

# Soybean R3 Foliar Fungicide Trial: 2021 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.

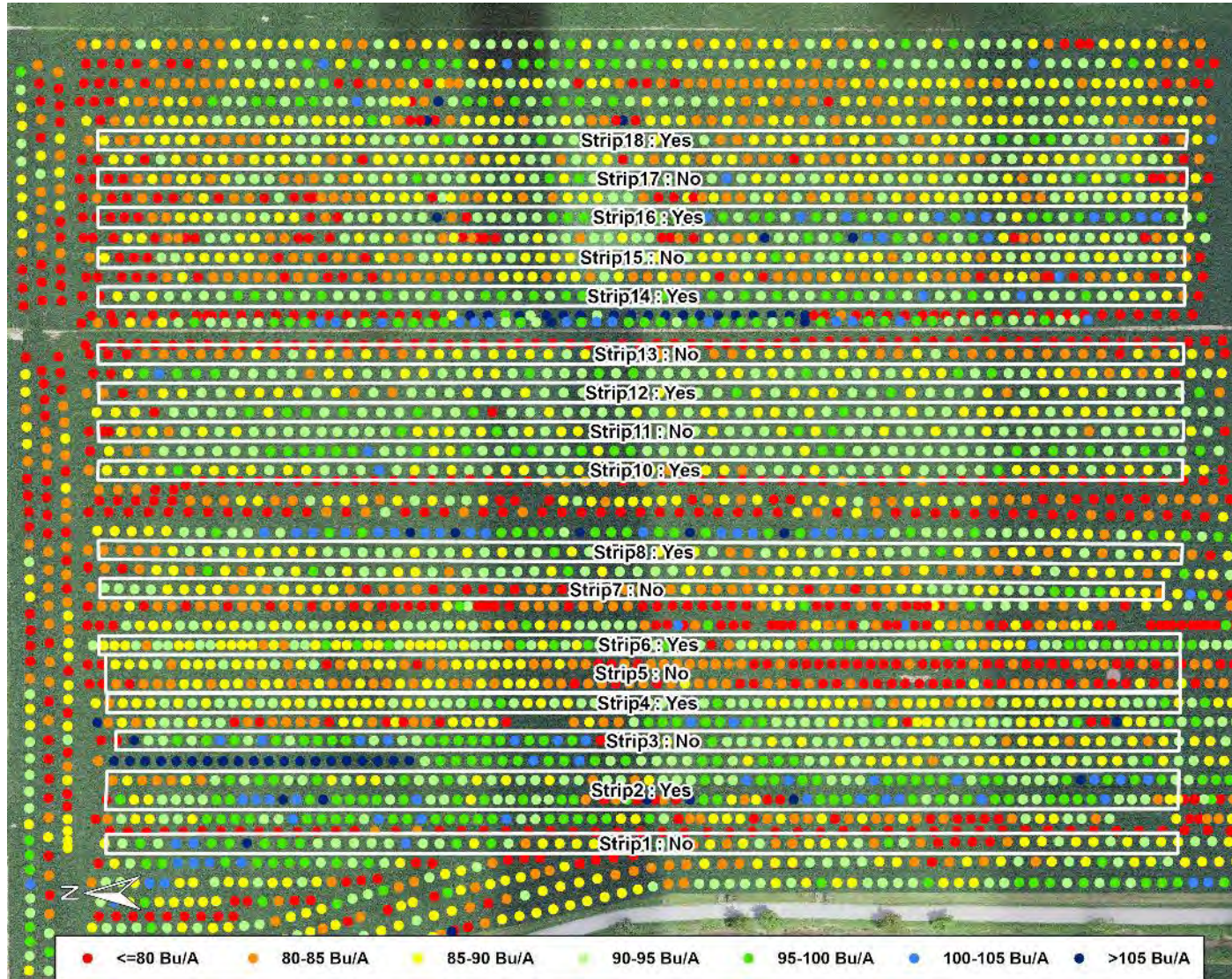
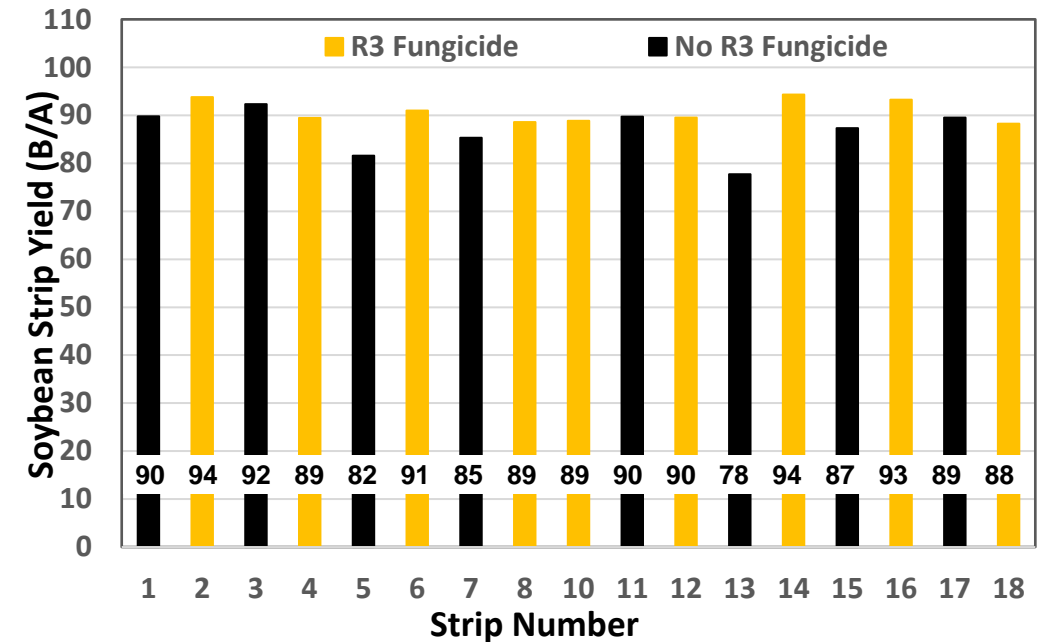
*This on-farm research was supported by the Missouri Soybean Merchandizing Council (award No. 18-415) and University of Missouri Extension.*

*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 R3 Fungicide Trial Site 2101 Cape Girardeau County

There is >95% probability that R3 fungicide increased yield.

