2025 FIELD TRIAL RESULTS

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Response of Winter Canola to Supplemental Sulphur Fertilization Under Field Conditions

EXPERIMENT INFO

Planted: 09/06/2024

Variety: Mercedes

Population: 3.8 lbs/acre

Row Width: 7.5”

Prev. Crop: Rye

Plot Size: 30’ x 925’

Replications: 3

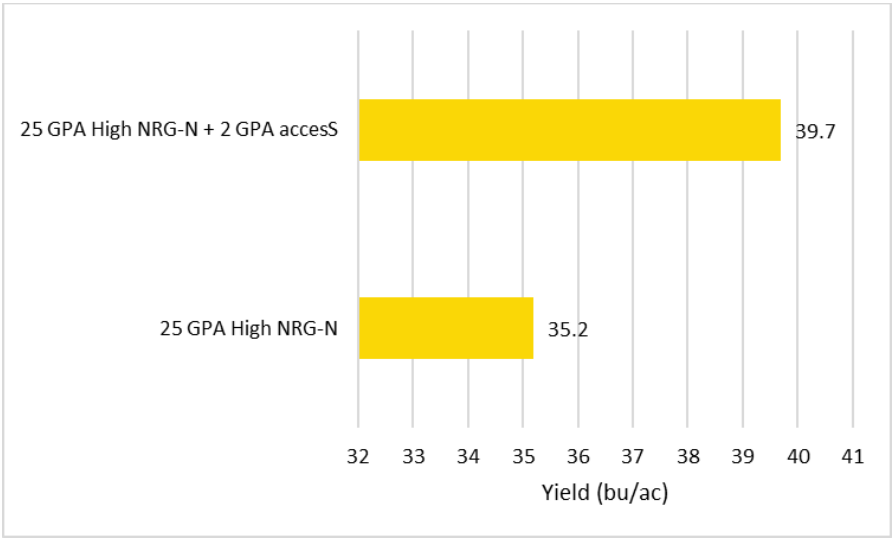
First N application
Date: 04/10/2025
Rate: 15 GPA High NRG-N
Stage: 6 leaf (growth stage 16)

Second fertilizer application
Date: 05/05/2025
Rate: 10 GPA High NRG-N for both treatments, plus the 2 GPA accesS on Treatment 2
Stage: Rosette

Harvested: 07/25/2025

Soil data
pH: 6.8 – 7.3
CEC: 5.0 – 13.5
% OM: 1.0 – 3.6
P (Bray): 115 – 184 ppm
% K: 1.4 – 5.4
% Mg: 12 – 15.6

Winter canola has a high demand for sulphur during growth and seed formation. Sulphur plays a key role in protein synthesis, enzyme activity, and the production of important compounds that influence oil quality. Adequate sulphur supply helps support strong vegetative growth, improves nitrogen use efficiency, and contributes to higher seed yield and oil content. Because sulphur is relatively mobile in soil and can be easily lost through leaching, deficiencies are common. Therefore, proper sulphur management is critical for maintaining healthy winter canola and achieving optimal productivity.



Treatment	Products	Total lbs/ac sulphur
1	25 GPA High NRG-N	12.5
2	25 GPA High NRG-N + 2 GPA accesS	22.5

The treatment with the High NRG-N and accesS yielded an **additional 4.5 bushels/acre** over the treatment just with High NRG-N.

Field Evaluation of Pre-Plant Nitrogen and Sulphur Fertilization in Winter Rye

EXPERIMENT INFO

Planted: 10/20/2024

Variety: Brasetto

Population: 65 lbs/acre

Row Width: 7.5”

