

2015-2023 DATA SUMMARY

# The Business Case for Conservation

*Cost-Benefit Analysis of  
Conservation Practices*



Precision Conservation Management

Precision Conservation Management (PCM) is a grassroots, commodity association-led not-for-profit program created by farmers, for farmers, to assist in the evaluation of in-field conservation decisions. Created in 2015, PCM has expanded to serve regions in Illinois, Nebraska, and Kentucky.

**The objective of PCM is to work one-on-one with farmers to analyze the costs and benefits of adopting new conservation practices.** By joining PCM, farmers get access to their own dedicated regional specialist, exclusive cost-share programs, and expert data analysis demonstrating how conservation practices affect both their environmental outcomes and farm incomes. PCM works with our dedicated IT partner, Heartland Science & Technology, to ensure that our custom-built and internally administered data portal keeps farmer data secure. Additionally, our data use policies assure that farmer data is always used to benefit our farmers’ interests, first and foremost.

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Something to consider as you review this data:

### Increased Yield ≠ Increased Profitability

It can be difficult to pivot from the drive to maximize crop yields; however, it's time to challenge the assumption that increased yield equals increased profitability. Review the following information while also considering the impact of lower yields and lower input costs for your farm's future.

# 2023 at a Glance

PCM works to support farmers as they adopt in-field conservation practices that benefit water quality and address climate change concerns. This report is possible because PCM farmers anonymously shared their farm's data for the betterment of agriculture and the advancement of farm conservation practice analysis.

## In 2023:

496 Farmers Enrolled • 6,624 Fields • 499K Acres

### TOTAL IMPACTS\*

NITRATE-N  
LOSS  
REDUCTIONS

1,154,702

lbs NO<sub>3</sub>-N loss reductions

PHOSPHORUS  
LOSS  
REDUCTIONS

174,983

lbs P loss reductions

SEDIMENT LOSS  
REDUCTIONS

258,963

tons sediment retained

### TOTAL ACRES

REDUCED  
TILLAGE

247,391

NITROGEN  
MANAGEMENT

257,009

COVER CROPS

84,614

Total acres and total impacts represent 2023 Illinois data only.

*\*Nutrient and sediment loss reductions are based on assumptions and values taken from the 2015 Illinois Nutrient Loss Reduction Strategy Science Assessment except for N rate reductions, which were based on the reduction in total lbs of N fertilizer applied for the three-year period of 2021-2023 relative to the period of 2015-2017 (the earliest three-year period for our PCM dataset).*



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## Farmer Benefits

- ✓ Free to join
- ✓ \$750 sign-up bonus
- ✓ Access to experts
- ✓ Exclusive cost-share programs
- ✓ Personal data analysis
- ✓ Financial and environmental reporting

“

*The information PCM provides helps me decipher what's working on my farm, and what's working for other farms in my region. As a bonus, they help me get paid for some of my conservation efforts. More than that — this program is voluntary, confidential, and flexible.*

*Dale Haudrich,  
Monroe County, Illinois*



# Enrolling in PCM — No Practice Change Required!

## 1. GET ENROLLED

Meet with your PCM specialist to provide an overview of your farm practices and goals. Your specialist will help you understand which cost-share opportunities you are eligible for right away!

## 2. PROVIDE DATA

Your specialist will assist with data collection and enter everything into PCM's secure Farmer Portal. Your farm data is immediately anonymized and will never be shared with anyone outside the program without your explicit permission and, even then, only for the purpose of participating in PCM's conservation incentive opportunities.

## 3. GET RECOMMENDATIONS

Make plans for the current crop year with your PCM specialist (there is no commitment to make a change to your practices). Your annual **Resource Analysis & Assessment Plan (RAAP)** report will include a breakdown of your farm's agronomic, economic, and environmental outcomes, and recommendations for the next crop year.

PCM FARMER SURVEY RESULTS  
(Based on PCM data)

100%

of PCM farmers are likely or very likely to continue working with PCM

92%

of PCM farmers agree that they would recommend the program to their neighbors

Special thanks to the following people for their dedication and assistance implementing the PCM program:

GERSHWIN MARKS (HEARTLAND SCIENCE & TECHNOLOGY)  
 ANDREW MCCLINTICK (HEARTLAND SCIENCE & TECHNOLOGY)  
 GLEN SALO (HEARTLAND SCIENCE & TECHNOLOGY)  
 PATRICK MORSE (PCM DATA SPECIALIST)  
 ROSALIE TRUMP (PCM COMMUNICATIONS)  
 DR. GARY SCHNITKEY (UNIVERSITY OF ILLINOIS)