Treatments	Mean (SD)	Delta Control
	<i>bushels/acre</i>	
All strips	88.8 (4.0)	--
Control (N)	87.0 (4.7)	--
R3 Fungicide (F)	90.8 (2.4)	3.8

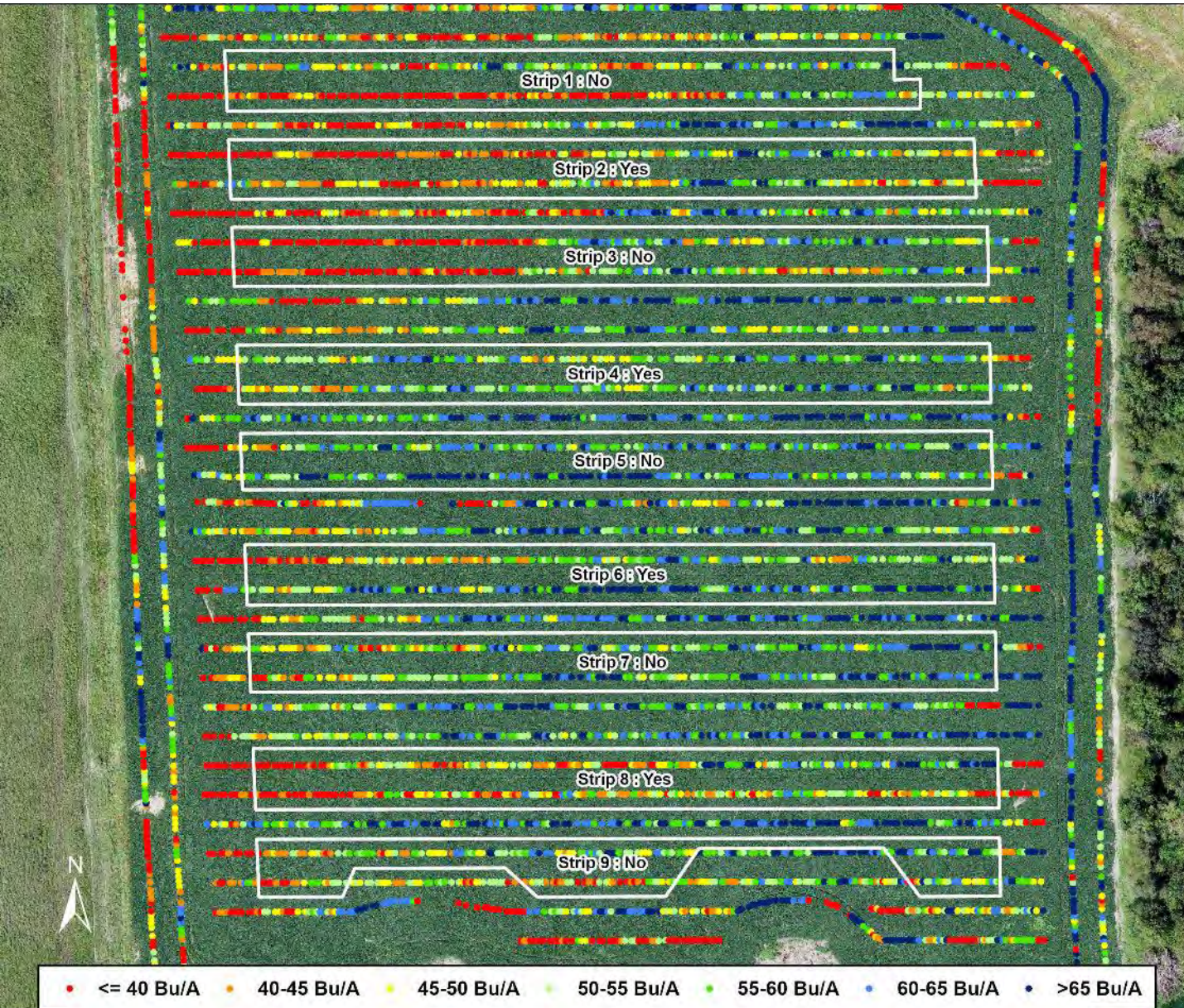
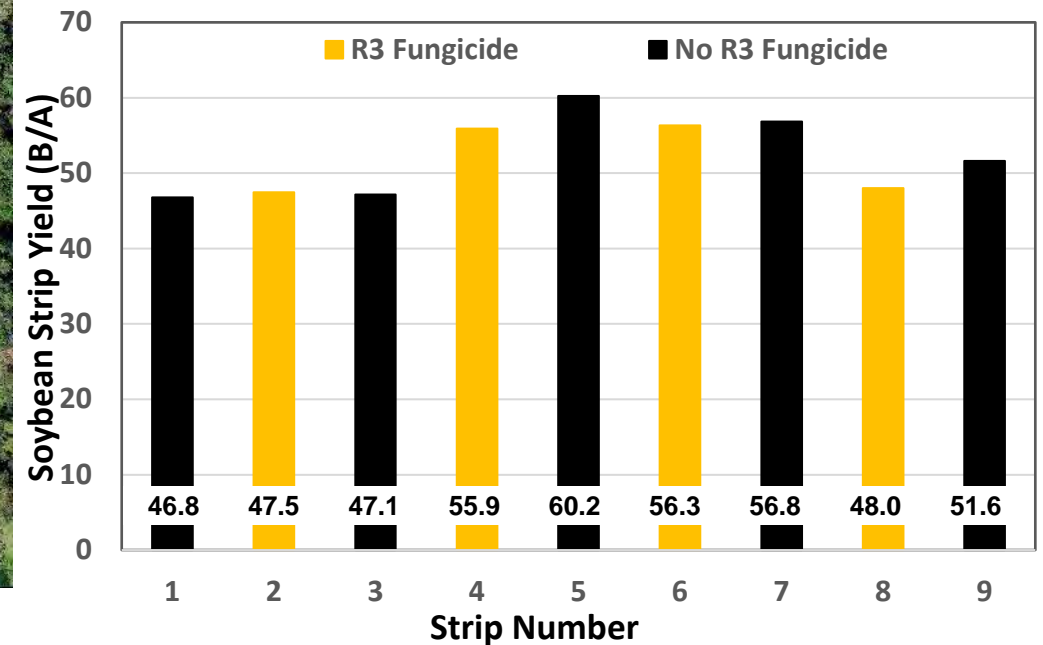


Map of soybean yield and areas used to determine strip yield. Points are 5 yield-point averages. Soybean harvested 10/13/2021; imagery taken at 100m on 8/3/2021.

