Financial and Environmental Impact of Conservation Practices

ILLINOIS

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Precision Conservation Management

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Precision Conservation Management

Positioning farmers to benefit from conservation outcomes

- Understand how conservation practices impact farm net returns
- Address water quality concerns. Prevent agricultural regulation
- Position farmers to benefit from positive conservation outcomes

Precision Conservation Management

- 1-on-1 technical support
- Data collection platform
- Individualized yearly RAAP report
  - Economic cost tables
  - Environmental assessments
  - Local practice comparisons
- $750 participation payment
- Exclusive program offers – cost share, other practice assistance
- Networking & educational opportunities

Illinois Nutrient Loss Reduction Strategy

Goal: **45% Reduction** in **Total N & Total P** Losses by **2035**

Interim: 15% Reduction in NO_3-N & 25% Reduction in Total P by 2025

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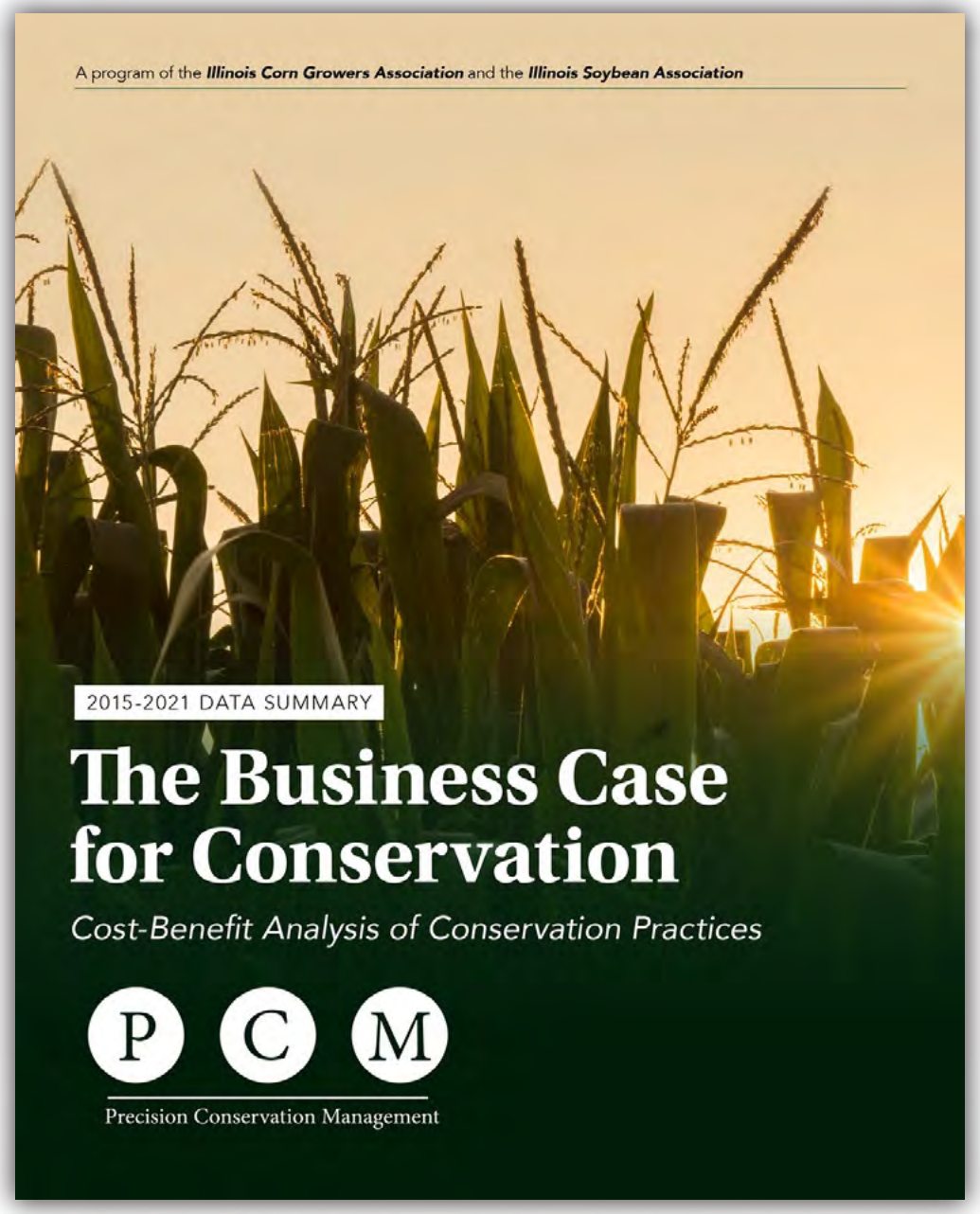
PCM PARTNERS!

CHECK US OUT ONLINE: WWW.PRECISIONCONSERVATION.ORG



HOT OFF THE PRESS!

JUNE EDITION

PRAIRIE FARMER

Practice Standards

Precision Conservation Management

- Cover Crops
- Nitrogen Management
- Tillage

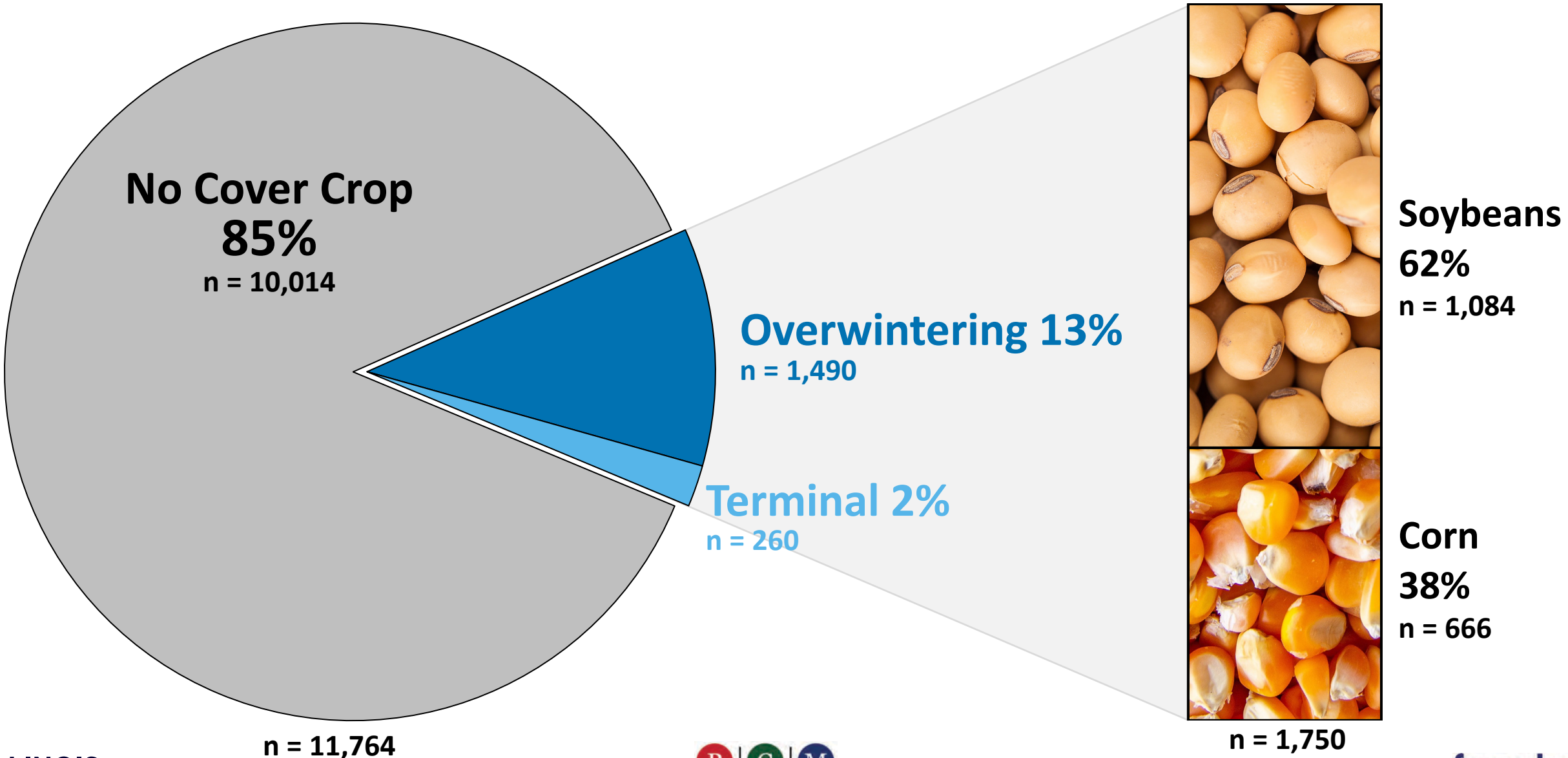
Do you “another” expect a “Federal” Cover crop program making payments for cover crop usage

O Yes (over $20 per acre)

O Yes (less than $20 per acre)

O No

Cover Crops Overview



Cover Crops Overview

- For the cover crop fields:
  - 91% are reduced till
    no-till, strip-till, or 1-pass light tillage benchmarks
  - 79% of the cover crop corn fields receive an in-season nitrogen application

- For all corn fields with a cover crop, 70% of the fields have a cover crop the next year the field is planted with corn

- For all soybean fields with a cover crop, 75% have a cover crop the next year the field is planted with soybeans

