complex and expect this to be reflected in futures prices as tight supplies are more fully evident, once production is fully known and harvest pressure abates.
- Though South America supplies are expected to hit a new record high and which will be available to the market beginning in February, US supplies (which have the strongest link to futures prices) will tighten further on our forecasts. US users of soybean meal will need to look to alternatives, including unconventional options such as soybean meal imports from Brazil.

The soybean balance sheet is much tighter than corn, particularly with a lack of alternative supply as Brazilian soybean exports are virtually exhausted. We assume an additional 1.05 million acres vs. the USDA's estimate, based on FSA data, as discussed above. We use the USDA's yield estimate of 35.3 bu/acre, but acknowledge that there is upside here owing to reports of better than expected yields as harvest progresses. As of September 23rd, 22% of the US harvest was complete.

All in, we derive ending stocks of 103 million bushels, which equates to a stocks-to-use of 3.7%, or 14 days of consumption. This is very tight and compares to 5.3% last year (adjusting for the Quarterly Grains Stock report) and a historical average of 9%. Given the stretched fundamental situation, we find soybeans the most undervalued currently.

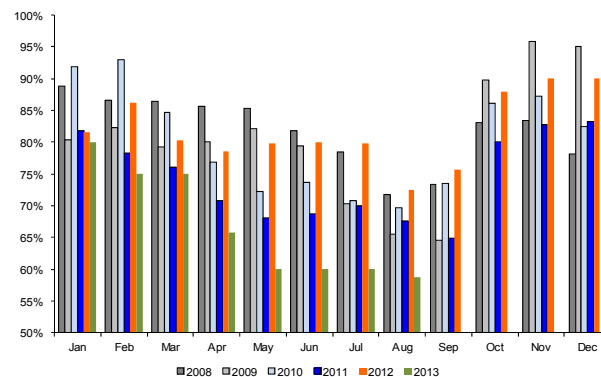
**Figure 20: US soybean supply/demand forecast**

	05/06A	06/07A	07/08A	08/09	09/10	10/11	Projections As Of			Sep 12/13F	Deutsche Bank 12/13F	DB- Post Grain Stocks report 12/13F
							Sep 11/12E	Post Grain Stocks 11/12E	Aug 12/13F			
<b>Supply</b>												
Planted Acres	72.0	75.5	64.7	75.7	77.5	77.4	75	75.1	76.1	76.1	77.2	77.2
Harvested Acres	71.3	74.6	64.1	74.7	76.4	76.6	73.6	73.8	74.6	74.6	75.6	75.6
	99.0%	98.8%	99.1%	98.7%	98.6%	99.0%	98.1%	98.3%	98.0%	98.0%		
Bu. Yield Per Acre	43.0	42.9	41.7	39.7	44.0	43.5	41.5	41.9	36.1	35.3	35.3	35.3
Bushels in Beg. Stocks	256	449	574	205	138	151	215	215	145	130	139	168
Bushels Produced	3,063	3,197	2,677	2,967	3,359	3,329	3,056	3,094	2,692	2,634	2,670	2,670
Imported Bushels	3	9	10	13	15	14	16	16	20	20	20	20
Total Supply	3,322	3,655	3,261	3,185	3,512	3,495	3,287	3,325	2,857	2,785	2,829	2,857
<b>Demand</b>												
Crushings	1,739	1,808	1,803	1,662	1,752	1,648	1,705	1,705	1,515	1,500	1,550	1,550
Export	947	1,116	1,159	1,283	1,499	1,501	1,360	1,360	1,110	1,055	1,100	1,100
Seed	93	80	89	90	90	87	88	88	89	89	89	89
Residual	94	77	5	12	20	44	3	3	27	25	15	15
Total Use	2,873	3,081	3,056	3,047	3,361	3,280	3,157	3,157	2,742	2,670	2,754	2,754
Ending Stocks	449	574	205	138	151	215	130	168	115	115	75	103
<b>Analysis</b>												
% Harvested of Planted	99.0%	98.8%	99.1%	98.7%	98.6%	99.0%	98.1%	98.3%	98.0%	98.0%	98.0%	98.0%
Use/Production	93.8%	96.4%	114.2%	102.7%	100.1%	98.5%	103.3%	102.1%	101.9%	101.4%	103.2%	103.2%
Stocks/Use Ratio	15.6%	18.6%	6.7%	4.5%	4.5%	6.6%	4.1%	5.3%	4.2%	4.3%	2.7%	3.7%
Exports % of Total Use	33.0%	36.2%	37.9%	42.1%	44.6%	45.8%	43.1%	43.1%	40.5%	39.5%	39.9%	39.9%
Stocks to daily consumption	57	68	24	17	16	24	15	19	15	16	10	14

