

Soybean R3 Foliar Fungicide Trial: 2022 Location Results

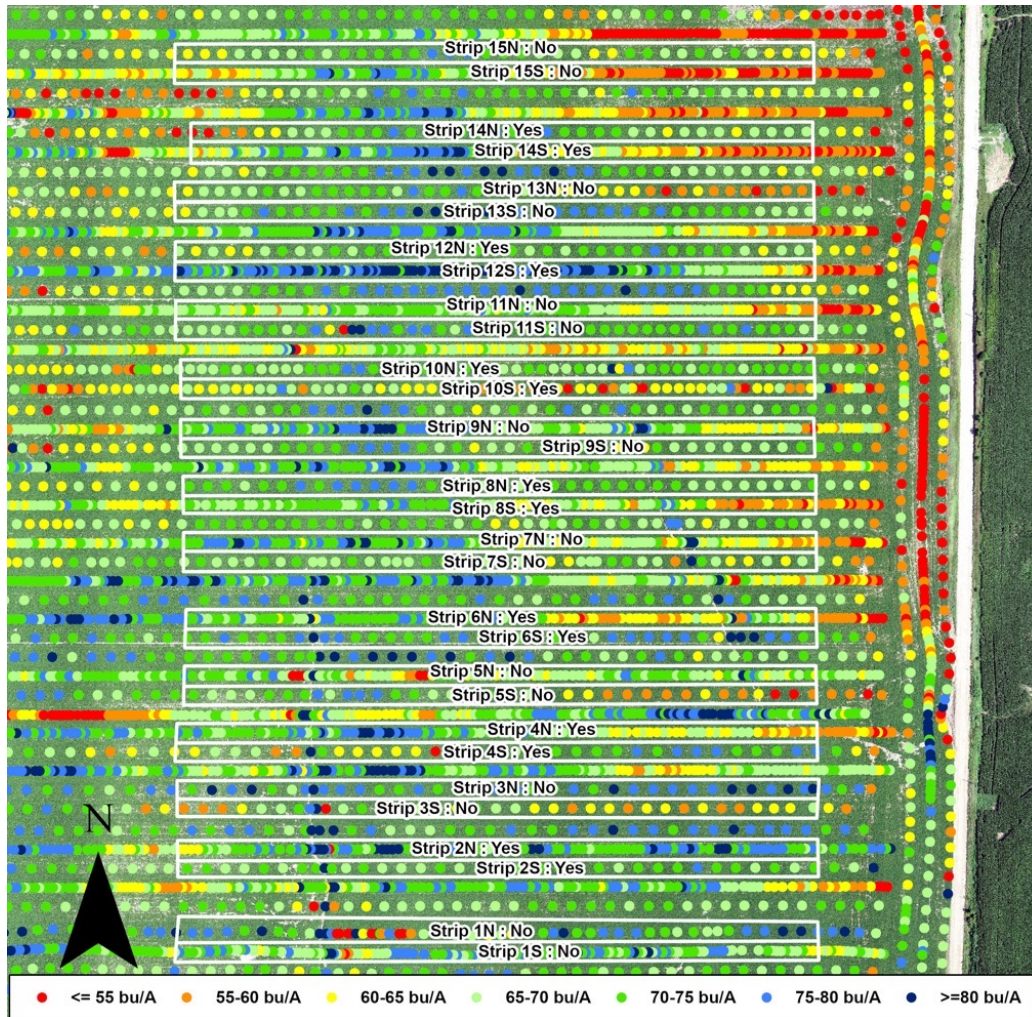
Key question: Are fungicides applied at R3 effective at reducing foliar disease and increasing yield?

Treatments: Strips with fungicide applied at R3 vs. strips with no fungicide application.

*Farmer's choice of product used.

This on-farm research was supported by the Missouri Soybean Merchandizing Council (award No. 18-415) and University of Missouri Extension.

This on-farm research was only possible with the cooperation of Missouri Soybean farmers who volunteered to implement trials on their fields and the Regional MU Extension faculty that supported them.