These tables represent the full nine-year dataset for net financial and environmental outcomes parsed by tillage classes for our Illinois corn and soybean fields with highly productive soils. It’s fascinating how consistent these tillage results are from year to year. **Even though yields and prices go up and down every year, average net profitability is greatest for the same tillage systems every year: 1-pass light and 2-pass light tillage systems for corn; 1-pass light, 2-pass light, and 2-pass moderate tillage systems for soybean.**

What does this tell us? Most farmers in Illinois know their fields well enough to understand when they need an extra tillage pass to maximize profitability. **But for farmers who are willing to convert to no-till or strip-till, PCM offers opportunities to reduce financial risks while doing something great for water quality and soil health.**

<b>Corn</b> HIGH SPR   2015-23 AVG VALUES	NO-TILL	STRIP TILL	1-PASS LIGHT	2-PASS LIGHT	2-PASS MODERATE	2+ TILLAGE PASSES
# of fields	1,262	1,628	1,964	708	889	112
Yield per acre	219	221	222	227	227	223
<b>GROSS REVENUE</b>	<b>\$944</b>	<b>\$953</b>	<b>\$952</b>	<b>\$976</b>	<b>\$975</b>	<b>\$963</b>
<b>TOTAL DIRECT COSTS*</b>	<b>\$437</b>	<b>\$456</b>	<b>\$432</b>	<b>\$442</b>	<b>\$450</b>	<b>\$446</b>
Field work	\$0	\$22	\$11	\$25	\$29	\$41
Other power costs	\$108	\$101	\$105	\$103	\$102	\$106
<b>TOTAL POWER COSTS**</b>	<b>\$108</b>	<b>\$123</b>	<b>\$116</b>	<b>\$128</b>	<b>\$131</b>	<b>\$147</b>
<b>OVERHEAD COSTS</b>	<b>\$39</b>	<b>\$39</b>	<b>\$39</b>	<b>\$39</b>	<b>\$39</b>	<b>\$39</b>
<b>TOTAL NON-LAND COSTS</b>	<b>\$584</b>	<b>\$618</b>	<b>\$587</b>	<b>\$609</b>	<b>\$620</b>	<b>\$632</b>
<b>OPERATOR &amp; LAND RETURN</b>	<b>\$360</b>	<b>\$335</b>	<b>\$365</b>	<b>\$367</b>	<b>\$355</b>	<b>\$331</b>
Estimated soil loss (tons/a)	0.66	0.61	2.02	1.87	1.63	2.31
Soil Carbon Index (-1 to 1, higher=better)	0.69	0.79	0.50	0.54	0.54	0.44
GHG emissions (metric tons CO2e/a)	0.62		0.83		1.00	

\*Direct Costs = fertilizers, pesticides, seed, cover crop seed, drying, storage, and crop insurance

\*\*Power Costs = tillage, fall fertilizer application, spraying, planting, cover crop planting, spring/in-season fertilizer application, harvesting, and grain hauling

# PCM FARMER SURVEY RESULT

(Based on PCM data)

# 64%

of PCM farmers who don't already use reduced tillage practices agree that they are likely to reduce or eliminate tillage

## Finally! PCM is publishing data on low-SPR soils!

For the first time, our dataset includes enough lower SPR fields to include a fair representation of them for Illinois' lower SPR corn and soybean fields. Check out our website ([precisionconservation.org](http://precisionconservation.org)) to see these same tables for our lower SPR corn and soybean fields. As always, we welcome your thoughts and feedback!

Soybean HIGH SPR   2015-23 AVG VALUES	NO-TILL	STRIP TILL	1-PASS LIGHT	2-PASS LIGHT	2-PASS MODERATE	2+ TILLAGE PASSES
# of fields	3,047	182	912	292	938	480
Yield per acre	68	73	70	70	72	70
GROSS REVENUE	\$724	\$779	\$748	\$749	\$769	\$749
TOTAL DIRECT COSTS*	\$176	\$225	\$171	\$165	\$178	\$159
Field work	\$0	\$19	\$12	\$26	\$28	\$50
Other power costs	\$82	\$78	\$80	\$73	\$75	\$72
TOTAL POWER COSTS**	\$82	\$97	\$92	\$99	\$103	\$122
OVERHEAD COSTS	\$33	\$33	\$33	\$33	\$33	\$33
TOTAL NON-LAND COSTS	\$290	\$355	\$296	\$297	\$314	\$314
<b>OPERATOR &amp; LAND RETURN</b>	<b>\$434</b>	<b>\$424</b>	<b>\$452</b>	<b>\$452</b>	<b>\$455</b>	<b>\$435</b>
Estimated soil loss (tons/a)	1.15	0.71	1.86	2.28	2.67	4.71
Soil Carbon Index (-1 to 1, higher=better)	0.49	0.62	0.42	0.36	0.23	-0.02
GHG emissions (metric tons CO2e/a)	-0.23			0.02		0.17