Spring N application
Date: 04/30/2025
Rate: 25 GPA High NRG-N

Prev. Crop: Soybeans

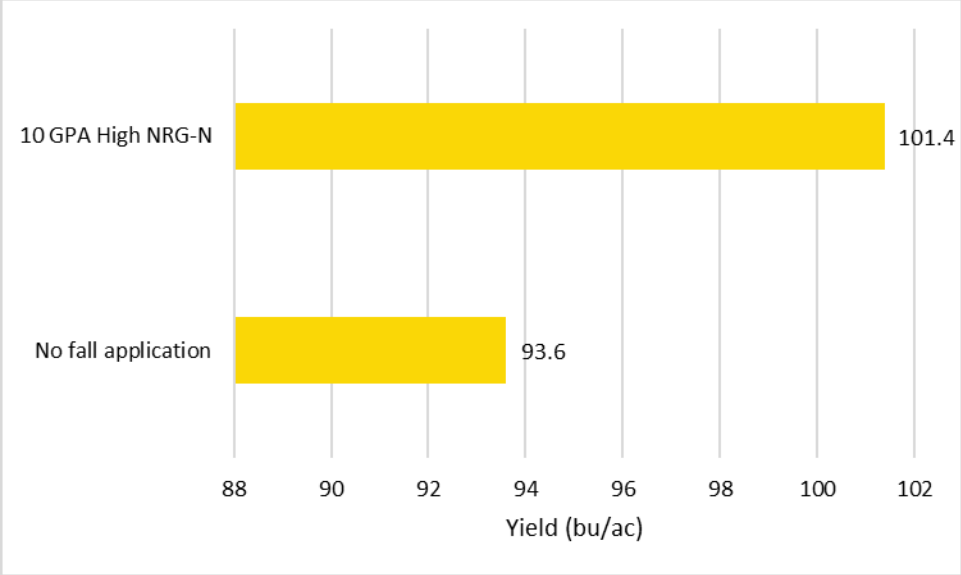
Plot Size: 30’ x 280’

Replications: 3

Harvested: 06/08/2025

Soil data
pH: 6.8 – 7.6
CEC: 5.9 – 9.3
% OM: 0.9 – 3.3
P (Bray): 104 - 216 ppm
% K: 1.4 – 5.3
% Mg: 5.8 – 17.3
Ca: 950 - 1610 ppm

Nitrogen and sulphur are two essential nutrients for winter rye. Nitrogen is a key component of chlorophyll and proteins, making it vital for photosynthesis, vegetative growth, and overall biomass production. Adequate nitrogen supply promotes vigorous tillering and improves grain yield. Sulphur is important for the formation of certain amino acids and enzymes that support protein synthesis and metabolic processes in the plant. Sulphur also enhances nitrogen use efficiency, allowing winter rye to better use available nitrogen in the soil. Because these nutrients work closely together in plant metabolism, balanced nitrogen and sulphur management is important for maintaining healthy winter rye growth and maximizing yield and grain quality.



Treatment	Products	Total lbs/ac sulphur (including the spring application of High NRG-N)
1	No fall application	12.5
2	10 GPA High NRG-N on Oct. 20, 2024	17.5

The combination of fall and spring applications of High NRG-N yielded an **additional 7.8 bushels/acre** over the single spring application.

Field Evaluation of Supplemental Foliar Phosphorus Applications in Grain Corn

EXPERIMENT INFO

Planted: 06/02/2025

Hybrid: MZ 4049SMX with Fortenza + Vibrance Cinco + Lumiante + Stamina (2975 CHU)

Population: 32,000 seeds/acre

Row Width: 30”

Prev. Crop: Soybeans

Plot Size: 12 rows x 675’

Replications: 3

Pre-Plant N Application
Date: 04/23/2025
Rate: 15 GPA High NRG-N

Starter Program
3 GPA Pro-Germinator + 3 GPA Kalibrate + 1 L/ac Micro 500 + 1 L/ac eNhance + 1 L/ac MicroLink Ca + 1 L/ac Boron