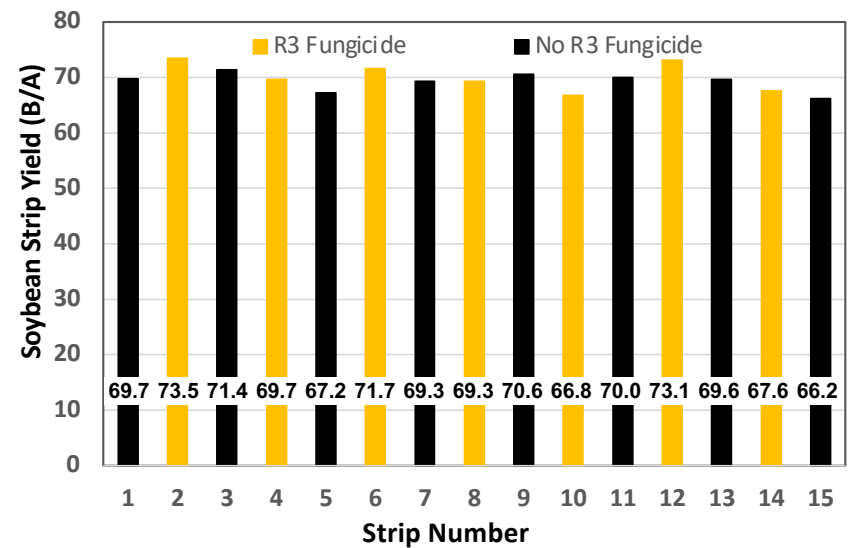


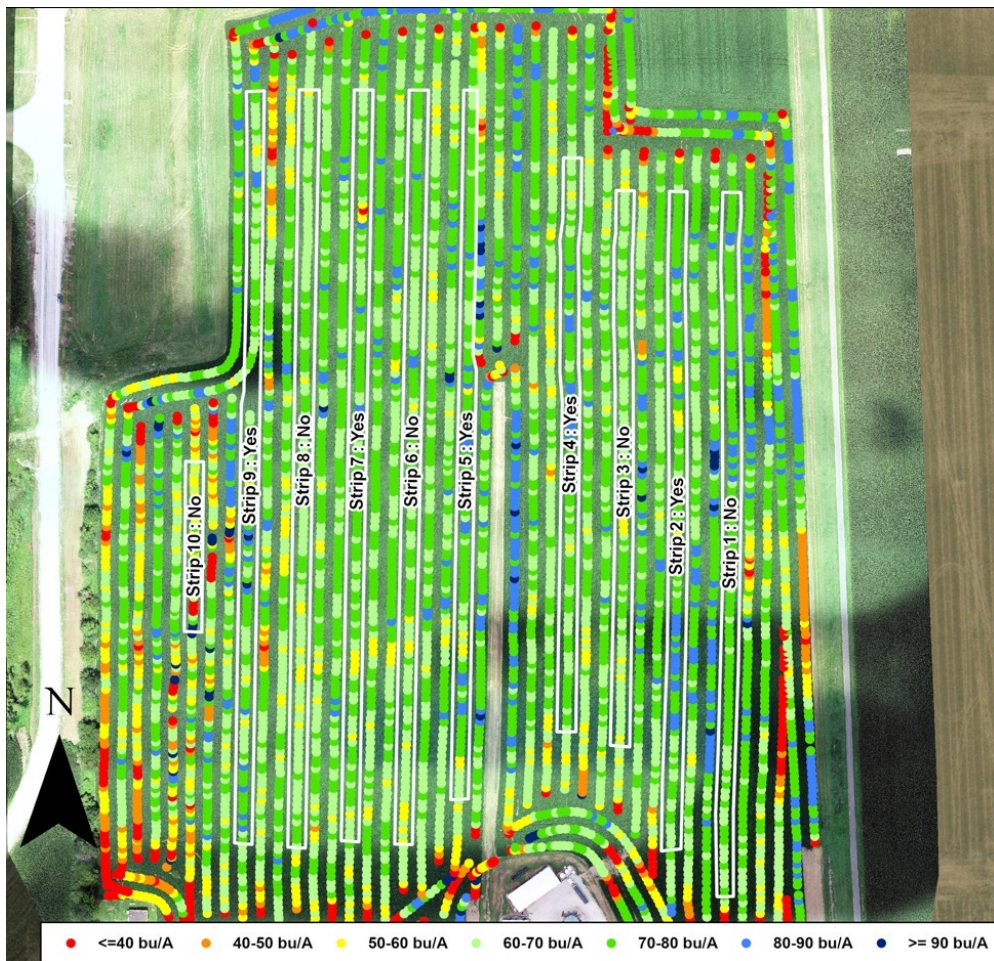
Soybean yield map and areas used for yield determination. Data from 5-point yield averages. Field harvested October 10, 2022. Aerial image was taken at 100 meters on August 22, 2022.

Soybean R3 Fungicide Trial Site 2201 Holt County

Summary of yield data. There is about a 50% chance that R3 fungicide increased yield one bushels or more at this location.

Treatments	Mean (SD)	Delta Control
	<i>bushels/acre</i>	
All strips	69.7	--
Control (N)	69.2	--
R3 Fungicide (F)	70.2	1.0



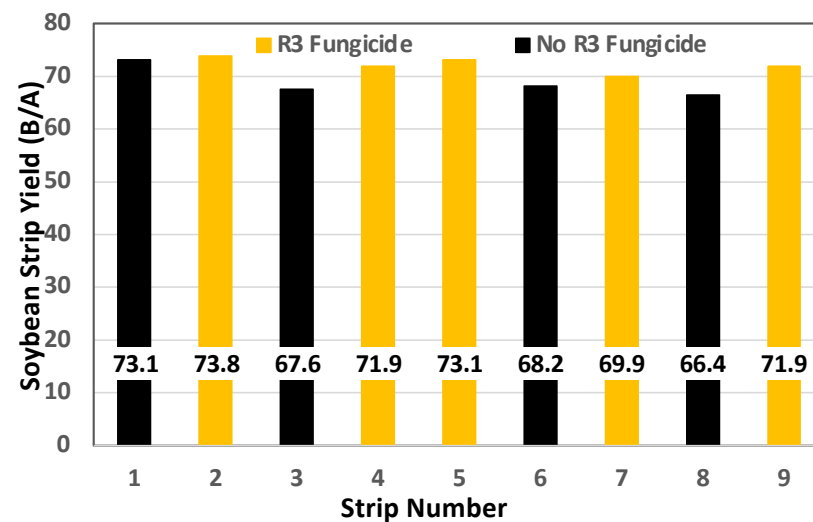


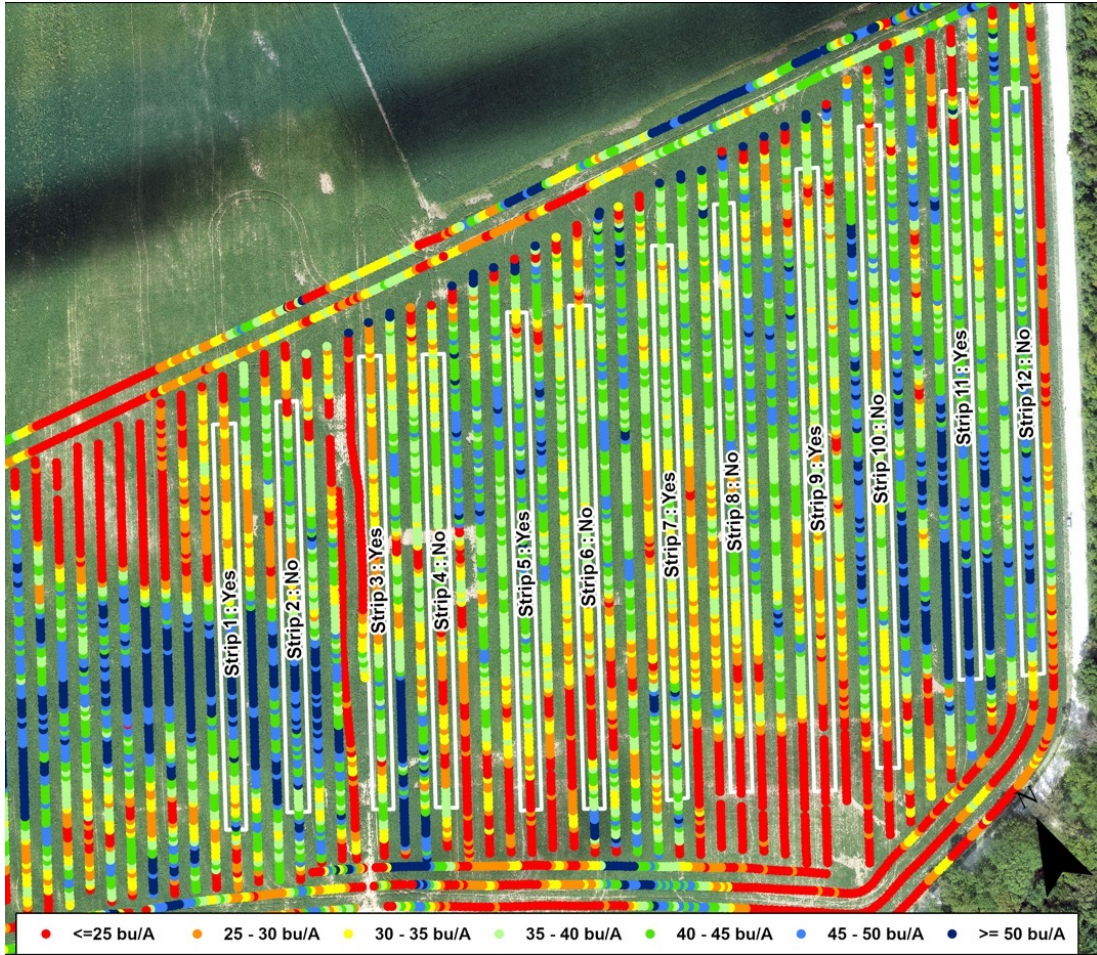
Soybean yield map and areas used for yield determination. Field harvested October 16, 2022. Aerial image was taken at 100 meters on August 5, 2022.

