The Great Lakes Yield Enhancement Network

Welcome to the 2025 Winners Announcement Meeting!

Great Lakes YEN partners:

What is a Yield Enhancement Network (YEN)?

Started in 2012 in the UK with ADAS crop physiologists

Focuses on achieving a higher percent of potential yield

- 115 bu/ac yield ÷ 220 bu/ac yield potential = 52% of potential achieved

Crop modelling calculates the yield potential of each farm entry

- Solar radiation
- Soil water holding capacity – soil type, soil depth
- Rainfall
- Reported growth stages

Network – Benchmark report, Participant wrap-up meeting

The Great Lakes YEN Collaborators

2025 YEN steering team

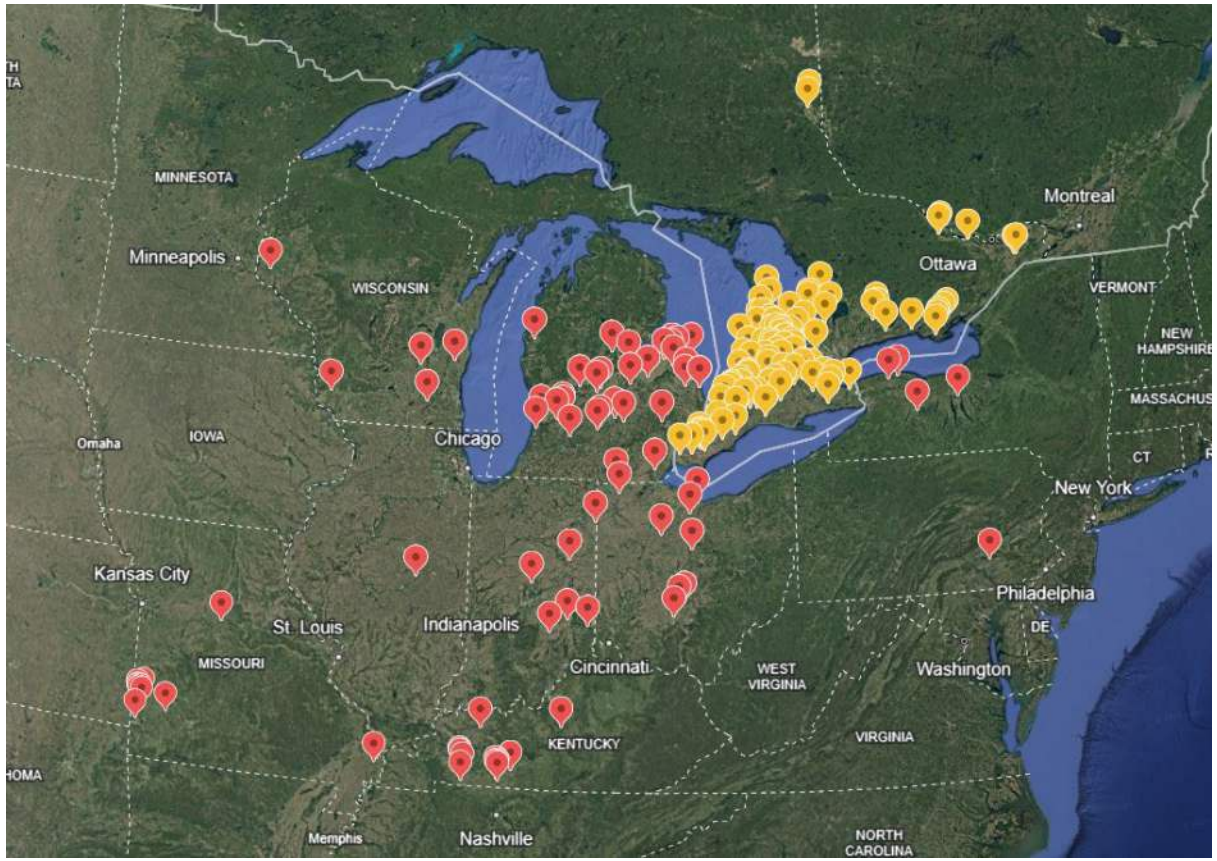
- Joanna Follings – OMAFA: Cereals Specialist
- Dennis Pennington – Michigan State Extension: Wheat System Specialist
- Jody Pollok-Newsom – Michigan Wheat Program: Executive Director
- Marty Vermey – Grain Farmers of Ontario: Sr. Agronomist
- Alexandra Dacey – Grain Farmers of Ontario: Agronomy Project Coordinator
- Dr. Josh Nasielski – University of Guelph: Associate Professor

