

# Soybean R3 Foliar Fungicide Trial: 2023 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.*



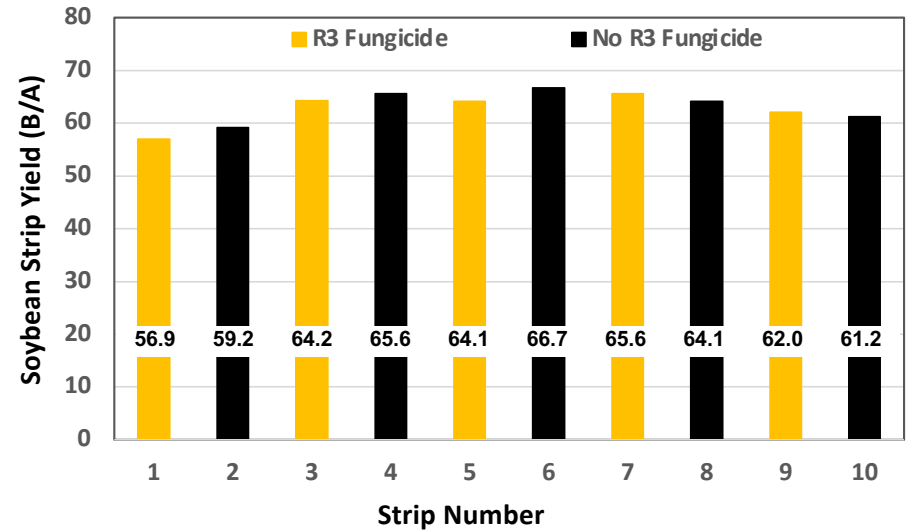


Map of soybean yield and areas used to determine strip yield. Soybean harvested 10/6/2023; imagery taken at 100m on 8/23/2023.

## Soybean R3 Fungicide Trial Site FT2301 Holt County

There is a low probability that R3 fungicide increased yield. There is less than only a 10% probability it increased yield more than 0.5 B/A.

Treatments	Mean (SD)	Delta Control
	<i>bushels/acre</i>	
All strips	63.0 (3.1)	--
Control (N)	63.4 (3.1)	--
R3 Fungicide (F)	62.6 (3.4)	-0.8



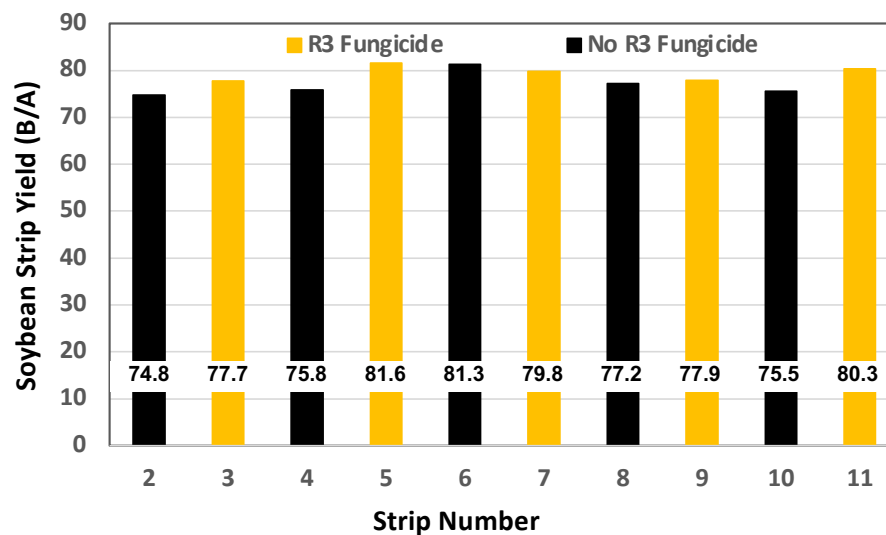


Map of soybean yield and areas used to determine strip yield. Soybean harvested 10/1/2023; imagery taken at 100m on 7/27/2023.