Soybean R3 Fungicide Trial Site 2202 Buchanan County

A preliminary analysis of the data indicates that R3 fungicide increased yield. Data from Strip 10 was not included because we could not get a representative strip length.

Treatments	Mean (SD)	Delta Control
	<i>bushels/acre</i>	
All strips	70.7 (2.7)	--
Control (N)	68.8 (3.0)	--
R3 Fungicide (F)	72.1 (1.5)	+3.3



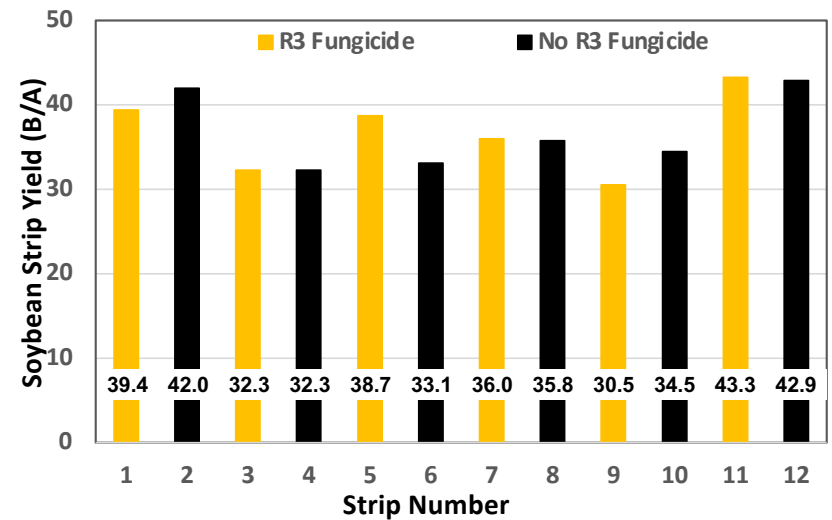


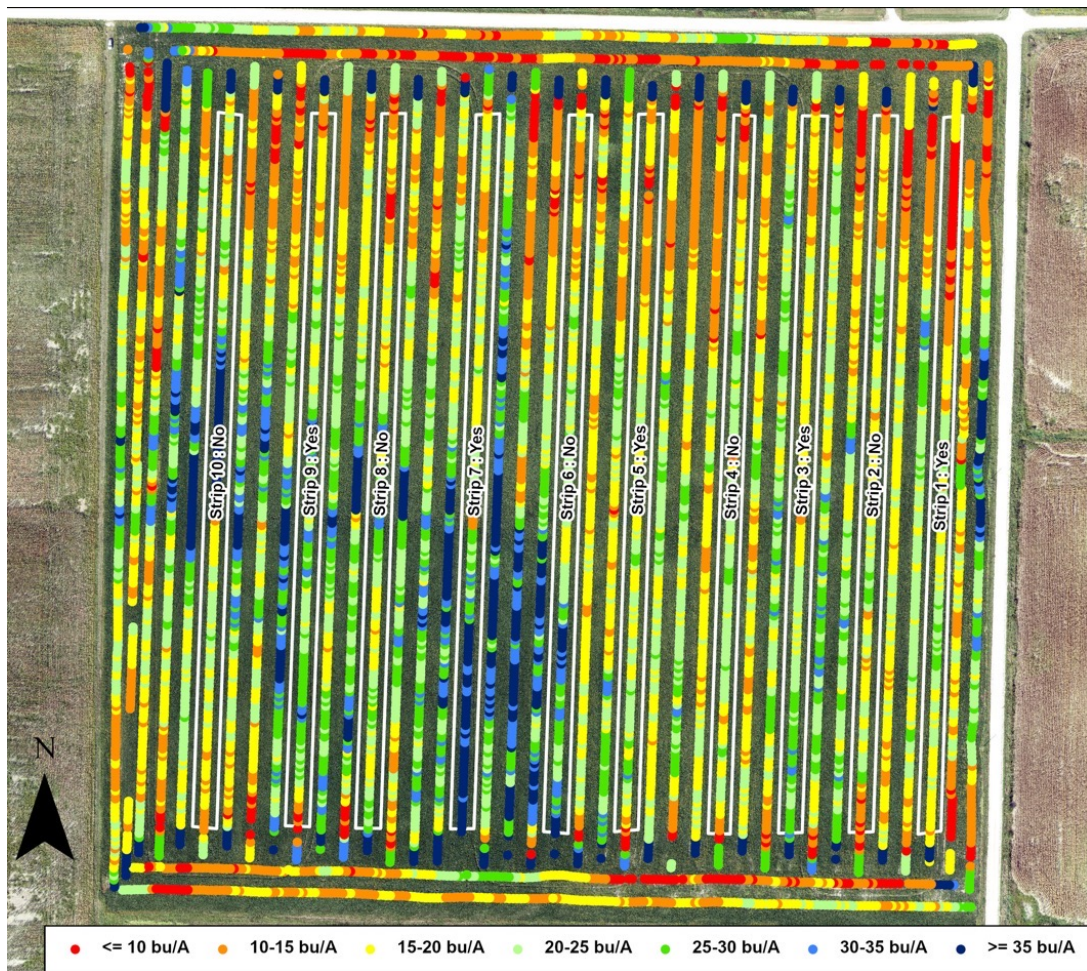
Soybean yield map (harvested 10/11/2022) and areas used for yield determination. Imagery taken at 100m on 9/7/2022.

Soybean R3 Fungicide Trial Site 2203 Cape Girardeau County

There is no evidence that fungicide increases yield. This location had lots of variability. Eliminating the low yielding areas in the southern part of the field had no impact on the result.