**No-Till** = no tillage; **Strip-Till** = less than full-width tillage of varying intensity; **1-Pass Light** = 1 pass w/low-disturbance tillage; **2-Pass Light** = 2 passes w/low-disturbance tillage; **2-Pass Moderate** = 2 passes (1 low-disturbance tillage + 1 high-disturbance tillage); **2+ Tillage Passes** = more than 2 tillage passes, any intensity level

SPR = soil productivity rating

Cover crops are great, but growing cover crops without losing money (at least in the short term) can be very challenging. When reviewing the PCM cover crop data, keep in mind that most of the farmers growing cover crops in PCM have been doing it for three years or less. Also, many of the fields represented below have had cover crops for a very short time and do not yet demonstrate the benefits cover crops provide over time like improved soil structure and water infiltration, increased soil organic matter, and reduced weed pressure. We are not claiming to represent the

best-case scenario for cover crops here, but this data does fairly represent what a farmer is likely to experience during their first few years using cover crops.

One more thing to keep in mind: The tables below do not include payments that PCM farmers are receiving for growing cover crops — **and PCM offers several opportunities to help farmers manage financial risk when starting with cover crops.**

Back to our first statement: Cover crops are great. In fact, **nothing works better to reduce nutrient losses**

<b>Corn</b> HIGH SPR   2015-23 AVG VALUES	<b>OVERWINTERING</b>	<b>WINTER TERMINAL</b>	<b>NO COVER CROP</b>
# of fields	<b>584</b>	<b>249</b>	<b>5,789</b>
Yield per acre	<b>216</b>	<b>220</b>	<b>224</b>
Soil Productivity Rating (SPR)	<b>138</b>	<b>140</b>	<b>140</b>
<b>GROSS REVENUE</b>	<b>\$943</b>	<b>\$949</b>	<b>\$962</b>
COVER CROP SEED	<b>\$15</b>	<b>\$15</b>	<b>\$0</b>
<b>TOTAL DIRECT COSTS*</b>	<b>\$452</b>	<b>\$439</b>	<b>\$443</b>
COVER CROP PLANTING	<b>\$12</b>	<b>\$16</b>	<b>\$0</b>
Other power costs	<b>\$127</b>	<b>\$115</b>	<b>\$119</b>
<b>TOTAL POWER COSTS**</b>	<b>\$139</b>	<b>\$131</b>	<b>\$119</b>
<b>OVERHEAD COSTS</b>	<b>\$40</b>	<b>\$39</b>	<b>\$39</b>
<b>TOTAL NON-LAND COSTS</b>	<b>\$631</b>	<b>\$609</b>	<b>\$601</b>
<b>OPERATOR &amp; LAND RETURN</b>	<b>\$284-\$334</b>	<b>\$315-\$365</b>	<b>\$361</b>
Estimated soil loss (tons/a)	<b>0.81</b>	<b>1.10</b>	<b>1.45</b>
GHG emissions (metric tons CO2e/a)	<b>0.36</b>		<b>0.78</b>

\*Direct Costs = fertilizers, pesticides, seed, cover crop seed, drying, storage, and crop insurance

SPR = soil productivity rating



and soil erosion from fields. They may even be the key to stopping future regulation of farmers. Because of this, we strongly recommend farmers consider using this practice.

**We are publishing information about how cover crops are working for farmers on lower SPR soils on our website! Check out our data at [precisionconservation.org](https://precisionconservation.org).**

**PCM FARMER SURVEY RESULT**  
(Based on PCM data)

**63.5%**

of PCM farmers who don't already use cover crops on their whole farm agree that they are likely to try or expand cover crops