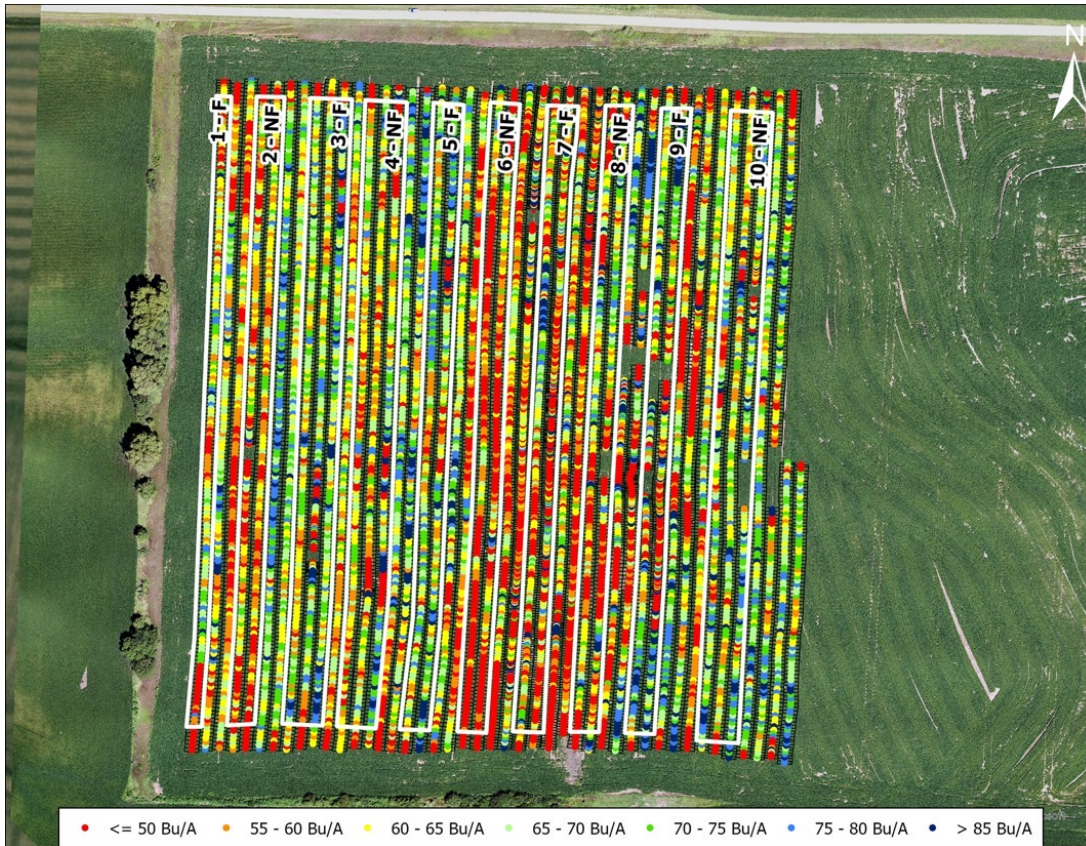
## Soybean R3 Fungicide Trial Site FT2302 Buchanan County

There is greater than 90% probability that R3 fungicide increased yield and an 50% probability it increased yield more than 2 B/A.

Treatments	Mean (SD)	Delta Control
	<i>bushels/acre</i>	
All strips	78.2 (2.3)	--
Control (N)	76.9 (2.6)	--
R3 Fungicide (F)	79.5 (1.6)	+2.6





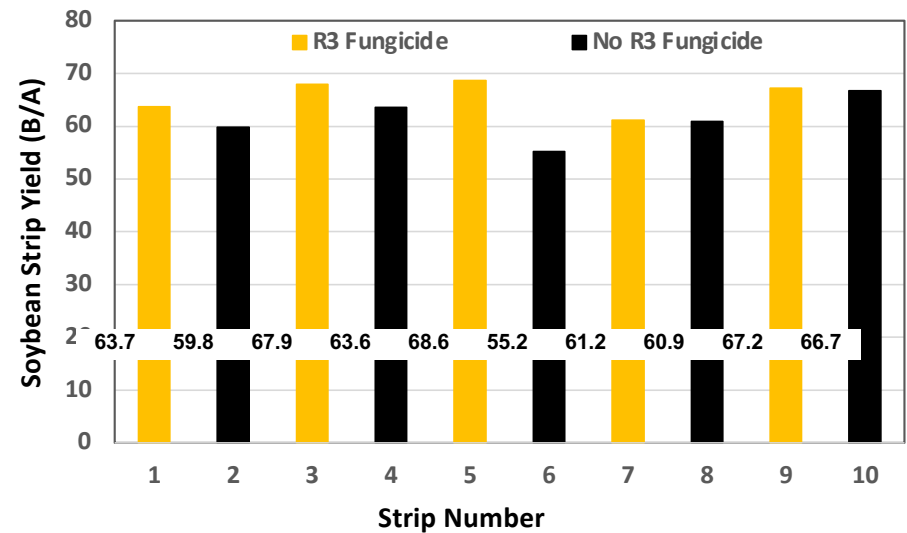


Map of soybean yield and areas used to determine strip yield. Soybean harvested 10/22/2023; imagery taken at 100m on 8/10/2023.

## Soybean R3 Fungicide Trial Site FT2303 Andrew County

There is a high probability that R3 fungicide application increased yield. There is an 85% probability it increased yield 1 B/A and a 50% probability it increased yield more than 4.5 B/A.

Treatments	Mean (SD)	Delta Control
	<i>bushels/acre</i>	
All strips	63.5 (4.3)	--
Control (N)	61.2 (4.3)	--
R3 Fungicide (F)	65.7 (3.2)	+4.5