Treatments	Mean (SD)	Delta Control
	<i>bushels/acre</i>	
All strips	36.7 (4.4)	--
Control (N)	36.7 (4.6)	--
R3 Fungicide (F)	36.7 (4.7)	0



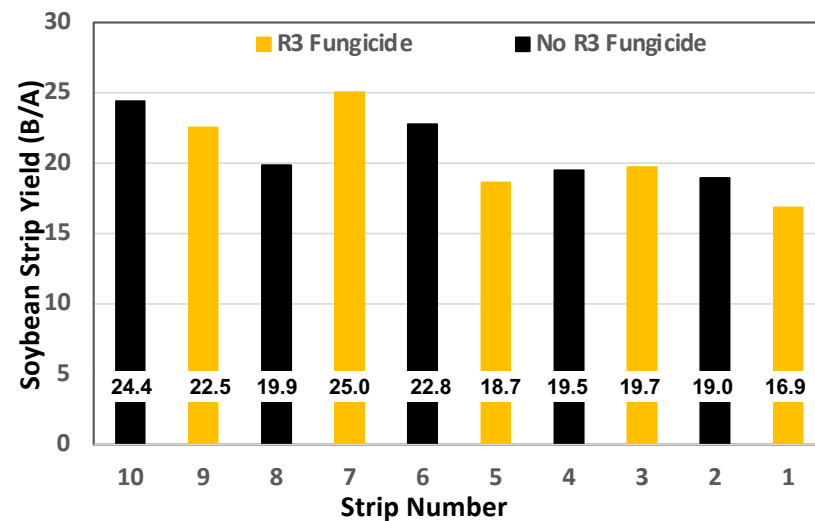


Soybean yield map and areas used for yield determination. Imagery taken at 100m on 9/13/2022.

Soybean R3 Fungicide Trial Site 2205 Dade County

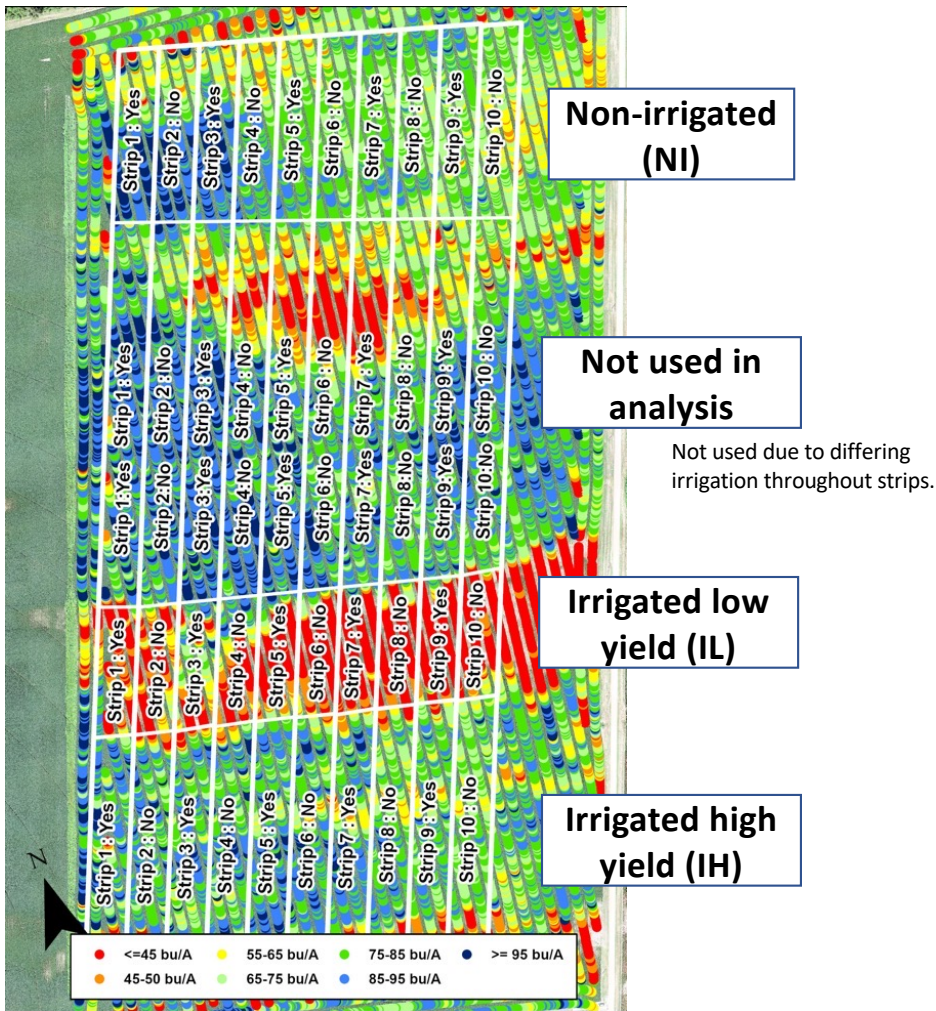
There is no evidence that fungicide increases yield. When we eliminated the high yielding area associated with what is a wetter area it had no impact on the result.

Treatments	Mean (SD)	Delta Control
	<i>bushels/acre</i>	
All strips	20.8 (2.7)	--
Control (N)	21.1 (2.4)	--
R3 Fungicide (F)	20.6 (3.2)	-0.5



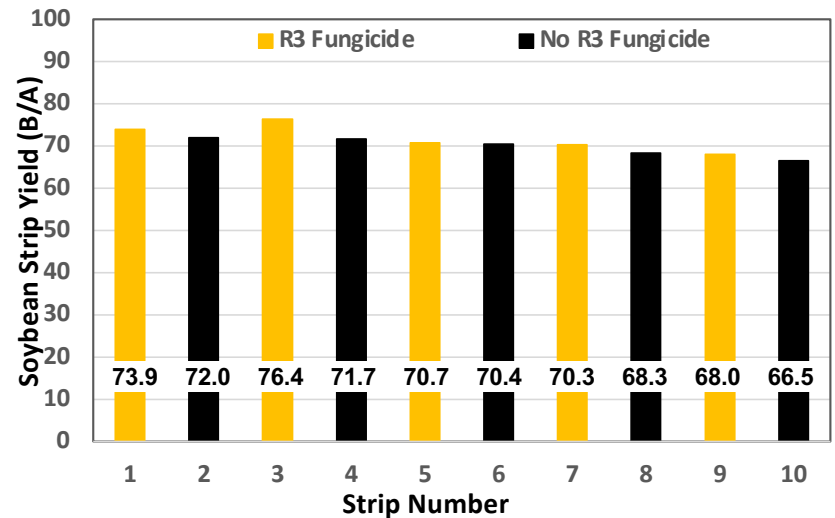
Soybean R3 Fungicide Trial Site 2207 Mississippi County

Initial analysis indicated a 50% chance that R3 fungicide increased yield more than 1 bushel per acre across the three parts of the field that had similar irrigation across all strips. Given the dramatic differences in conditions in these three sections they were then analyzed and reported separately.