Agronomists – CCA

ADAS – UK

Great Lakes YEN partners:

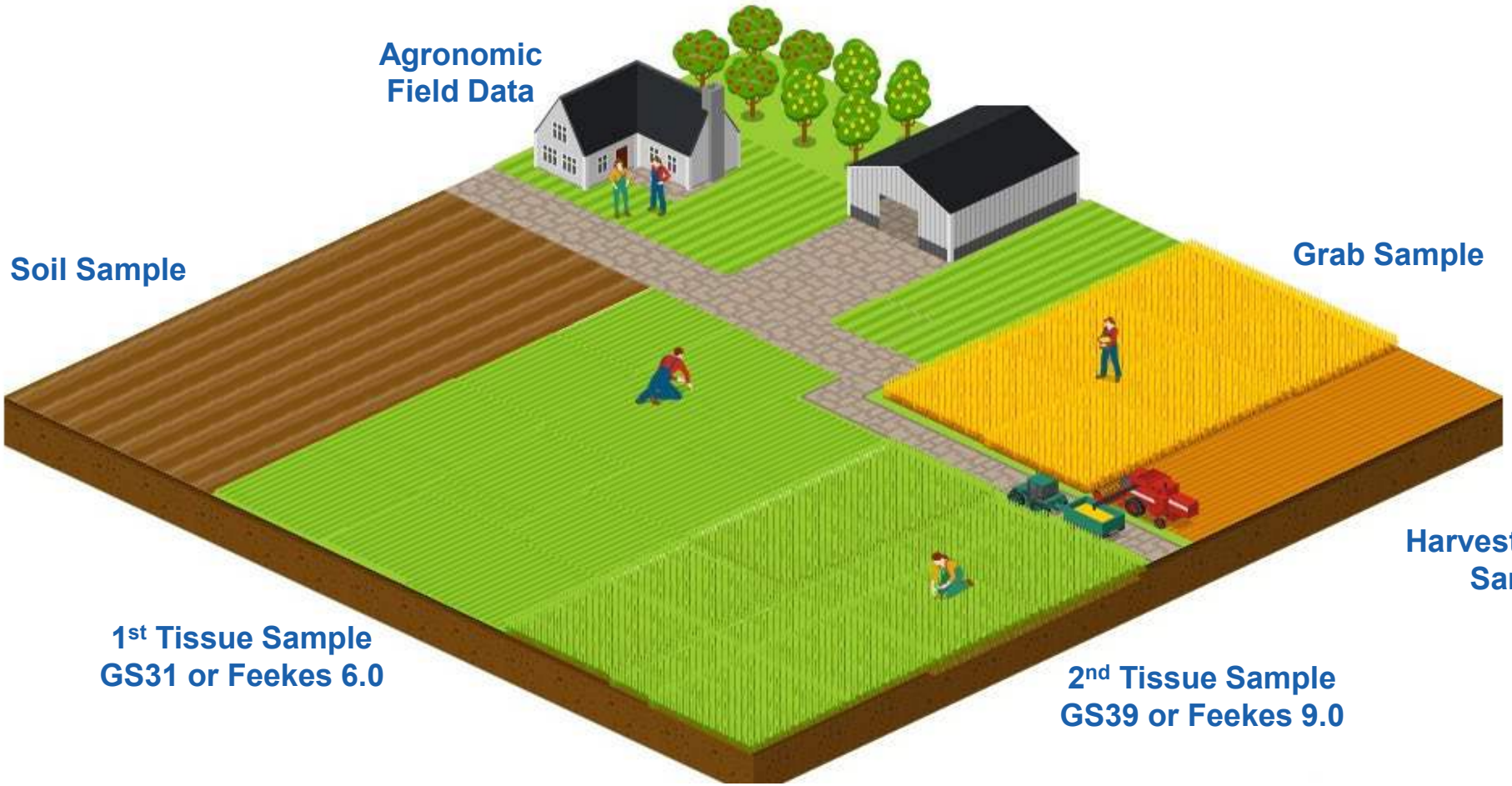
The Farmers: 2025 Great Lakes YEN Locations