## Soybean

HIGH SPR | 2015-23 AVG VALUES

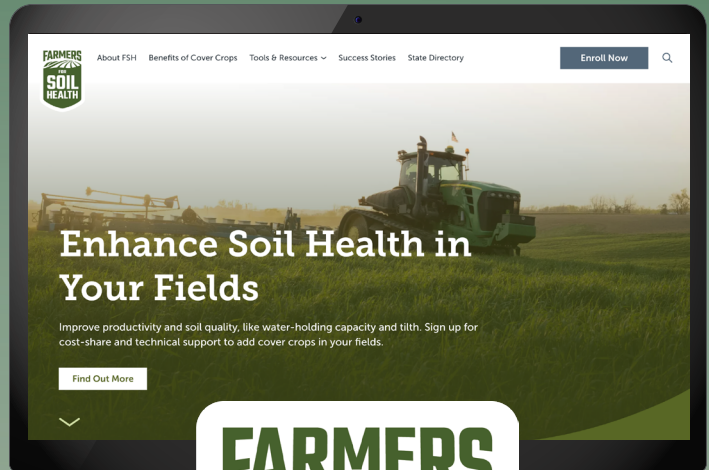
	OVERWINTERING	WINTER TERMINAL	NO COVER CROP
# of fields	1,340	44	4,554
Yield per acre	68	71	70
Soil Productivity Rating (SPR)	139	139	140
<b>GROSS REVENUE</b>	<b>\$723</b>	<b>\$762</b>	<b>\$747</b>
COVER CROP SEED	\$14	\$16	\$0
<b>TOTAL DIRECT COSTS*</b>	<b>\$180</b>	<b>\$180</b>	<b>\$173</b>
COVER CROP PLANTING	\$11	\$16	\$0
Other power costs	\$95	\$75	\$89
<b>TOTAL POWER COSTS**</b>	<b>\$106</b>	<b>\$91</b>	<b>\$89</b>
<b>OVERHEAD COSTS</b>	<b>\$33</b>	<b>\$33</b>	<b>\$33</b>
<b>TOTAL NON-LAND COSTS</b>	<b>\$318</b>	<b>\$304</b>	<b>\$295</b>
<b>OPERATOR &amp; LAND RETURN</b>	<b>\$375-\$425</b>	<b>\$435-\$485</b>	<b>\$452</b>
Estimated soil loss (tons/a)	1.24	1.12	2.03
GHG emissions (metric tons CO <sub>2</sub> e/a)	-0.42		-0.02

\*\*Power Costs = tillage, fall fertilizer application, spraying, planting, cover crop planting, spring/in-season fertilizer application, harvesting, and grain hauling

## Farmers for Soil Health

Farmers for Soil Health assists farmers in 20 states with the cost and learning curve of adopting **cover crops**. They have thoughtfully built flexibility into their program to allow for varying timing and seeding rates — ultimately making cover crop adoption more attainable for farmers.

Enrollment is a simple online process. Visit [farmersforsoilhealth.com](http://farmersforsoilhealth.com) to learn more.



“

*My main goal with cover crops is erosion control. Other bonuses I've seen: Herbicide cost saving has been a big bonus in soybeans. I've greatly reduced the amount of chemicals and amount I'm spending on my herbicide program in soybeans. Another bonus is improving fertility. This is a slow one but we have seen organic matter percentage going up in the first field I cover cropped. I soil test at least every four years and I'm optimistic that the recommendations for P and K will start to be lower. I'm hopeful that these covers are recycling nutrients in the soil profile and helping them become more available for my crops.”*

Michael Aussieker,  
Washington County, Illinois

**This statewide program is the first of its kind with an allowance for farmers to plant lower seeding rates of cover crops.** This opportunity is also stackable with PCM's exclusive PepsiCo Program, because you are not claiming any carbon asset when you take their base incentive. Reach out to your PCM specialist to inquire about stacking opportunities like this!

# Field to Market/PepsiCo

PCM was one of several programs included in a recent collaboration between Field to Market: The Alliance for Sustainable Agriculture® and the USDA through Field to Market’s Climate-Smart Agriculture Innovative Finance Initiative. The Initiative, which is part of USDA’s Partnerships for Climate-Smart Commodities Grant Program, will use innovative finance mechanisms to accelerate climate-smart practice uptake by farmers, leveraging private sector demand to strengthen markets for climate-smart commodities.

PCM is leveraging funds from this grant to offer an incentive to farmers for **cover crops, reduced-till, no-till, strip-till, reduction in nitrogen use, and various practice enhancement options** through an existing partnership with PepsiCo. This pay-for-practice program is designed to provide cost-share opportunities for farmers, which make conservation practices more economically achievable. **Farmers can be paid up to \$35/acre through this exclusive PCM program!**



Practice payments are stackable

Cover Crops	No-Till/Strip-Till	MRTN/10% N Reduction
\$15/acre 1st and 2nd year	\$10/acre 1st and 2nd year	\$10/acre 1st year
\$10/acre 3rd year and beyond	\$5/acre 3rd year and beyond	



*We are very excited to be awarded this grant and thank the USDA and PepsiCo for funding this important work. This opportunity will allow us to offer innovative incentives at scale that will help us engage farmers we were unlikely to reach otherwise.*

*Greg Goodwin, Director of PCM*

Dr. Gary Schnitkey, who oversees PCM’s financial analysis, is always telling us, “Keeping costs low without sacrificing too much yield is the key to remaining profitable.” Nitrogen fertilizer is one of the top input costs farmers pay. How efficient are you with your nitrogen fertilizer? We have found that **the University of Illinois Maximum Return to Nitrogen (MRTN) recommendation system has predicted the most profitable nitrogen application rate every single year since 2015**, when we started doing these analyses. The 2023 growing season was no different.