Map of soybean yield and areas used to determine strip yield. Soybean harvested 10/5/2022; imagery taken at 100m on 8/11/2022.

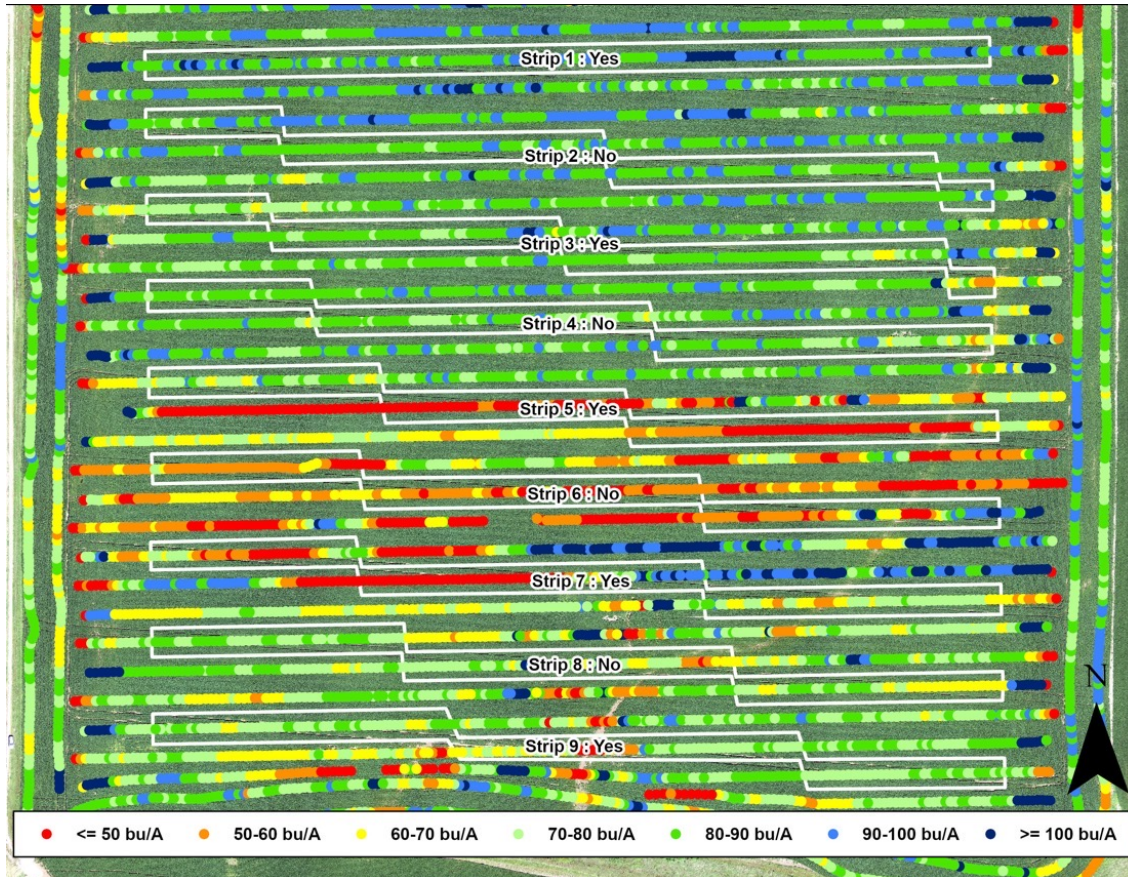
Treatments	Mean (SD)	Delta Control
	<i>bushels/acre</i>	
All strips	70.8 (2.9)	--
Control (N)	69.8 (2.3)	--
R3 Fungicide (F)	71.9 (3.3)	+1.1



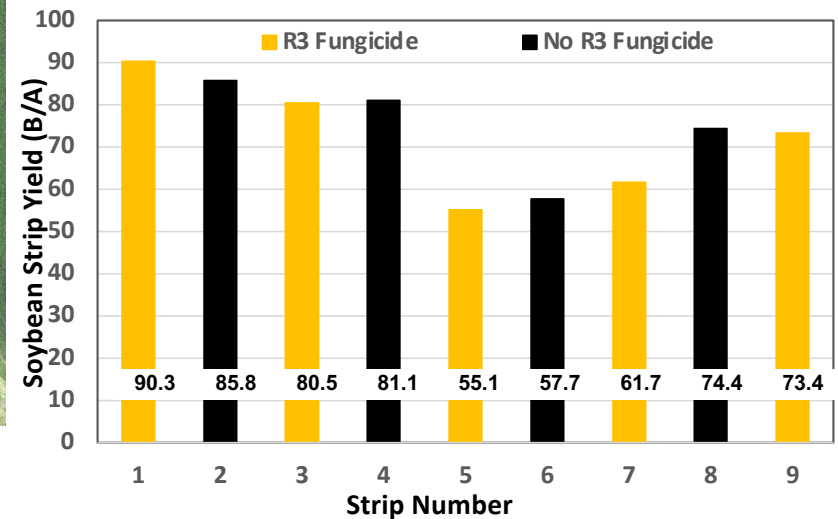
Soybean R3 Fungicide Trial Site 2208 Montgomery County

