AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search
http://ageconsearch.umn.edu
aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

farmdoc DAILY

Department of Agricultural and Consumer Economics, University of Illinois Urbana-Champaign

Will Non-Land Costs Decrease in 2015?

Gary Schnitkey

Department of Agricultural and Consumer Economics
University of Illinois

September 16, 2014

***farmdoc daily* (4):178**

Recommended citation format: Schnitkey, G. "Will Non-Land Costs Decrease in 2015?" *farmdoc daily* (4):178, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, September 16, 2014.

Permalink URL http://farmdocdaily.illinois.edu/2014/09/will-non-land-costs-decrease-in-2015.html

Corn and soybean revenues in 2013 and 2014 will be much lower than revenues from 2009 to 2012, leading to hopes that non-land costs also may decrease. After a decrease in revenue during the early 1980s, non-land costs did decrease by 18% from 1982 through 1986. Modest decreases in costs are projected for 2014. It is, however, difficult to identify where further large decreases in costs will occur in 2015. Fertilizer and seed costs need to decrease if non-land costs are to continue to lower levels.

Historic Non-land Costs

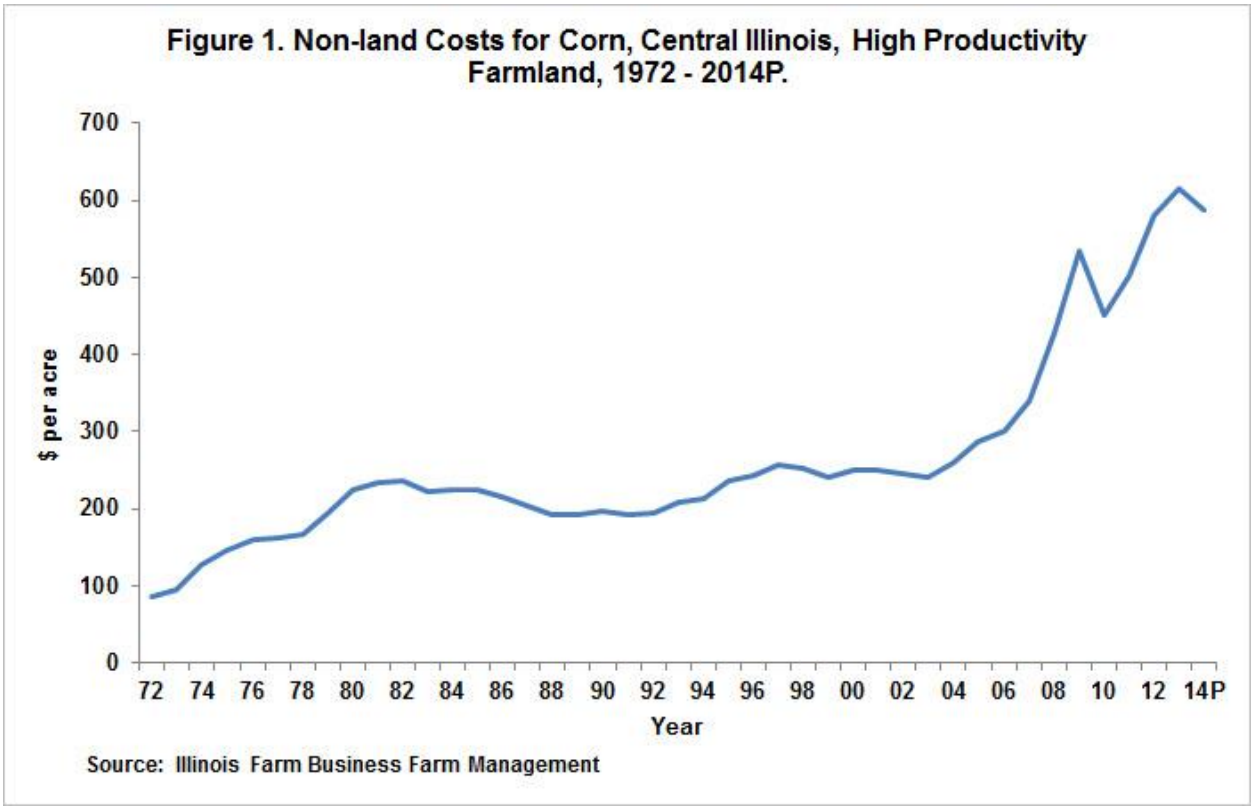
Figure 1 shows per acre non-land costs for corn grown in central Illinois on high-productivity farmland. Two points are evident from Figure 1. First, non-land costs increased dramatically from 2006 to 2013. From 1996 through 2005, non-land costs averaged $252 per acre. Non-land costs then increased to $615 per acre in 2013, a more than doubling of costs. Costs are projected to decrease slightly to $588 per acre in 2014.

Second, costs did decrease in the early 1980s after a period or rising costs. Costs increased from $85 per acre in 1972 to $236 per acre in 1982. Similar to the 2006-2013, non-land costs more than doubled from 1972 to 1982. Then costs decreased from $236 per acre in 1982 to $192 per acre in 2006, a decrease of 18%.

Note that the 18% decrease occurred over several years, with an average decrease of 4% per year. If non-land costs hit a high of 2013 at $615 per acre, a similar 18% decrease in costs would take costs to $500 per acre, a decrease of $115. If decreases in 1982-1988 are a guide, the decreases will occur over several years.