# Soybean R3 Fungicide Trial Site 2102 Dade County

R3 fungicide did not increase yield.

Treatments	Mean (SD)	Delta Control
	<i>bushels/acre</i>	
All strips	52.3 (5.1)	--
Control (N)	52.5 (5.9)	--
R3 Fungicide (F)	51.9 (4.8)	-0.6

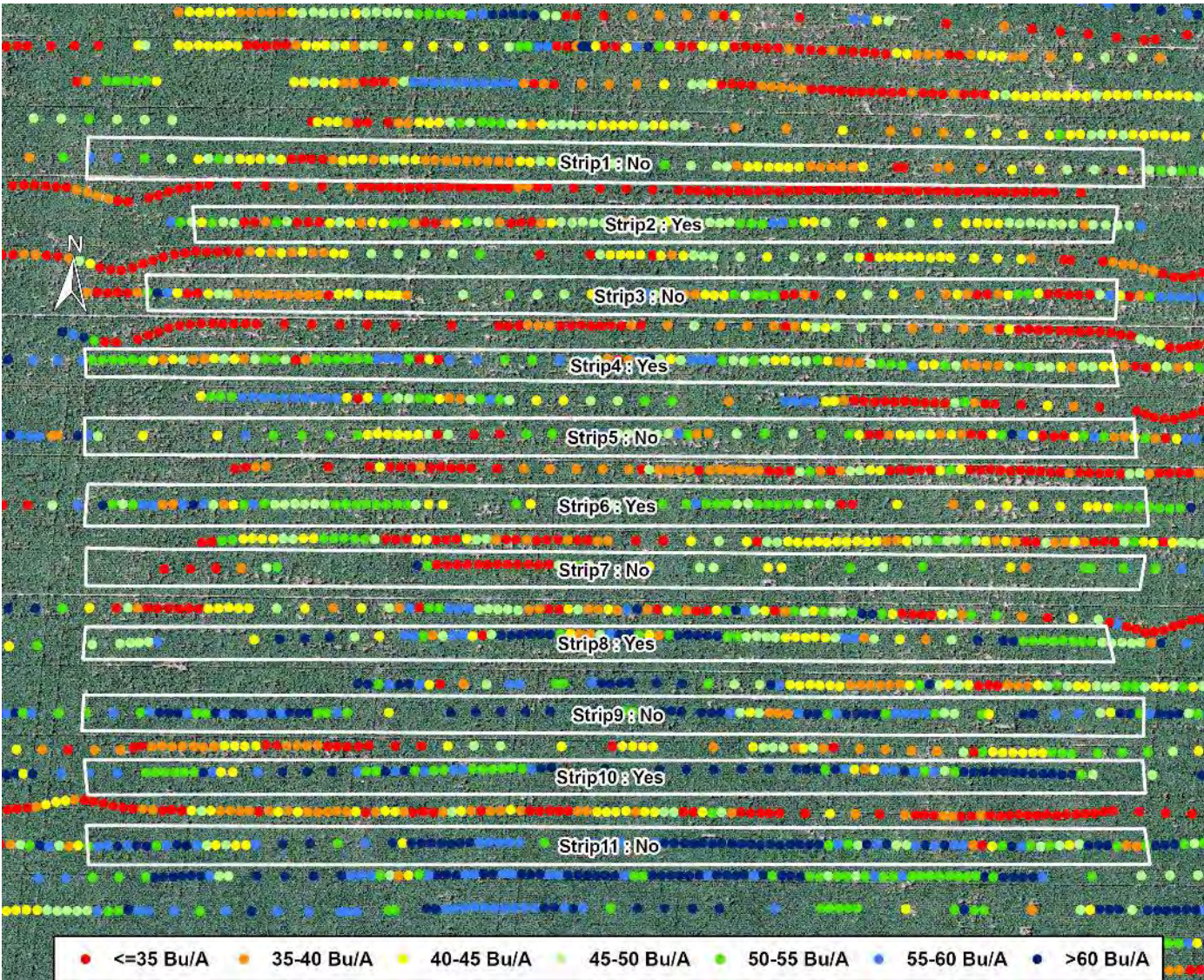
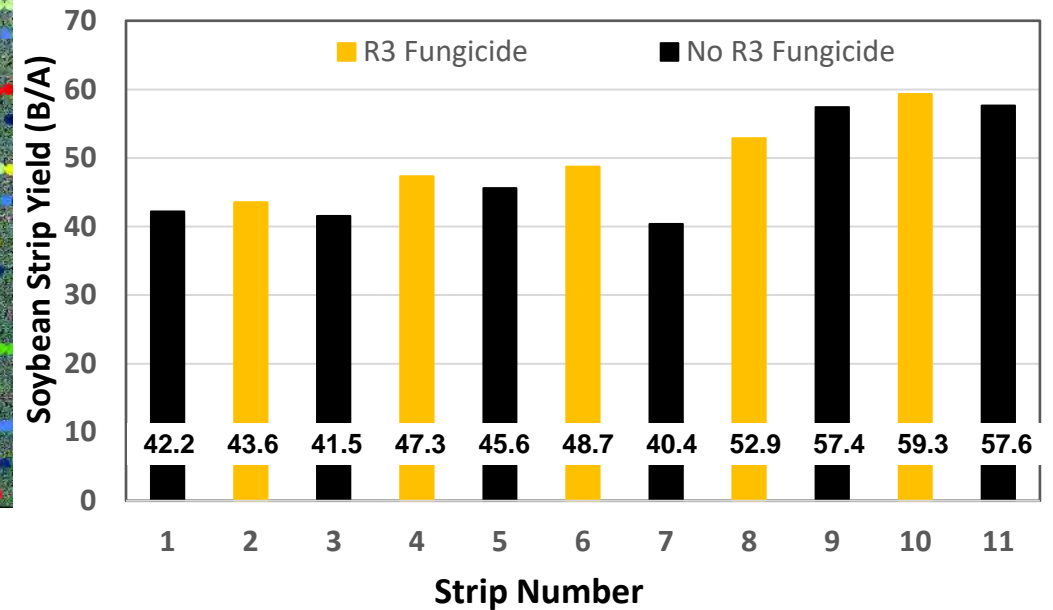


Map of soybean yield and areas used to determine strip yield. Points are 5 yield-point averages. Soybean harvested 10/20-21/2021; imagery taken at 100m on 9/10/2021.