Corn into Cover Crop

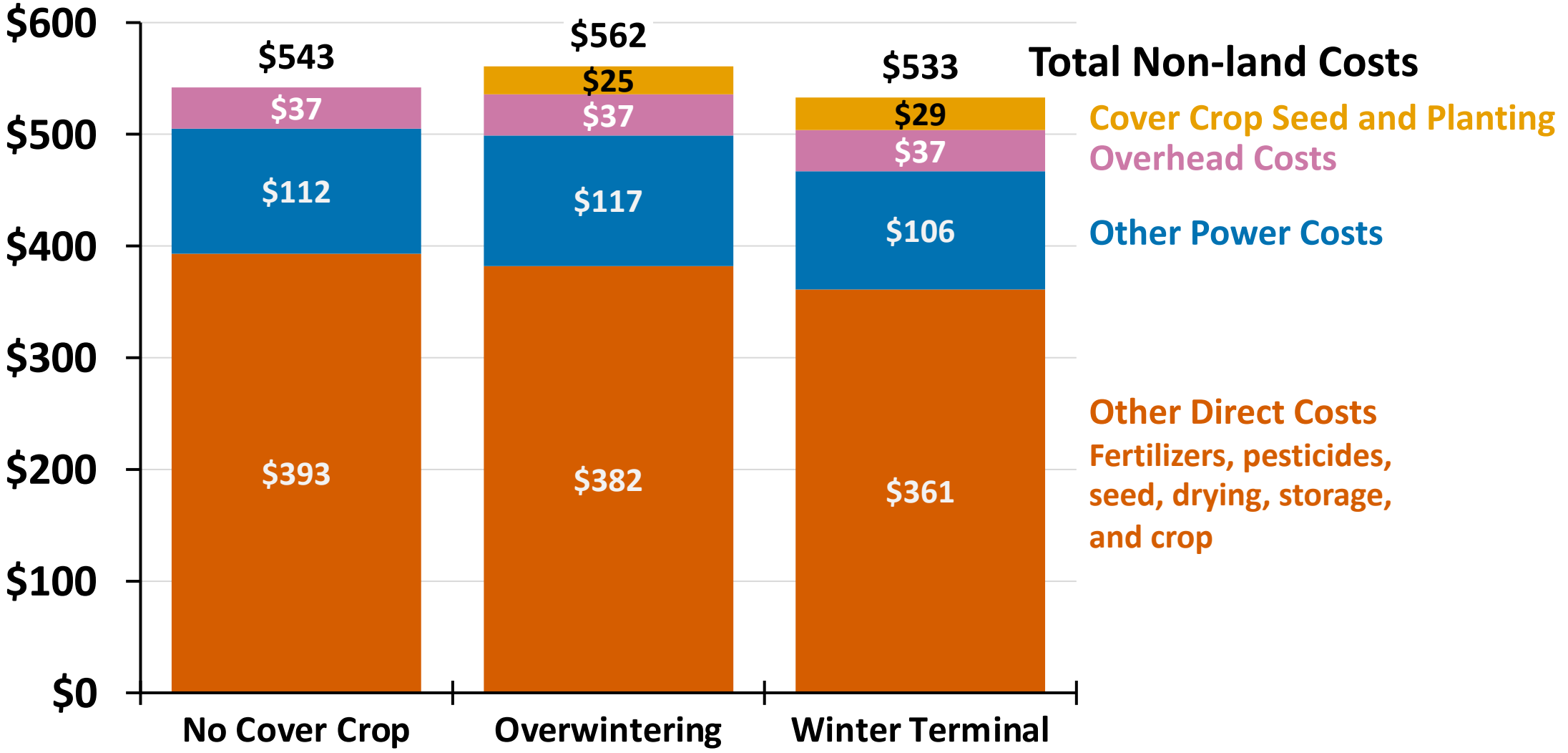
Cover Crops

Corn, High SPR, Average from 2015 to 2021

	Overwintering	Winter Terminal	No Cover Crop
Number of Fields	243	109	3523
Yield per Acre	214	215	221
Soil Productivity Rating	139	139	140
Gross Revenue	$833	$834	$856
Total Non-land Cost	$562	$533	$543
Operator & Land Return	$271	$301	$313

Cover Crops Costs

Corn, High SPR, Average from 2015 to 2021



Soybeans into Cover Crop

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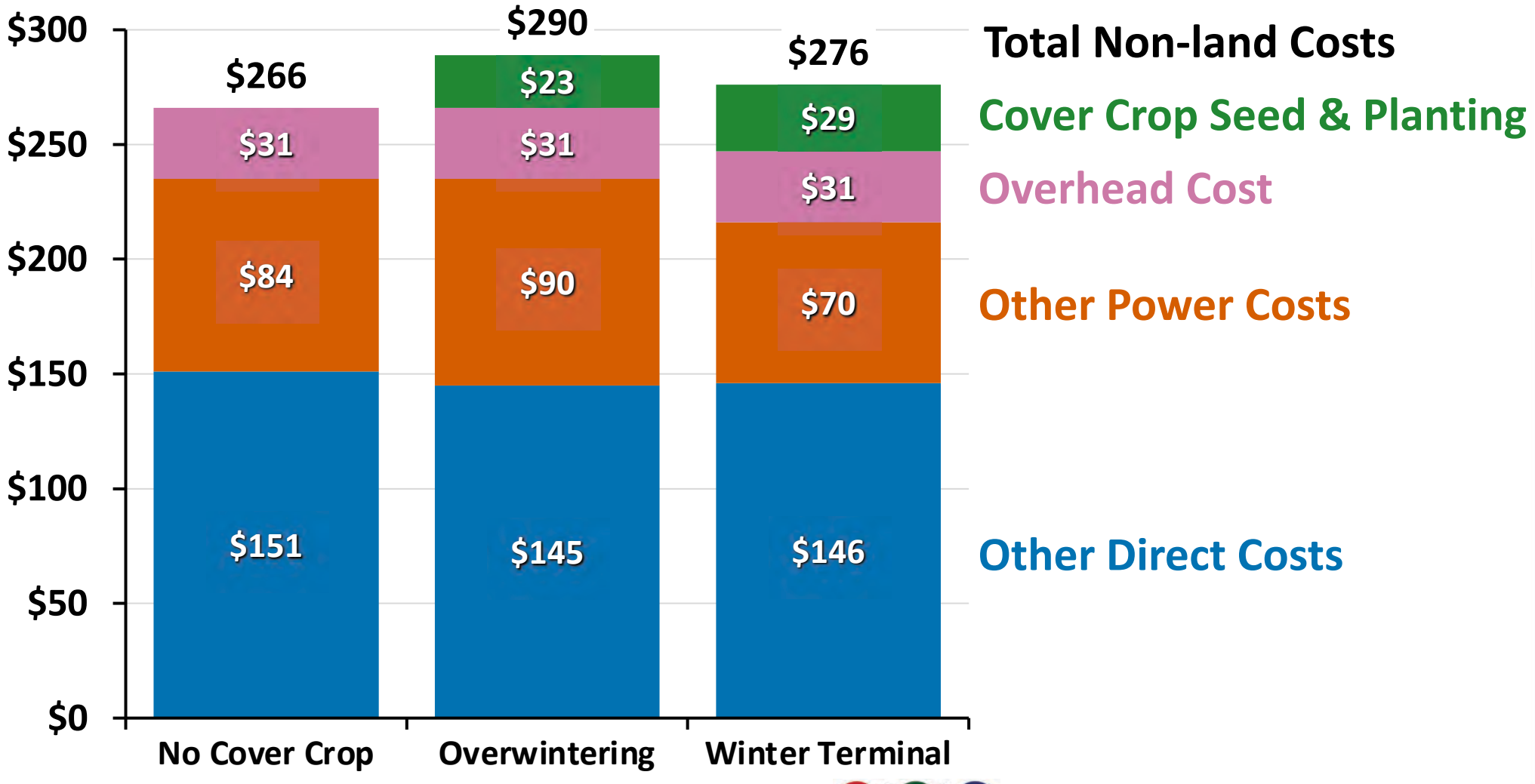
Cover Crops

Soybean, High SPR, Average from 2015 to 2021



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Cover Crops

Soybean, High SPR, Average from 2015 to 2021

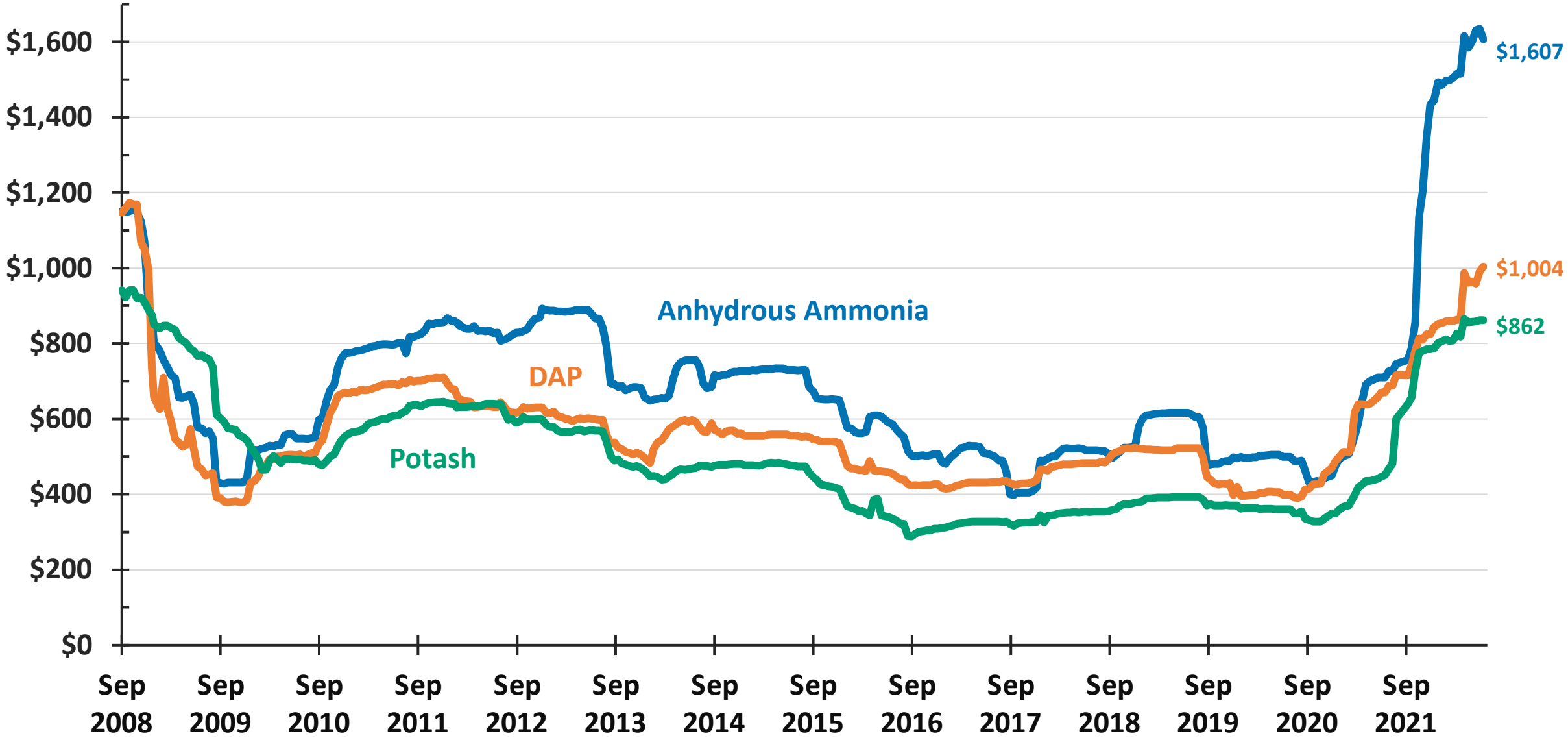
	Overwintering	Winter Terminal	No Cover Crop
Number of fields	588	28	3,066
Yield per acre	68	68	70
Soil Productivity Rating	139	139	140
Gross Revenue	$666	$675	$686
Total Non-land Costs	$290	$276	$266
Operator & Land Return	**$376**	**$399**	**$420**