In addition to their rate of nitrogen fertilizer, **farmers can increase profitability (especially in years with average to below-average profitability projections) by applying the majority of their nitrogen in-season**, either preplant or at sidedress. Farmers applying nitrogen mostly in the fall on high productivity soils apply a higher average nitrogen rate plus stabilizer and, while they make slightly higher corn yields than farmers who apply in-season, on average, those few extra bushels are not enough to pay for the extra pounds of nitrogen and stabilizer costs.

<b>Corn</b> HIGH SPR, N TIMING   2015-23 AVG VALUES	<b>&gt;40% FALL</b>	<b>MOSTLY PREPLANT</b>	<b>MOSTLY SIDEDRESS</b>	<b>50% PRE/ 50% SIDEDRESS</b>	<b>3-WAY SPLIT</b>
NUE (lb N/bu grain)	<b>0.97</b>	<b>0.91</b>	<b>0.90</b>	<b>0.93</b>	<b>0.92</b>
# fields	<b>2,690</b>	<b>1,364</b>	<b>1,514</b>	<b>474</b>	<b>580</b>
Yield per acre	<b>224</b>	<b>220</b>	<b>223</b>	<b>221</b>	<b>225</b>
<b>GROSS REVENUE</b>	<b>\$964</b>	<b>\$943</b>	<b>\$956</b>	<b>\$951</b>	<b>\$970</b>
N fertilizer	<b>\$102</b>	<b>\$96</b>	<b>\$95</b>	<b>\$109</b>	<b>\$104</b>
Other direct costs	<b>\$349</b>	<b>\$323</b>	<b>\$338</b>	<b>\$344</b>	<b>\$369</b>
<b>TOTAL DIRECT COSTS*</b>	<b>\$451</b>	<b>\$419</b>	<b>\$433</b>	<b>\$453</b>	<b>\$473</b>
Field Work	<b>\$16</b>	<b>\$16</b>	<b>\$17</b>	<b>\$16</b>	<b>\$20</b>
Other power costs	<b>\$106</b>	<b>\$98</b>	<b>\$104</b>	<b>\$104</b>	<b>\$104</b>
<b>TOTAL POWER COSTS**</b>	<b>\$122</b>	<b>\$114</b>	<b>\$121</b>	<b>\$120</b>	<b>\$124</b>
<b>OVERHEAD COSTS</b>	<b>\$39</b>	<b>\$39</b>	<b>\$39</b>	<b>\$39</b>	<b>\$39</b>
<b>TOTAL NON-LAND COSTS</b>	<b>\$613</b>	<b>\$573</b>	<b>\$594</b>	<b>\$612</b>	<b>\$636</b>
<b>OPERATOR &amp; LAND RETURN</b>	<b>\$351</b>	<b>\$370</b>	<b>\$362</b>	<b>\$339</b>	<b>\$334</b>

\*Direct Costs = fertilizers, pesticides, seed, cover crop seed, drying, storage, and crop insurance

\*\*Power Costs = tillage, fall fertilizer application, spraying, planting, cover crop planting, spring/in-season fertilizer application, harvesting, and grain hauling

NUE = nitrogen use efficiency  
SPR = soil productivity rating

Note: When reviewing these tables, please keep in mind that the nitrogen values represent the TOTAL nitrogen fertilizer application rate, including any nitrogen applied in MAP or DAP or with herbicides or other sources.



Find the MRTN Rate  
in your region at  
[cornratecalc.org](http://cornratecalc.org)

**PCM FARMER SURVEY RESULT**  
(Based on PCM data)

**60%**

of PCM farmers who don't already use MRTN rates say that they are likely to apply nitrogen at MRTN rates

**72%**

of PCM farmers who don't already apply nitrogen in-season say that they are likely to apply nitrogen in-season

<b>Corn</b> N RATE, HIGH SPR, LBS PER ACRE   2015-23 AVG VALUES	<150	151-175	176-200	201-225	>225
# fields	181	599	1,854	2,558	1,430
<b>AVG Corn Yield</b> (bu/a) 2015-23	208	218	220	223	229
<b>OPERATOR &amp; LAND RETURN</b>	<b>\$361</b>	<b>\$371</b>	<b>\$365</b>	<b>\$354</b>	<b>\$346</b>
GHG emissions (metric tons CO <sub>2</sub> e/a)	0.38	0.61	0.66	0.74	0.9

“

*I appreciate the insights PCM provides to give me confidence to lower fertilizer rates while maintaining strong returns. It is a win-win for farmer profitability and improving water quality. PCM provides powerful data to empower us all to confidently learn to be better stewards of our own land while helping our downstream neighbors too.*