Ontario (90)

Michigan (36)
Kentucky (17)
Ohio (9)
Indiana (7)
New York (2)
Missouri (11)
Wisconsin (4)
Illinois (1)
Pennsylvania (1)
Washington (1)

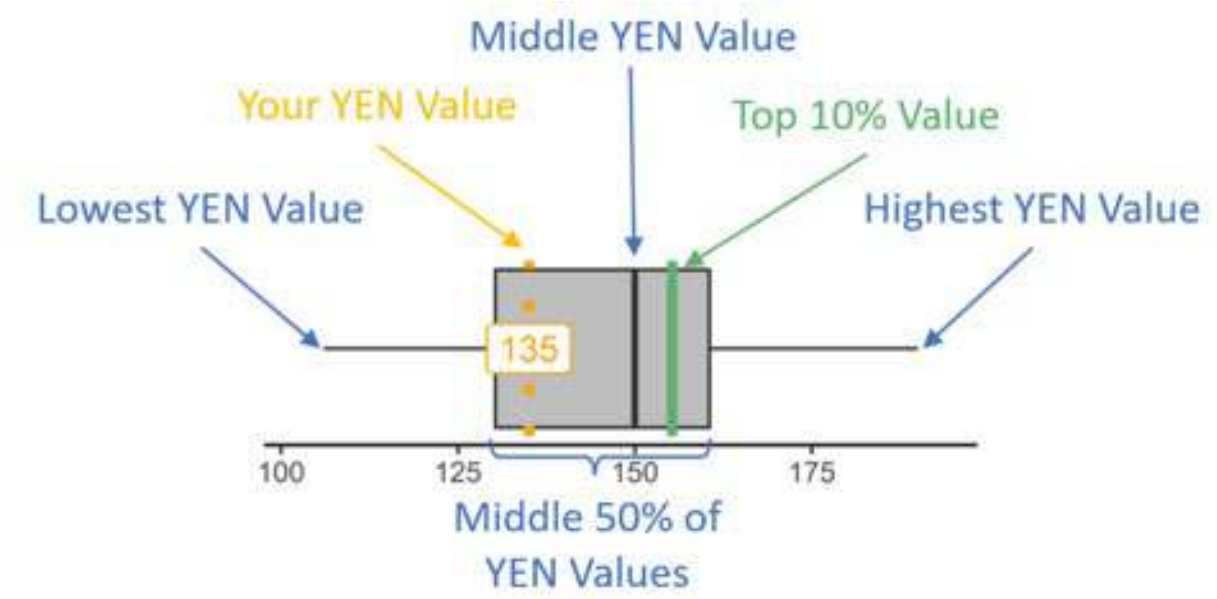
YEN Critical Samples and Evaluations from the Field



Navigating the Report – Benchmarking Charts

YEN Benchmarking Charts – What do they mean?

The YEN is much more than a competition – it provides a full set of metrics that allow you to gauge the performance of your crop against all other YEN entrant's crops. This has proved to be one of the primary values of the YEN. To accomplish this comparison between sites, we visualize collected data using benchmarking charts like the one seen below. These charts compare your value of any given metric to all other entrants in 2023.