Source: USDA, Deutsche Bank  
 Note: The marketing year for soybeans starts in September

We assume a higher crush for the 2012/2013 crop year owing to the need for soybean meal. Based on our forecast, we assume crushings of 1.55 billion bushels, above the USDA's 1.5 billion forecast. We assume a historically low 58-60% soybean processing capacity utilization next summer, Figure 21, though that may be too high. In our view, crushing is dependent on availability, which is based on the pace of US exports until the South American crop is ready to be shipped out in the February timeframe.

**Figure 21: NOPA Crush Utilization, DB Estimates Sept '12-Aug '13**



Source: Deutsche Bank, National Oilseed Processors Association  
 Note: Deutsche Bank projections September 2012-August 2013

Without this higher crush (soybean processing), we would have negative soybean meal ending stocks, which is impossible. Assuming a 47.6 lbs/bushel soybean meal extraction rate (lbs of soybean meal from one bushel of soybeans), we still are very tight on soybean meal availability with estimated ending stocks of 170,000 short tons (Figure 22). This is below the typical level of about 300,000 short tons.



**Figure 22: US soybean meal supply/demand forecast**

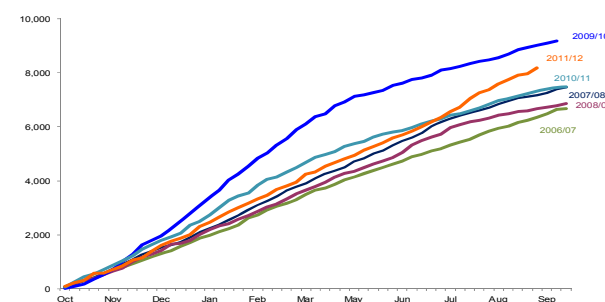
	Projections As Of									
	05/06A	06/07A	07/08A	08/09	09/10	10/11	Sep 11/12E	Aug 12/13F	Sep 12/13F	Deutsche Bank 12/13F
<b>Supply</b>										
Short tons in Beg. Stocks	172	314	343	294	235	302	350	300	300	300
Production	41,242	43,054	42,284	39,102	41,707	39,251	41,250	36,000	35,700	36,890
Imports	141	156	141	88	160	180	200	300	300	400
Total Supply	41,555	43,524	42,768	39,484	42,102	39,732	41,800	36,600	36,300	37,590
<b>Demand</b>										
Domestic	33,176	34,374	33,232	30,741	30,640	30,301	32,000	29,300	29,200	30,620
Export	<u>8,064</u>	<u>8,804</u>	<u>9,242</u>	<u>8,508</u>	<u>11,160</u>	<u>9,081</u>	<u>9,500</u>	<u>7,000</u>	<u>6,800</u>	<u>6,800</u>
Total Use	41,240	43,178	42,474	39,249	41,800	39,382	41,500	36,300	36,000	37,420
Ending Stocks	314	346	294	235	302	350	300	300	300	170
Stocks/Use	0.8%	0.8%	0.7%	0.6%	0.7%	0.9%	0.7%	0.8%	0.8%	0.5%

Source: USDA, Deutsche Bank  
 Note: The marketing year for soybean meal starts in October

If crush (processing) cannot go higher owing to low soybean availability, the US protein industry would have to turn to wheat feeding, canola meal use, and imports of soybean meal. In terms of the latter, logistical constraints are an issue as the US is not well set up to import product. Additionally, Brazil will be stretched logistically and adding a new trade flow – Brazilian soybean meal to the US – may further stress its system.

With respect to canola meal, we note that its protein content is lower than soybean meal (mid 30's vs. 47-48%) and it is a less preferred feed. Finally, we did not discuss higher use of dried distillers grains, DDGS (a feed alternative produced as a byproduct of ethanol processing) owing to a lower preference for the feed since the widespread adoption of corn oil extraction by the ethanol industry, which has reduced the nutritional content of DDGS.

In addition to the solid domestic demand for soybean meal, export demand is robust. New crop sales stand at 36% of the USDA's crop year estimate. This compares to 16% for the same time last year. Old crop exports (accumulated exports + outstanding sales) for this crop year (ends September) are running 300,000 short tons above USDA's estimate. We expect a portion of these to be rolled over into the new crop year, further stretching the 2012/13 balance sheet.

