Field trial: Canola

Study details

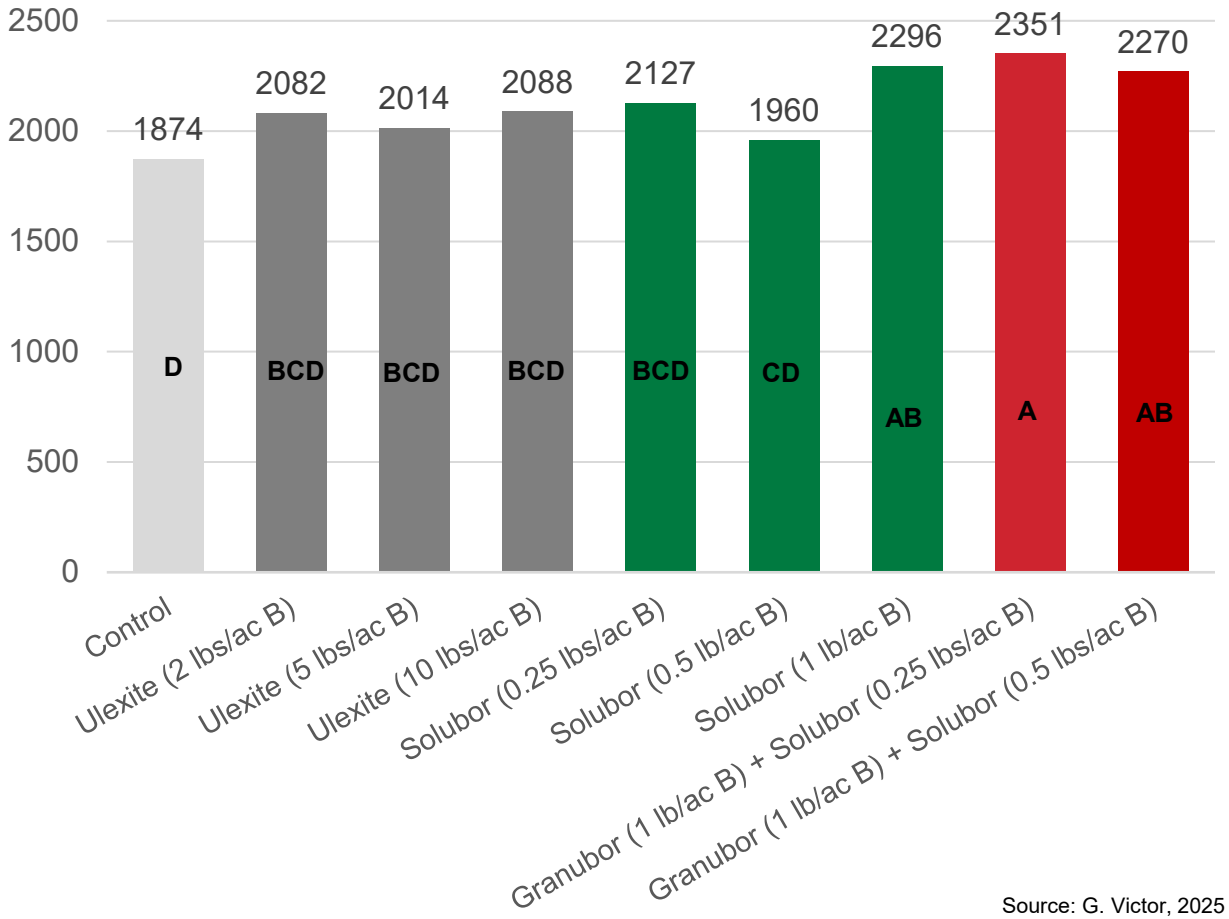
Research institution: North Dakota State University
Researchers: Drs. Victor Gomes and Leandro Bortolon
Date: 2025 crop season
Locations: Dickinson and Minot, North Dakota, United States
Crop variety: L345PC (Dickinson), DK400TL (Minot)
Plant population: 600k pl/ac (Dickinson), 450k pl/ac (Minot)
Soil:

- Organic matter: 4% (Dickinson), 3.3% (Minot)
- Type: Loamy soils in both locations
- Boron content: 0.35 ppm (Dickinson), 0.44 ppm (Minot)

Fertilizer: *Granubor*®, *Solubor*®, and ulexite
Trial design: Randomized complete block with four repetitions

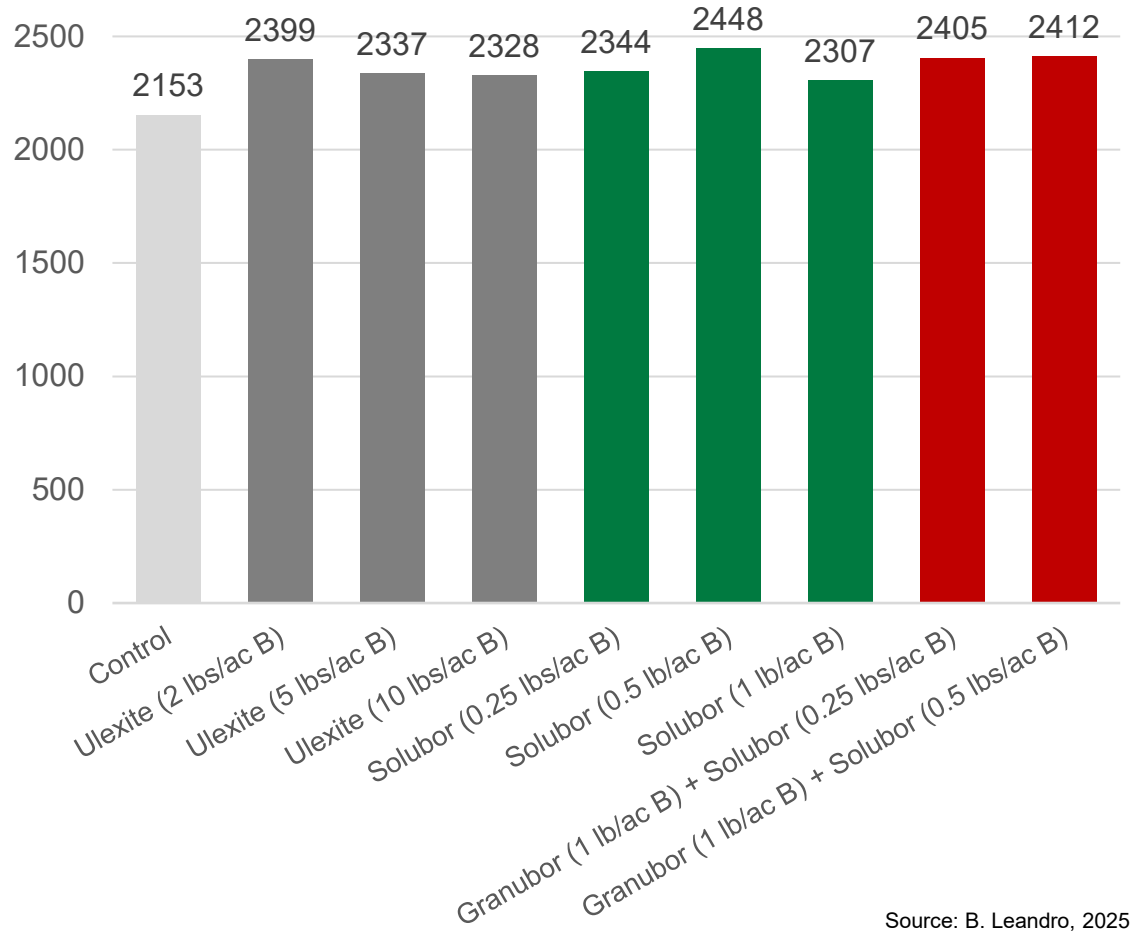
Results: Canola yield (lbs/ac)