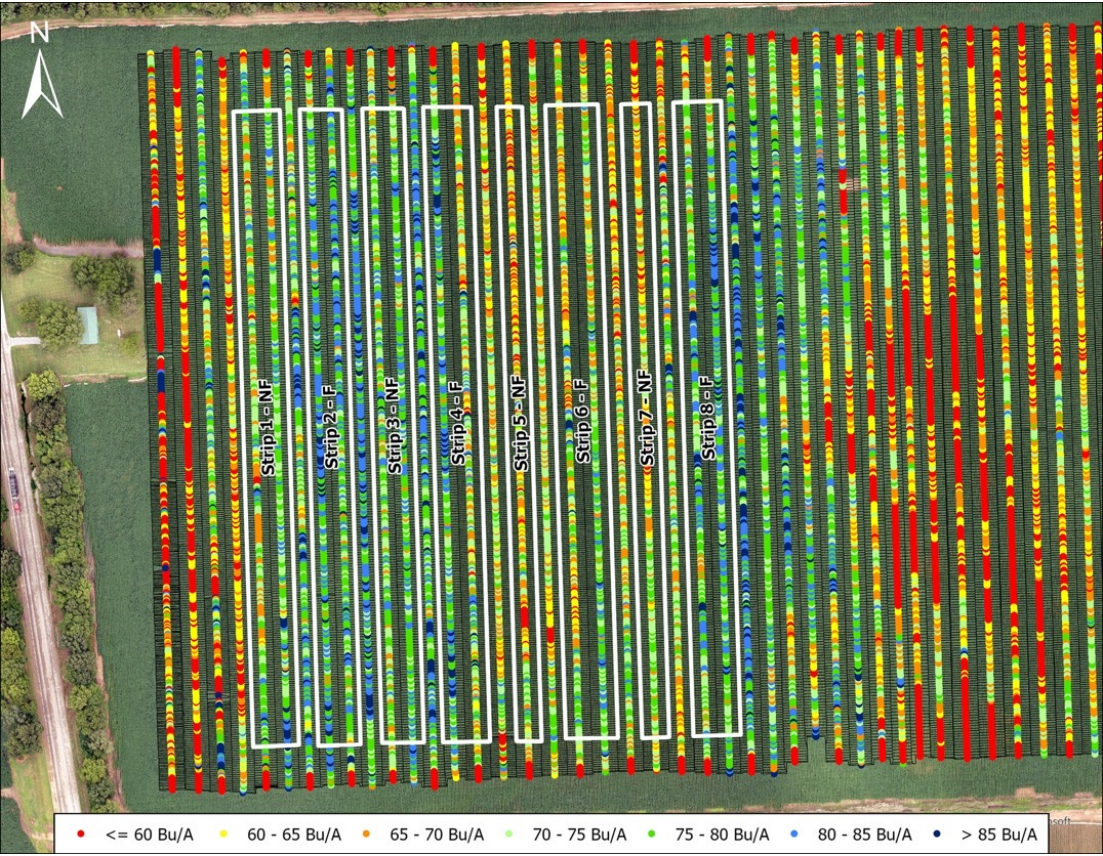


# Soybean R3 Fungicide Trial

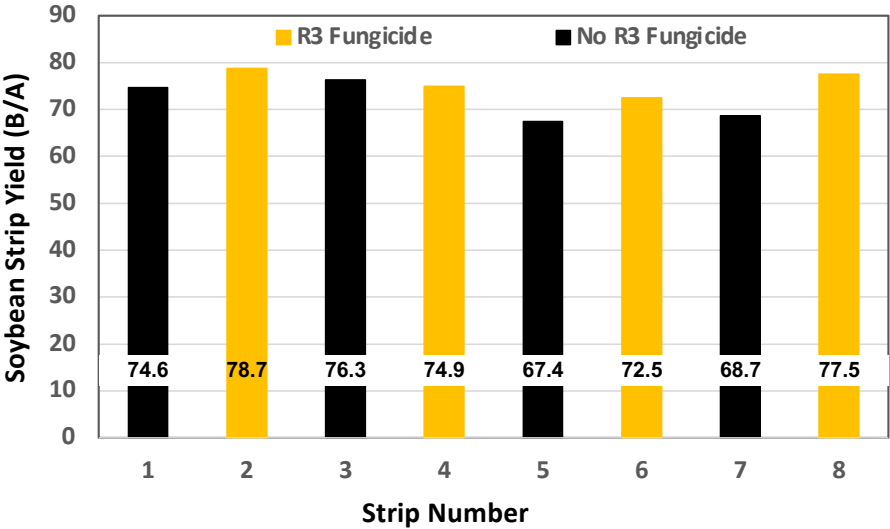
Site FT2304

New Madrid County

There is a high probability that R3 fungicide application increased yield.  
 There is a 90% probability it increased yield at least 1.5 B/A and 50% probability it increased yield more than 4.5 B/A.



Treatments	Mean (SD)	Delta Control
	<i>bushels/acre</i>	
All strips	73.8 (4.0)	--
Control (N)	71.7 (4.4)	--
R3 Fungicide (F)	75.9 (2.8)	+4.2