Nitrogen Rates

What are your expectations for anhydrous ammonia prices for application in late fall 2022?

- O Over $2,000 per ton
- O $1,500 to $2,000 per ton
- O $1,000 to $1,500 per ton
- O Less than $1,000 per ton

Fertilizer Prices per Ton in Illinois From 2008 to 2022



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Source: US Department of Agriculture, Agricultural Marketing Service

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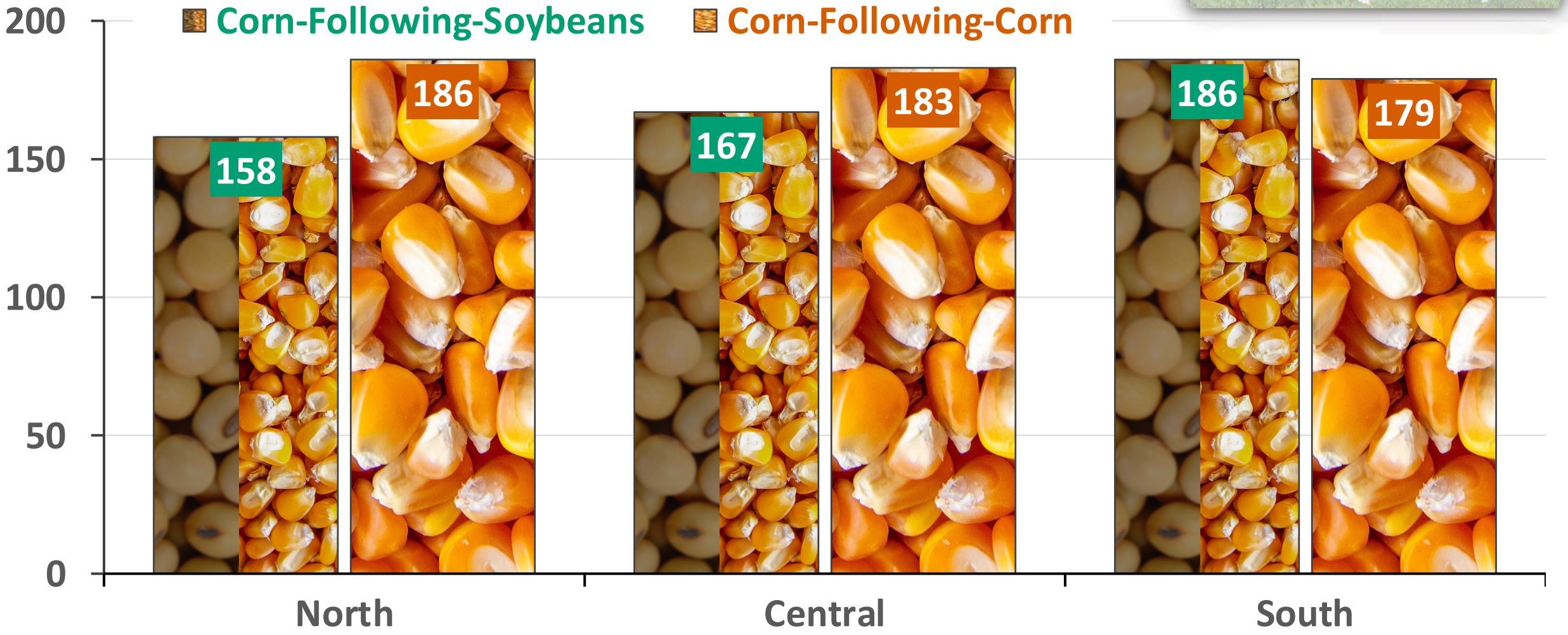
Illinois 2022 MRTN Recommendation

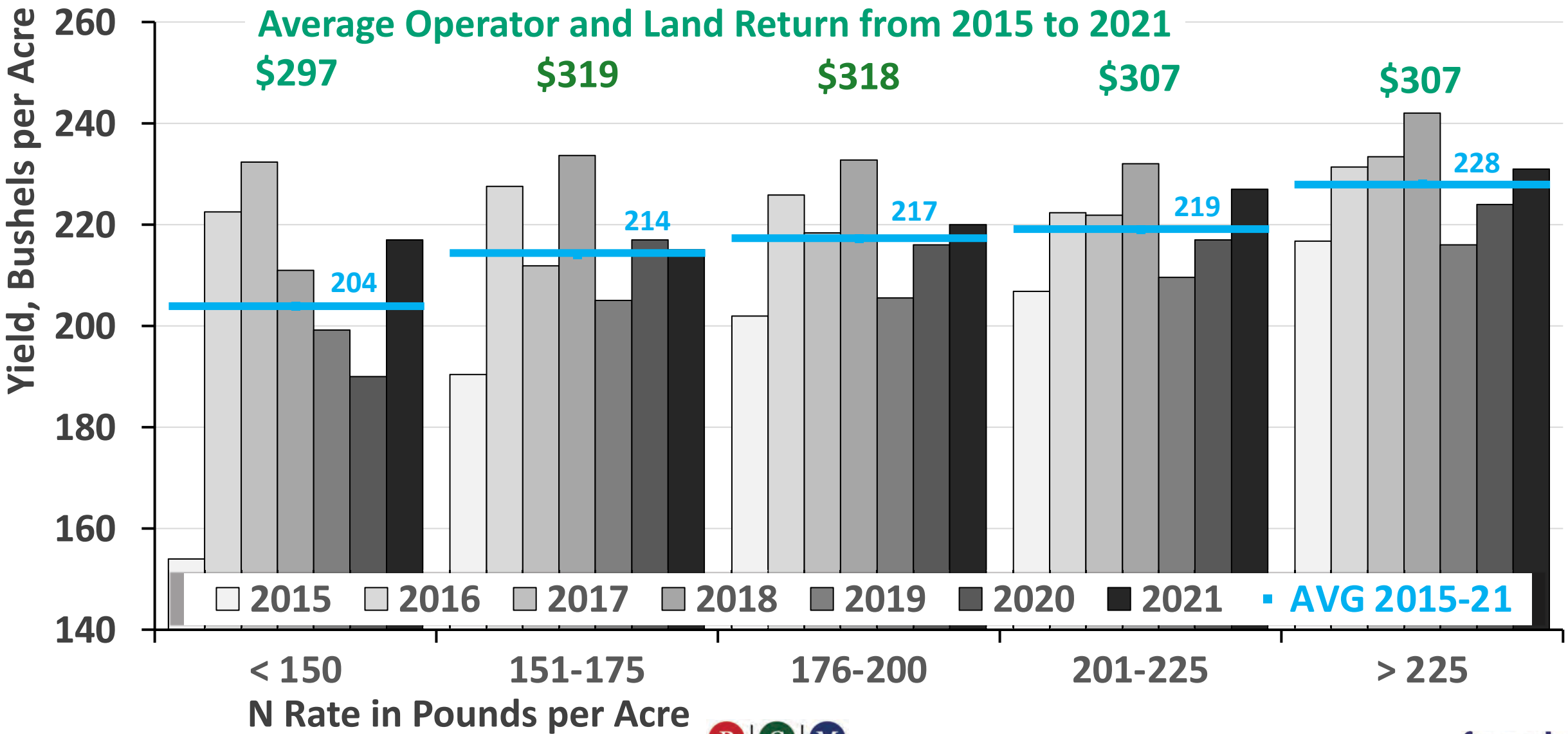
in pounds of N applied[1,2]



[1]Taken from Corn Nitrogen Rate Calculator (http://cnrc.agron.iastate.edu/nRate.aspx) on June 22, 2022

[2]MRTNs determined with a $6.75 corn price, $1,600 per ton anhydrous ammonia price, and $630 per ton nitrogen solution price

CORN, High SPR, N Rate, Pounds per Acre



Nitrogen Application Timing

Nitrogen Application Timing

Corn, High SPR, Average from 2015 to 2021

	>40% Fall	Mostly Preplant	Mostly Sidedress	50% Pre 50% Sidedress	3-Way Split
# fields	1,428	841	933	310	363
NUE (lb N/bu grain)	0.98	0.92	0.91	0.95	0.93
Yield per acre	220	218	221	218	222

