Minnesota Corn's Sustainability Journey

MAY 7, 2025 – NRCS STAC MEETING

MinnesotaCorn

mncorn.org

Minnesota Corn Background

- Two separate and independent organizations meet jointly
- Minnesota Corn Growers Association (MCGA)
- Minnesota Corn Research & Promotion Council (MCR&PC)
- One Mission: Identify and promote opportunities for corn growers while enhancing quality of life

MinnesotaCorn GROWERS ASSOCIATION

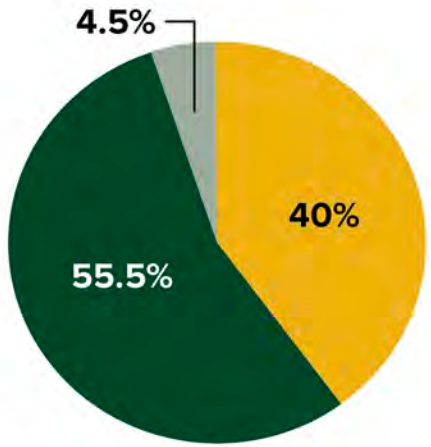
MinnesotaCorn RESEARCH & PROMOTION COUNCIL

Budget

MCGA Financials

- Operations and Administration
- Advocacy
- Education and Promotion

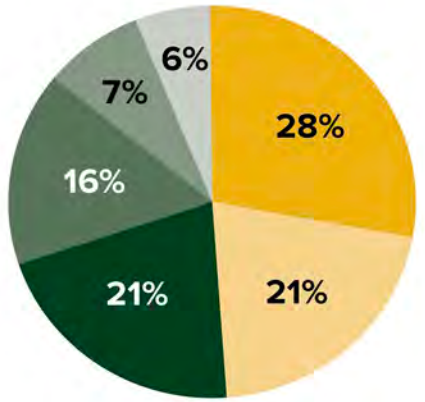
Total: $534,115



Corn Checkoff Investment Allocation

- Research and Utilization
- National Corn Growers Association
- Membership and Consumer Engagement
- Education, Outreach, and Promotion
- Export Programs
- Operations and Administration

Total: $11,238,515



Sustainability - Definition

Farming in a manner that meets the needs of the present without compromising the ability of future generations to meet their own needs.

Minnesota Corn's **three-pronged approach**:

- **People**: Strengthen rural communities while enabling a safe and healthy quality of life for non-farmers and ensuring food security for communities worldwide.
- **Planet**: Responsibly manage and replenish finite resources used for farming, while protecting and enhancing the environment that is impacted by farming practices.
- **Profit**: Provide a fair margin of profit for farmers, while delivering equitably priced goods to the non-farming public.

People – Member & Consumer Engagement

Membership

- Over 6,700 active members
- Second largest corn organization in the country

Outreach & Sellback

- Minnesota Corn scholarships
- Sponsorship of 4-H, FFA, MARL, & MAITC
- CommonGround and Twin Cities Road Crew program support

Grassroot Engagement

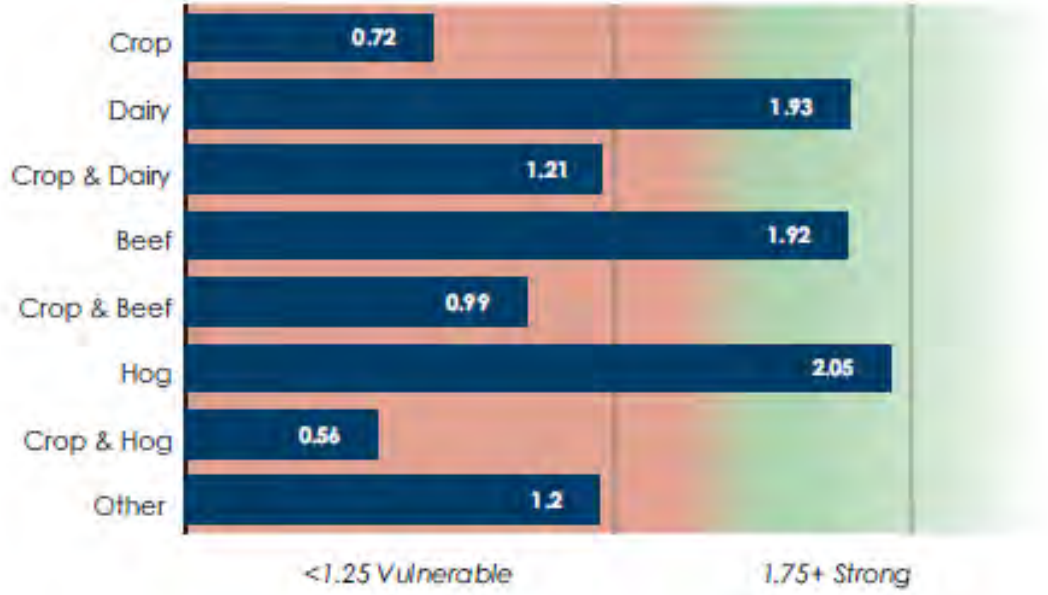
- 52 county corn grower associations
- 4 district field managers
- County sponsorship program to support county initiatives