# Soybean R3 Fungicide Trial Site 2103      Audrain County

Summary of yield data. When we removed strip 7 there was an 85% chance R3 fungicide increased yield. Yield monitor issues may have impacted these results.

Treatments	Mean (SD)	Delta Control
	<i>bushels/acre</i>	
All strips	49.6 (7)	--
Control (N)	48.9 (8.0)	--
R3 Fungicide (F)	50.4 (6.0)	1.5

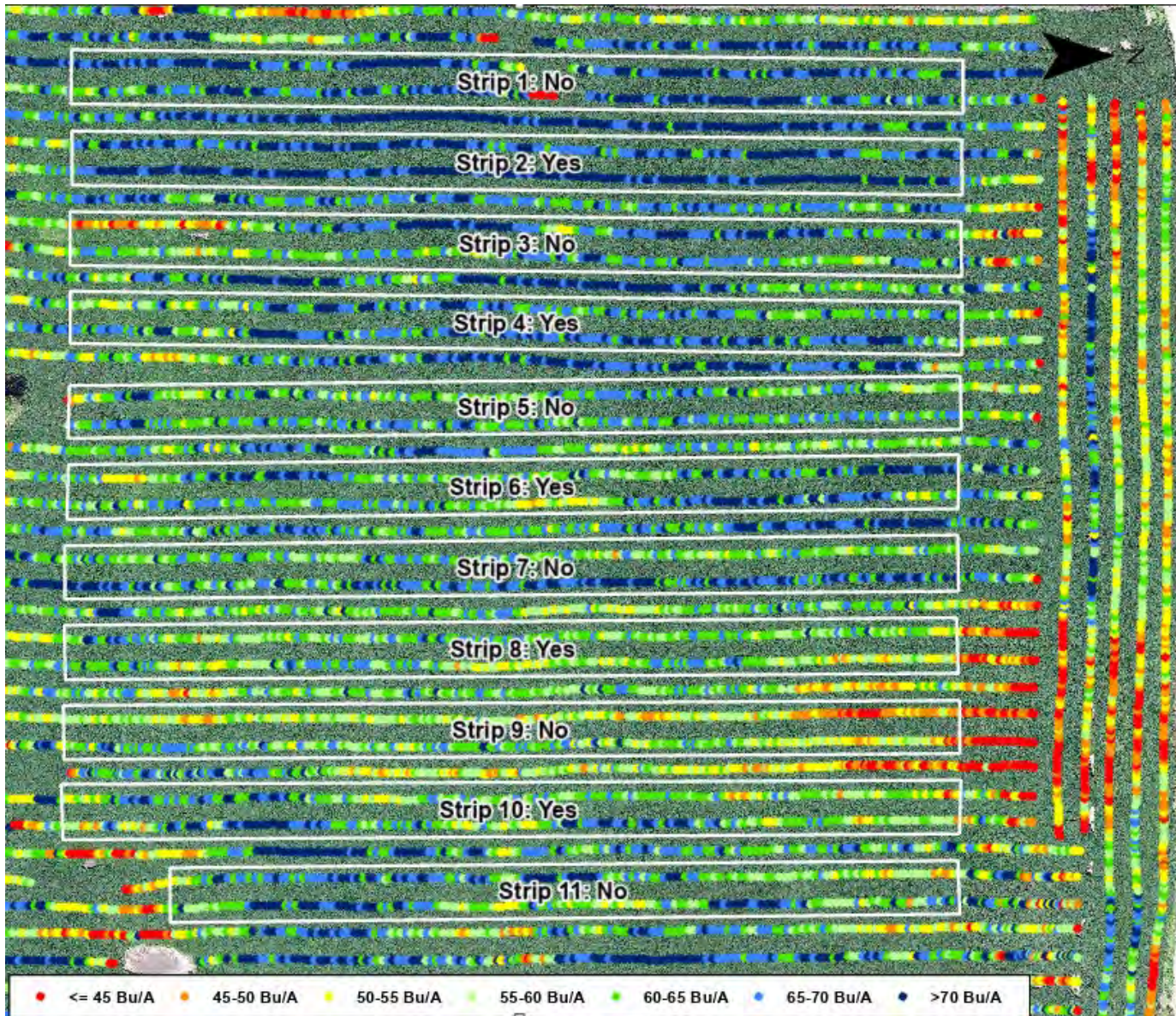
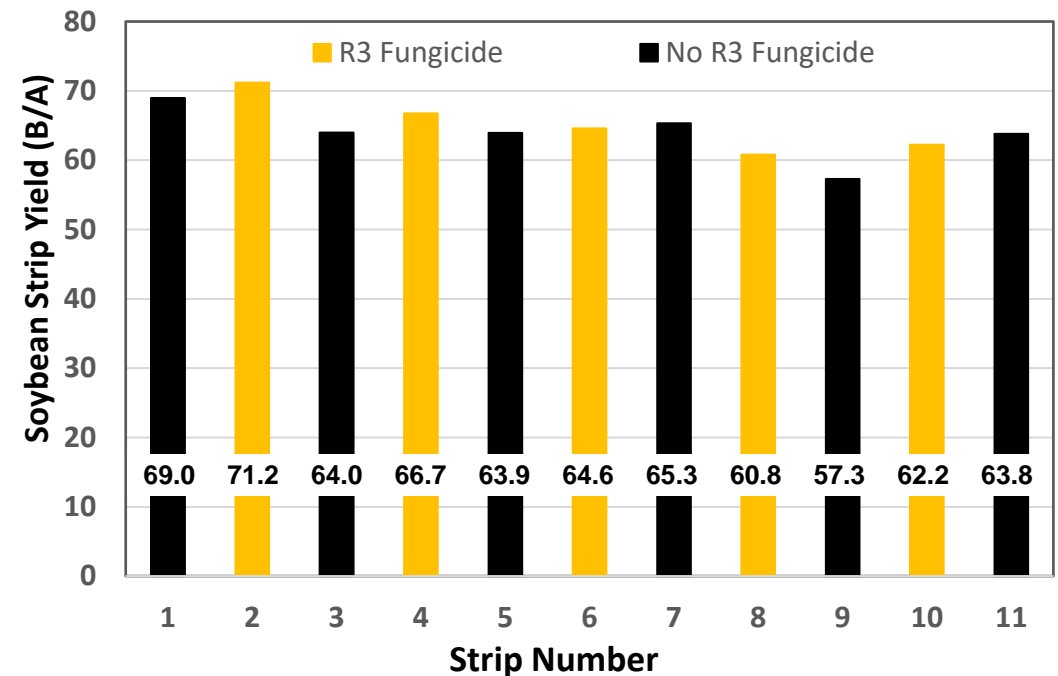