Nitrogen Timing

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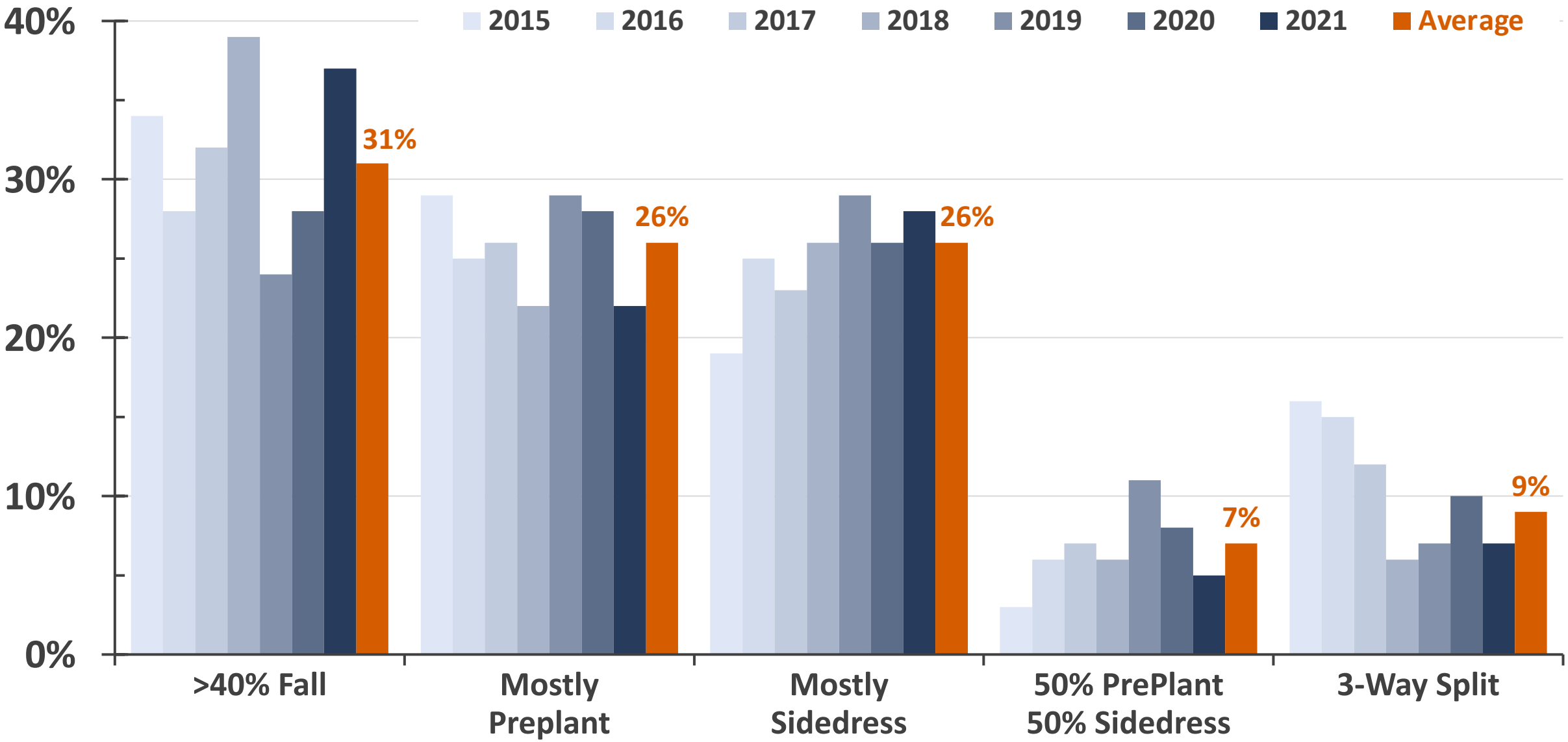
# fields	1,428	841	933	310	363
NUE (lb N/bu grain)	0.98	0.92	0.91	0.95	0.93
Yield per acre	220	218	221	218	222
Gross Revenue	$854	$844	$857	$843	$860
Total Non-land Cost	$555	$515	$535	$548	$564
Operator & Land Return	$299	$329	$322	$295	$296

Percent of Fields by N Benchmark



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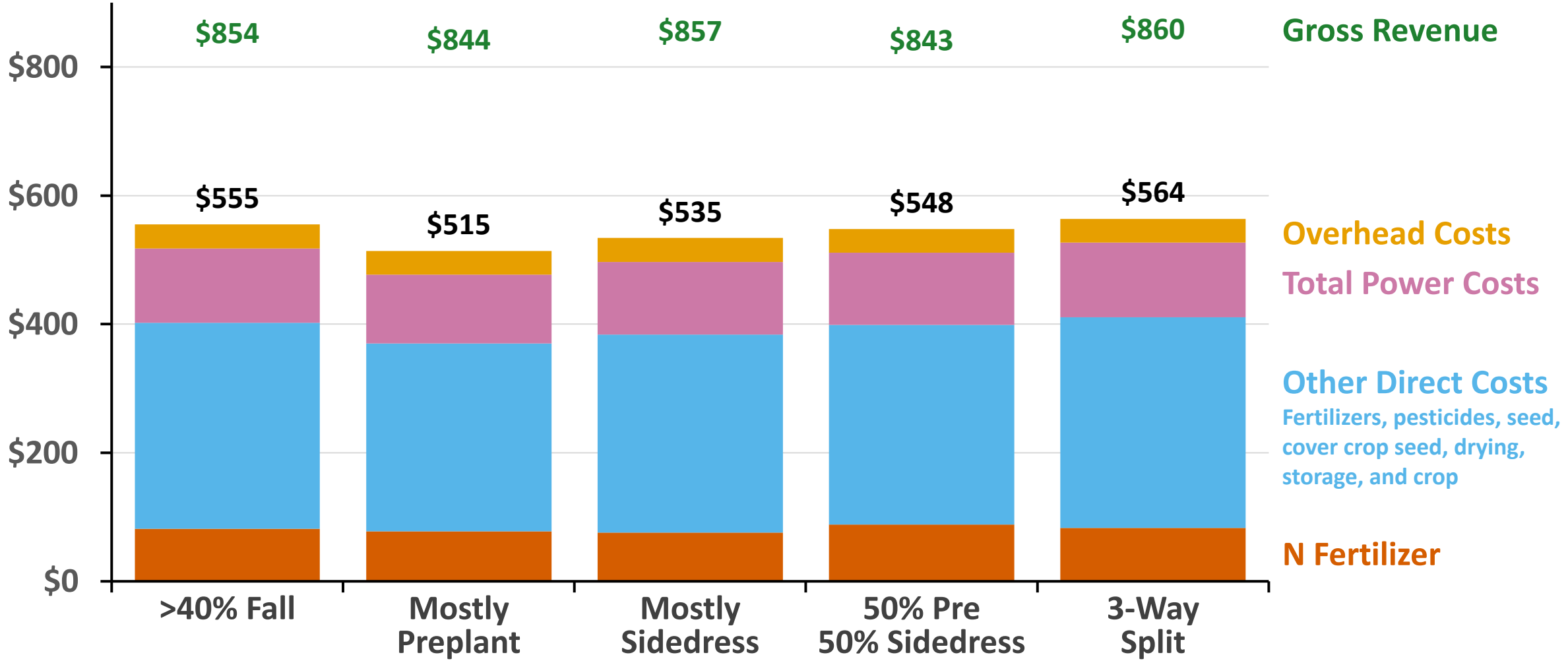