Sidedress Application
Date: 07/05/2025
Rate: 30 GPA High NRG-N

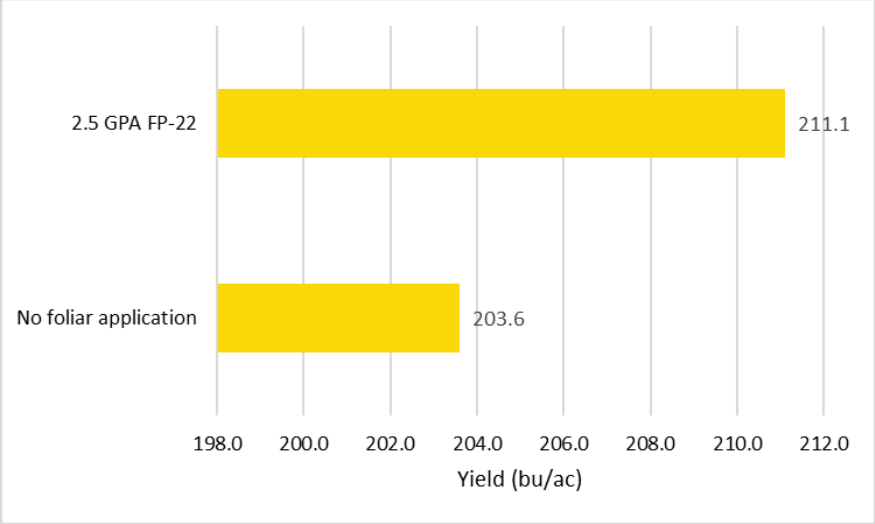
Fungicide Application
Date: 08/21/2025
Rate: 237 mL/ac Delaro Complete + 82 mL/ac Proline

Harvested: 11/27/2025

Soil Data

pH:	**6.6 – 7.8**
CEC:	**7.1 – 15**
% OM:	**2.2 – 3.8**
P (bicarb):	**24 – 55 ppm**
% K:	**1.5 – 5.0**
% Mg:	**7.1 – 18.9**
Ca:	**840 – 2730 ppm**

Phosphorus plays a critical role in early corn plant development, energy transfer, and root growth. It is a key component of adenosine triphosphate (ATP), which drives many metabolic processes required for plant growth. Adequate phosphorus availability promotes strong root systems, improves early vigor, and supports kernel development, all of which contribute to higher grain yield. However, phosphorus availability in soil can be limited, particularly in cool or compacted soils where root uptake is reduced. In these situations, foliar phosphorus applications can help supplement plant nutrition by delivering small amounts of readily available phosphorus directly to the leaves. While foliar phosphorus cannot replace soil-applied phosphorus, it can serve as a useful management tool to support plant growth during periods when soil phosphorus uptake is restricted.



Treatment	Average moisture (%)
No foliar fertilizer application	25.4
2.5 GPA FP-22	25.1

The AgroLiquid foliar phosphorous program yielded an **additional 7.5 bushels** over the check.

A Field Evaluation of Dry vs. Liquid Fertilizer Placement in Strip-Tilled Grain Corn Production

EXPERIMENT INFO

Planted: 05/20/2025

Hybrid: MZ 4049SMX with Fortenza + Vibrance Cinco + Lumiante + Stamina (2975 CHU)

Population: 32,000 seeds/acre

Row Width: 30”

Prev. Crop: Soybeans

Plot Size: 30’ x 1,608’

Replications: 4

Hog Manure Application
Date: 11/20/2024
Rate: 3,000 GPA

Fungicide Application
Date: 08/21/2025
Rate: 237 mL/ac Delaro Complete + 82 mL/ac Proline