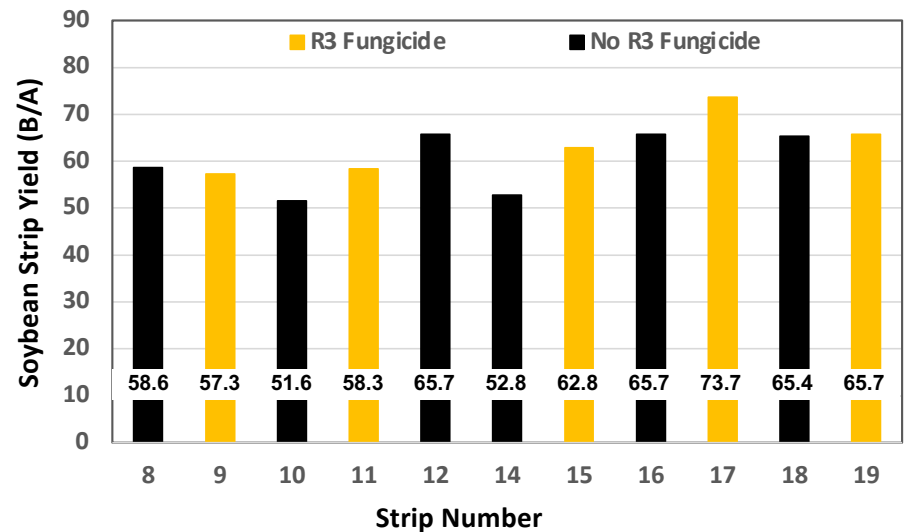


Map of soybean yield and areas used to determine strip yield. Soybean harvested 10/18/2023; imagery taken at 100m on 7/19/2023.

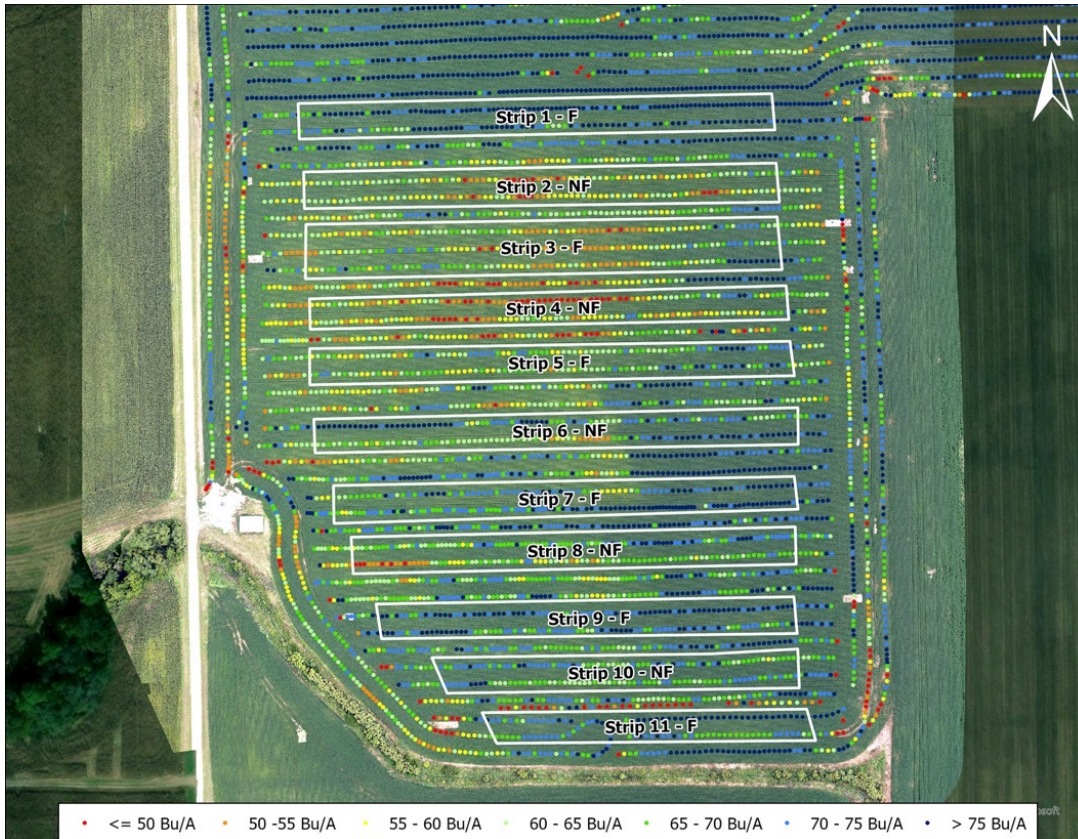
## Soybean R3 Fungicide Trial Site FT2305 Cape Girardeau County

There is greater than 70% probability that R3 fungicide increased yield and an 50% probability it increased yield more than 2 B/A.

Treatments	Mean (SD)	Delta Control
	<i>bushels/acre</i>	
All strips	61.6 (6.5)	--
Control (N)	60.0 (6.6)	--
R3 Fungicide (F)	63.6 (4.2)	+3.6