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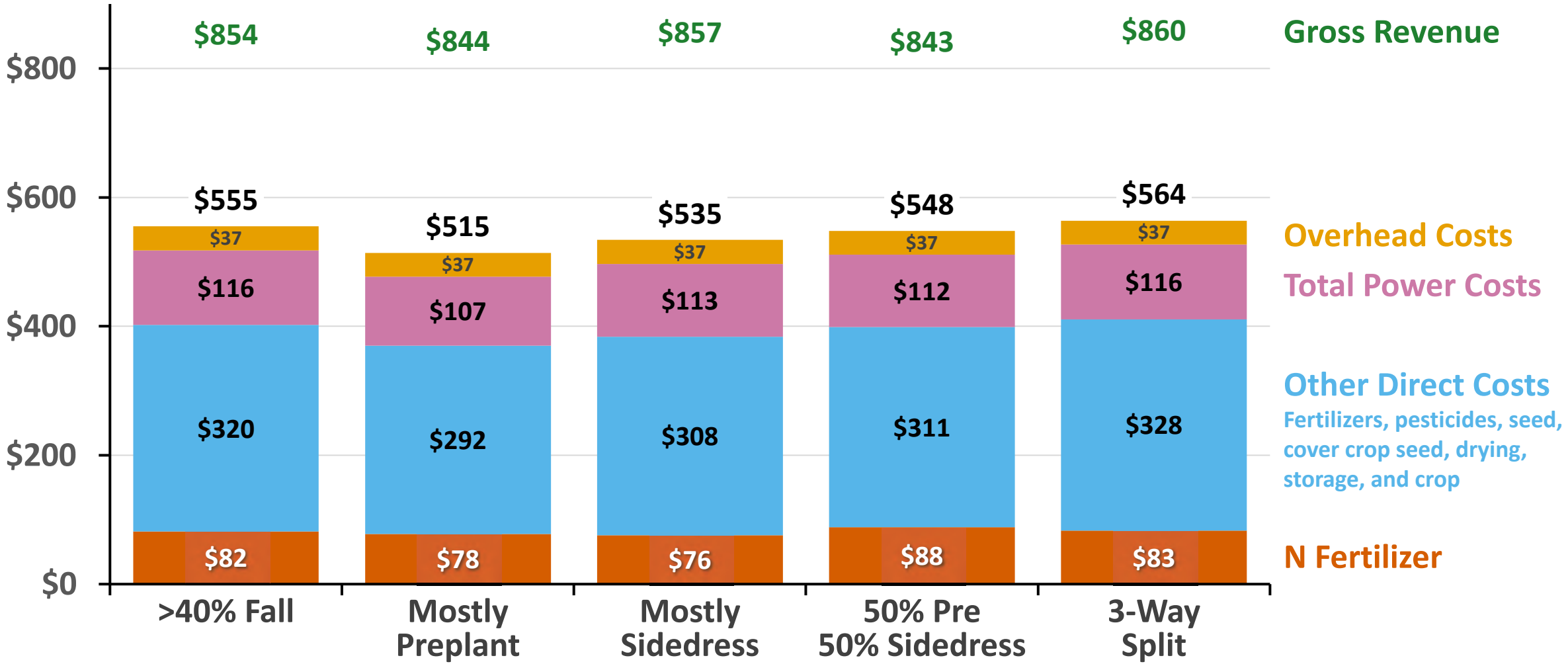
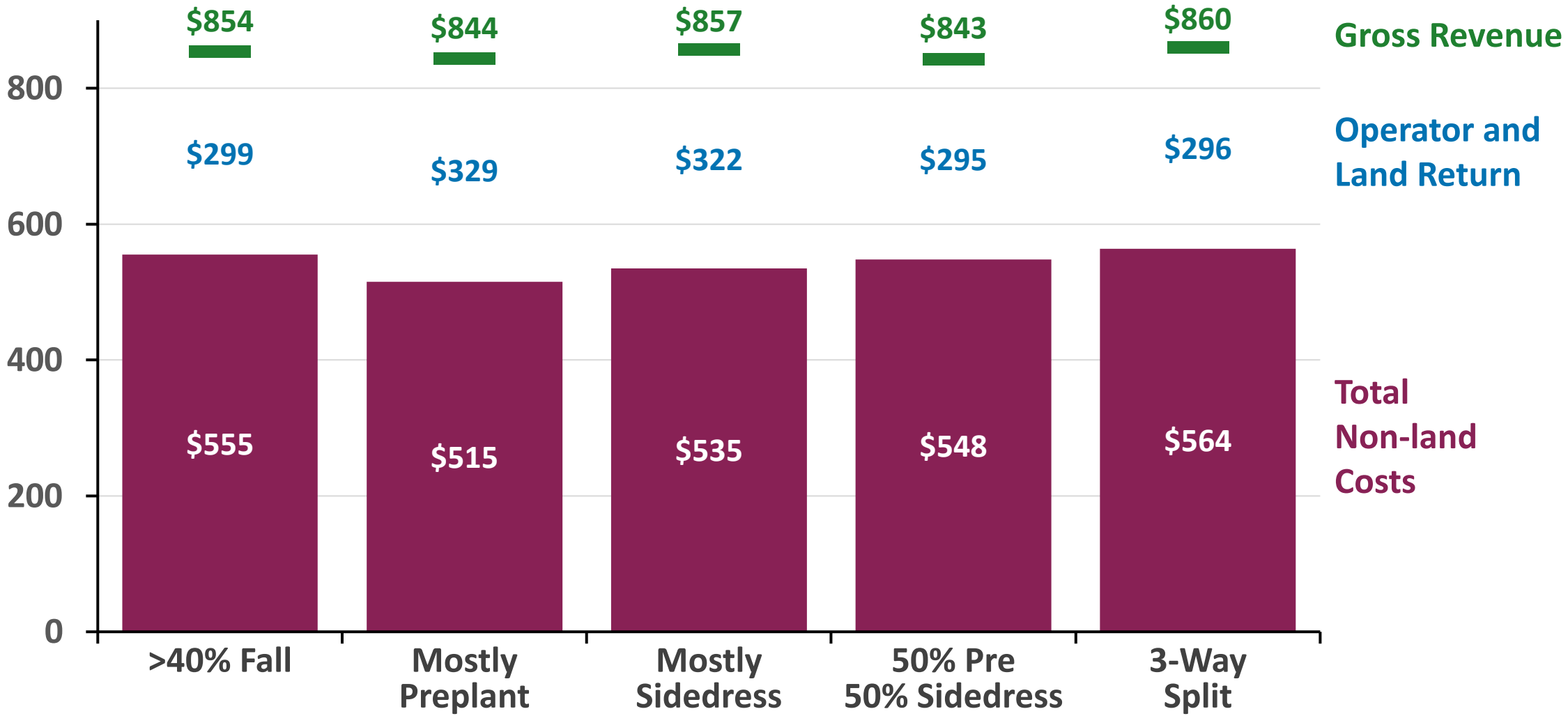


Nitrogen Timing

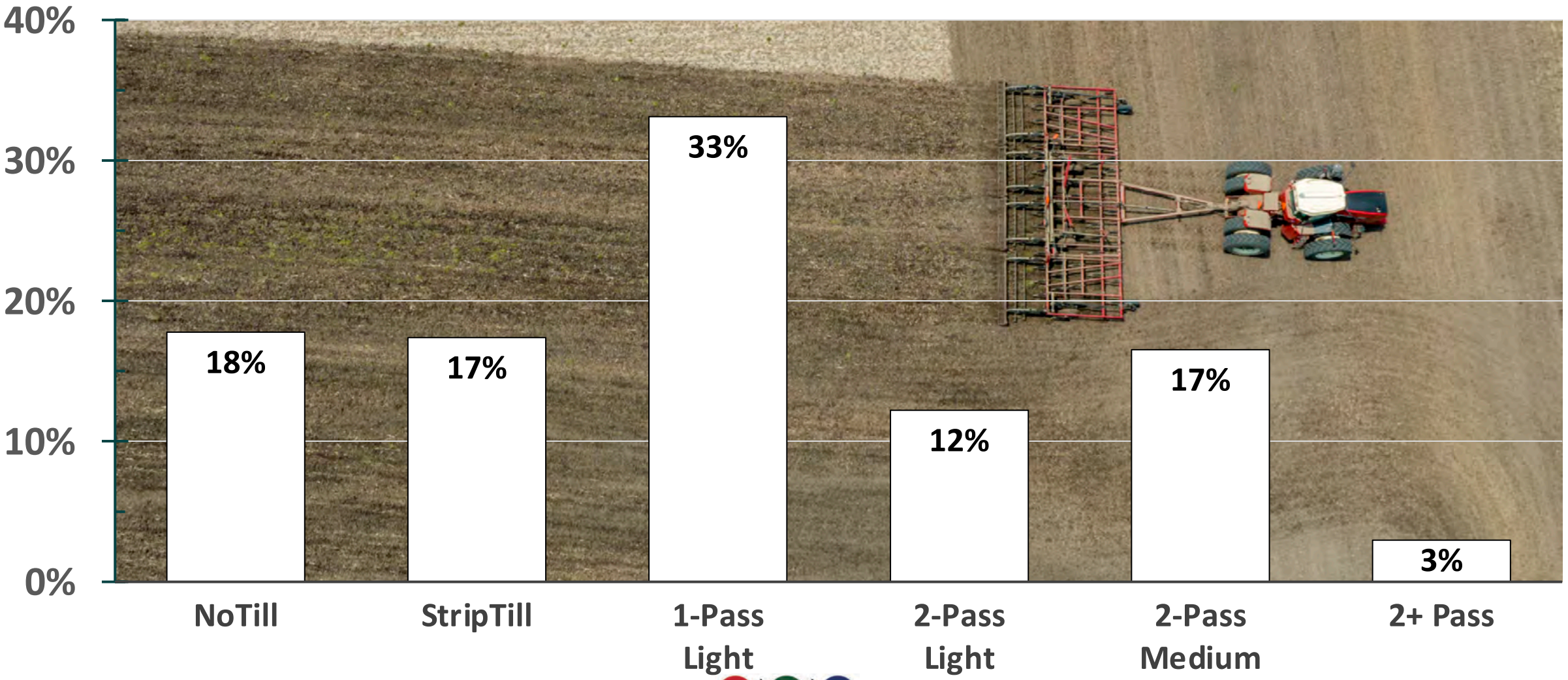
Corn, High SPR, Average from 2015 to 2021