Map of soybean yield and areas used to determine strip yield. Points are 5 yield-point averages. Soybean harvested 11/20/2021; imagery taken at 100m on 9/9/2021.

# Soybean R3 Fungicide Trial Site 2104 Holt County

Summary of yield data. There is evidence that R3 fungicide increased yield at this location.

Treatments	Mean (SD)	Delta Control
	<i>bushels/acre</i>	
All strips	64.4 (3.8)	--
Control (N)	63.9 (3.9)	--
R3 Fungicide (F)	65.1 (4.1)	1.2



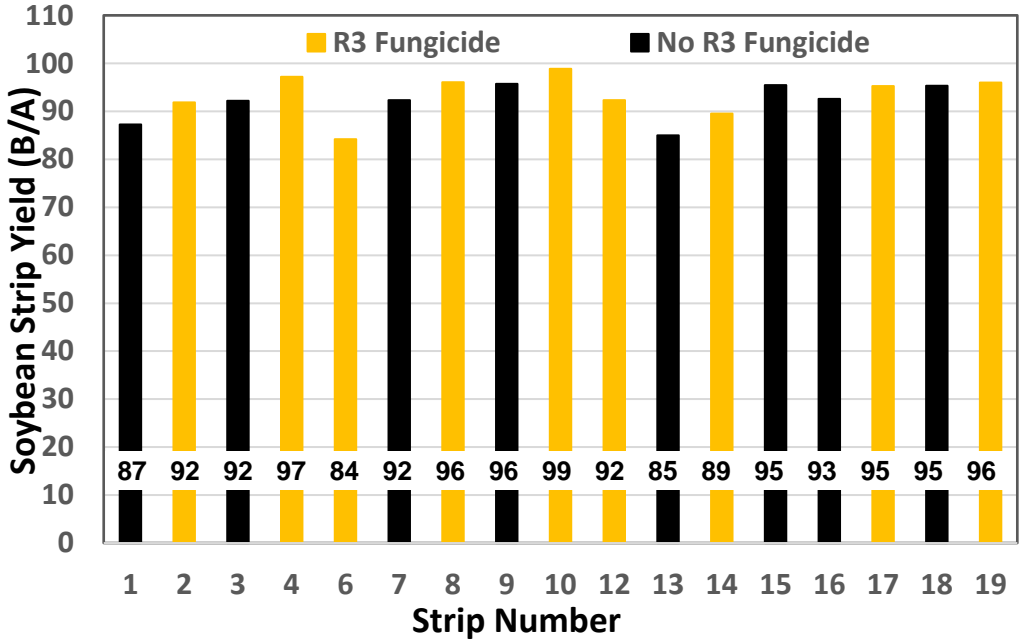
Map of soybean yield and areas used to determine strip yield. Points are 5 yield-point averages. Soybean harvested 10/05/2021; imagery taken at 100m on 8/17/2021.



# Soybean R3 Fungicide Trial Site 2105H Stoddard County

There is >75% probability that R3 fungicide increased yield.

Treatments	Mean (SD)	Delta Control
	<i>bushels/acre</i>	
All strips	92.8 (4.2)	--
Control (N)	92.0 (4.0)	--
R3 Fungicide (F)	93.5 (4.6)	1.5



Map of soybean yield and areas used to determine strip yield. Points are 5 yield-point averages. Soybean harvested 9/26/2021; imagery taken at 100m on 8/4/2021. 2105H and 2105L differ in variety used.