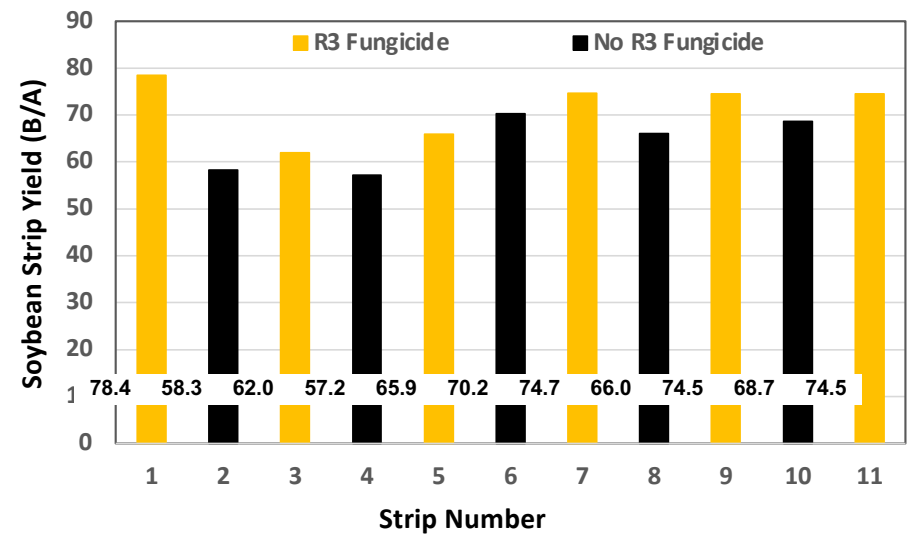


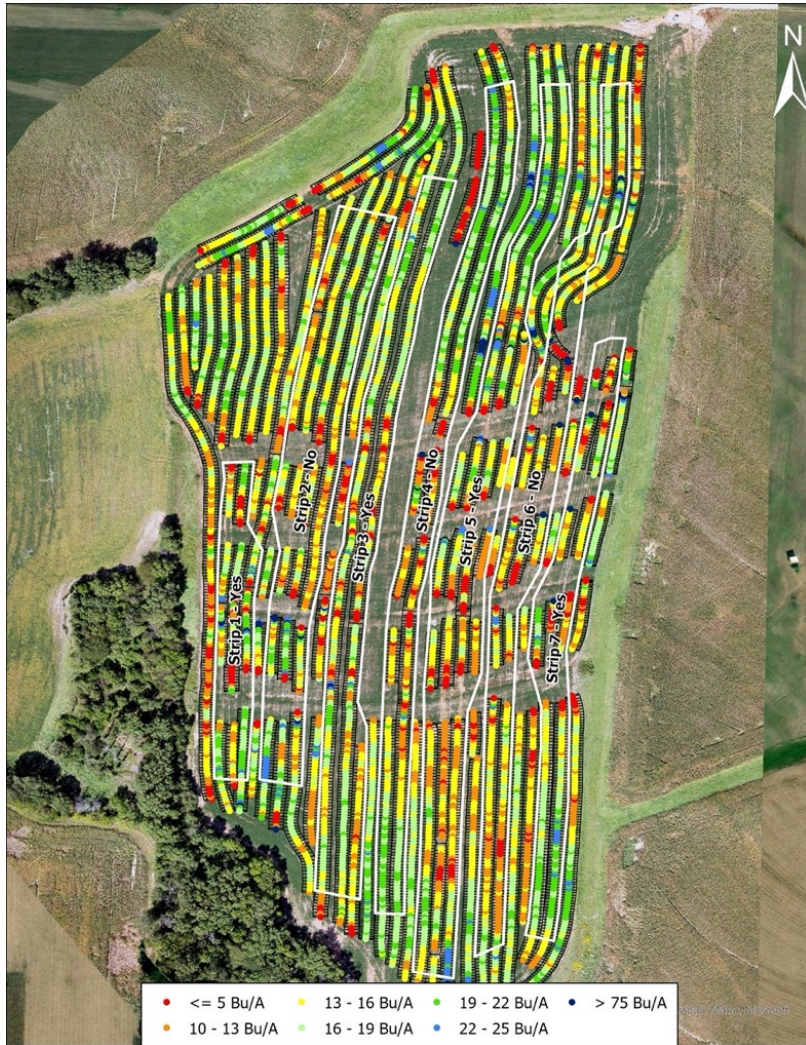


## Soybean R3 Fungicide Trial Site FT2306 Pike County

There is greater than 90% probability that R3 fungicide increased yield and an 50% probability it increased yield more than 6 B/A.

Treatments	Mean (SD)	Delta Control
	<i>bushels/acre</i>	
All strips	68.2 (7.0)	--
Control (N)	64.1 (6.0)	--
R3 Fungicide (F)	71.7 (6.3)	+7.6



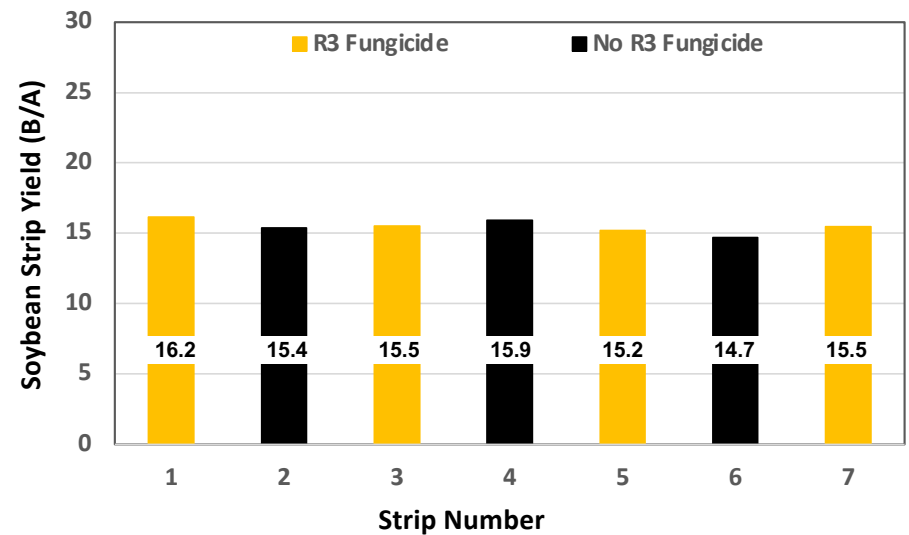


Map of soybean yield and areas used to determine strip yield. Soybean harvested 11/8/2023; imagery taken at 100m on 9/15/2023.