Profit – Farm Debt & Income Trends

*Source – Farm Business Management Executive Summary 2024

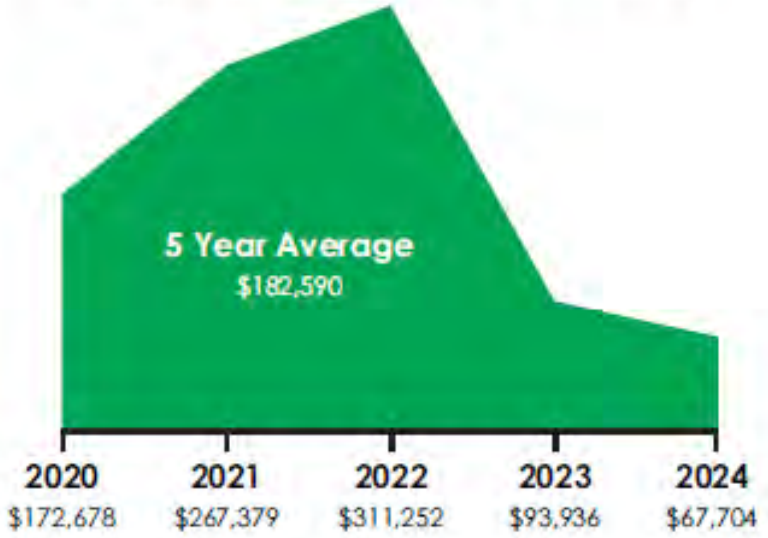
Debt Coverage by Farm Type

Indicates if farms generated enough income to cover current interest expense and all intermediate and long-term debt payments. Farm type determined by source that generates 70%+ gross revenue.



Net Farm Income (NFI) Continued to Decline in 2024

NFI represents the return to investing your unpaid family labor, management, and money in the farm instead of elsewhere.



Profit – Financial Trend Summary

*Source – Farm Business Management Northern Minnesota Annual Report 2024

Financial Trend Summary
(Farms sorted by region)

	State Avg.	Northern	Southern	Red River Valley
Number of farms	2223	555	1526	142
Income Statement				
Gross cash farm income	1,057,092	987,625	1,030,889	1,610,196
Total cash farm expense	898,843	843,088	881,177	1,306,600
Net cash farm income	158,250	144,537	149,712	303,595
Average net farm income	67,704	102,583	37,849	252,216
Median net farm income	21,473	37,003	12,869	105,049

Profit – Avg. Costs & Breakeven

*S. MN Farm Business Management Summary: Corn

- Prepared by Kent Thiesse, Farm Management Analyst
- "Net Return over all Costs" includes gov farm program and crop insurance payments.
- "Net Return" does not include any allocation for farm operator labor and management charges or returns.
- $4.40/bushel est. corn price 2024 based on WASDE projected price on 5-01-24. ($4.27 as of 10/9/24)

Input Costs	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024 (Est.)
Seed	$128	$123	$121	$118	$113	$111	$108	$110	$114	$121	$135
Fertilizer	$167	$147	$135	$116	$115	$128	$126	$142	$226	$246	$200
Chemicals	$35	$37	$38	$38	$36	$37	$37	$42	$55	$59	$65
Other Costs	$167	$138	$130	$152	$151	$159	$147	$166	$210	$205	$225
Total Input Costs	$497	$445	$424	$424	$415	$435	$418	$460	$605	$631	$625
Ave. Price Per Bu.	$3.97	$3.52	$3.35	$3.23	$3.48	$3.76	$4.09	$5.40	$6.31	$4.86	$4.40 ($4.00)
Corn Bu. to cover Input Costs	125	126	127	131	119	116	102	86	96	130	142 (156)
Cash Rent (Ave./Acre)	$251	$235	$230	$219	$217	$214	$214	$227	$249	$262	$275 (est.)
Corn Bu. to cover Cash Rent	63	67	69	68	62	57	52	43	40	54	62 (68)
Overhead Expense	$111	$110	$101	$99	$94	$95	$99	$107	$114	$120	$125
Corn Bu. to cover Ovhd. Exp.	28	31	30	31	27	25	24	20	18	25	28 (31)
Total Costs Per Acre	$859	$790	$755	$742	$726	$744	$731	$794	$968	$1,013	$1,025
Total Bu. to cover All Costs	216	224	226	230	208	198	178	149	154	208	233 (256)
Actual Corn Yield	167	206	205	215	178	180	207	206	213	203	????
Net Return over All Costs	($44)	($56)	($54)	($34)	($56)	+$42	+$169	+$333	+$379	+$39	????

