Soybean Boron Foliar Trial

Trial ID: 2025-SBF03 – R.M. of Emerson – Franklin

Objective: Quantify the agronomic and economic impacts of a single foliar boron fertilizer application for soybean production.

Summary: There was no significant yield difference between soybeans with and without a V2 foliar boron (B) application. A spring composite soil sample of the trial area resulted in a ''very low'' soil B (0.4 ppm) level. All plots were plant tissue sampled after boron application and there were no significant differences between treatments and both treatments were considered ''sufficient'' in plant B. There was significantly more average nodulation per plant in the boron strips compared to untreated, but both treatments were considered agronomically sufficient. As a result, there was a decrease in profit/ac equal to the cost of product application.

Trial Information

Treatment	Untreated vs. Solubor®
Application Timing	V2
Application Date	6/18/2025
Application Rate	0.5 lbs/ac
Application Method	Broadcast
Soil Texture	Loamy Fine Sand
Spring Soil Test Boron (0-6'')	0.4 ppm (''V. Low'' per AGVISE interpretation)
Previous Crop	Corn
Tillage	Conventional Tillage
Seeding Date	5/13/2025
Variety	P009Z94E
Seeding Rate	155,000 seeds/ac
Row Spacing	22 in.
Plant Stand @ V4	105,000 plants/ac
Harvest Date	10/3/2025

Precipitation (mm)

	May	June	July	Aug	Total
Rainfall	30.3	54.1	64.2	61.5	210.1
Normal	74.01	94.5	84.42	67.18	320.11
% Norm	41%	57%	76%	92%	66%

Foliar Boron Content (V4) ǂ

	Foliar Boron Content (ppm)
Solubor	31.8 A
Untreated	32.8 A

ǂ Foliar samples (uppermost trifoliates) were collected after at least 10 days after application. Samples were sent for total foliar Boron content testing. Plant B values >20 ppm are considered ''sufficient'' per AGVISE Laboratories interpretation.

Nodulation Rating ǂ

	Nodulation Rating
Solubor	3.6 A
Untreated	3.0 B

ǂ Nodulation ratings were done at flowering (R1-R2) and the number of pink, healthy and active nodules were rated on a scale of 0-4, where 0 = no nodules, and 4 = 20+ healthy nodules/plant. Averages followed by different letters are significantly different at α =0.05.

NDVI Field Image August 15

[Additional On-Farm Network Research Reports]

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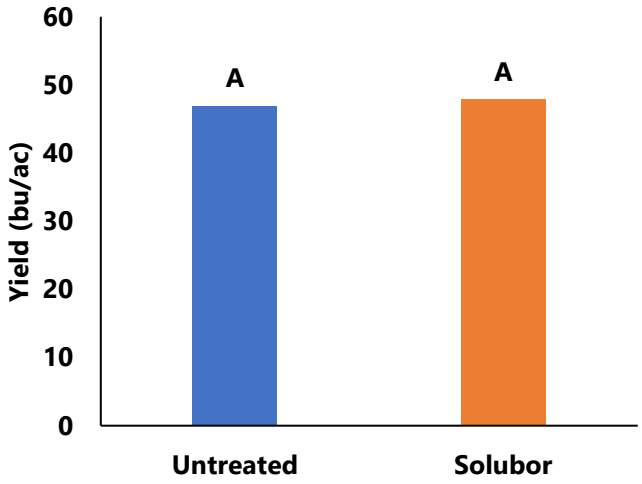
Yield by Treatment



Overall Yield & Economics

	Mean (bu/ac)	Cost ǂ	Change in Profit ǂ ǂ
Solubor	47.9	$2.00/ac	-$2.00/ac
Untreated	46.9		
Yield Difference	1.0		
P-Value	0.5128		
CV	3.4%		
Significance	**No**	**Economic**	**No**

ǂ Based on an estimated cost for foliar boron fertility products, does not include application cost

ǂ ǂ Yields were not significantly different, therefore there is no increased income to offset the cost of the foliar boron fertility product.

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