**Figure 23: Soybean meal accumulated exports ('000 MT)**

Source: Deutsche Bank, USDA

Brazilian soybeans are not expected to start to ease global tight supplies until February/March 2013. US soybean commitments (accumulated exports + outstanding sales) for 2012/2013 represent a significant 77% of USDA's crop year estimate. Hence, we assume higher exports of 1.1 billion bushels vs. the USDA's 1.055 (which is a seven-year low).

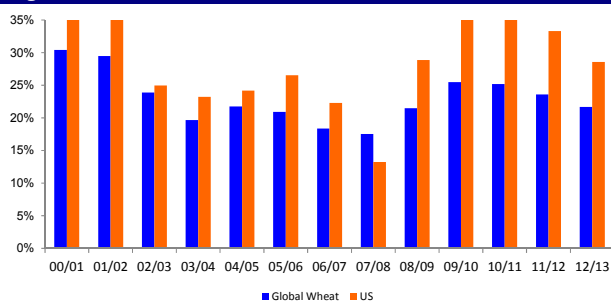
## Wheat: Adequate, But Shrinking Supplies

### Summary

- The US wheat supply and demand balance is more “normal” compared to soybeans and corn. Global stocks are tighter than the historical average, but remain adequate.
- We expect potential further downside to Southern Hemisphere supply estimates, as well as the need for wheat to fill the gaps in feed demand left by tight soybean meal and corn supplies. These should help provide underlying support to the wheat market.
- Given these dynamics, we expect wheat to be range-bound with some downside in 4Q13 contracts.

Wheat fundamentals are far less tight than those of soybeans and corn. Specifically, the US wheat stocks-to-use ratio was estimated at 28.6% in the September crop report for the 2012/13 crop year, which ends next May. This compares to the historical average of 28.2%. On a global basis, global stocks-to-use is forecast at 21.7% compared to the historical average of 23.1%, Figure 24.

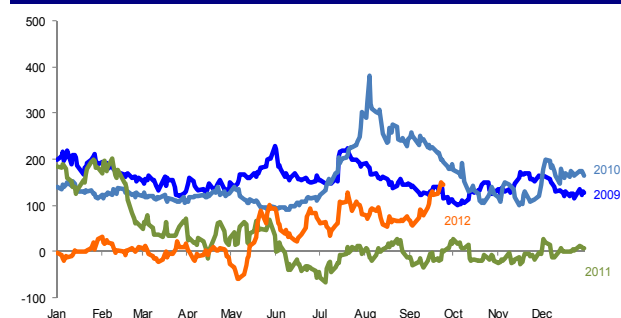
**Figure 24: Global and US wheat stocks-to-use ratios**



Source: Deutsche Bank, USDA

While not burdensome, global wheat supplies are sufficient. Hence, wheat has been largely trading along with corn. However, recently wheat has been stronger relative to corn (Figure 25) as supply side worries in key exporter nations have surfaced.

