



# Soybean Variety, Seeding Rate, and Row Spacing Trial

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## Objective

Determine the effects of corn seeding rate and row spacing on corn yields to define best management practices.

## Materials and Methods

### Crop Year: 2022

Soil type	Galva, Primghar
Previous crop	Corn
Variety	AG18XF1, AG24XF1, P20A22X, P23A15X
Planting date	May 16, 2022
Row spacing	15 in., 20 in., 30 in.
Seeding rate	90,000; 120,000; and 150,000 seeds/acre
Tillage	Fall chisel plowed–Nov. 18, 2021; Spring soil finisher–May 12, 2022
Fertilizer	19-48-55 VRT application–November 13, 2021
Nitrogen	No nitrogen
Harvest date	October 10, 2022
Experimental design	Randomized complete block design by soybean brand
Replications	4
Treatments	Cultivar, row spacing, and seeding rate

## Results

Table 1. Corn grain yields for hybrid, seeding rate, and row spacing trial main effects in 2022.

	Bayer	Covetta
<b>grain yield (bushels/acre)</b>		
Variety X Variety Y	56.9 54.9 P = 0.1566	54.5 54.0 P = 0.6811
90,000 seeds/ac. 120,000 seeds/ac. 150,000 seeds/ac.	55.4 56.0 56.2 P = 0.8938	50.7 56.4 55.5 P = 0.0015
15 in. row 20 in. row 30 in. row	56.0 55.7 56.0 P = 0.9774	54.6 53.3 54.7 P = 0.6222

Table 2. Corn grain yields for the Corteva hybrid × seeding rate × row spacing trial in 2021.

	Bayer			Covetta		
	15 in. row	20 in. row	30 in. row	15 in. row	20 in. row	30 in. row
<b>grain yield (bushels/acre)</b>						
Variety X Variety Y	57.0 55.0	56.1 55.3	57.7 54.4	54.6 54.7	53.5 53.2	55.4 54.0
	P = 0.7650			P = 0.9040		
90,000 seeds/ac. 120,000 seeds/ac. 150,000 seeds/ac.	54.1 57.4 56.5	55.1 55.8 56.2	57.1 54.9 56.1	51.3 56.9 55.7	48.6 55.6 55.8	52.2 56.8 55.1
	P = 0.7996			P = 0.8699		

## **Key Takeaways**

- For both trials, yields ranged from 48.6 bushels/acre to 57.7 bushels/acre.
- The Bayer Asgrow trial did not have any significant yield differences associated with variety, seeding rate, or row spacing or their interactions.
- In the Corteva Pioneer trial, 90,000 seeds/acre were lowest yielding. There were no interaction effects associated with variety, seeding rate, or row spacing

## **Acknowledgements**

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