From 2013 to 2014, non-land costs are projected to decrease from $615 per acre to $588 per acre, a decrease of 4%, mirroring the decreases in the 1980s. The projected 2014 decrease resulted from lower fertilizer prices. However, these decreases may be eliminated due to high moisture of harvested grain. This could lead to higher drying costs this fall, eliminating some or all of the projected decrease coming from reduced fertilizer costs.

We request all readers, electronic media and others follow our citation guidelines when re-posting articles from farmdoc daily. Guidelines are available here. The farmdoc daily website falls under University of Illinois copyright and intellectual property rights. For a detailed statement, please see the University of Illinois Copyright Information and Policies here.



Difficulty in Identify Continuing Cost Increases

Moving forward into 2015, it is difficult to identify what costs will continue to decrease. To explore this issue, non-land costs are broken out to specific cost items.

Non-land costs for corn production are regularly made available on *farmdoc* (http://www.farmdoc.illinois.edu/manage/actual_projected_costs.pdf). Non-land costs are divided into three categories: direct costs – costs directly related to production, power costs – primarily related to machinery, and overhead – not directly related to production or machinery. These categories are further divided into cost items. Table 1 shows those cost items with their category identified. Items are arranged from the item with the highest increase from 2006 to 2013 to the item with the lowest increase.

Below is given a 2014 cost outlook for the four items with the largest cost increases. These four items accounted for 79% of the cost increase from 2006 to 2013. These items also accounted for 71% of total non-land costs in 2013. Since these items account for the majority of cost increases and the majority of costs, decreases in these four items likely need to occur if non-land costs continue to decrease in 2015.

Fertilizer: Fertilizer costs increased by $111 per acre from 2006 to 2013, accounting for 35% of the cost increase from 2006 to 2013. So far, fertilizer prices do not point to large decreases in 2014. Nitrogen fertilizer prices are higher and phosphate and potash fertilizer prices are lower in September 2014 than in September 2013. According to the Agricultural Marketing Service, anhydrous ammonia price was $717 per ton on September 9, 2014, compared to $685 per ton on September 12, 2013. Diamonium phosphate price was $471 per ton on September 4, 2014, compared to $524 per ton on September 12, 2013. Potash price was $476 per ton on September 9, 2014, compared to $493 on September 12, 2013. There were hopes that fertilizer costs would decrease into 2015, but transportation issues could lower the possibilities of cost declines.

Seed: Seed costs increased by $69 per acre from 2006 through 2013, accounting for 22% of the non-land costs increase from 2006 to 2013. Several seed companies have released prices, indicating that seed prices will rise for 2014 levels (As Angela Mueller reported in a *St. Louis Business Journal* article on August 29, 2014). If seed prices do not decrease, any saving in 2015 seed costs will occur because farmers are purchasing lower priced hybrids.

Table 1. Change in Non-Land Corn Costs from 2006 to 2013 by Cost Item, Central Illinois, High-Productivity Farmland

Item	Category	Change from 2006 to 2013	2013 Costs
		$/acre	$/acre
Fertilizers	Direct	111	193
Seed	Direct	69	114
Mach. depreciation	Power	43	63
Pesticides	Direct	26	66
Crop insurance	Direct	16	27
Drying	Direct	13	24
Fuel and oil	Power	10	24
Machine repair	Power	9	22
Hired labor	Overhead	8	16
Machine hire/lease	Power	5	11
Building repair and rent	Overhead	3	6
Utilities	Power	2	5
Misc.	Overhead	2	8
Building depreciation	Overhead	1	5
Insurance	Overhead	1	10
Storage	Direct	0	8
Light vehicle	Power	0	2
Interest (non-land)	Overhead	-6	11
Total		313	615

Machinery depreciation: Machinery depreciation increased by $43 per acre from 2006 to 2013, accounting for 14% of the cost increased from 2006 to 2013. Lower machinery depreciation has the potential to occur. Farmers have lowered machinery capital purchases which will eventually lead to lower levels of machinery depreciation. Given lower machinery purchases, machinery depreciation could be lowered by $4 to $5 per acre in 2015.

Pesticides: Pesticide costs increased by $26 per acre from 2006 through 2013, accounting for 8% of the non-land cost increase from 2006 to 2013. Pesticide costs levels are highly dependent on pest pressures during the growing season. Given that weed resistance to herbicides is increasing, it is difficult to build a case where pesticide costs decrease, except in a low pest pressure year.

Summary

Overall, large cost decreases do not appear likely for 2015. Of the four cost items with the largest increase between 2006 and 2012, only machinery depreciation appears likely to decrease. For large non-land cost decreases to occur, cost decreases in fertilizer and seed need to occur. As of yet, cost decrease like those occurring during 1982-1986 do not appear to be continuing into 2015.

References

Schnitkey, G. "Revenue and Costs for Corn, Soybeans, Wheat, and Double-Crop Soybeans, Actual for 2007 through 2013, Projected 2014." Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, June 2014.

Mueller, A. "Monsanto, DuPont raising prices despite farm slump." *St. Louis Business Journal Morning Edition*, Aug 29, 2014, accessed on September 16, 2014: http://www.bizjournals.com/stlouis/morning_call/2014/08/monsanto-dupont-raising-prices-despite-farm-slump.html

Also available at:
http://farmdoc.illinois.edu/manage/newsletters/fefo14_17/fefo_14_17.html