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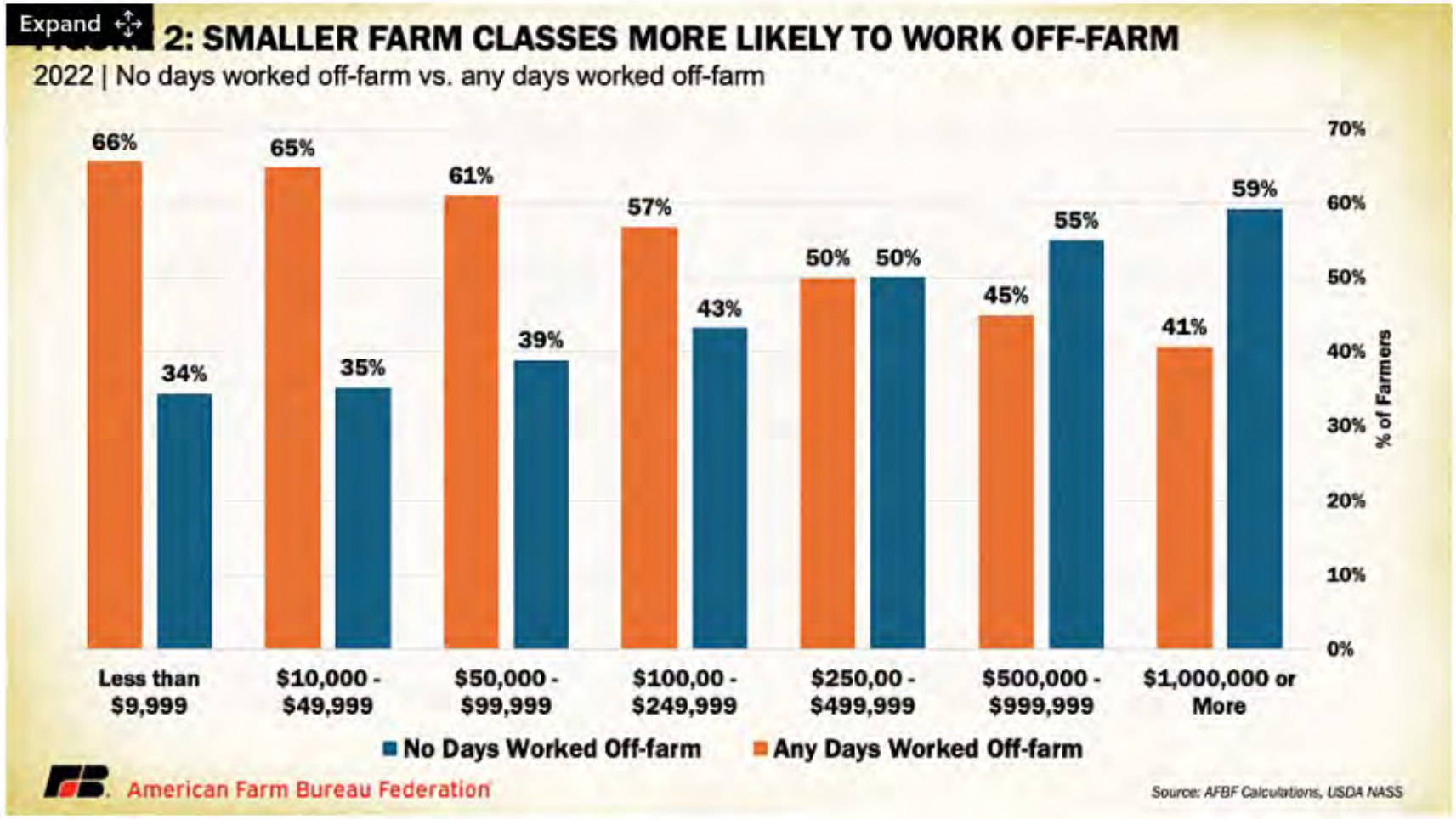
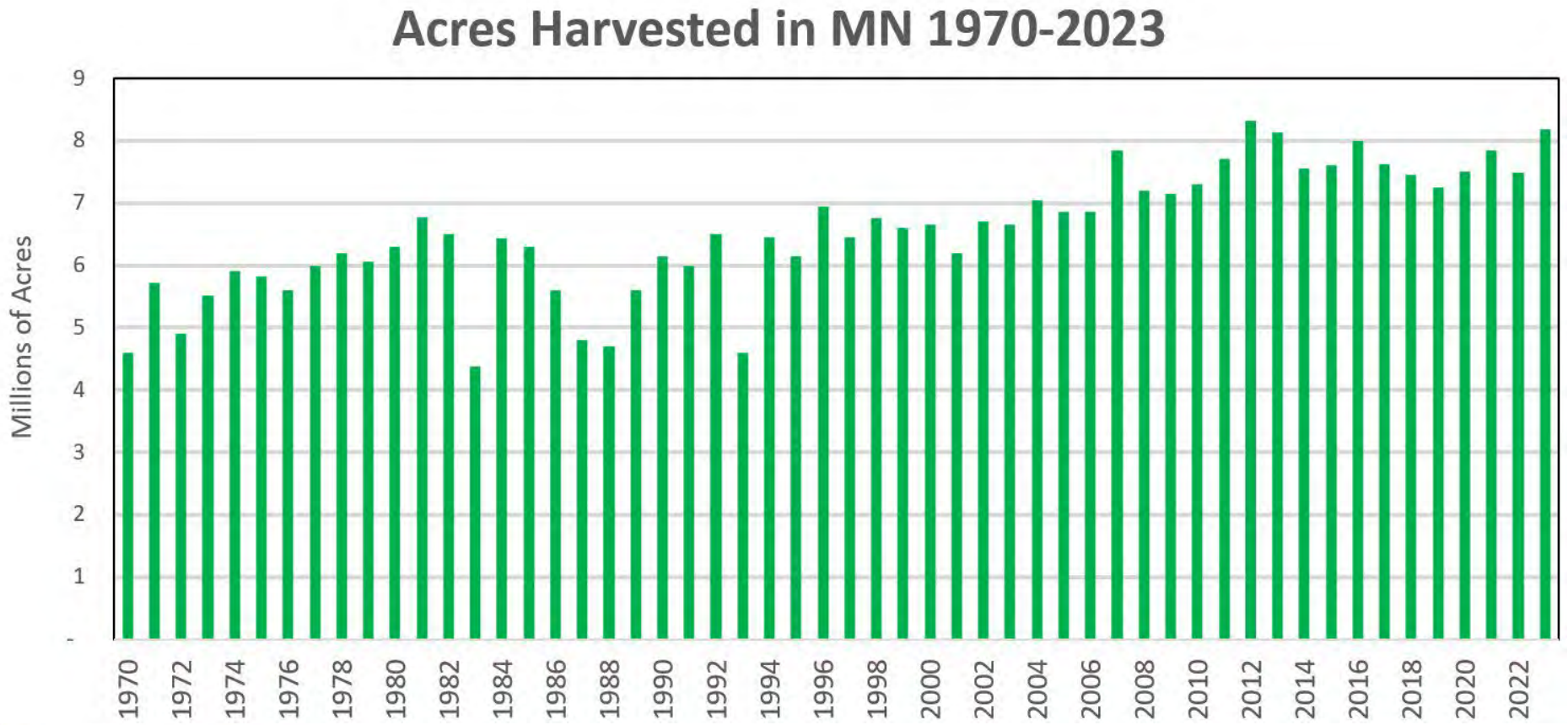
Profit – Off-Farm Income