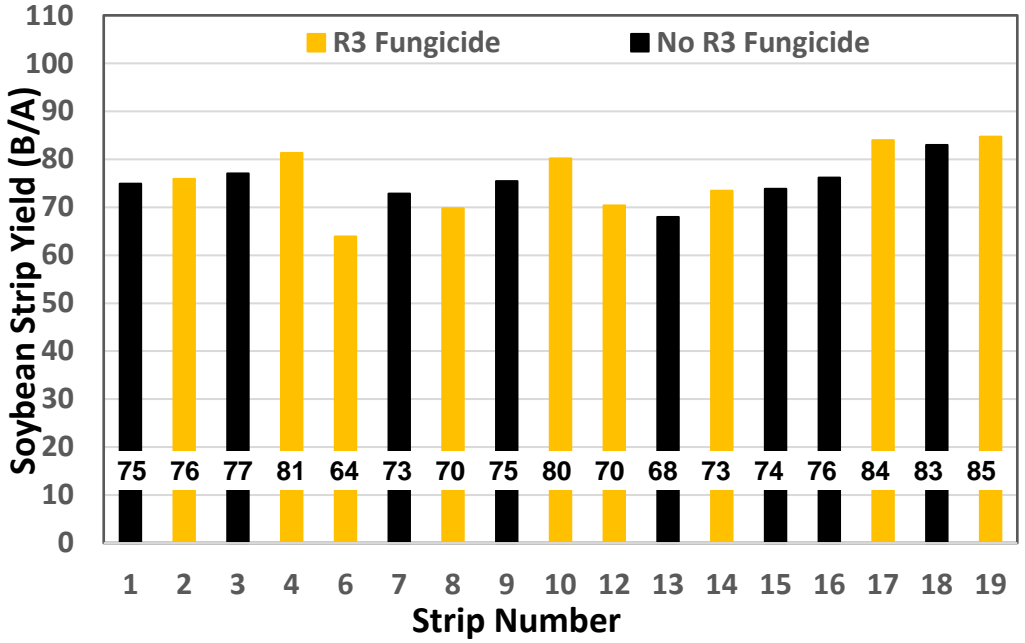
Low yield area

# Soybean R3 Fungicide Trial

## Site 2105L Stoddard County

There is >70% probability that R3 fungicide increased yield.

Treatments	Mean (SD)	Delta Control
	<i>bushels/acre</i>	
All strips	75.6 (5.8)	--
Control (N)	75.2 (4.2)	--
R3 Fungicide (F)	76.0 (7.1)	0.8



Map of soybean yield and areas used to determine strip yield. Points are 5 yield-point averages. Soybean harvested 9/26/2021; imagery taken at 100m on 8/4/2021. 2105H and 2105L differ in variety used.

