Soybean Yield under N and S Fertilization

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Objective

Determine the effects of nitrogen and sulfur fertilization on soybean yield to define best management practices.

Materials and Methods

Crop Year–2021	
Soil Type: Galva	Galva, Primghar
Previous Crop	Corn
Variety	P23A15X
Planting Date	May 11
Row Spacing	30 in.
Seeding Rate	140,000 seeds/acre
Tillage	Soil Finisher: April 2
Fertilizer	24-60-80 VRT application: November 3, 2020
Nitrogen	Per treatment scheme
Harvest Date	October 6
Experimental Design	Randomized complete block design
Replications	Four
Treatments	Untreated (0 lb. N and S per acre at both planting); AMS (26.3 lb. N and 30 lb. S per acre at both planting); Gypsum (0 lb N and 30 lb S per acre at both planting); Urea (26.3 lb. N and 0 lb S per acre at both planting); and Full (150 lb. N and 15 lb. S per acre at both planting and R3 stage)

Results

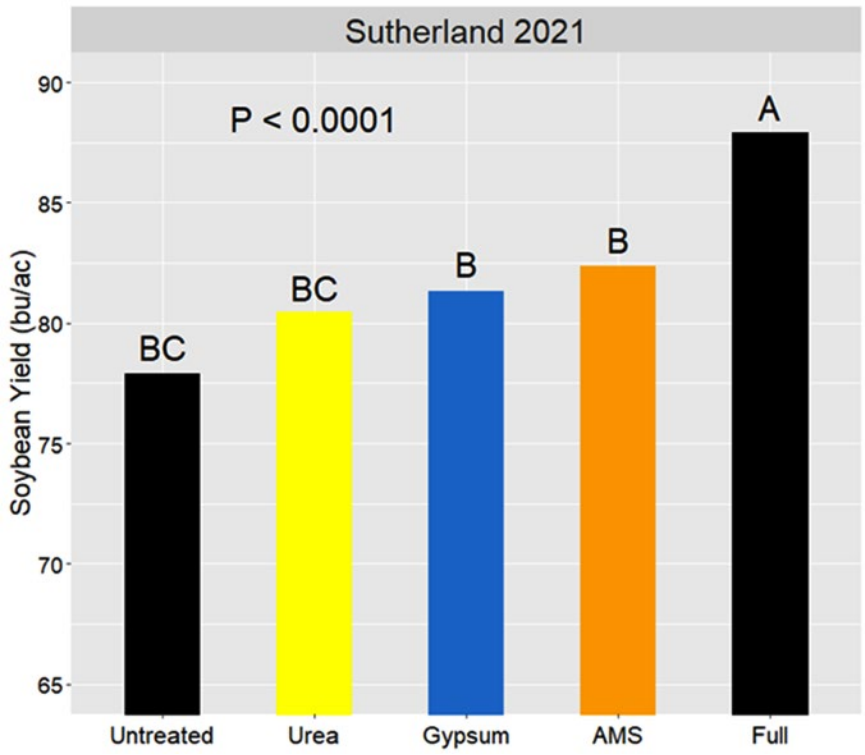

Figure 1. Soybean grain yield at 13% moisture in 2021. Yields that are significantly different at P < 0.05 have different letters.

Key Takeaways

- Only the Full treatment (150 lb. N and 15 lb. S per acre at both planting and R3 stage) had significantly higher soybean yields compared with the Untreated treatment.
- The AMS treatment is moderately significant (P = 0.0877) and higher than the Untreated treatment.

Acknowledgements

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