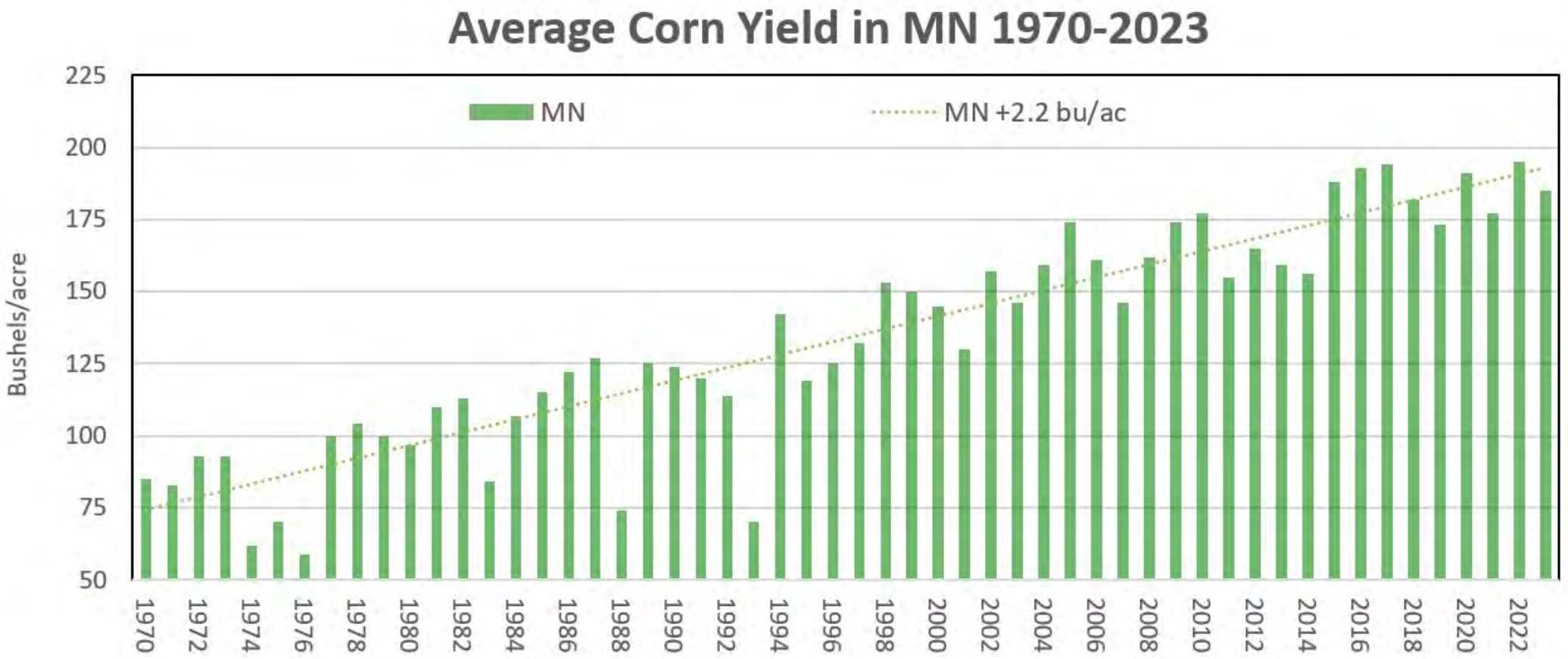


MN Corn Production History



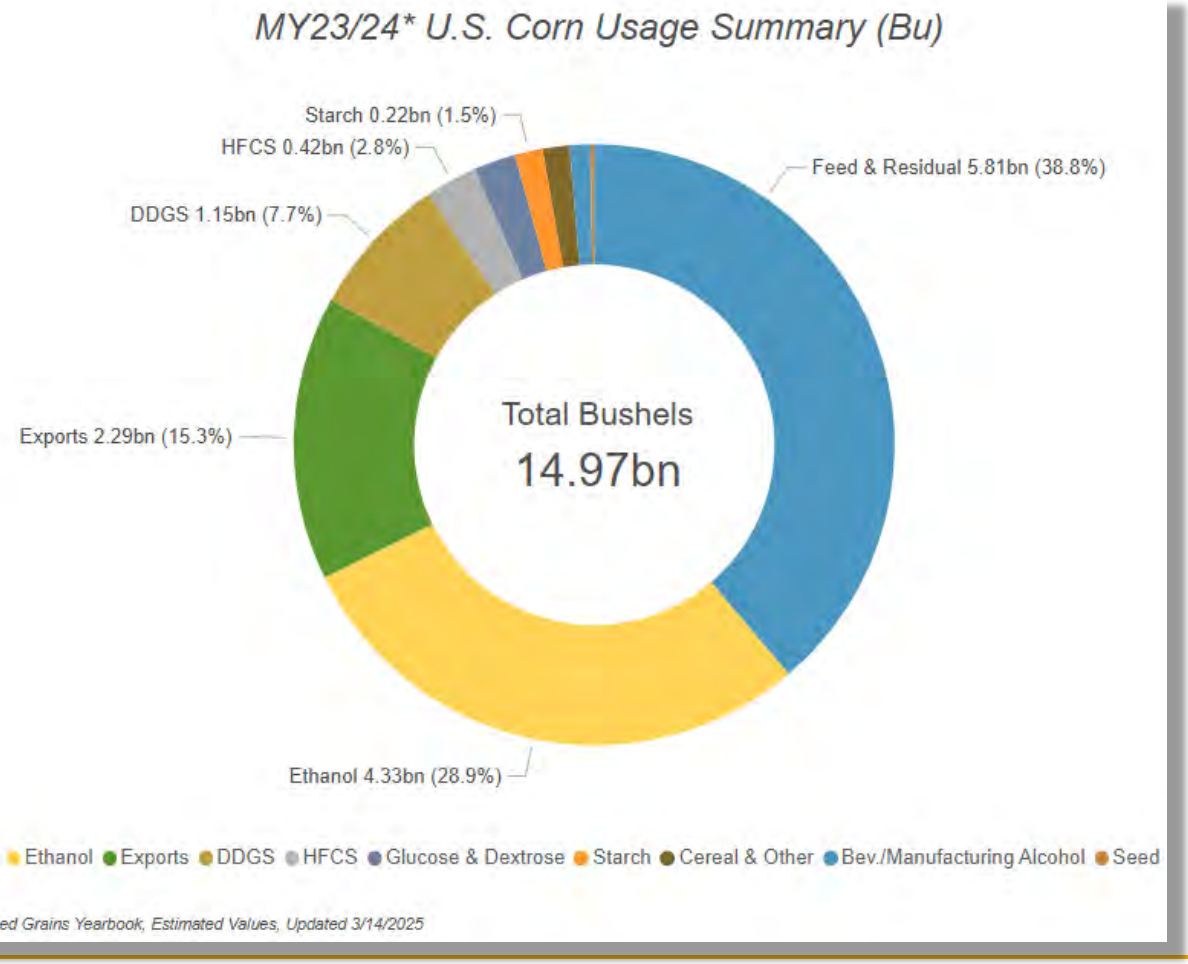
Source: *USDA-NASS*

MN Corn Production History



Source: *USDA-NASS*

Profit – U.S. Corn Usage by Segment



Profit – Utilization

Ethanol

- $35 million invested since 2008
- Top blend rate in the country 12.72%
- 512 UNL88 Stations
- 448 Flex Fuel Stations
- 623 total higher blend stations
- 2023 E15 Sales: 127.56 Million Gallons (21% increase YOY)

Exports

Exports of corn & corn products added $5 Billion in value to the Minnesota economy

Trade Partners

- U.S. Grains Council
- MAIZALL
- U.S.A. Poultry & Egg Export Council
- U.S. Meat Export Federation
- Northern Crops Institute
- Minnesota Dept of Agriculture