Noah Forlines, Stark County, Illinois



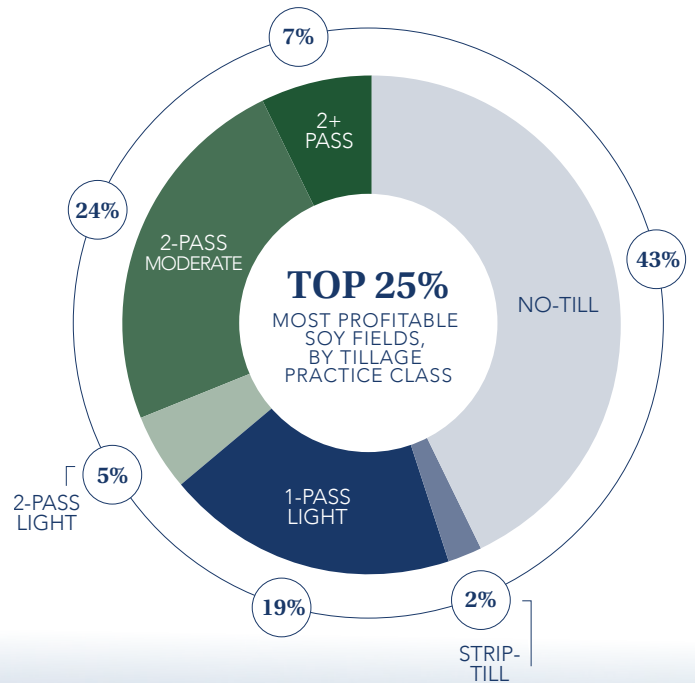
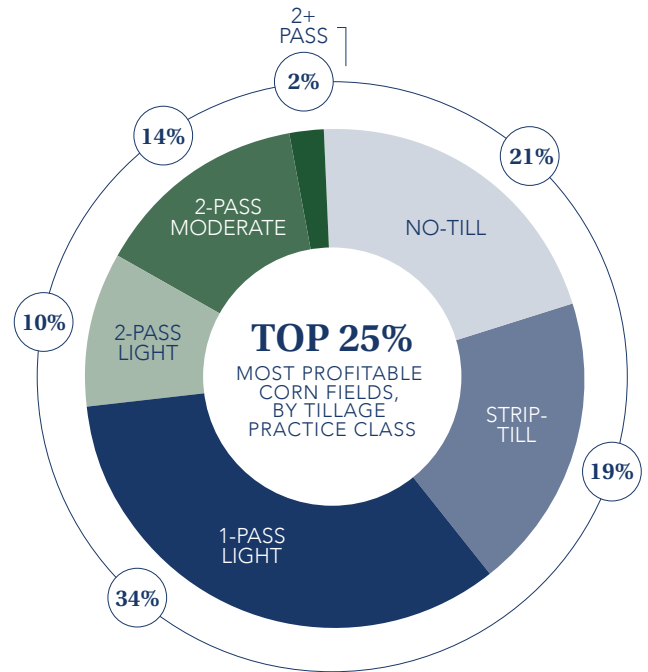
Curious about how nitrogen fertilizer rate affects corn yield and profitability on low SPR soils? PCM is now publishing low SPR results on our website. Learn more at [precisionconservation.org](http://precisionconservation.org)

# Most Profitable Acres by Tillage Practice

Each year we look at the top 25% most profitable fields to see what those farmers are doing and what farmers all over Illinois can learn from them. This analysis lets us identify the most profitable corn and soybean fields across our entire dataset, broken out by higher and lower-productivity soils and normalized by year, to account for different profitability levels across time.

We had 6,623 corn fields and 5,939 soybean fields in our analysis of the most profitable fields this year.

Regarding tillage, we saw these trends: The most frequently observed tillage systems were **1-pass light tillage for corn** (34% of most profitable fields) and **no-till for soybean** (43% of most profitable fields). Also, **strip tillage is being used more frequently — and more profitably — for corn production** in recent years. In 2018, only 12% of the most profitable corn fields were strip-tilled; in 2023 that number increased to 31%.



**PRACTICE TO WATCH:**

**Every year, more strip tillage fields are being represented in our most profitable analysis.**



*Between now and 2025, we all have to do something different on each acre to achieve the goals of the Illinois Nutrient Loss Reduction Strategy. We can't do what we've always done and avoid negative publicity or difficult*

*regulations like we see in surrounding states. I use PCM to help inform the decisions I'm making on each acre and to make sure my farm is profitable. It's been a valuable tool for me."*