**Figure 25: Wheat – corn spread**

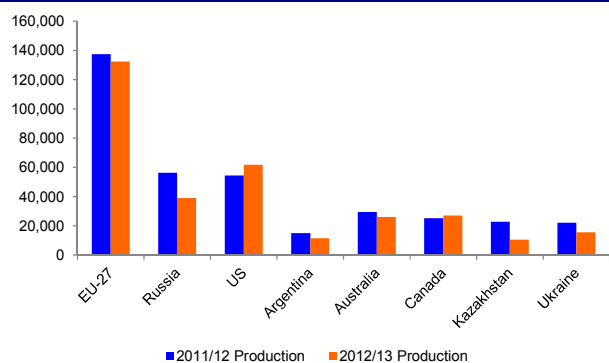


Source: Deutsche Bank, Bloomberg Finance LP  
Prices are USD/bu \* 100

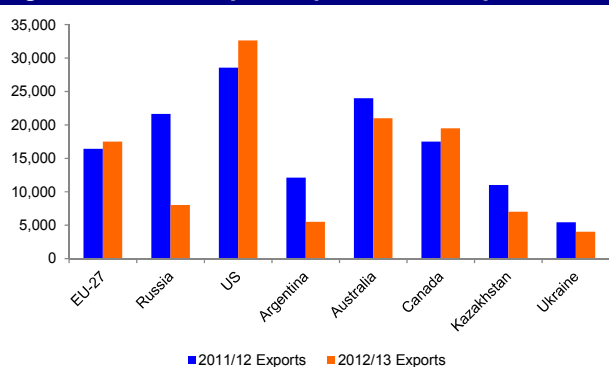
Australia’s crop has been adversely affected by dry weather, particularly across Western Australia. The USDA currently estimates the crop at 26 MMT, but ABARES pegs the crop at 22.5 MMT, with potential further downside. This difference accounts for 50 bps. in terms of global stocks-to-use. Additionally, farmers in Argentina have cut wheat plantings by 22% and recent heavy rains may lead to crop loss in the Buenos Aires province.

Possible export restrictions from Russia have been a primary driver of higher wheat prices (relative to corn prices) recently. Ukraine noted it would consider similar measures, if Russia restricted exports. Indeed, reports have surfaced that the Agriculture Ministry in the Ukraine indicated that wheat exports would not exceed 4 MMT, which is in line with USDA’s current estimates. In Russia, the Agriculture ministry estimates Russia’s 2012/13 grain exportable surplus (including wheat) at 10-12 MMT (vs. last year’s 27 MMT), down from its prior estimate of 10-14 MMT. Since the start of the marketing year (which began on July 1<sup>st</sup>), the country has already exported 7 MMT. As a result, even if export restrictions are not officially set, dwindling supplies will eventually price Russia out of the export market by the end of the year. We note that last week’s wheat purchase by Egypt did not include Russian wheat as it was priced higher than French and Romanian wheat.

Russia’s Deputy Prime Minister Arkady Dvorkovich has repeatedly indicated that Russia would not impose export restrictions, but previously did not rule out “pinpoint interventions.” Earlier last week, the country’s Economy Minister said the government may consider restricting grain exports, but Dvorkovich quickly ruled it out. He noted that subsidies were a better way to fight the effects of a tight domestic grain market, according to Reuters. Later reports indicated Dvorkovich is also considering sales from state grain intervention stocks, which contain roughly 5 MMT of grain.

**Figure 26: Wheat production by select country**

Source: Deutsche Bank, FAS

**Figure 27: Wheat exports by select country**

Source: Deutsche Bank, FAS

As noted, supplies in the US are ample as the crop was not impacted by drought, like soybeans and corn. However, dryness in the US Southern Plains is still a concern for winter wheat development when the crop comes out of dormancy in the spring. Recent rains in the region (with more in the forecast) have enabled good winter wheat seeding progress with 25% of the crop planted as of September 23<sup>rd</sup>, up from 11% the week before, and narrowing the gap with the historical average of 27%. However, conditions are still stressed with 100% of the leading winter wheat state of Kansas enduring severe drought conditions and 51% of the state under exceptional drought down from 60.6% in the prior week.

Given the situation in the Black Sea region, it is widely expected that US exports will begin to pick up at the end of 2012, into 2013. Currently, US export commitments (accumulated exports + outstanding sales) represent 38% of USDA's annual estimate, below 48% last year this time. As noted, French wheat has worked its way into tenders from Egypt recently. Eventually, US wheat should be as well. The tight situation in feed in the US, particularly in soybean meal, in 2013 should provide support under wheat as it will be used to fill gaps until the 2013/2014 corn and soybean crops come in next fall.

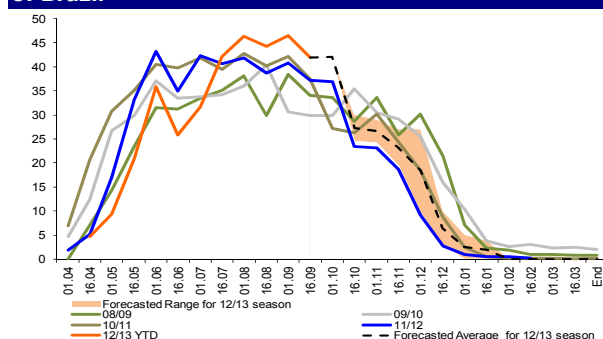
## Sugar

### Summary

- **We expect the world will have a sugar surplus next year. However, a potential shortfall in the Brazilian crop as a result of adverse weather, downside to sugar production in Thailand, combined with recently reduced estimates for Indian production and higher Indian consumption should keep prices supported, but unlikely to rally significantly in our view.**
- **Upside risk exists should Brazil increase gasoline prices after municipal elections in October and/or raise the ethanol blend rate in May/June 2013.**

Estimates for the Brazilian sugarcane crush in the South Central region have been increasing owing to better weather since July. UNICA's official forecast for 2012/13 is 518.5 MMT, revised up recently from 509 MMT, with private estimates up to 520-525 MMT. Last year, the region crushed 493 MMT, down from the peak of 557 MMT in the 2010/11 crop year. Importantly, even though UNICA's sugarcane crush estimate was raised, it reduced its sugar production estimate 1.2% to 32.7 MMT on lower sugar content (ATR) as rains in June did not allow for needed stress on the cane to concentrate sugar.