Tillage Practices

Percent of Fields by Tillage Benchmark

2015-2021, Corn



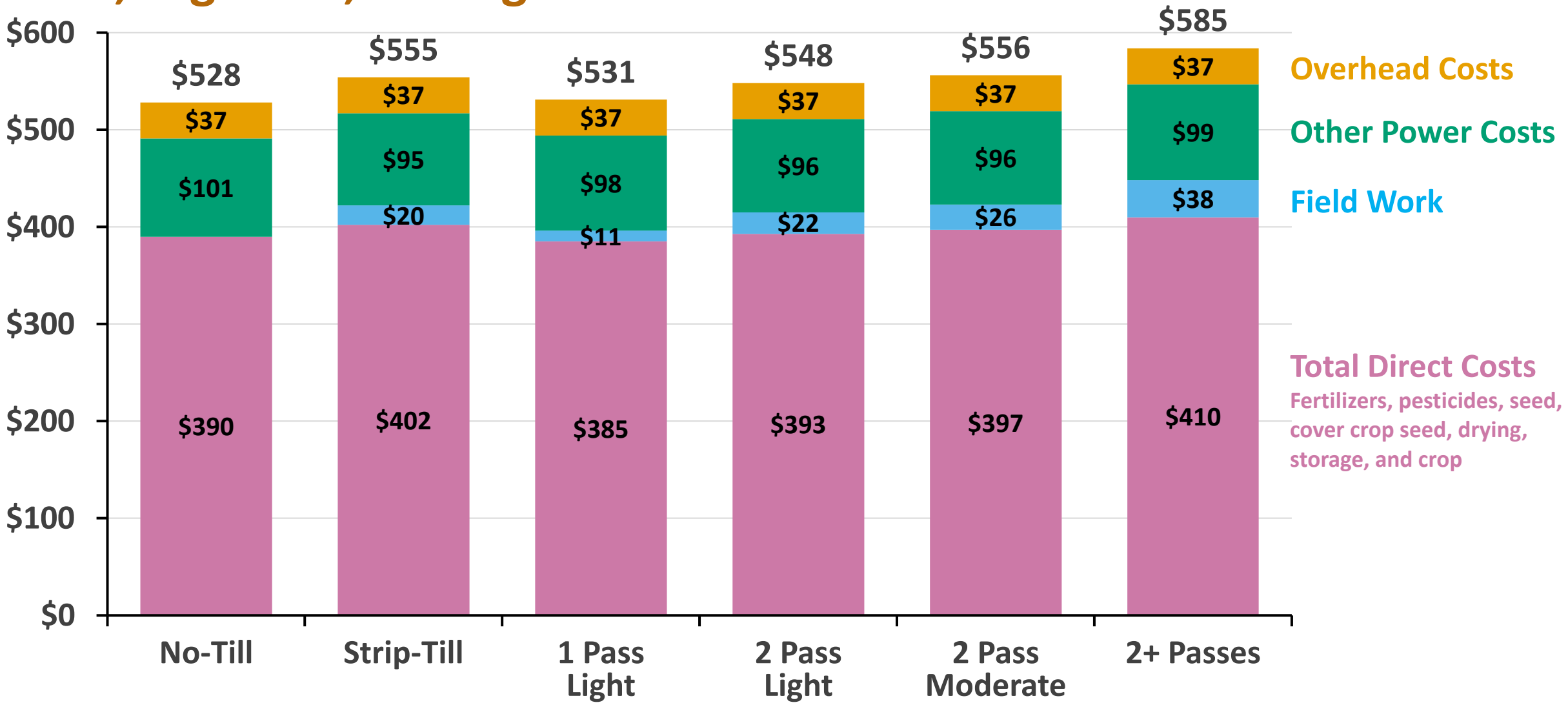
Tillage

Corn, High SPR, Average from 2015 to 2021

	No-Till	Strip-Till	1 Pass Light	2 Pass Light	2 Pass Moderate	2+ Passes
# fields	590	731	1,312	442	638	88
Yield per acre	213	218	219	225	225	218
Gross Revenue	$826	$845	$851	$876	$873	$845
Total Non-land Cost	$528	$555	$531	$548	$556	$585
Operator & Land Return	$298	$290	$320	$328	$317	$260

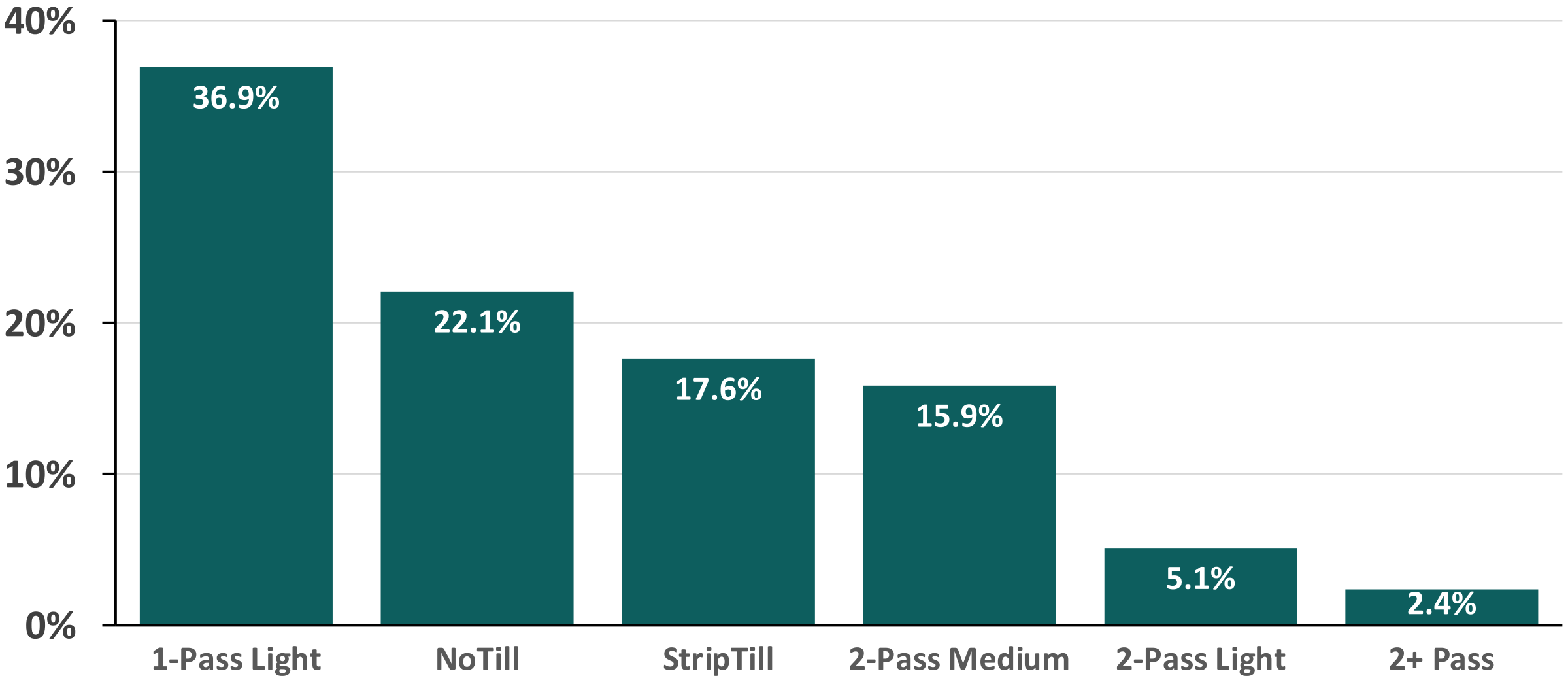
Tillage

Corn, High SPR, Average from 2015 to 2021



Most Profitable Fields by Tillage Class

Corn, High SPR, Average from 2015 to 2021



Most Profitable Fields by Tillage Class

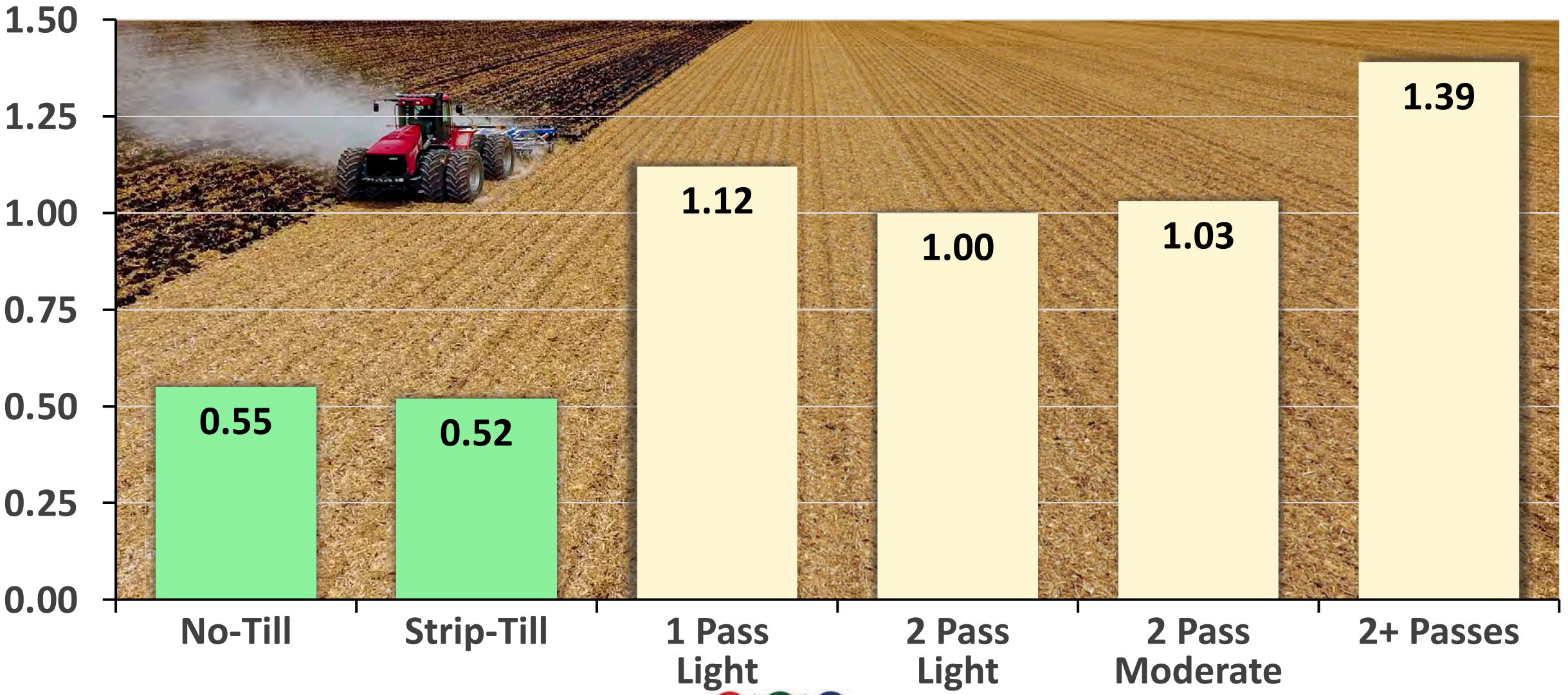
Corn, High Soil Productivity Rating (SPR)

	2015	2016	2017	2018	2019	2020	2021	Average
NoTill	0%	25%	83%	11%	5%	17%	14%	**22%**
StripTill	33%	13%	0%	14%	16%	17%	30%	**18%**
1-Pass Light	33%	38%	17%	38%	59%	42%	32%	**37%**
2-Pass Light	0%	0%	0%	11%	9%	7%	8%	**5%**
2-Pass Medium	33%	13%	0%	25%	11%	15%	14%	**16%**
2+ Pass	0%	13%	0%	0%	0%	3%	2%	**2%**

