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IFES 2018: Management and Conservation in the Face of Lower Returns

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This is a presentation summary from the 2018 Illinois Farm Economics Summit (IFES) which occurred December 17-21, 2018. A complete collection of presentations including PowerPoint Slides (PPT) and printable summaries (PDF) are available here.

Last year, we examined what made some farms more profitable than others. One of the traits of more profitable farms was that they had lower costs, suggesting that those more profitable farms may have used less inputs than other farms. As a period of lower returns potentially begins, use of lower inputs may improve profitability. Moreover, it is possible that use of less inputs may have environmental benefits.

We report results from Precision Conservation Management (PCM), a program sponsored by Illinois Corn and many other partners. One of the goals of this project is to determine the profitability of various farming practices so as to understand the returns and costs associated with various conservation alternatives.

Results from the three years from 2015 to 2017 include:

- The more profitable "tillage" systems for corn were strip till and one pass systems. Systems that had two or more passes did not increase yields or profits.
- On average, one pass tillage system for soybeans had higher returns than did tillage systems with more than one pass.
- From 2015 to 2017, there was no statistical relationship between nitrogen rates and yields when applications exceed Maximum Return to Nitrogen (MRTN) rates recommended by Universities. Profits were lower for farms that applied much more nitrogen than MRTN rates.
- On average, profitability was higher for systems that applied some of their nitrogen after planting than those systems that relied primarily on fall application for nitrogen.
- Use of cover crops in soybeans did not result in lower returns than non-use of cover crops, perhaps because less tillage was done when cover crops were used.

Based on these results, we make the following suggestions. First, farmers may wish to experiment with less tillage. Lowering tillage can lower costs and may not lower yields.

Second, reducing nitrogen rates may increase profitability if rates are above MRTN rates. In-field experimenting with lower rates could confirm these finding on an individual fields.

Third, adopting a system that applies some nitrogen after planting may be a useful alternative.

Fourth, some of the benefits of cover crops are long term. As a result, choosing fields on which control will be maintained is prudent.

PCM will continue for several years. The University of Illinois will continue to evaluate the economics of various production practices.

Tillage and Soybeans

Tillage Method	No of Fields *	SPR *	Yields 2015	2016	2017	Average *	Opr and Land Return *
			Bushels per acre				$ per acre
No-till	434	133	63	67	64	64	397
1 pass	133	135	69	69	64	68	414
2 pass	207	133	66	68	64	66	400
2+ pass	178	134	62	67	61	63	367

* Over three years.

Additional Resources

The slides for this presentation can be found at: http://www.farmdoc.illinois.edu/presentations/IFES_2018

For current farm management information: http://www.farmdoc.illinois.edu/manage/index.asp

Paulson, N. "IFES 2017: Habits of Financially Resilient Farms." Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, January 10, 2018.

Schnitkey, G. "Nitrogen Prices, Rates Cuts, and 2018 Fertilizer Costs." *farmdoc daily* (8):58, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, April 3, 2018.

Schnitkey, G., K. Swanson, J. Coppess and S. Armstrong. "Managing the Economics of Planting Cereal Rye as a Cover Crop." *farmdoc daily* (8):151, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, August 14, 2018.