Dickinson, ND



Source: G. Victor, 2025

Minot, ND



Source: B. Leandro, 2025

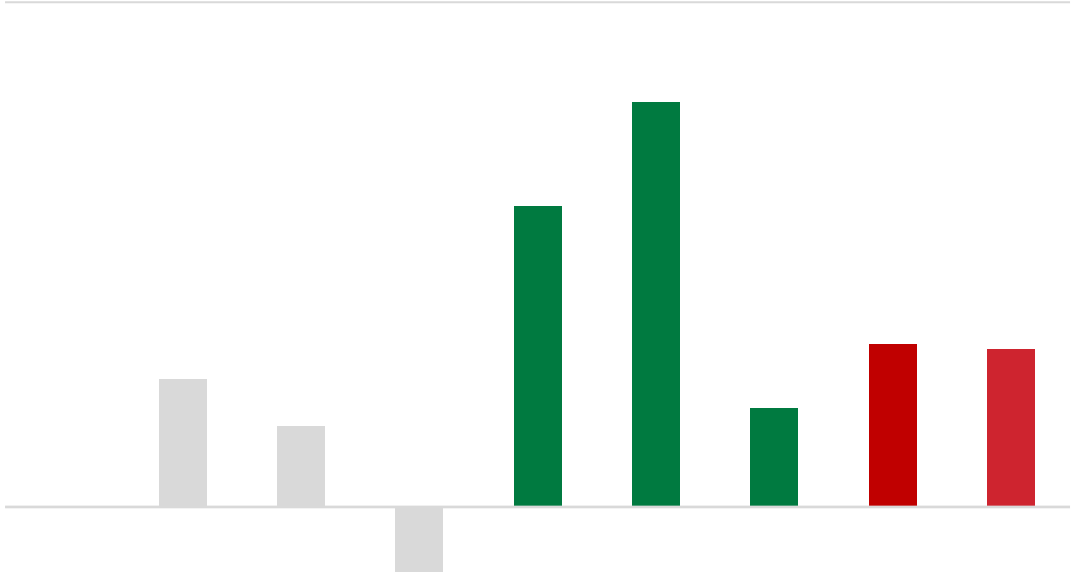
Results: ROI (%)

Dickinson, ND

	Control	Ulexite (2 lbs/ac B)	Ulexite (5 lbs/ac B)	Ulexite (10 lbs/ac B)	Solubor (0.25 lbs/ac B)	Solubor (0.5 lb/ac B)	Solubor (1 lb/ac B)	Granubor (1 lb/ac B) + Solubor (0.25 lbs/ac B)	Granubor (1 lb/ac B) + Solubor (0.5 lbs/ac B)
ROI (%)	0	69.8	-42.1	-51.4	314	10.9	309.3	232.1	150.8

Source: G. Victor, 2025

Minot, ND



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ROI (%)	0	101	64.1	-51.4	237.9	320.7	77.8	129.1	125.1

Source: B. Leandro, 2025

Conclusion

In Dickinson, treatments were statistically significant for grain yield. The treatments that consisted of the combination of *Granubor* at planting and *Solubor* at 10-20% bloom produced the best results.

In Minot, the results were not statistically significant for grain yield or oil content, but there is definitely a yield gain (>100 lbs/acre) for the treatments that received any boron fertilization when compared to the untreated plots. The yield gain was greater than 200 lbs/acre for the plots that received *Granubor* and *Solubor*.

Summary

Dickinson

Treatments that combined *Granubor* at planting with *Solubor* during early bloom (10–20%) delivered the highest grain yield performance. This combination stands out as the most effective approach for maximizing productivity.

Minot

While formal statistical thresholds weren't the focus, the results clearly show consistent yield improvements with boron fertilization:

- Any boron treatment outperformed untreated plots, adding over 100 lbs/acre
- The *Granubor* + *Solubor* combination achieved the largest gains—more than 200 lbs/acre, reinforcing the value of a dual-application strategy with refined borates