Environmental Factors

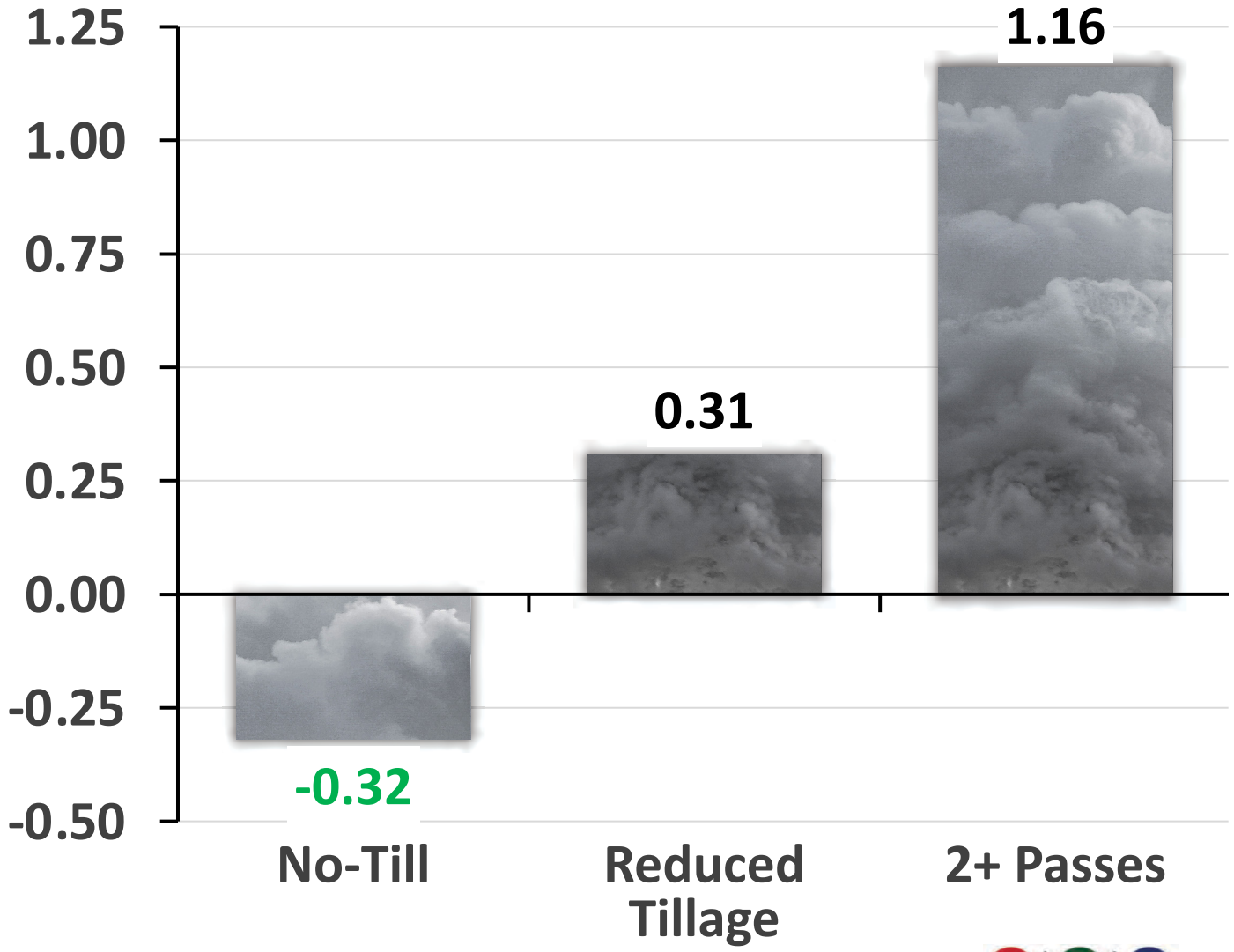
Soil Loss (Tons/acre), by Tillage Class

Averages from 2015 to 2021, Corn, High SPR



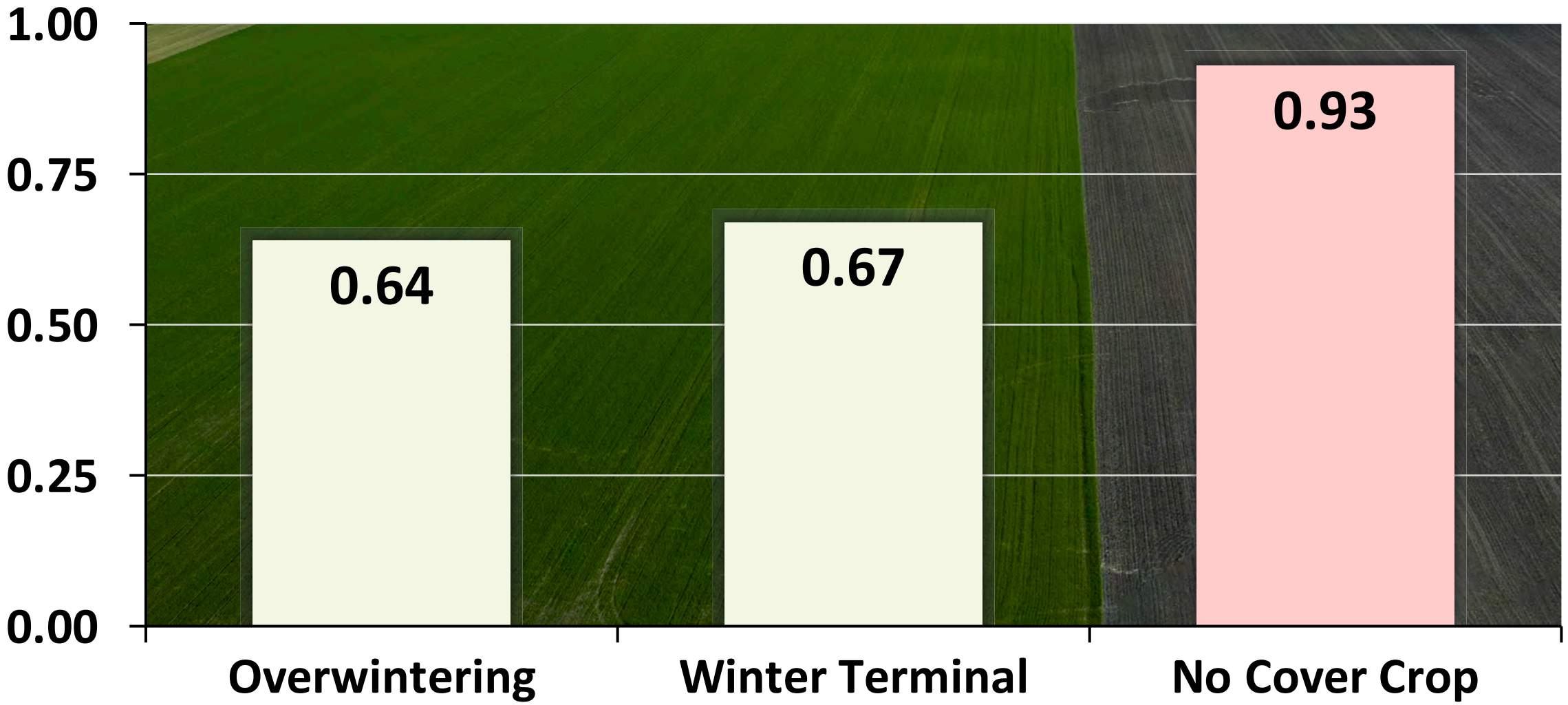
GHG emissions (metric tons CO^2e/acre), by Tillage Class

Averages from 2015 to 2021, Corn, High SPR



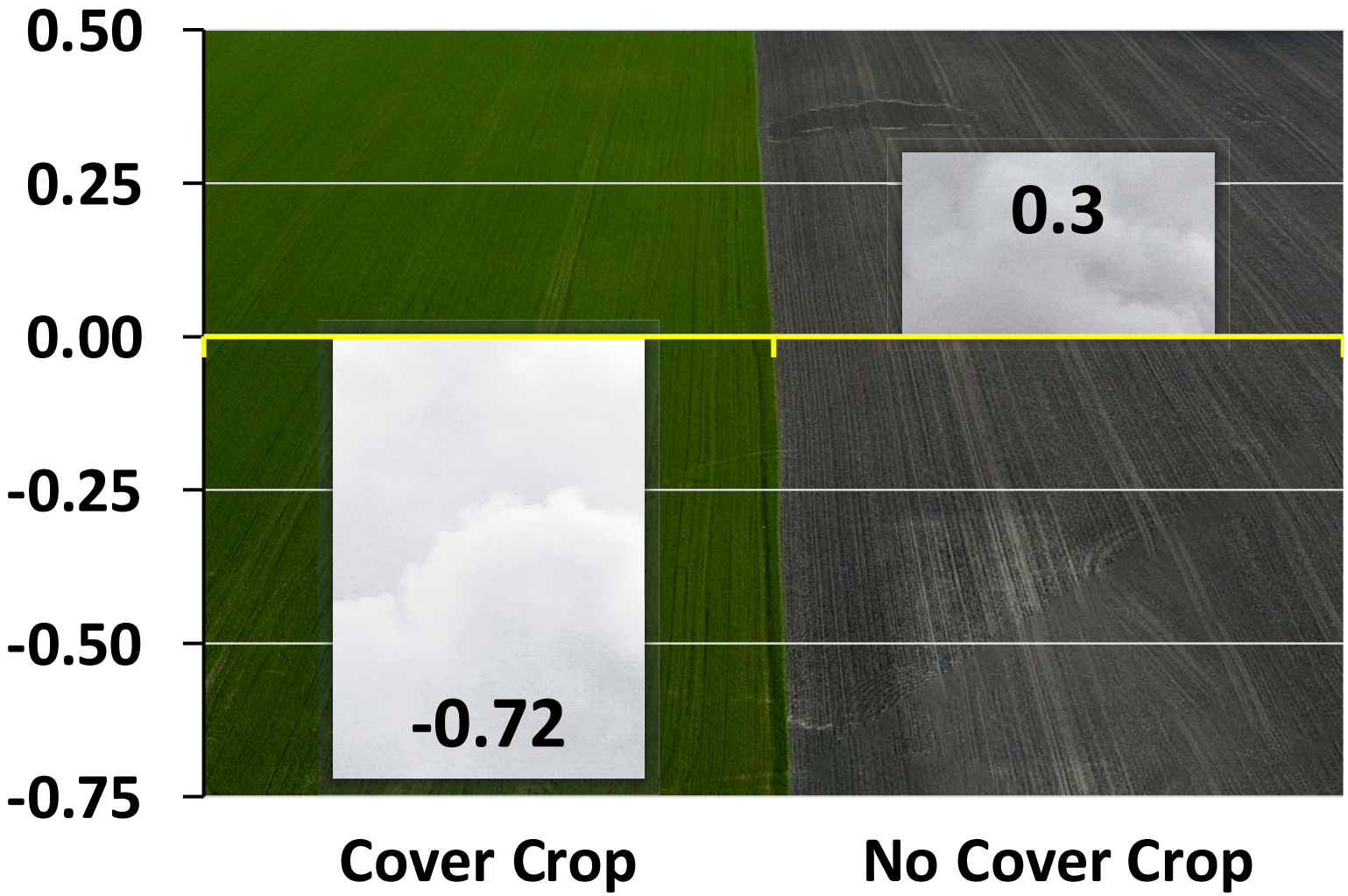
Soil Loss (Tons/acre), by Cover Crop Class