## Soybean R3 Fungicide Trial Site 2307      Audrain County

There was little evidence that R3 fungicide increased yield. There was a 10% probability that R3 fungicide increased yield more than 0.5 B/A.

Treatments	Mean (SD)	Delta Control
	<i>bushels/acre</i>	
All strips	15.5 (0.5)	--
Control (N)	15.4 (0.6)	--
R3 Fungicide (F)	15.6 (0.4)	+0.2



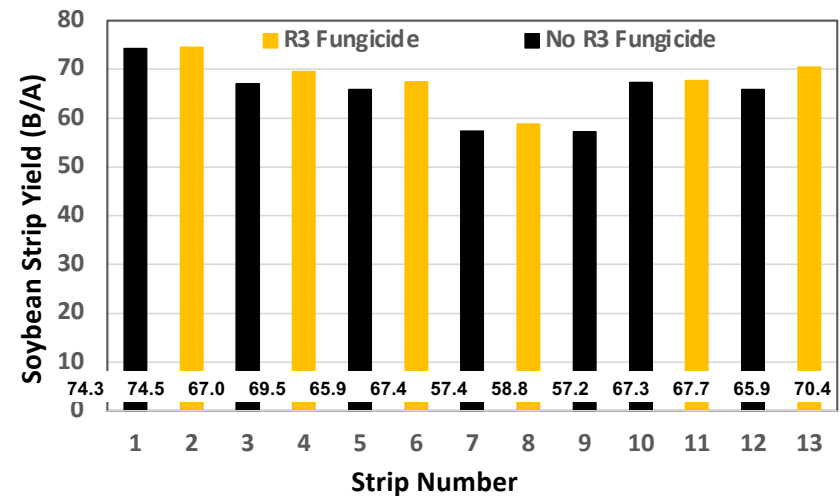




## Soybean R3 Fungicide Trial Site FT2309 Lincoln County

There is greater than 90% probability that R3 fungicide increased yield and an 50% probability it increased yield more than 3 B/A.

Treatments	Mean (SD)	Delta Control
	<i>bushels/acre</i>	
All strips	66.4 (5.7)	--
Control (N)	65.0 (6.0)	--
R3 Fungicide (F)	68.1 (5.2)	+3.1



# Soybean R3 Fungicide Trial

Site 2308E

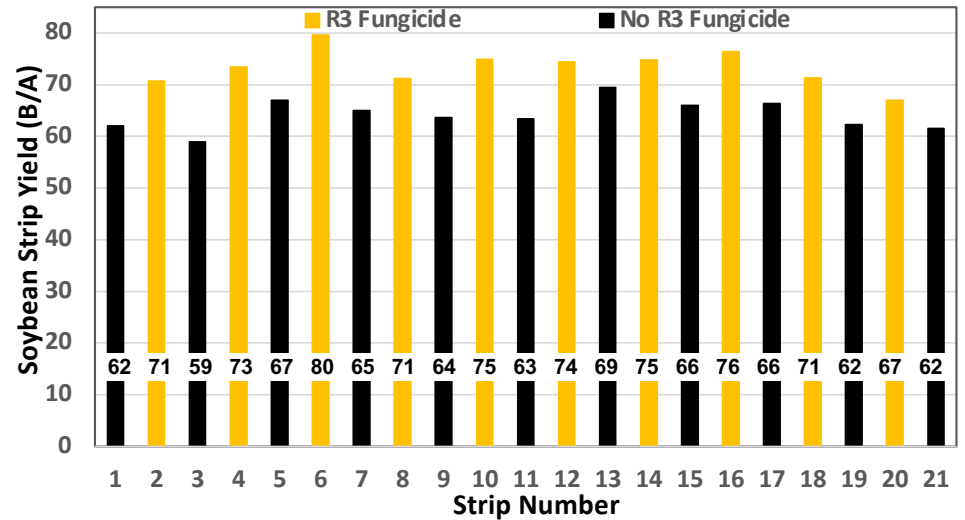
Callaway County

There was strong evidence that R3 fungicide increased yield. There was a 90% probability that R3 fungicide increased yield more than 5 B/A.



Map of soybean yield and areas used to determine strip yield. Soybean harvested 10/8/2023; baseline imagery from ESRI.