Highest Yield Winners!

Gold: Nick Suwyn – Wayland, MI

In-Season Fertility

- 157 lbs N, 16 lbs P, 36 lbs S + B & Mo
  - 1st app – 89N – 10 P – 19S – 0.2 B
  - 2nd app – 68N – 6 P – 17S – 0.13 B

Crop Protection

- Fall: T0 fungicide, herbicide, micros and insecticide
- T1 fungicide, PGR + micros @ 1st node
- T2 fungicide + micros @ flag leaf
- T3 fungicide, insecticide + micros

Test Weight: 59.8 lb/bu

Head count: 1,076 heads/M^2

Yield: 182.7 bu/ac

118% of 153.8 bu/ac potential

Biomass: 20,602 lb/ac

135 mm SAW + 147 mm rainfall = 282 mm

Establishment

- Conventional Tillage (<15% residue cover) after soybeans
- Seeded Sept 21st @ 1.24 M seeds/ac
- 5” row spacing
- Pre-plant incorporated dairy manure: 21N-52P-64K-13S
- Variety: ISF 780

Silver: Wayne Metzger – Proton Station, ON

In-Season Fertility

- 157 lbs N, 59.5 lbs S
  - 1st app – 17N – 20S (tillering)
  - 2nd app –100N – 34S (GS30)
  - 3rd app – 40N – 5.5S (ear emergence)

Crop Protection

- Herbicide and T1 fungicide @ 2nd node
- T2 fungicide @ ear emergence
- T3 fungicide @ anthesis

Test Weight: 62.5 lb/bu
Head count: 774 heads/M^2

Yield: 170.1 bu/ac

93% of potential: 182.2 bu/ac

Biomass: 18,851 lb/ac

270 mm SAW + 93 mm rainfall = 363 mm

Establishment

- No-till after soybeans
- Seeded Sept 21st @ 1.5 M seeds/ac
- 7” row spacing
- In-furrow with seed: 5N-18P-5K-1S
- Variety: 25R64

Bronze: Ben Wilson – Caledonia, MI

In-Season Fertility

- 136 lbs N, 12 lbs K, 22 lbs S & 4 lbs Mg
  - 1st app – 56N – 12K – 16S – 4 Mg
  - 2nd app – 80N – 6S

Crop Protection

- Herbicide @ stem elongation
- T2 fungicide, PGR, micros @ 2nd node
- T3 fungicide, insecticide, micros @ anthesis

Test Weight: 59.0 lb/bu

Head count: 813 heads/M^2

Yield: 156.2 bu/ac

82% of potential: 190.0 bu/ac

Biomass: 17,625 lb/ac

180 mm SAW + 108 mm rainfall = 288 mm

Establishment

- Conservation tillage (>30% residue) after soybean
- Seeded Sept 27th @1.4M seeds/ac
- 7.5” row spacing
- Variety: 25R29

Highest % of Potential Yield Winners!

How is Yield Potential Calculated?

Potential Grain Yields

To estimate potential yield, we assume a theoretically 'perfect' variety grown with 'inspired' management on your land and 2023-2024 weather achieving:

1. **70% capture of light energy** from green-up to flowering and **95% capture of light energy** from flowering to maturity
2. **A conversion efficiency of 1.54 tonnes of biomass per terajoule (TJ)** of captured light energy
3. **A harvest index of 0.58** meaning 58% of biomass is converted to harvested grain

Biomass accumulation in (2) is constrained by water availability using the following rule:

4. **Capture of all the available water** held in the soil to 1.5 m depth (or to rock if less) plus all rainfall from greenup to physiological maturity. The crop must have access to 18 mm of water per tonne of biomass. Crop biomass (2) is scaled down if water availability is insufficient

Gold: Nick Suwyn – Wayland, MI

Background

- Crop Rotation: Grain corn-grain corn-soybean
- Soil Type: Sandy Loam
- Cover Crops: None
- Manure History: Twice in last 5 yrs