There is uncertainty around how much the weather will impact crush and yields for the rest of the season. While most observers believe September will continue to show an increase in sugarcane crushed vs. last year, there is debate with respect to October. Data for the early September released last week, showed cane crush up 12.8% vs. the year ago period, which is a slightly slower pace than the YoY improvements seen in the prior two periods (+14.2%). Though the ATR improved sequentially, it was down slightly vs. last year. By our estimates, a weather impacted end to the season suggests sugarcane crush can be as low as 475 MMT, while a stronger end to the season suggests cane crush of close to 525 MMT (shaded area in the figure below).

**Figure 28: Sugarcane crushed ('000 MT) Center South of Brazil**

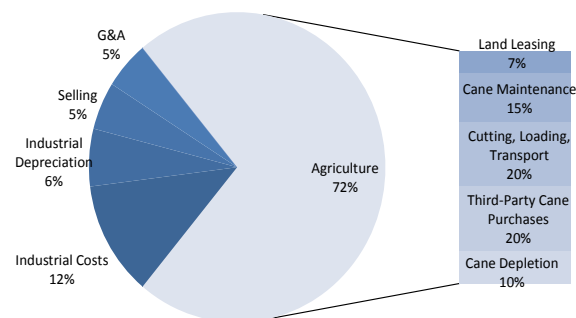
Source: Deutsche Bank

**Figure 29: Actual and forecasted Brazilian sugar and ethanol**

	2009/2010	2010/2011	2011/2012	2012/2013	2012/2013	2012/2013	2012/2013
				Initial	Revised	DB - High	DB - Low
Sugarcane Crushing Total (thous tons)	541.962	556.945	493.159	509	518.5	523.8	473.0
Production							
Sugar (thous tons)	28.645	33.501	31.304	33.1	32.7	32.9	30.1
Anhydrous ethanol (mil liters)	6.206	7.413	7.466	6.95	8.3	8.6	7.6
Hydrous (mil liters)	17.479	17.971	13.076	14.536	12.75	12.5	11.3
Total ethanol (mil liters)	23.685	25.384	20.542	21.486	21.05	21.1	18.9
Anhydrous (% of total ethanol)	26.2%	29.2%	36.3%	32.3%	39.4%		
Hydrous (% of total ethanol)	73.8%	70.8%	63.7%	67.7%	60.6%		
Sugarcane quality							
TRS (thous tons)	70,216	78,249	67,830	71,260	70,207	70,870	63,997
Kg of TRS/ton of sugarcane	129.56	140.5	137.54	140	135.4	135.3	135.3
Sugar & Ethanol Production Share							
Sugar	42.81%	44.93%	48.44%	48.75%	48.88%	48.90%	48.90%
Ethanol	57.19%	55.07%	51.56%	51.25%	51.12%	51.10%	51.10%
Market							
Sugar exports (thous tons)			22,119	24,000	23,500		
Ethanol exports (mil liters)			1,768	1,700	2,550		
Ethanol exports (mil gallons)			467	449	673		
Liters of ethanol/ton of sugarcane	43.7	45.58					
Kg of sugar/ton of sugarcane	52.85	60.15					

Source: Deutsche Bank, UNICA

By looking at the historical sugarcane crushing amounts, it is apparent that production in Brazil is having difficulty advancing. The industry has struggled since the financial crisis and investments have been less than what is needed. As a result, cane has aged and is less able to withstand adverse weather conditions. At this point, investment is geared toward cane replanting as the industry is operating well below capacity of 620 MMT. Over the past three years, the rate of replanting has been below 10%. This year, it increased to 13%, but is still below the ideal rate of 17%. Given the high fixed cost nature of the industry (~70%), low utilization has exacerbated the industry's woes.