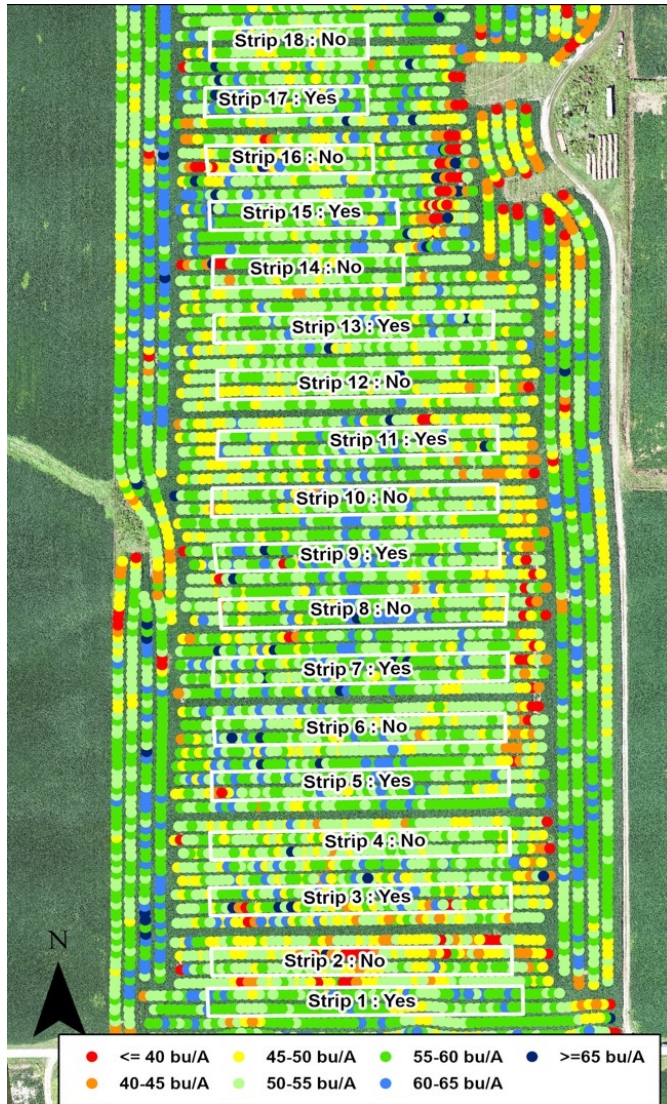
There is no evidence that fungicide increased yield. There was a lot of variation at this location. Analysis with strips 5, 6 and 7.

Treatments	Mean (SD)	Delta Control
	<i>bushels/acre</i>	
All strips	73.3 (12.6)	--
Control (N)	74.7 (12.3)	--
R3 Fungicide (F)	72.2 (14.2)	-2.5



Soybean yield and areas used to determine strip yield. Soybean harvested 10/18/2022; imagery taken at 100m on 8/18/2022.



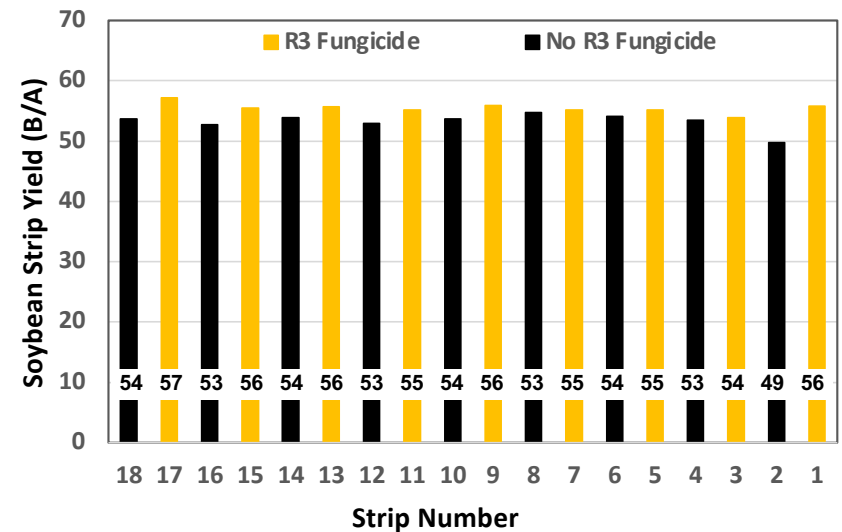


Map of soybean yield and areas used to determine strip yield. Soybean harvested 11/21/2022; imagery taken at 100m on 8/30/2022.

Soybean R3 Fungicide Trial Site 2209 Marion County

There is greater than 95% probability that R3 fungicide increased yield by at least one B/A and an 80% probability it increased yield more than 2 B/A.

Treatments	Mean (SD)	Delta Control
	<i>bushels/acre</i>	
All strips	54.4 (1.6)	--
Control (N)	53.2 (1.4)	--
R3 Fungicide (F)	55.5 (.85)	+2.3



Corn R3 Fungicide Trial Site 2112 Callaway County

Summary of yield data. There was little evidence that fungicide increased yield at this location. There was a 30% chance that fungicide increased yield >1 B/A.

Treatments	Mean (SD)	Delta Control
	<i>bushels/acre</i>	
All strips	129 (3)	--
Control (N)	128.2 (3)	--
R3 Fungicide (F)	129.0 (3)	0.8