Treatments	Mean (SD)	Delta Control
	<i>bushels/acre</i>	
All strips	68.6 (5.7)	--
Control (N)	64.2 (3.0)	--
R3 Fungicide (F)	73.4 (3.5)	+9.2

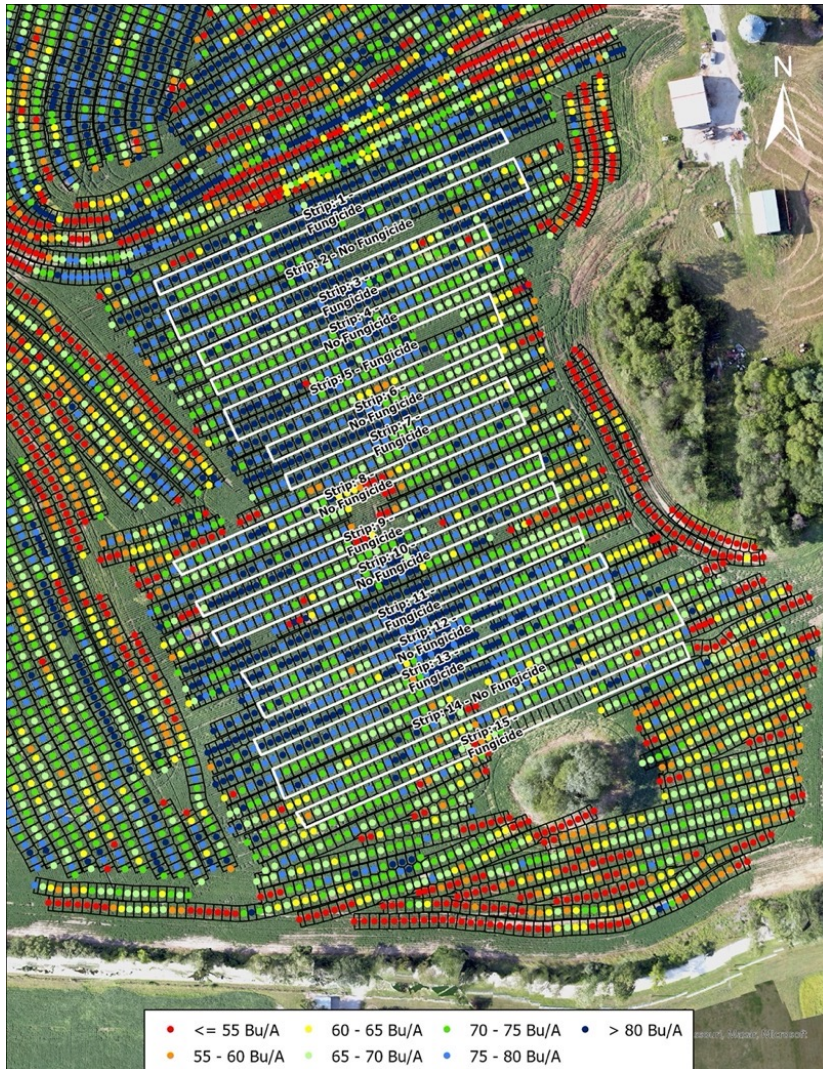




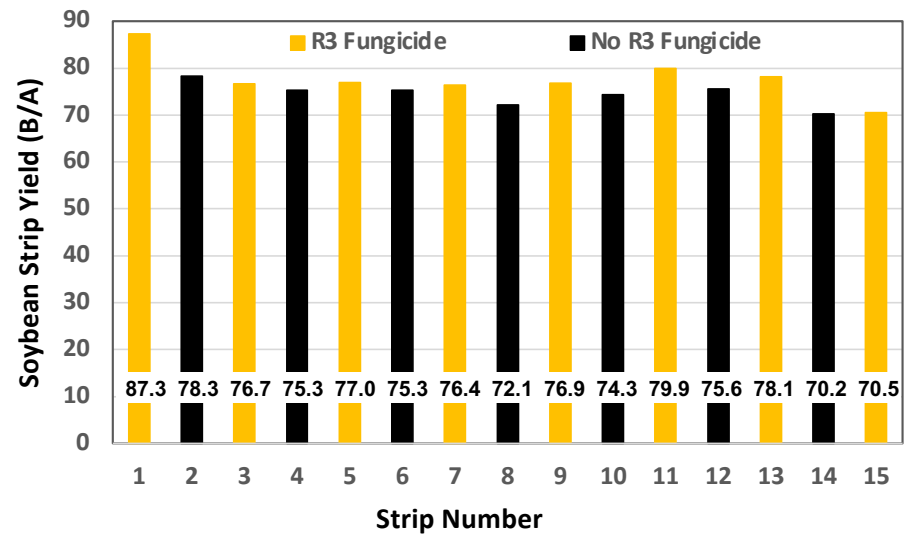
## Soybean R3 Fungicide Trial Site FT2310 Lincoln County

There is greater than 95% probability that R3 fungicide increased yield and an 50% probability it increased yield more than 3 B/A.

Treatments	Mean (SD)	Delta Control
	<i>bushels/acre</i>	
All strips	76.3 (4.1)	--
Control (N)	74.5 (2.6)	--
R3 Fungicide (F)	77.8 (4.7)	+3.3



Map of soybean yield and areas used to determine strip yield. Soybean harvested 9/28-30/2023; imagery taken at 100m on 7/26/2023.