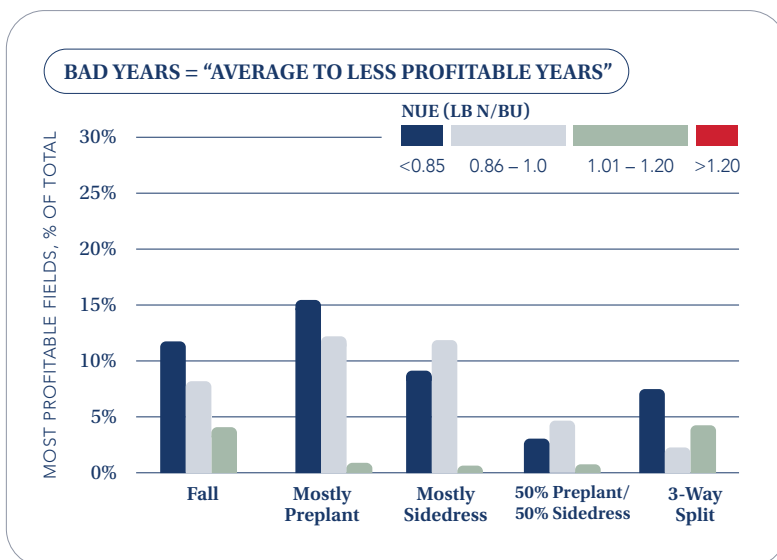
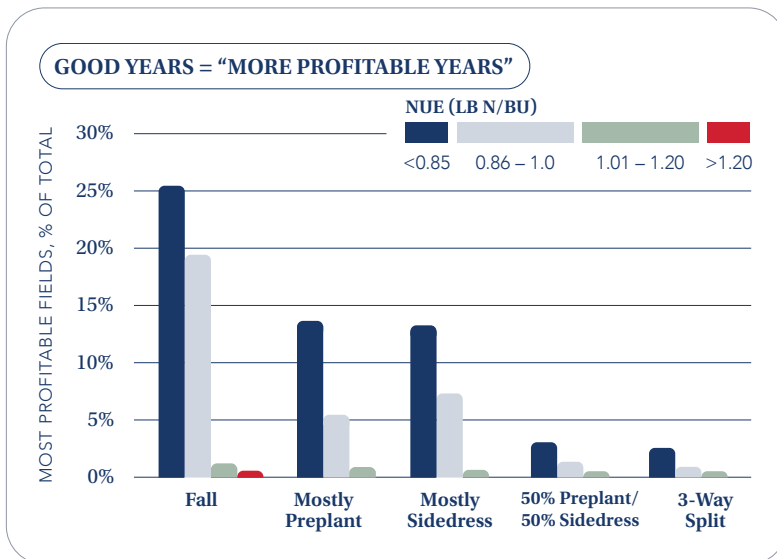
Dirk Rice, Champaign County, Illinois



# Most Profitable Corn Acres, Parsed by Nitrogen Management

This year, we looked at the most profitable corn field data a little differently. What we discovered is that there are different and distinct patterns for nitrogen management depending on whether the growing season was a “more profitable year\*” versus an “average to less profitable year\*\*.” We found that in more profitable years (i.e., 2018, 2020, 2021, 2022, and 2023) timing of nitrogen fertilizer applications was less important than maximizing efficiency by producing high yields with lower rates of nitrogen fertilizer (<0.85 lb N/a).

The chart on the top demonstrates that the most profitable fields during high-profit years reflect the same distribution of N timing classes as our full dataset: Most fields fall into the Fall N category, followed by Mostly Preplant and Mostly Sidedress. However, when grain prices, input prices, and corn yields converge to produce average profitability or lower-profitability years (i.e., 2015, 2016, 2017, and 2019), we see a new trend — one that bucks the natural distribution of our full dataset. In average to less profitable years, we see more of the Mostly Preplant fields in the <0.85 and 0.86-1.0 lb N/acre classes dominate our Most Profitable Fields. Mostly Fall (<0.85 lb N/a) and Mostly Sidedress (0.86-1.0 lb N/a) do well in average to lower profitability years, as well.



\*More Profitable Year was set as years when the average Non-land Operator and Land Return is greater than \$400/acre.

\*\*Average to Less Profitable Year was set as years when average Non-land Operator and Land Return is less than \$400/acre.

**Here’s the lesson:** In years when yields are high and the ratio of corn prices to input costs is reasonable, nitrogen fertilizer timing is not as important as economizing your nitrogen fertilizer rate. But in years when nitrogen prices are high relative to corn prices, nitrogen fertilizer timing AND rate are important and applying the majority of nitrogen fertilizer in-season (preplant or sidedress or a combination) is a good idea. Applying fertilizer in-season is also a great practice for reducing fertilizer losses and addressing the water quality goals of the Illinois Nutrient Loss Reduction Strategy.

In order to meet the goals of the Illinois Nutrient Loss Reduction Strategy, **at least one additional conservation practice must be implemented on every acre of farmland in Illinois.** Is 2024 the year for you to try something new?

Use PCM's data and recommendations to consider what your newest conservation practice should be and consider enrolling in PCM to make conservation adoption easy and cost-effective.