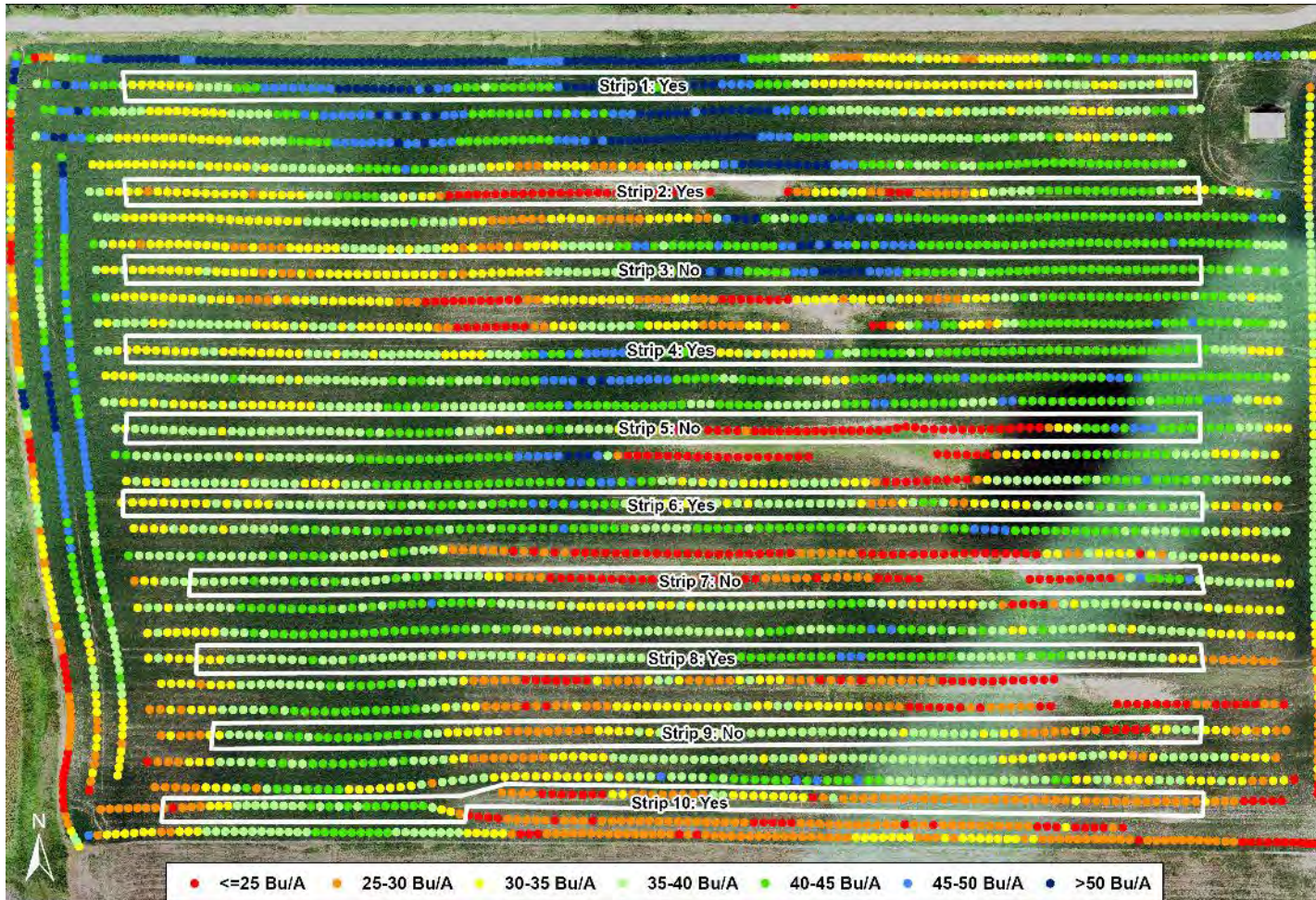
All strips, delete yields <30 B/A

# Soybean R3 Fungicide Trial Site

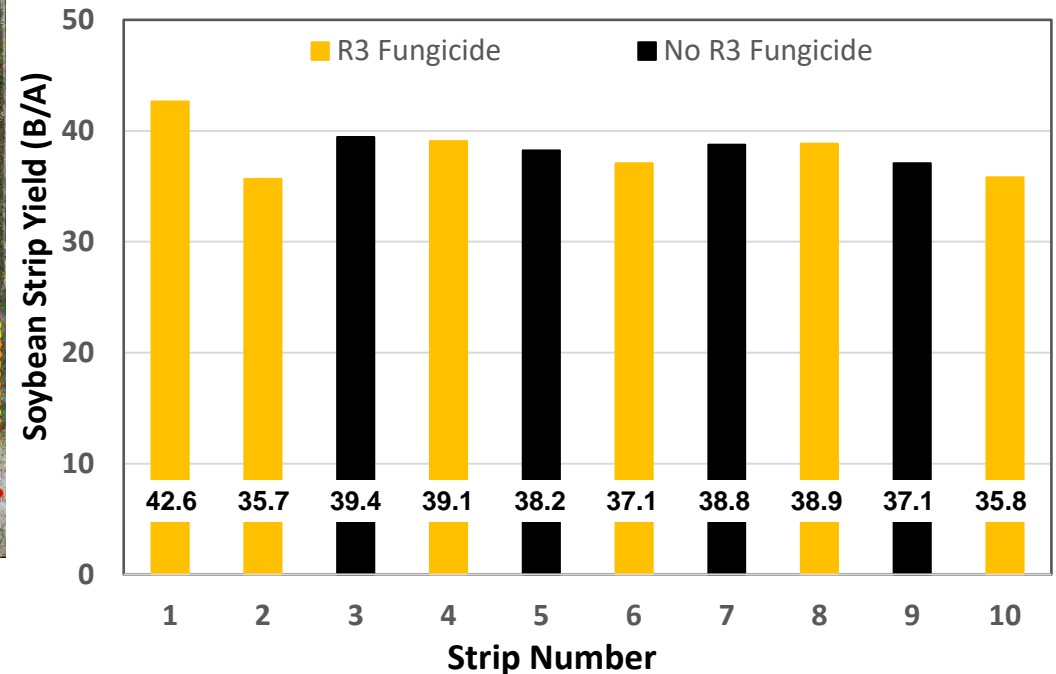
## 2106 Montgomery County

Summary of yield data. No statistical difference. High amount of variability made assessing treatment differences difficult.

Treatments	Mean (SD)	Delta Control
	<i>bushels/acre</i>	
All strips	38.3 (2.0)	--
Control (N)	38.4 (1.0)	--
R3 Fungicide (F)	38.2 (2.6)	-0.2



Map of soybean yield and areas used to determine strip yield. Points are 5 yield-point averages. Soybean harvested 9/26/2021; imagery taken at 100m on 8/26/2021.

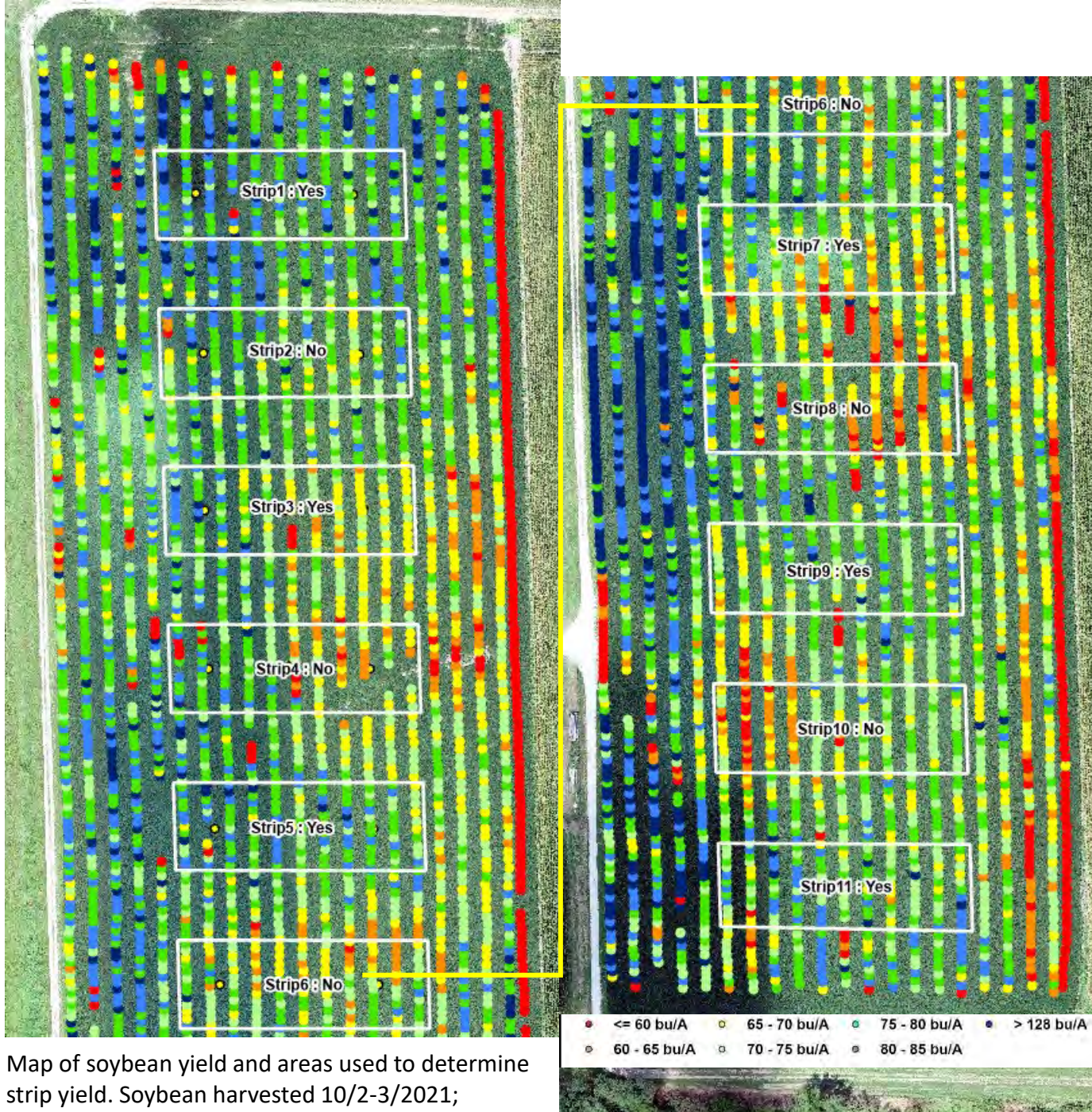
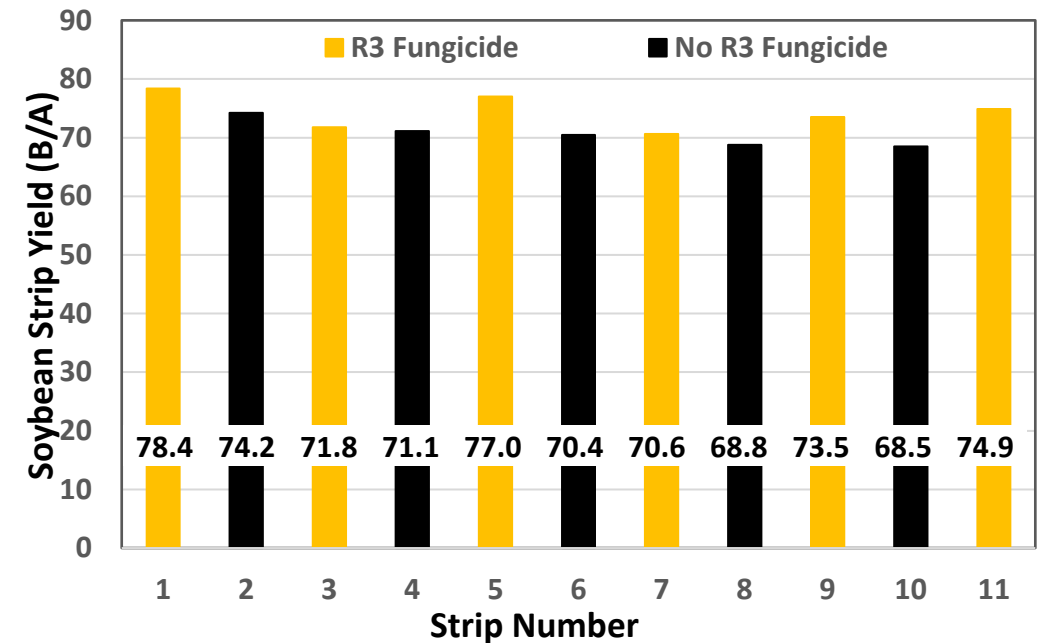