**Figure 30: Brazilian sugar and ethanol cost breakdown**

Source: Bunge Limited

According to Brazil's Cane Technology Centre, as reported by Reuters, the average number of optimal cuts in the sugarcane sector is 3.1. The current Center-South Brazilian crop (about 60% of total Brazilian crushing) has been harvested an average of 3.5 times, down from 3.6 cuts last year, but still older than the ideal age. Owing to replanting activities, next year's crop should improve to 3.3 cuts, which still exceeds the optimum 3.1.

Indeed, Brazil is no longer the low cost producer. A combination of a stronger currency, low fixed cost absorption, higher labor costs and a high debt burden has increased the replanting incentive to US20.5 cents/lb in sugar terms. A reduction in the ethanol blend rate (from 25% to 20%) and recent deterioration in returns on co-generation (owing to the inclusion of wind and solar in auctions) have further stressed the industry.

Brazilian sugar and ethanol producers are lobbying for the blend rate to increase and recent news articles point to the possibility (subject to government decision) effective May 1 or June 1, 2013.

The industry is also looking for the government to increase gasoline prices (as hydrous ethanol prices are capped at ~70% of gasoline) to allow ethanol prices to increase, as well as for a potential reduction in ethanol taxes at the pump (PIS/COFINS). We would expect more clarity on the possibility of higher gasoline prices after municipal elections in Brazil in October. According to Bunge, Petrobras is losing USD35/barrel on imported gasoline to cover the shortfall in supply to cover domestic demand.

The world will have a sugar surplus next year, but a potential shortfall in the Brazilian crop owing to weather and downside to Thai production, combined with recently reduced estimates of Indian production and higher Indian consumption should keep prices supported.

**Christina McGlone-Hahn, (1) 203 863 2283**  
[christina.mcglone@db.com](mailto:christina.mcglone@db.com)

**Michael Lewis, (44) 20 7545 2166**  
[michael.lewis@db.com](mailto:michael.lewis@db.com)

# Appendix 1

## Important Disclosures

Additional information available upon request

**For disclosures pertaining to recommendations or estimates made on a security mentioned in this report, please see the most recently published company report or visit our global disclosure look-up page on our website at <http://gm.db.com/ger/disclosure/DisclosureDirectory.eqsr>.**

## Analyst Certification

The views expressed in this report accurately reflect the personal views of the undersigned lead analyst(s). In addition, the undersigned lead analyst(s) has not and will not receive any compensation for providing a specific recommendation or view in this report. Christina McGlone/Michael Lewis

### Deutsche Bank debt rating key

**CreditBuy ("C-B"):** The total return of the Reference Credit Instrument (bond or CDS) is expected to outperform the credit spread of bonds / CDS of other issuers operating in similar sectors or rating categories over the next six months.

**CreditHold ("C-H"):** The credit spread of the Reference Credit Instrument (bond or CDS) is expected to perform in line with the credit spread of bonds / CDS of other issuers operating in similar sectors or rating categories over the next six months.

**CreditSell ("C-S"):** The credit spread of the Reference Credit Instrument (bond or CDS) is expected to underperform the credit spread of bonds / CDS of other issuers operating in similar sectors or rating categories over the next six months.

**CreditNoRec ("C-NR"):** We have not assigned a recommendation to this issuer. Any references to valuation are based on an issuer's credit rating.

**Reference Credit Instrument ("RCI"):** The Reference Credit Instrument for each issuer is selected by the analyst as the most appropriate valuation benchmark (whether bonds or Credit Default Swaps) and is detailed in this report. Recommendations on other credit instruments of an issuer may differ from the recommendation on the Reference Credit Instrument based on an assessment of value relative to the Reference Credit Instrument which might take into account other factors such as differing covenant language, coupon steps, liquidity and maturity. The Reference Credit Instrument is subject to change, at the discretion of the analyst.

## Regulatory Disclosures

### 1. Country-Specific Disclosures

**Australia and New Zealand:** This research, and any access to it, is intended only for "wholesale clients" within the meaning of the Australian Corporations Act and New Zealand Financial Advisors Act respectively.

**Brazil:** The views expressed above accurately reflect personal views of the authors about the subject company(ies) and its(their) securities, including in relation to Deutsche Bank. The compensation of the equity research analyst(s) is indirectly affected by revenues deriving from the business and financial transactions of Deutsche Bank. In cases where at least one Brazil based analyst (identified by a phone number starting with +55 country code) has taken part in the preparation of this research report, the Brazil based analyst whose name appears first assumes primary responsibility for its content from a Brazilian regulatory perspective and for its compliance with CVM Instruction # 483.