New Uses

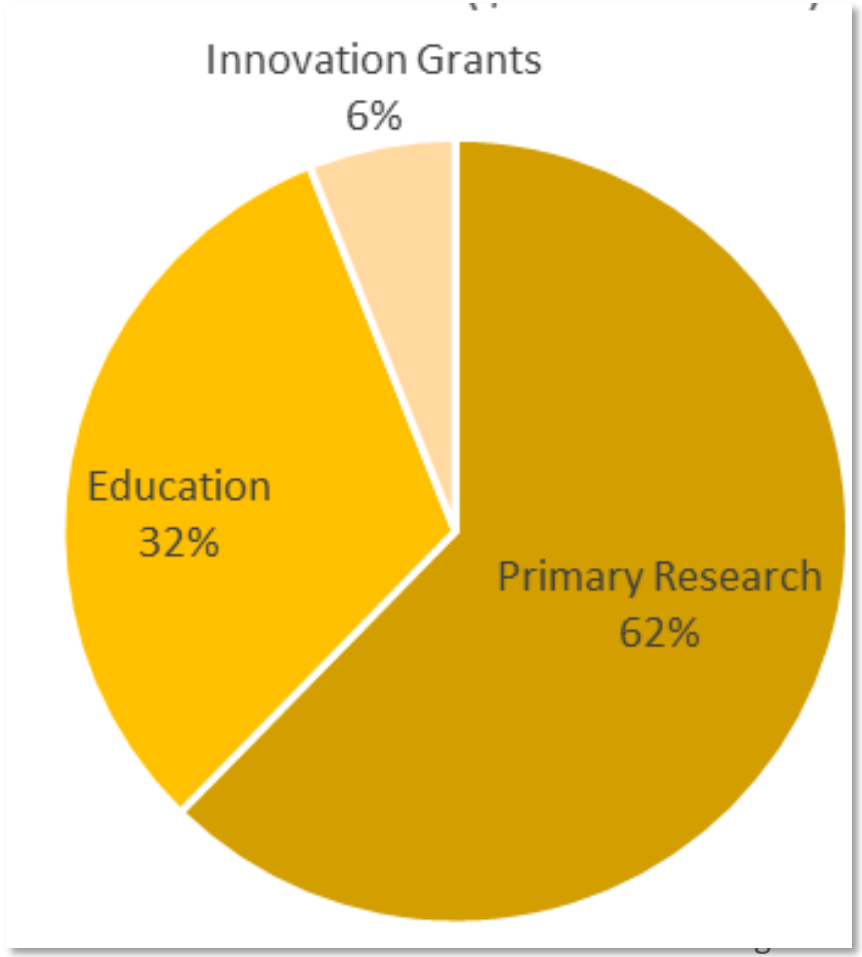
Valerian Materials
MPD used in adhesives, sealants, and other polyurethane products

Låkril Technologies
corn-derived acrylic acid

MN SAF Hub
SAF production in MN

Planet – Research

- MCR&PC research and education investments between 2008 to 2023 ($19.9 million)
- Nearly $2 million each year research projects focused on nitrogen management
- Nearly $4 million invested in soil health and cover crop research and education
- More than $6.5 million invested in education on nutrient management



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Planet – Research

Mitigating cold and warm season nitrogen losses from corn systems

- Led by Dr. Tim Griffis studying whether winter rye cover crops and enhanced efficiency fertilizers reduce nitrous oxide losses during the soil freeze-thaw cycles of spring
- Freeze/thaw can contribute 35% of the annual nitrous oxide emissions.

Sustainable Answer Acre (SAA) research project

- Collaboration among public and private groups in south-central Minnesota

- Evaluates split applications of N vs satellite imagery to set N rates vs pre-emerge full N rate

- Other plots evaluate cover crops and reduced tillage

Planet – Outreach

- Supporting extension positions
  - Dr. Fabian Fernandez
  - Brad Carlson
- Nitrogen Smart
  - Program for producers focused on maximize economic return on N while minimize N losses
  - More than 1,200 participants to date representing nearly 1M acres
  - Fundamentals and Advanced courses offered online

University of Minnesota Extension Educator, Brad Carlson, leads a Nitrogen Smart session

Planet – BMP Implementation

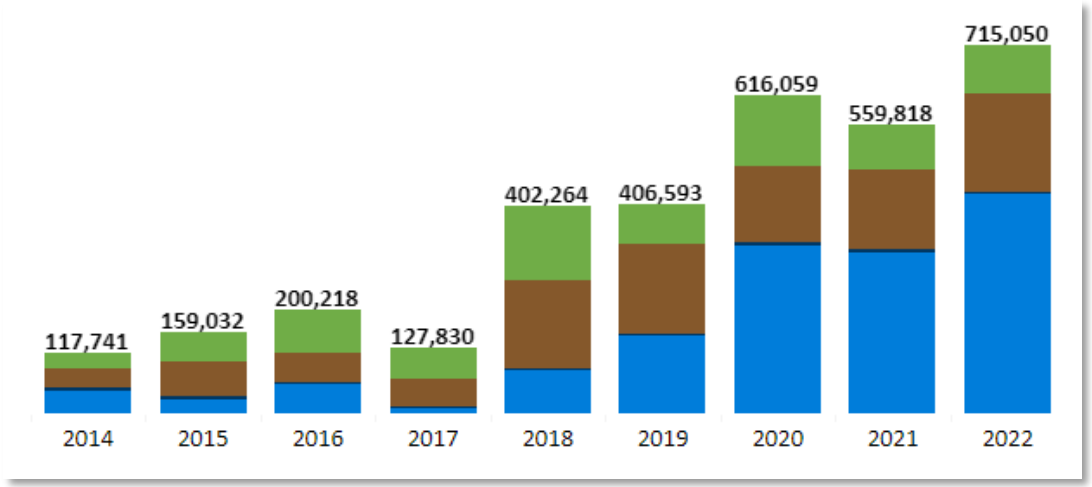
New acres of Best Management Practices completed each year through state and federal government programs. Source: Minnesota Nutrient Reduction Strategy BMP Summary

Living cover (768,356 acres total)
Practices that reduce nutrient and soil loss by keeping plants growing continuously, including the Fall and Spring months. Common practices include cover crops and conservation cover.