### **Nitrogen Rate — Money Talks**

Nine years of PCM data show that nitrogen applications over MRTN are less profitable. This is the easiest change to increase your profitability.



### **Nitrogen Timing — Maximize Your Investment**

Apply the majority of nitrogen in the spring. The most profitable acres in our dataset are utilizing preplant and sidedress nitrogen applications at MRTN levels. This is also a great practice for reducing fertilizer losses and improving water quality!



### **Tillage — Less is More**

Consider one less tillage pass this coming year. Also, strip tillage is proving itself as a profitable system in many of the highly productive soils across Illinois. Save fuel, save soil, increase profitability.



### **Recreational Tillage is OUT — Maybe Try Finding a New Hobby**

More than two passes of heavy tillage is never profitable compared to other tillage management systems in our dataset. Consider lighter tillage passes this year.



### **Cover Crops — Something to Consider**

Cover crops are the single best conservation practice and the cost-sharing opportunities right now make this an easier investment. Sign up for one of PCM's many cover crop opportunities to try cover crops on a small scale.





PCM specialists provide enrolled farmers with one-on-one technical support, custom farm reports, and annual data analysis and recommendations. They also connect farmers with cost-share programs best suited to your individual farm and goals — making it a priority to stay up to date on programs and technology useful to PCM farmers.



*One of the most important parts of PCM that I appreciate is the ability to use it as a resource. If I have a question about a new tillage practice or whether I could get some funding to adopt a new practice, I can call Leyton to direct me.*

*Darrin Tate, Champaign County, Illinois*

**If you'd like to try cover crops on your farm**, please reach out to your PCM specialist or another resource like a Certified Crop Advisor, or your Soil and Water Conservation District or Natural Resources Conservation Service (NRCS) staff. We're all here to help!



**Get an in-depth look at the most profitable cover crop strategies in our new guide, Managing Risks With Cover Crops, at [precisionconservation.org](http://precisionconservation.org).**





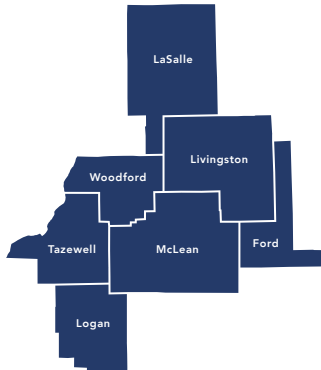
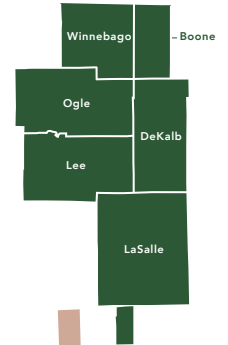
PCM's team of specialists are available to help farmers navigate land management practices and available incentive programs. Reach out directly to your region's specialist to learn more.

ILLINOIS



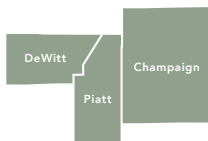
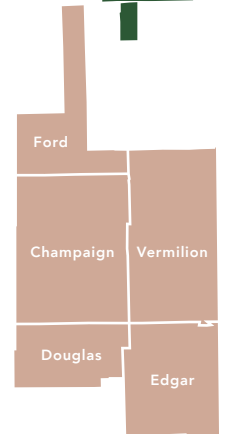
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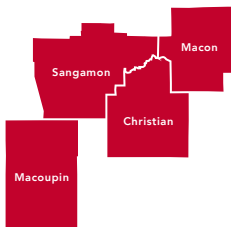
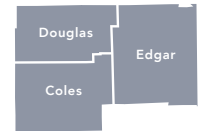
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## PCM is expanding — New region in Nebraska!

We are thrilled to be expanding to a new region in Nebraska in 2024 with support from the Farmers for Soil Health Climate Smart Commodities Partnership Program! PCM targets watersheds and industry supply sheds strategically to have the greatest impact on nutrient loss in our waterways and climate change concerns. By supporting farmers as they reduce tillage, implement cover crops, and maximize irrigation efficiency in this region, we will move the needle even more to achieve water use, water quality, and greenhouse gas reduction goals.



### PCM NEBRASKA

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**Don't see your county listed?**

Email [info@precisionconservation.org](mailto:info@precisionconservation.org) to inquire.

Precision Conservation Management (PCM) is a farmer-driven effort addressing natural resource concerns on a field-by-field basis. We are here to identify conservation practices that effectively address environmental issues without risking the farmers' bottom line — **to apply financial analysis to conservation adoption.**

This report provides data highlights gleaned from farmers in Illinois, Nebraska, and Kentucky, but the results are relevant and useful for farmers across much of the Midwest to consider regarding nitrogen application, cover crop utilization, and tillage management.



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We would love your feedback on PCM's annual data book! Take a short survey here. You'll be entered to win a \$100 gift card!