Averages from 2015 to 2021, Corn, High SPR

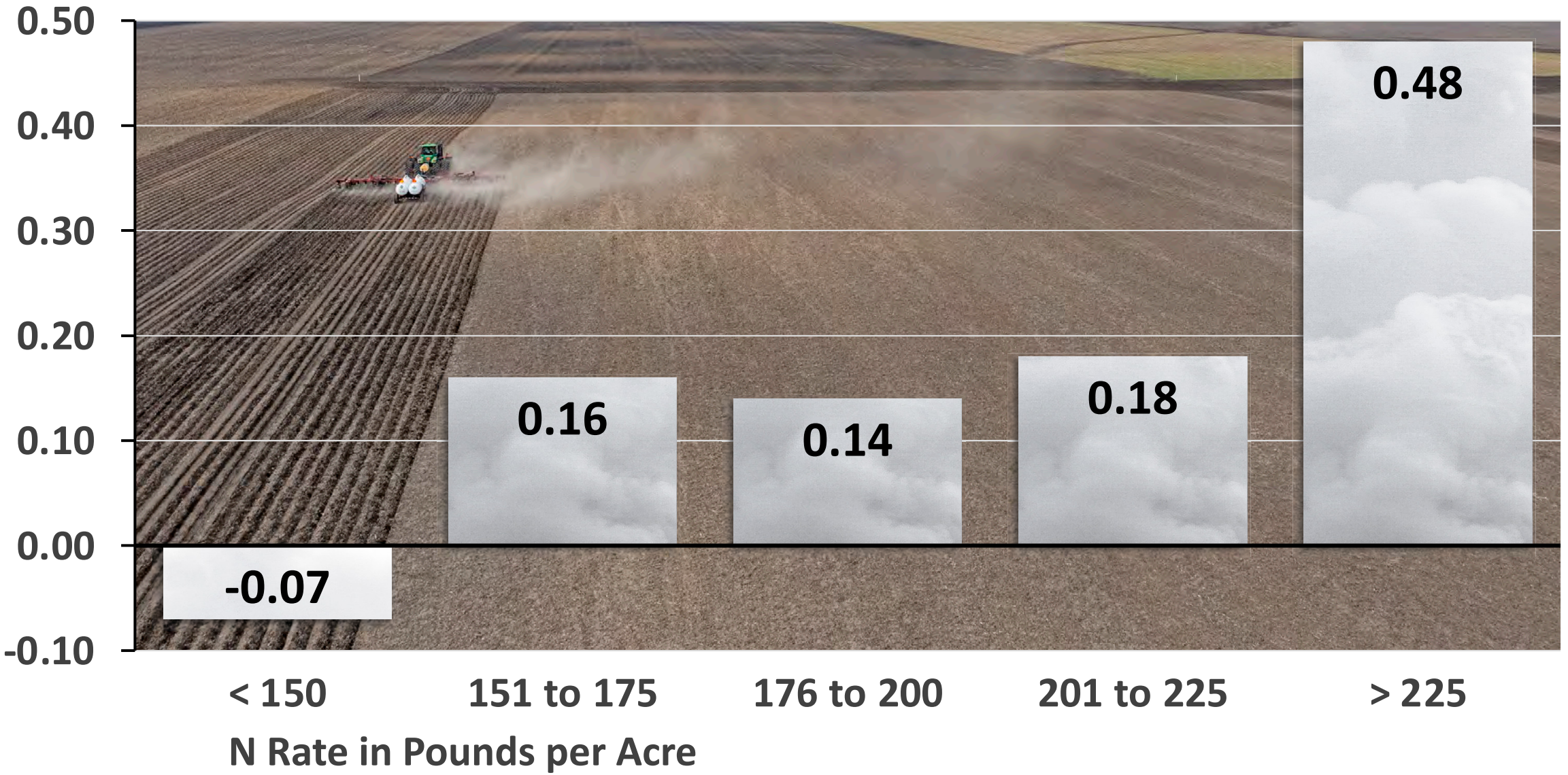


GHG emissions (metric tons CO^2e/a), by Cover Crop Class

Averages from 2015 to 2021, Corn, High SPR



GHG Emissions (metric tons CO2e/a), by N rate



PCM Impact, 2021

Conservation Acres

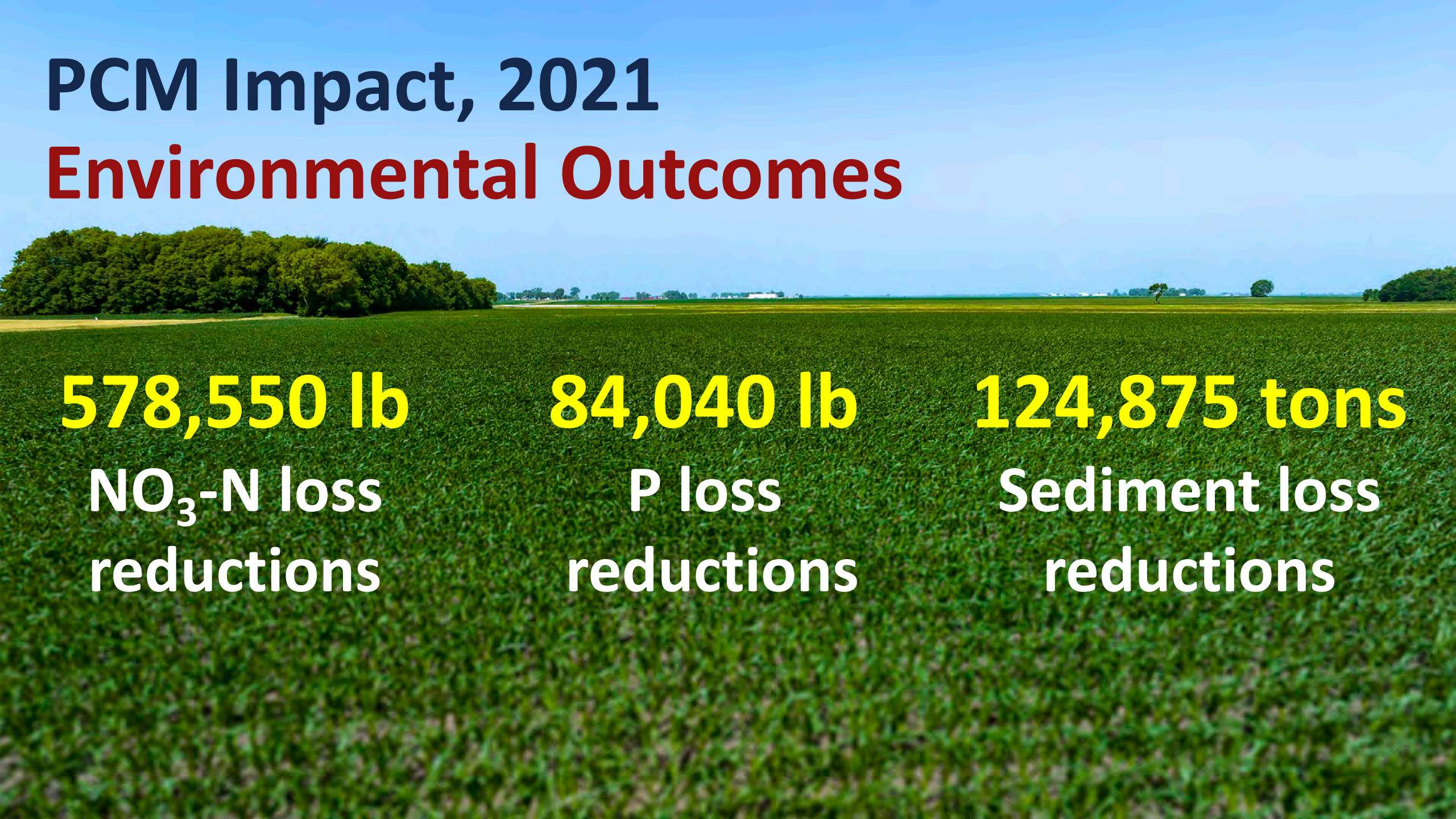
118,418
reduced tillage

125,081
of in-season N fertilizer application, corn

36,080
cover crop

PCM Impact, 2021

Environmental Outcomes



578,550 lb
NO_3-N loss reductions

84,040 lb
P loss reductions

124,875 tons
Sediment loss reductions

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THANK YOU!

Learn more at www.precisionconservation.org

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