Cropland erosion control (1,061,080 acres total)
Designed to reduce runoff and soil losses. This group consists primarily of farming practices that leave crop residue on the surface or structural practices that reduce or capture runoff and eroded soil.

Drainage water retention and treatment (32,853 acres total)
Practices designed to slow down waters leaving tile-drained landscapes or otherwise treat tile-waters for nutrient removal prior to entering streams. Wetland restoration and controlled drainage management are the most common practices, but other emerging practices include saturated buffers and bioreactors.

Nutrient management (1,442,315 acres total)
Managing the amount, form, placement, and timing of nutrient and soil amendments such that nutrients are used most efficiently by the crops, at the same time minimizing leaching and runoff to surface and ground water.

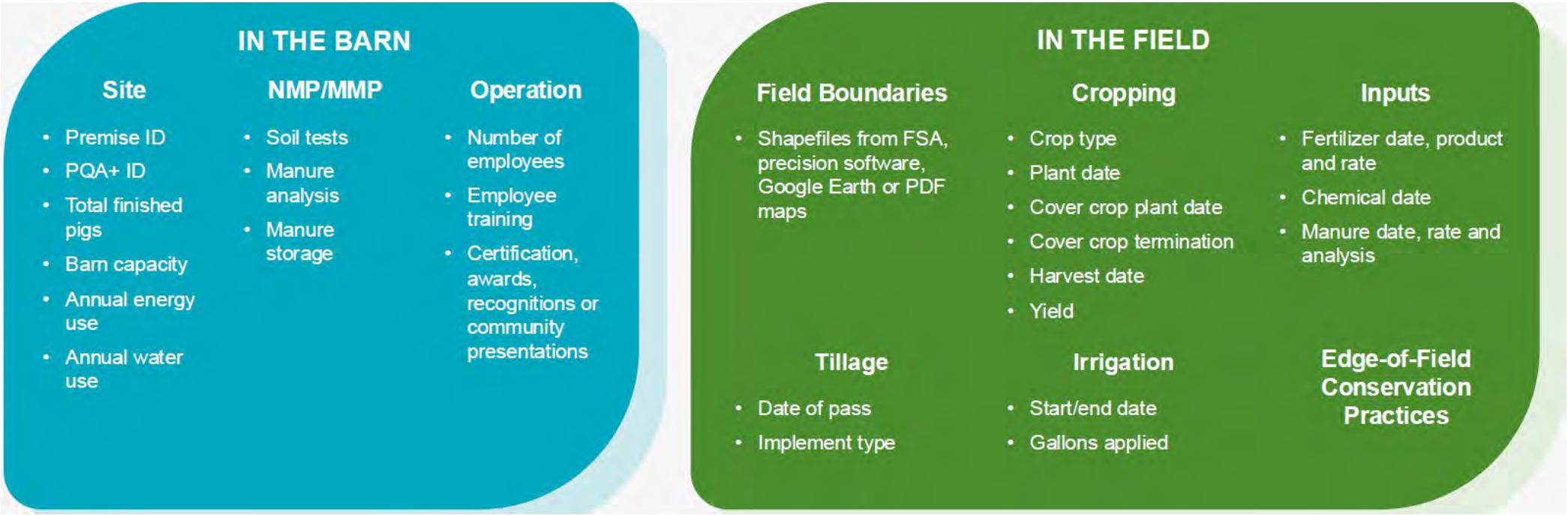


Source: *Minnesota Pollution Control Agency*

Planet – On-Farm Assessments

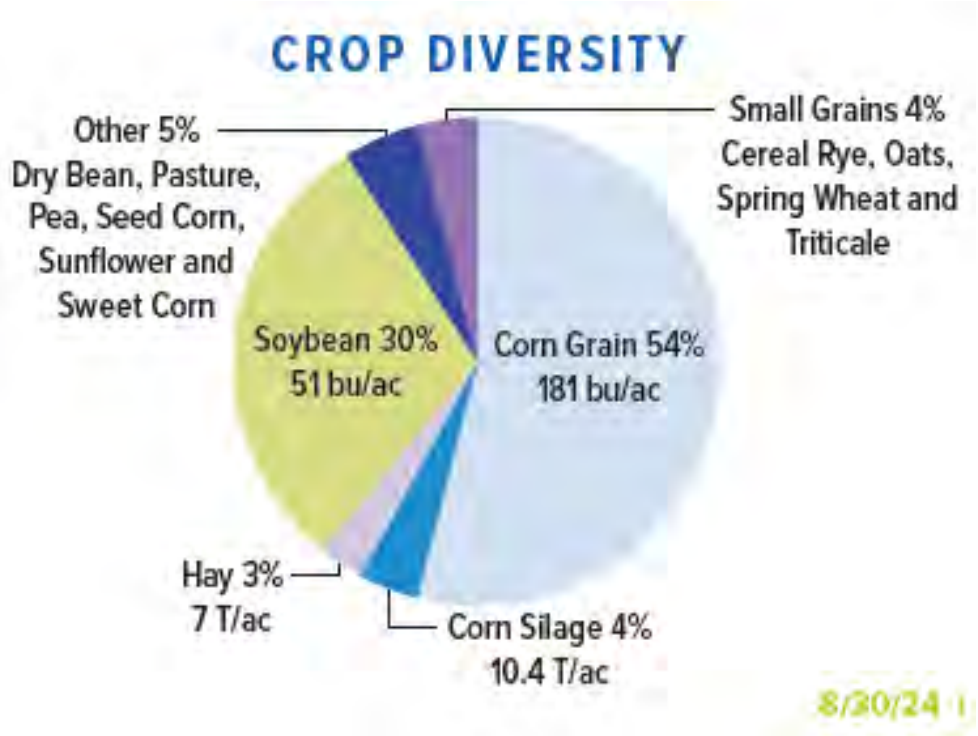
Data Collected

Eocene℠ Environmental Group

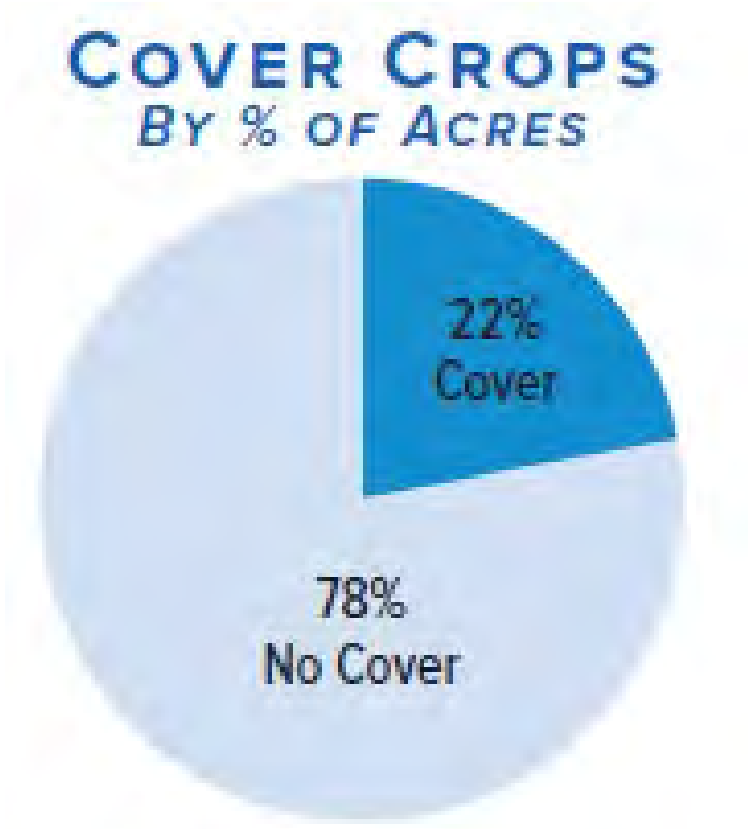


Planet – On-Farm Assessments

- MN Corn's directors commit to having on-farm assessments of **Soil Health**, **Water Quality**, **Economics**, **Carbon Sequestration & GHG Emissions**, and **Edge-of-Field Conservation Practices**
- 37K acres assessed 2022 crop year
- 39K acres assessed 2023 crop year

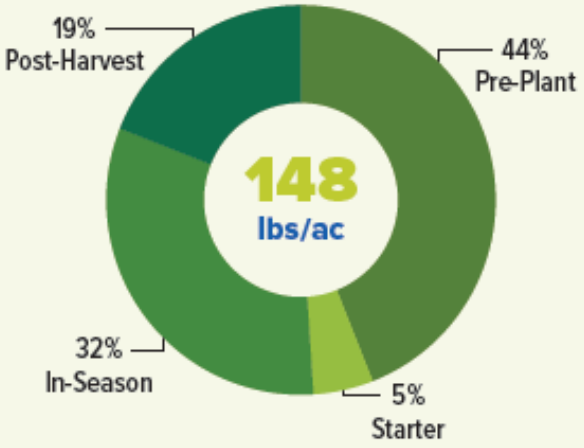


