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FERTILIZER PRICES LIKELY TO DECLINE IN 2009

Difficulties within the financial sector became apparent in the middle of September as the United States government grappled with responses to a worsening credit situation. The financial meltdown, along with public perceptions of economic problems, has led to concerns that a deep, world-wide recession is occurring. As a result, prices of many commodities have declined dramatically in the belief that demands for those commodities are being reduced. Among those commodities seeing declines are wholesale fertilizers. Lower wholesale fertilizer prices likely will lead to lower prices that farmers pay for fertilizers. Lower fertilizer prices then may lead to an increase in corn profitability relative to soybean profitability.

Declining Wholesale Prices

Since September, wholesale prices of fertilizers have declined dramatically. In September, fertecon (www.fertecon.com) reported that wholesale prices of anhydrous ammonia at the Gulf of Mexico were over $800 per ton. In early January, anhydrous ammonia prices were below $200 per ton. Similarly, diammonium phosphate (DAP) at the Gulf was over $1,000 per ton in September and about $350 per ton in early January.

In explaining these price declines, executives of The Mosaic Company - a publicly traded fertilizer company - indicated that a "perfect storm" of factors led to the price declines including 1) the global financial crisis, 2) large distribution pipeline stocks in some regions of the country, and 3) a late North American harvest season (Source: The Mosaic Company, Security Exchange Commission 8-K filing "report of Unscheduled Material Events or Corporate Changes, December 3, 2008). The financial crisis limited fertilizer applications in South America, as credit for purchasing fertilizer was constrained because of non-functioning credit markets. In North America, fertilizer manufactures produced large amounts of fertilizer under expectations of high farmer use due to high commodity prices. However, farmer demands have been reduced because of lower commodity prices and higher fertilizer prices. Moreover, much of the corn-belt experienced a late harvest, further limiting fertilizer applications. As a result, there are large amounts of unsold fertilizer in inventory.

These factors have led to significant reductions in demand. The chief executive officer of Agrium – another publicly-traded fertilizer company – estimated that demand in the fall of 2008 was down by 20% for nitrogen, down by 50% for phosphate, and down by 50% for potash. These demand reductions have led to price declines for both anhydrous ammonia and phosphates (Source: CIBC World Markets, Equity Research Company Update, Agrium Inc., December 2, 2008).

Outlook for Farmer-Paid Prices

As of yet, prices farmers pay for fertilizers have not decreased as much as declines in wholesale prices. In fact, retail fertilizer prices have not declined much at all in many areas of Illinois. Non-declining prices are attributed to large unsold fertilizer inventories held by many retailers. Retailers will lose money on these inventories if retail fertilizer prices follow wholesale fertilizer prices down. While retailers will suffer financial losses, there are incentives for farmers to delay purchasing fertilizers, waiting for fertilizer prices to decline.

Waiting to purchase fertilizer poses some risk to farmers. Supply of fertilizer could become limited as companies curtail production. There also are geopolitical events that may impact fertilizer prices. For example, Russia and the Ukraine recently have had a dispute over natural gas pricing, potentially leading to a cut off of natural gas supplies to Europe. If this unlikely event occurred, natural gas prices in the United States could escalate, leading to higher nitrogen fertilizer prices. Again the point is not that this or other events will occur, rather the point is that there remains risks for higher fertilizer prices.

Fertilizer Costs and Planting Decisions

Besides increasing farm profitability, lower fertilizer prices may influence planting decisions. In general, lower fertilizer prices increase corn profitability relative to soybean profitability, thereby providing farmers with incentives to plant more corn. This is particularly true of reductions in nitrogen fertilizer prices, as nitrogen is needed on corn and not on soybeans.

To illustrate, per acre fertilizer costs are calculated for corn and soybeans given fertility programs representative of those in northern and central Illinois. Under these representative programs, corn receives 180 pounds per acre of anhydrous ammonia, 128 pounds of diammonium phosphate (DAP), and 125 pounds of potash. Soybeans receive 38 pounds per acre of DAP and 163 pounds of potash (see Table 1).

Table 1. Per Acre Fertilizer Costs Given Fall 2008 and Projected Spring 2009 Pricing.

		Fall Pricing		Projected Spring Pricing		
	Quantity[1]	Price	Cost Per Acre	Price	Cost Per Acre	Difference[2]
Panel A. Corn	(lbs./acre)	$/ton	$/acre	$/ton	$/acre	$/acre
Anhydrous Ammonia	180	1,000	$90	600	$54	-$36
Diammonium phosphate	128	1,000	64	800	51	-13
Potash	125	900	56	600	38	-18
Total			$210		$143	-$67
Panel B. Soybeans	(lbs./acre)	$/ton	$/acre	$/ton	$/acre	$/acre
Diammonium phosphate	38	1,000	$19	800	$15	-$4
Potash	163	900	73	600	49	-24
Total			$92		$64	-$28

[1] Quantities are representative of fertility programs in northern and central Illinois.

[2] Spring pricing costs - fall pricing costs.

Costs are calculated using prices representative of fertilizer prices in the late summer and early fall prior to the drop in wholesale fertilizer prices. Fall prices are a $1,000 per ton price for anhydrous ammonia, $1,000 per ton price for DAP, and $900 per ton price for potash. Given these prices, fertilizer costs are $210 per acre for corn and $92 per acre for soybeans (see Table 1).

In anticipation of retail price declines, fertilizer costs are calculated at lower prices that may be prevalent in spring. Prices of $600 per ton for anhydrous ammonia, $800 per ton for DAP, and $600 per ton for potash are used in calculating costs. Given these "spring prices", fertilizer costs are $143 per acre for corn and $64 per acre for soybeans (see Table 1).

Spring prices result in significantly lower per acre fertilizer costs. For corn, fertilizer costs using spring prices are $67 lower than for fall prices ($210 cost using fall prices - $143 cost using spring prices). For soybeans, fertilizer costs using spring prices are $28 lower than fall prices ($92 costs using fall prices - $64 costs using spring prices). The $67 reduction in corn fertilizer costs is $39 larger than the $28 reduction in soybean costs. These fertilizer cost reductions increase the profitability of corn relative to soybeans by $39 per acre, a sizable increase that may cause corn to be more profitable than soybeans.

Of the $67 decline in corn fertilizer costs, ammonia price declines accounted for $36 of the decrease (see Table 1). Stated in percentage terms, the $36 ammonia cost decrease was 56% of the total corn cost decrease. Since nitrogen fertilization is not needed for soybeans, prices changes in nitrogen sources such as anhydrous ammonia will have larger impacts on relative profit changes between corn and soybeans as compared to prices for phosphates and potash.

Summary

Like most other commodity, wholesale fertilizer prices have declined since the middle of September 2009. As a

result, retail fertilizer prices likely will be lower in the spring as compared to the fall. Lower fertilizer prices will increase the profitability of corn relative to soybeans. As farmers make planting decisions, up-to-date fertilizer prices should be used in calculating relative profitability.

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