**EU countries:** Disclosures relating to our obligations under MiFiD can be found at <http://www.globalmarkets.db.com/riskdisclosures>.

**Japan:** Disclosures under the Financial Instruments and Exchange Law: Company name - Deutsche Securities Inc. Registration number - Registered as a financial instruments dealer by the Head of the Kanto Local Finance Bureau (Kinsho) No. 117. Member of associations: JSDA, Type II Financial Instruments Firms Association, The Financial Futures Association of Japan, Japan Investment Advisers Association. This report is not meant to solicit the purchase of specific financial instruments or related services. We may charge commissions and fees for certain categories of investment advice, products and services. Recommended investment strategies, products and services carry the risk of losses to principal and other losses as a result of changes in market and/or economic trends, and/or fluctuations in market value. Before deciding on the purchase of financial products and/or services, customers should carefully read the relevant disclosures, prospectuses and other documentation. "Moody's", "Standard & Poor's", and "Fitch" mentioned in this report are not registered credit rating agencies in Japan unless "Japan" or "Nippon" is specifically designated in the name of the entity.

**Malaysia:** Deutsche Bank AG and/or its affiliate(s) may maintain positions in the securities referred to herein and may from time to time offer those securities for purchase or may have an interest to purchase such securities. Deutsche Bank may engage in transactions in a manner inconsistent with the views discussed herein.

**Russia:** This information, interpretation and opinions submitted herein are not in the context of, and do not constitute, any appraisal or evaluation activity requiring a license in the Russian Federation.

### Risks to Fixed Income Positions

Macroeconomic fluctuations often account for most of the risks associated with exposures to instruments that promise to pay fixed or variable interest rates. For an investor that is long fixed rate instruments (thus receiving these cash flows), increases in interest rates naturally lift the discount factors applied to the expected cash flows and thus cause a loss. The longer the maturity of a certain cash flow and the higher the move in the discount factor, the higher will be the loss. Upside surprises in inflation, fiscal funding needs, and FX depreciation rates are among the most common adverse macroeconomic shocks to receivers. But counterparty exposure, issuer creditworthiness, client segmentation, regulation (including changes in assets holding limits for different types of investors), changes in tax policies, currency convertibility (which may constrain currency conversion, repatriation of profits and/or the liquidation of positions), and settlement issues related to local clearing houses are also important risk factors to be considered. The sensitivity of fixed income instruments to macroeconomic shocks may be mitigated by indexing the contracted cash flows to inflation, to FX depreciation, or to specified interest rates – these are common in emerging markets. It is important to note that the index fixings may – by construction – lag or mis-measure the actual move in the underlying variables they are intended to track. The choice of the proper fixing (or metric) is particularly important in swaps markets, where floating coupon rates (i.e., coupons indexed to a typically short-dated interest rate reference index) are exchanged for fixed coupons. It is also important to acknowledge that funding in a currency that differs from the currency in which the coupons to be received are denominated carries FX risk. Naturally, options on swaps (swaptions) also bear the risks typical to options in addition to the risks related to rates movements.

---

## David Folkerts-Landau

Managing Director  
Global Head of Research

---

Guy Ashton  
Head  
Global Research Product

Marcel Cassard  
Global Head  
Fixed Income Research

Stuart Parkinson  
Associate Director  
Company Research

---

### Asia-Pacific

Fergus Lynch  
Regional Head

### Germany

Andreas Neubauer  
Regional Head

### Americas

Steve Pollard  
Regional Head

### Europe

Richard Smith  
Regional Head

### Principal Locations

---

#### Deutsche Bank AG London

1 Great Winchester Street  
London EC2N 2EQ  
Tel: (44) 20 7545 8000

---

#### Deutsche Bank AG New York

60 Wall Street  
New York, NY 10005  
United States of America  
Tel: (1) 212 250-2500

---

#### Deutsche Bank AG Hong Kong

Filiale Hongkong  
Intl. Commerce Centre  
1 Austin Road West Kowloon,  
Hong Kong  
tel: (852) 2203 8888

---

#### Deutsche Securities Inc. Japan

2-11-1 Nagatacho  
Sanno Park Tower  
Chiyoda-ku, Tokyo 100-6171  
Tel: (81) 3 5156 6770