Harvest

- TKW: 36.1
- Moisture: 11%
- Harvest Index: 51%

Yield: 182.7 bu/ac

118% of potential: 153.8 bu/ac

Biomass: 20,602 lb/ac

135 mm SAW + 147 mm rainfall = 282 mm

Estimated Use of Water: 416 mm

Estimated % of Solar Radiation Capture:

81.79%

Silver: Mark Davis – Napanee, ON

In-Season Fertility

- 140 lbs N & 25 lbs S
  - 1 app @ tillering

Crop Protection

- T2 fungicide, herbicide, biologicals and micros @ flag leaf
- T3 fungicide & biologicals @ anthesis

Test Weight: 59.8 lb/bu

Head count: 917 heads/M^2

Yield: 147.2 bu/ac

104.6% of potential: 140.8 bu/ac

Biomass: 17,757 lb/ac

150 mm SAW + 108 mm rainfall = 258 mm

Establishment

- No-till after soybeans
- Seeded Sept 4th @ 2.06M seeds/ac
- Broadcast
- Pre-plant Broadcast Hog Manure: 33N-50P-44K
- Variety: 25R40

Bronze: Gary Vader – Cherry Valley, ON

In-Season Fertility

- 130 lbs N, 20 lbs K, 30.5 S
  - 1st app – 60N – 20K – 20.5S (GS24)
  - 2nd app – 70N - 10S (GS33)

Crop Protection

- T1 fungicide @ 1st node
- T3 fungicide @ anthesis

Test Weight: 64.1 lb/bu

Head count: 942 heads/M^2

Yield: 120.39 bu/ac

102.9% of 117.0 bu/ac potential

Biomass: 17,259 lb/ac

135 mm SAW + 80 mm rainfall = 295 mm

Establishment

- No-till after soybeans
- Seeded Sept 20th @1.32 M seeds/ac
- 7.5” row spacing
- In-furrow with seed: MAP (11N-52P)
- Variety: OAC Constellation

From Everyone on the Great Lakes YEN Team:

Congratulations to all Our Winners!

Great Lakes YEN partners:

Next Steps for the Great Lakes YEN

The 2025 Great Lakes YEN reports are being sent out to all who completed the program THIS WEEK!

- Please read through and make notes to bring to your regional wrap-up meeting

- ‘How to Read Your Report’ Help Sessions
  - Will hold small-group virtual sessions later this fall to answer questions
  - Check your email for session invite

Next Steps for the Great Lakes YEN

Regional Wrap-Up meetings

- Deep dive into the data, panel and breakout discussions, networking
- Ontario – **February 20th** in London, ON
- USA – **February 18th** in Frankenmuth, MI
- Kentucky – TBD

2026 applications open soon for all participants until **January 30, 2026**

- Secure your spot!
- Check your email for a link to register

If you have any questions:

Regarding your report, please contact:

- USA – Dennis Pennington: pennin34@msu.edu or 269-832-0497
- Ontario – Joanna Follings: Joanna.follings@ontario.ca or 519-400-7124

About how to sign up for your region's wrap-up meeting:

- Check your email - Registration survey links will be sent via email in the coming weeks

About how to sign up for the 2026 YEN program or general program questions:

- USA - Jody Pollok-Newsom: jody@miwheat.org
- Ontario – Alex Dacey: adacey@gfo.ca

Why Grower Groups are Involved:

The Michigan Wheat Program

- The MWP was voted in by the state's wheat farmers in 2011 to focus on 2 things: quality and yield
- There is no better program to assist us in that mission than a Yield Enhancement Network for the Great Lakes Region
- The YEN is vital for keeping wheat growers on the cutting edge and hitting their farm's potential.

Grain Farmers of Ontario – Vision statement

- Thriving farms
- Responsible production
- Trusted grain farmers

2025 Great Lakes YEN Sponsors

The Great Lakes YEN

Thank you for your time!

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