Harvested: 11/25/2025

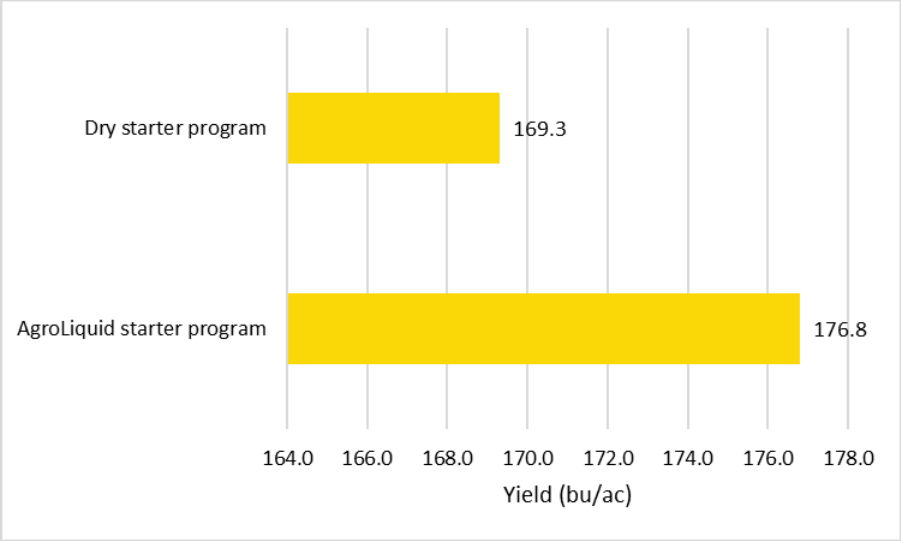
Soil Data
pH: 6.4 – 7.0
CEC: 5.6 – 14.3
% OM: 1.8 – 3.6
P: 21 – 46 ppm
% K: 2.5 – 4.7
% Mg: 6.8 – 16.7
Ca: 500 – 2130 ppm

Strip tillage combines the soil conservation benefits of no-till with the seedbed advantages of conventional tillage. By tilling narrow planting strips while leaving the rest of the field undisturbed, strip tillage reduces erosion, improves soil structure, and retains moisture. The warmed, well-prepared strips support better seed placement, faster germination, and strong early-season corn growth.

The use of liquid fertilizer in strip-till systems offers several advantages compared with dry fertilizer. Liquid fertilizers allow for more uniform application, better nutrient distribution within the strip, and the ability to apply multiple nutrients in a single pass. They can also be placed more accurately at specific depths, improving early nutrient availability. While dry fertilizers can still be effective, liquid fertilizer in strip-till systems can enhance nutrient efficiency and support more consistent early season corn development.

AgroLiquid starter program: 5 GPA Pro-Germinator + 2 GPA Kalibrate + 2 L/ac Micro 500 + 0.5 L/ac Boron + 1 L/ac eNhance

Dry starter program: 12-15-12-1Mg-13S-0.08B-0.12Zn



Treatment	Average moisture (%)
AgroLiquid starter program	24.4
Dry starter program	25.3

The AgroLiquid starter program **yielded an additional 8 bushels/acre** over the dry program.

Field Evaluation of Supplemental Nutrient Applications at Sidedress in Grain Corn

EXPERIMENT INFO

Planted: 05/17/2025

Hybrid: MZ 4158SDBR (3100 CHU) and MZ 4608SMX (3200 CHU); both with Fortenza + Vibrance Cinco + Lumiante + Stamina

Population: 32,000 seeds/acre

Row Width: 30”

Prev. Crop: Soybeans

Plot Size: 30’ x 789’

Replications: 3

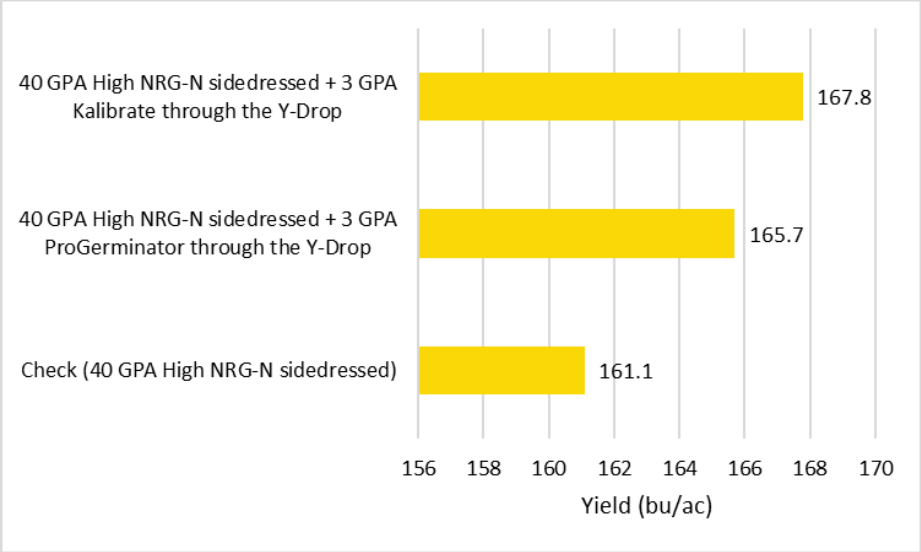
Sidedress Application
Date: 07/06/2025
Rate: 40 GPA High NRG-N