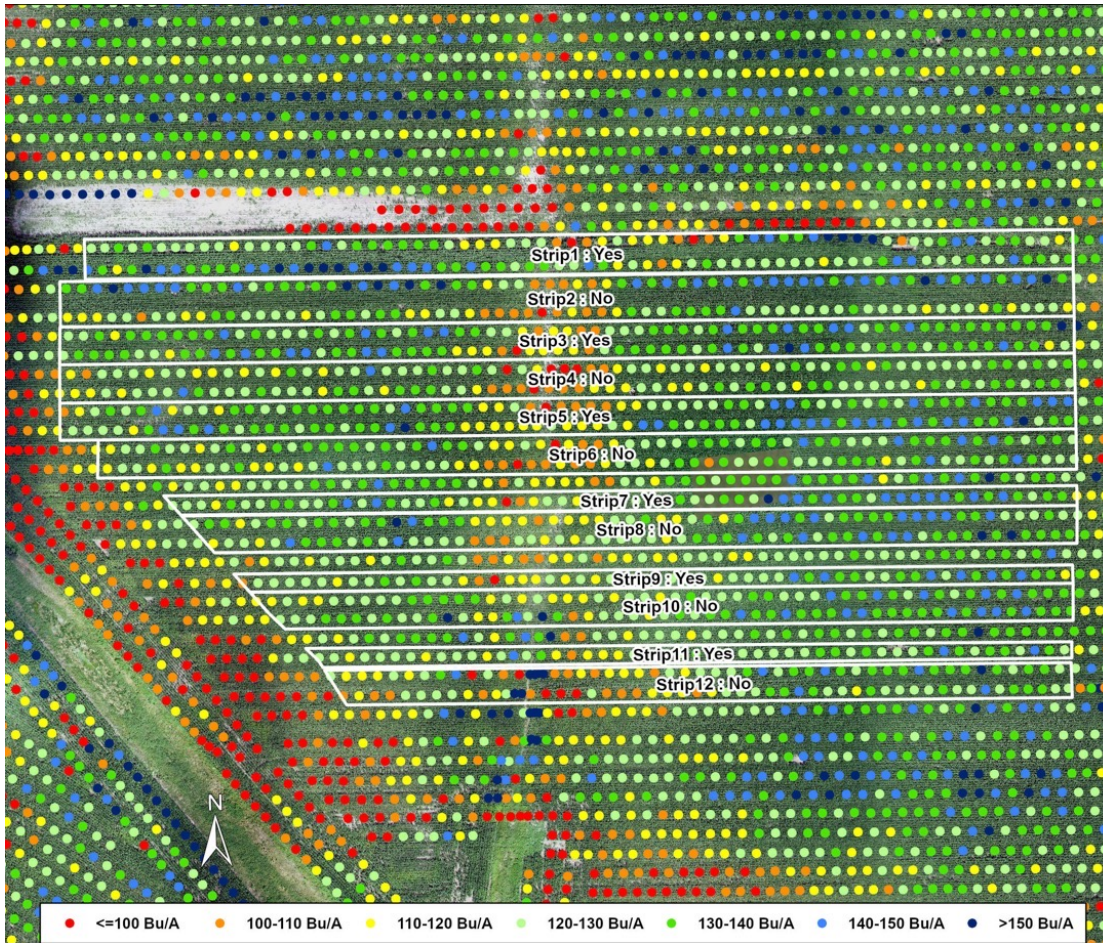
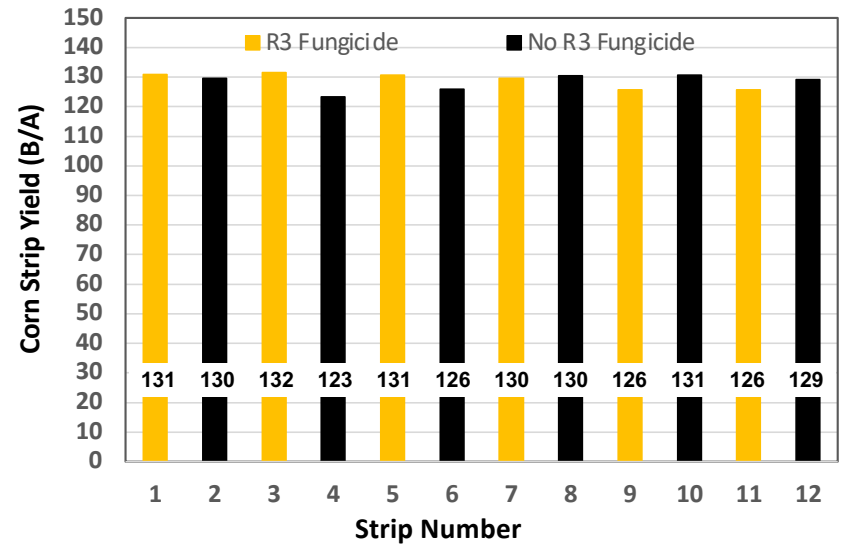
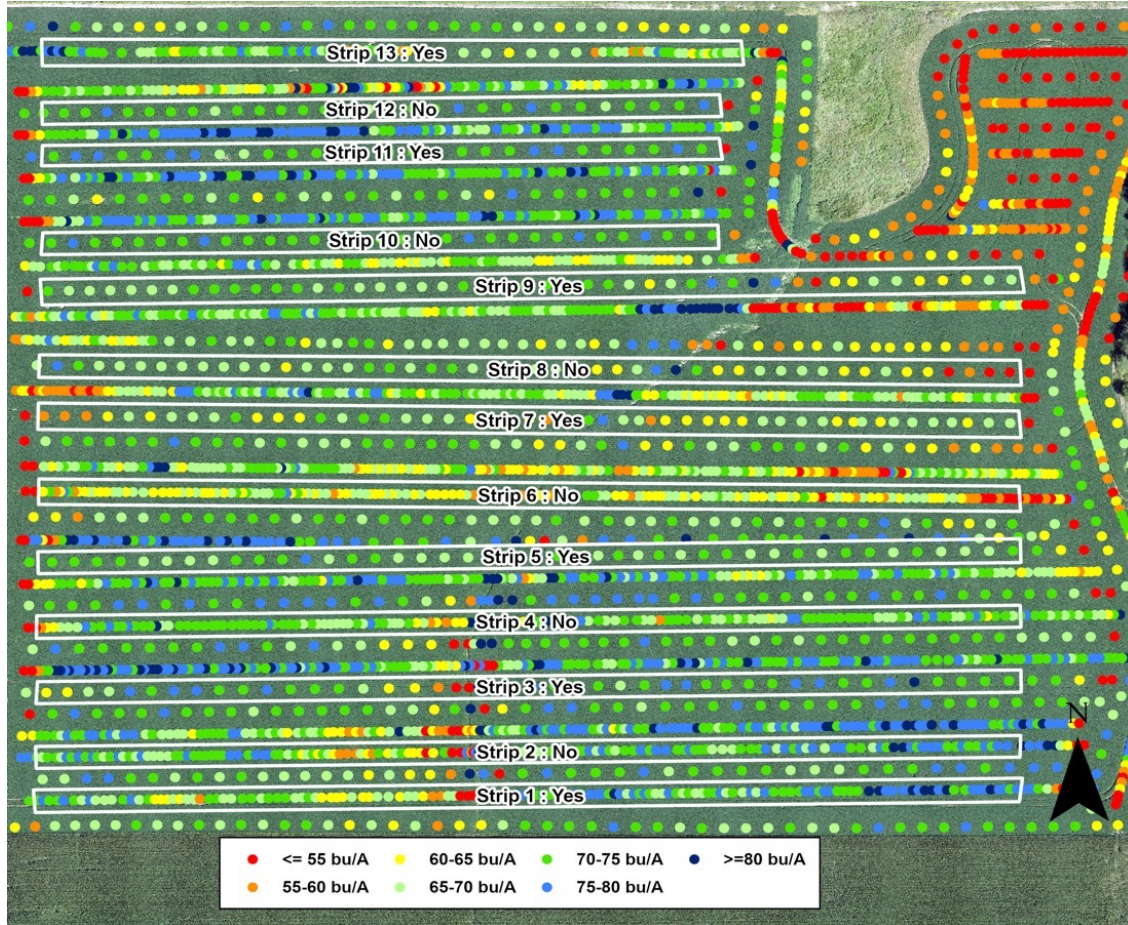
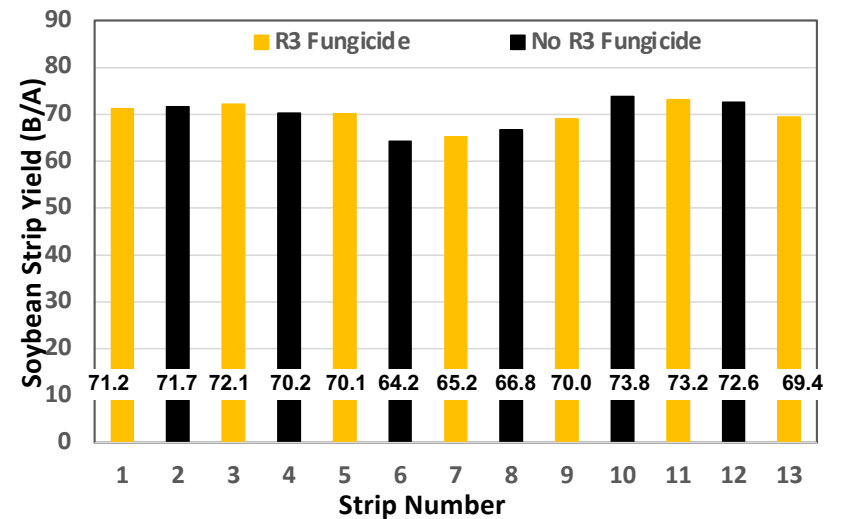