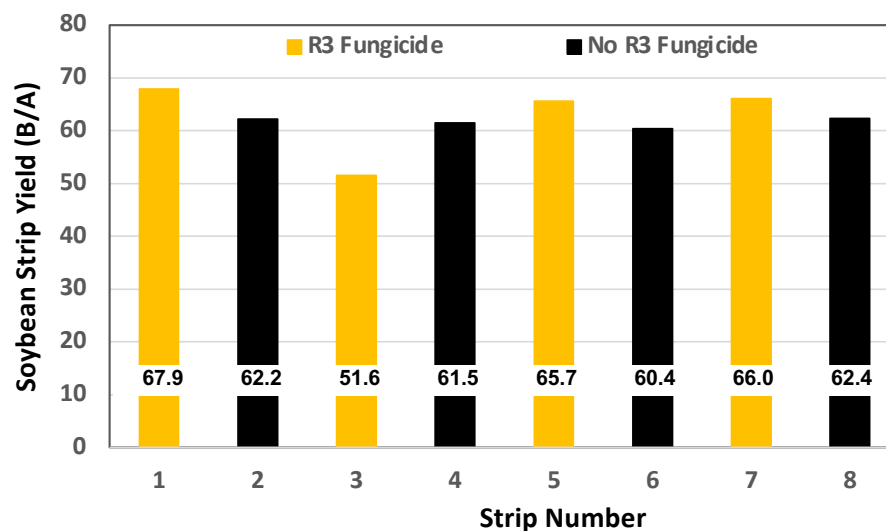


Map of soybean yield and areas used to determine strip yield. Soybean harvested 10/8/2023.

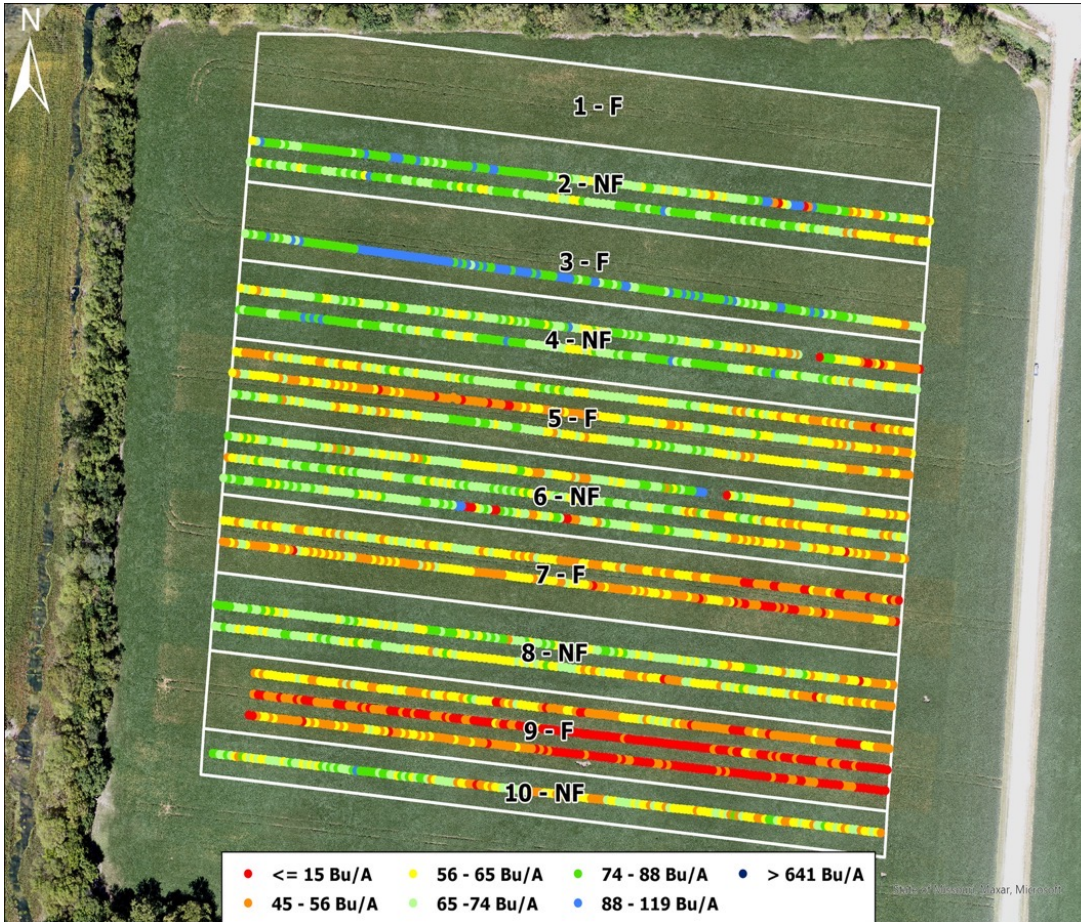
## Soybean R3 Fungicide Trial Site FT2311 Montgomery County

There is a 50% probability R3 Fungicide increased yield more than 1 B/A. Analysis uses all strips.

Treatments	Mean (SD)	Delta Control
	<i>bushels/acre</i>	
All strips	62.2 (5.0)	--
Control (N)	61.6 (0.9)	--
R3 Fungicide (F)	62.8 (7.6)	+1.2







Map of soybean yield and areas used to determine strip yield. Soybean harvested 10/23/2023.

## Soybean R3 Fungicide Trial Site FT2313 Cass County

There is over a 70% probability R3 Fungicide reduced yield. Analysis uses all strips we deemed in the treatment areas adjusted for swath width.

Treatments	Mean (SD)	Delta Control
	<i>bushels/acre</i>	
All strips	67.0 (10.6)	--
Control (N)	68.2 (3.8)	--
R3 Fungicide (F)	65.9 (15.3)	-2.3