Fungicide Application
Date: 08/21/2025
Rate: 237 mL/ac Delaro Complete + 82 mL/ac Proline

Harvested: 10/27/2025

Soil Data
pH: 6.3 – 7.3
CEC: 4.6 – 9.3
% OM: 1.5 – 3.3
P: 123 – 287 ppm
% K: 3.8 – 5.3
% Mg: 14.1 – 17.3
Ca: 530 – 1200 ppm

Sidedressing nitrogen in corn allows nutrients to be applied closer to the time when the crop needs them most, improving nitrogen use efficiency and supporting strong plant growth during key development stages. Applying nitrogen during the growing season can reduce the risk of nutrient losses from leaching or runoff. This practice also provides an opportunity to assess crop conditions and adjust fertilizer rates based on yield potential. In addition to nitrogen, other nutrients such as sulfur or micronutrients can be applied at this time if needed, helping ensure the crop has balanced nutrition to support healthy development and maximize yield potential.



Treatment	Average moisture (%)
Check (40 GPA High NRG-N sidedressed)	25.6
40 GPA High NRG-N sidedressed + 3 GPA Pro-Germinator through the Y-Drop	24.9
40 GPA High NRG-N sidedressed + 3 GPA Kalibrate through the Y-Drop	25.3

The treatment with Kalibrate through the Y-Drop yielded an **additional 6.7 bushels** over the check.

Field Evaluation of Supplemental Pre-Plant Sulphur Application in Soybeans

EXPERIMENT INFO

Planted: 06/04/2025

Cultivar: Cyclone R2X (RM 1.5)

Population: 180,000 seeds/acre

Row Width: 7.5”

Prev. Crop: Corn

Plot Size: 30’ x 2,191’

Replications: 4

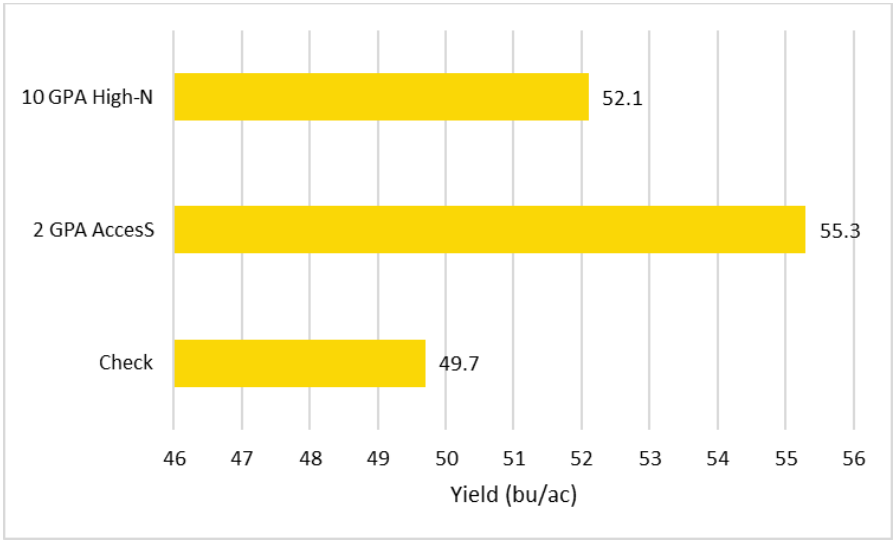
Pre-Plant Broadcast Fertilizer Application (7-port Streamer Nozzles)
Date: 05/30/2025

