



Nitrogen Fertilizer Prices and 2015 Planting Decisions

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October 9, 2014

farmdoc daily (4):195

Recommended citation format: Schnitkey, G. "[Nitrogen Fertilizer Prices and 2015 Planting Decisions](#)." *farmdoc daily* (4):195, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, October 9, 2014.

Permalink URL

<http://farmdocdaily.illinois.edu/2014/10/nitrogen-fertilizer-prices-and-2015-planting-decisions.html>

Anhydrous ammonia prices averaged \$717 per ton in Illinois according to the October 2nd edition of the Illinois Production Cost Report (see [here](#)). The 2014 price was higher than the 2013 price of \$678 per ton. Changes in nitrogen prices between now and spring could influence plantings of corn versus soybeans in 2015.

Projected 2015 Corn and Soybean Returns

The September 2014 version of the 2015 Crop Budgets (see [here](#)) suggests that soybeans will be more profitable than corn in all regions of Illinois. This profitability outlook is unusual. Usually, corn is projected to be more profitable than soybeans. Commodity prices used in the budgets are \$3.80 per bushel for corn and \$9.75 per bushel for soybeans. Relative changes in these prices will change the relative profits of corn versus soybeans.

Changes in input costs also could impact relative returns. Nitrogen fertilizer price often is a major factor influencing relative costs of corn and soybean production. Decreases in nitrogen prices increase the profitability of corn versus soybeans and vice versa.

Changes in Monthly Nitrogen Fertilizer Prices

Historical nitrogen prices provide a gauge of potential for price changes into spring. Table 1 shows monthly anhydrous ammonia prices for Illinois as reported by the Agricultural Marketing Service. For each year, this table begins with a price in September and ends with a price in June. For example, the first row of the report gives prices for September through December of 2008 and January through June of 2009. The 2008 fall prices are assumed to be related to 2009 crop production.

The \$717 per ton price in October 2014 is \$39 per ton higher than the October 2013 price of \$678 per ton. This price change favors soybean production. However, the \$717 price is \$57 per acre below the \$774 average price for the 2009 through 2014 production years. So far, 2015 ammonia prices are above 2014 levels, but below the average for the past six years.

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Table 1. Anhydrous Ammonia Prices in Illinois.¹

| Years of Prices | Production Year | Month | | | | | | | | | |
|-----------------------|--------------------|------------|-------|-------|-----|-----|-----|-----|-------|-----|------|
| | | Sept | Oct | Nov | Dec | Jan | Feb | Mar | April | May | June |
| | | \$ per ton | | | | | | | | | |
| 2008 - 09 | 2009 | 1,150 | 1,153 | 1,098 | 880 | 792 | 747 | 712 | 658 | 653 | 577 |
| 2009 -10 | 2010 | 429 | 431 | 431 | 478 | 518 | 522 | 528 | 540 | 560 | 548 |
| 2010 -11 | 2011 | 616 | 684 | 748 | 775 | 779 | 784 | 791 | 798 | 798 | 799 |
| 2011 -12 | 2012 | 831 | 852 | 855 | 862 | 858 | 850 | 842 | 834 | 833 | 829 |
| 2012 -13 | 2013 | 831 | 846 | 867 | 891 | 886 | 885 | 886 | 889 | 889 | 873 |
| 2013 -14 | 2014 | 687 | 678 | 684 | 670 | 650 | 655 | 658 | 720 | 754 | 756 |
| 2014 - 15 | 2015 | 715 | 717 | | | | | | | | |
| Average ² | | 757 | 774 | 780 | 759 | 747 | 740 | 736 | 740 | 748 | 730 |

¹ Reported in the Illinois Production Cost Report by the Agricultural Marketing Service, USDA. Monthly values equal the simple average of prices in the bi-weekly reports. The October 2014 price only includes the price in the October 2nd report.

² Averages from the 2009 through 2014 production years. Values for the 2015 year are not included in the average.

From 2009 to 2014, the October anhydrous price of \$774 per ton was \$34 per ton higher than the April average of \$740 per ton (see Table 1). However, within-year price changes can be large and of varying direction. To summarize changes between October and April by production year:

- 2009: Decreased from \$1,153 in October to \$658 in April, a decrease of \$495 per ton.
- 2010: Increased from \$431 in October to \$540 in April, an increase of \$109 per ton.
- 2011: Increased from \$684 in October to \$798 in April, an increase of \$114 per ton.
- 2012: Decreased from \$852 in October to \$834 in April, a decrease of \$18 per ton.
- 2013: Increased from \$846 in October to \$889 in April, an increase of \$44 per ton.
- 2014: Increased from \$678 in October to \$720 in April, an increase of \$42 per ton.

Prices increased in four years (2010, 2011, 2013, and 2014) and decreased in two years (2009 and 2012).

Summary

Nitrogen fertilizer prices could influence corn versus soybean planting decisions in 2015. Currently, budgets suggest soybeans will be more profitable than corn, potentially leading to acreage shifts away from corn to soybeans. Decreases in nitrogen fertilizer prices would increase corn profitability relative to soybeans, and vice versa.

Reference

Schnitkey, G. "[Crop Budgets, Illinois, 2015](#)." Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, September 2014.