Planet – On-Farm Assessments



CORN NITROGEN TIMING & RATE

Split applying nitrogen can improve productivity and profitability and can reduce losses to the environment. This chart represents the percent of total nitrogen applied at different points in the growing season.



NITROGEN INHIBITOR/STABILIZER

30% of nitrogen applied corn acres utilized a **nitrogen inhibitor or stabilizer.**

Planet – MN Agriculture Water Quality Certification

Lt. Gov. Flanagan and MDA Commissioner, Thom Petersen visit Gar-Lin Dairy October, 2024 for harvest visit and highlight recent MN Ag Water Quality Certification

Planet – Scaling up Practices

- MN Department of Agriculture
  - Soil Health Financial Assistance Program
  - Ag Weather Station Network
  - Ag Water Quality Certification Program
  - Ag BMP Loan Program
- Board of Water and Soil Resources
  - Multipurpose Drainage Management
  - Soil Health – cost-share/technical assistance
  - Water storage/water management

Planting cover crops into a no-till corn field using an air seeder purchased through the MDA Soil Health Financial Assistance program at Oelfke farm near Glencoe

Stay Connected

- **Adam Birr PhD,** Executive Director – abirr@mncorn.org
- **Website and News**: mncorn.org
- **Commonground**: commongroundminnesota.com
- **Leader Update**: Weekly e-newsletter
- **Social Media**: Facebook, Twitter
- **Corn Talk**: 4x/year print publication
- **Radio**: Linder, RRFN, Brownfield, KASM