---

#### Deutsche Bank AG Frankfurt

Große Gallusstraße 10-14  
60272 Frankfurt am Main  
Germany  
Tel: (49) 69 910 00

---

#### Deutsche Bank Ltd.

Aurora business park  
82 bld.2 Sadovnicheskaya street  
Moscow, 115035  
Russia  
Tel: (7) 495 797-5000

---

#### Deutsche Bank AG Singapore

One Raffles Quay  
South Tower  
Singapore 048583  
Tel: (65) 6423 8001

---

#### Deutsche Bank AG Australia

Deutsche Bank Place, Level 16  
Corner of Hunter & Phillip Streets  
Sydney NSW 2000  
Tel: (61) 2 8258 1234

---

#### Deutsche Bank Dubai

Dubai International Financial Centre  
The Gate, West Wing, Level 3  
P.O. Box 504 902  
Dubai City  
Tel: (971) 4 3611 700

---

**Subscribers to research via email  
receive their electronic  
publication on average 1-2  
working days earlier than the  
printed version.**

**If you would like to receive this  
or any other product via email  
please contact your usual  
Deutsche Bank representative.**

#### Publication Address:

Deutsche Bank AG  
London  
1 Great Winchester Street  
London EC2N 2EQ  
Tel: (44) 20 7545 8000

#### Internet:

<http://gmr.db.com>  
Ask your usual contact for a  
username and password.

---

## Global Disclaimer

Investing in and/or trading commodities involves significant risk and may not be suitable for everyone. Participants in commodities transactions may incur risks from several factors, including changes in supply and demand of the commodity that can lead to large fluctuations in price. The use of leverage magnifies this risk. Readers must make their own investing and trading decisions using their own independent advisors as they believe necessary and based upon their specific objectives and financial situation. Past performance is not necessarily indicative of future results. Deutsche Bank may with respect to securities covered by this report, sell to or buy from customers on a principal basis, and consider this report in deciding to trade on a proprietary basis. Deutsche Bank makes no representation as to the accuracy or completeness of the information in this report. Target prices are inherently imprecise and a product of the analyst judgement. Deutsche Bank may buy or sell proprietary positions based on information contained in this report. Deutsche Bank may engage in securities transactions, on a proprietary basis or otherwise, in a manner **inconsistent** with the view taken in this research report. In addition, others within Deutsche Bank, including strategists and sales staff, may take a view that is **inconsistent** with that taken in this research report. Deutsche Bank has no obligation to update, modify or amend this report or to otherwise notify a reader thereof. This report is provided for information purposes only. It is not to be construed as an offer to buy or sell any financial instruments or to participate in any particular trading strategy.

Unless governing law provides otherwise, all transactions should be executed through the Deutsche Bank entity in the investor's home jurisdiction. In the U.S. this report is approved and/or distributed by Deutsche Bank Securities Inc., a member of the NYSE, the NASD, NFA and SIPC. In Germany this report is approved and/or communicated by Deutsche Bank AG Frankfurt authorized by the BaFin. In the United Kingdom this report is approved and/or communicated by Deutsche Bank AG London, a member of the London Stock Exchange and regulated by the Financial Services Authority for the conduct of investment business in the UK and authorized by the BaFin. This report is distributed in Hong Kong by Deutsche Bank AG, Hong Kong Branch, in Korea by Deutsche Securities Korea Co. This report is distributed in Singapore by Deutsche Bank AG, Singapore Branch, and recipients in Singapore of this report are to contact Deutsche Bank AG, Singapore Branch in respect of any matters arising from, or in connection with, this report. Where this report is issued or promulgated in Singapore to a person who is not an accredited investor, expert investor or institutional investor (as defined in the applicable Singapore laws and regulations), Deutsche Bank AG, Singapore Branch accepts legal responsibility to such person for the contents of this report. In Japan this report is approved and/or distributed by Deutsche Securities Inc. The information contained in this report does not constitute the provision of investment advice. In Australia, retail clients should obtain a copy of a Product Disclosure Statement (PDS) relating to any financial product referred to in this report and consider the PDS before making any decision about whether to acquire the product. Deutsche Bank AG Johannesburg is incorporated in the Federal Republic of Germany (Branch Register Number in South Africa: 1998/003298/10). Additional information relative to securities, other financial products or issuers discussed in this report is available upon request. This report may not be reproduced, distributed or published by any person for any purpose without Deutsche Bank's prior written consent. Please cite source when quoting.

Copyright © 2012 Deutsche Bank AG