Foliar Fungicide Application
Date: 07/20/2025
Product: 235 mL/ac Delaro Complete

Harvested: 10/15/2025

Soil Data
pH: 6.0 – 7.4
CEC: 7.5 –11.4
% OM: 2.1 – 3.6
P: 22 – 41 ppm
% K: 2.9 – 6.3
% Mg: 12.3 – 17.6
Ca: 980 – 1670 ppm

Sulphur is essential for protein formation, enzyme function, and efficient nitrogen fixation in soybean plants. Adequate sulphur availability helps promote healthy plant growth, improved nodulation, and strong seed development. In soils where sulphur levels are limited, applying sulphur can help optimize nutrient balance and support higher yield potential while maintaining overall crop health.



The AccesS treatment yielded an **additional 5.6 bushels** over the check.

Field Evaluation of Foliar Potassium Application in Soybeans

EXPERIMENT INFO

Planted: 06/02/2025

Cultivar: Cyclone R2X (RM 1.5)

Population: 180,000 seeds/acre

Row Width: 7.5”

Prev. Crop: Corn

Plot Size: 30’ x 3,600’

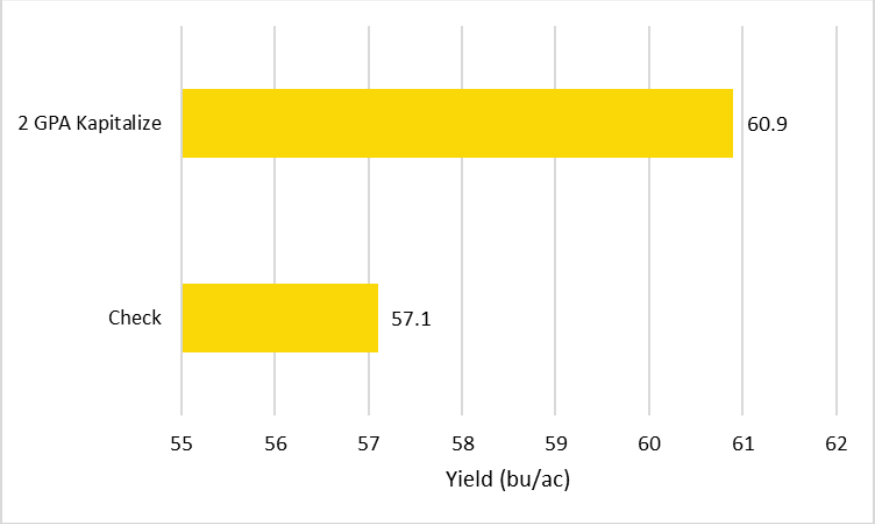
Replications: 3

Foliar Application
Date: 07/27/2025

Harvested: 10/17/2025

Soil Data
pH: 7.0 – 7.5
CEC: 5.7 –14.3
% OM: 2.7 – 4.3
P: 20 – 34 ppm
% K: 1.2 – 2.3
% Mg: 11.4 – 15.5
Ca: 1540 – 1780 ppm

Potassium supports water regulation, photosynthesis, and overall plant health in soybeans. Adequate potassium levels help improve plant vigor, strengthen stems, and enhance the plant’s ability to tolerate stress such as drought or disease. Potassium is also important for seed development and can contribute to improved yield and seed quality. In situations where soil potassium levels are limited or crop demand is high, foliar potassium applications can provide a supplemental nutrient source during the growing season. While foliar applications do not replace soil-applied potassium, they can help address short-term deficiencies and support plant performance during critical growth stages.



The Kapitalize treatment yielded an **additional 3.8 bushels** over the check.