Figure 3. Corn yield map and areas used for yield determination. Field harvested November 7, 2021. Aerial image was taken at 100 meters on August 23, 2021.

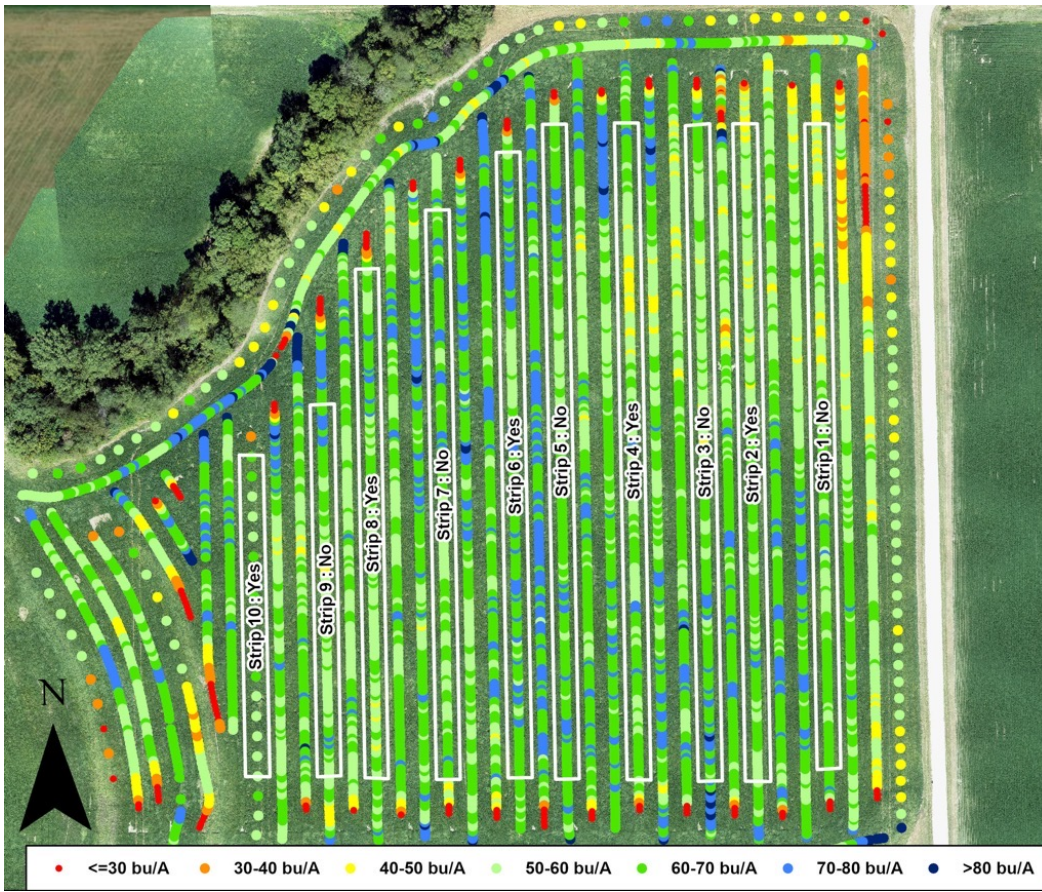
Soybean R3 Fungicide Trial Site 2213 Ralls County

There was a 20% probability that R3 fungicide increased yield by at least one B/A.

Treatments	Mean (SD)	Delta Control
	<i>bushels/acre</i>	
All strips	70.0 (3.0)	--
Control (N)	69.9 (3.7)	--
R3 Fungicide (F)	70.0 (2.6)	+0.1



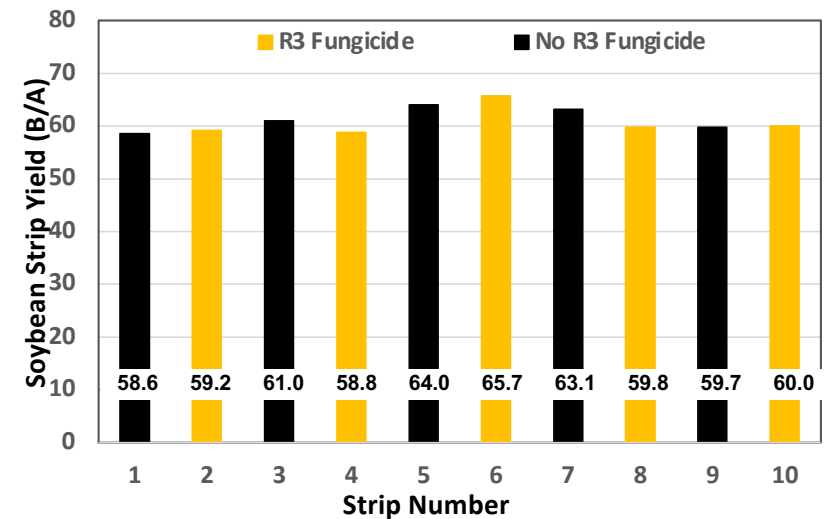
Map of soybean yield and areas used to determine strip yield. Points are 5 yield-point averages. Soybean harvested 10/20/2022; imagery taken at 100m on 8/30/2022.



Soybean R3 Fungicide Trial Site 2214 Pike County

There is a 10% probability that R3 fungicide increased yield by at least one B/A.

Treatments	Mean (SD)	Delta Control
	<i>bushels/acre</i>	
All strips	61.0 (2.5)	--
Control (N)	61.3 (2.3)	--
R3 Fungicide (F)	60.7 (2.9)	-0.6



Map of soybean yield and areas used to determine strip yield. Points are 5 yield-point averages. Soybean harvested 10/15/2022; imagery taken at 100m on 9/9/2022.