# Soybean R3 Fungicide Trial Site 2107 Buchanan County

There is >95% probability that R3 fungicide increased yield.

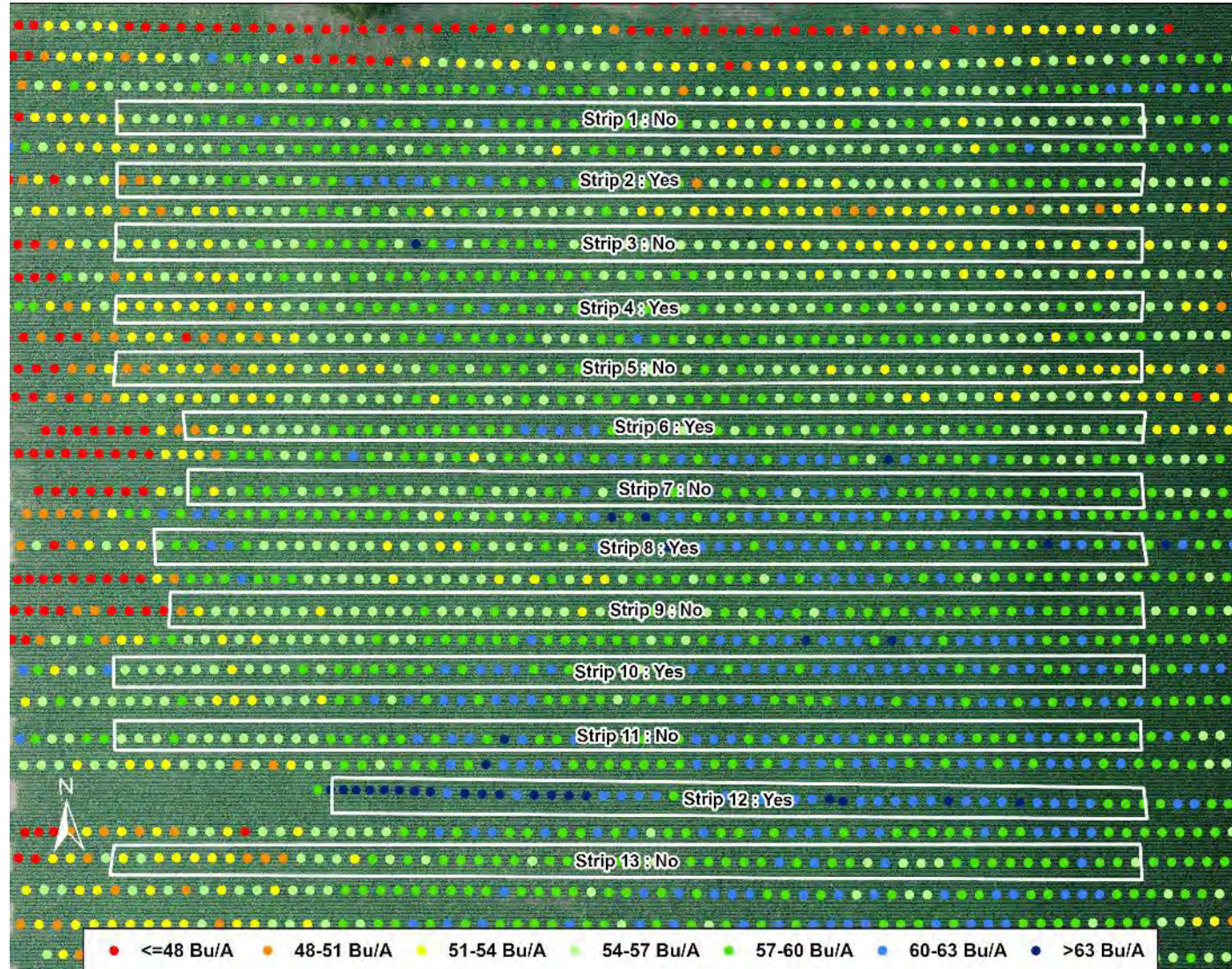
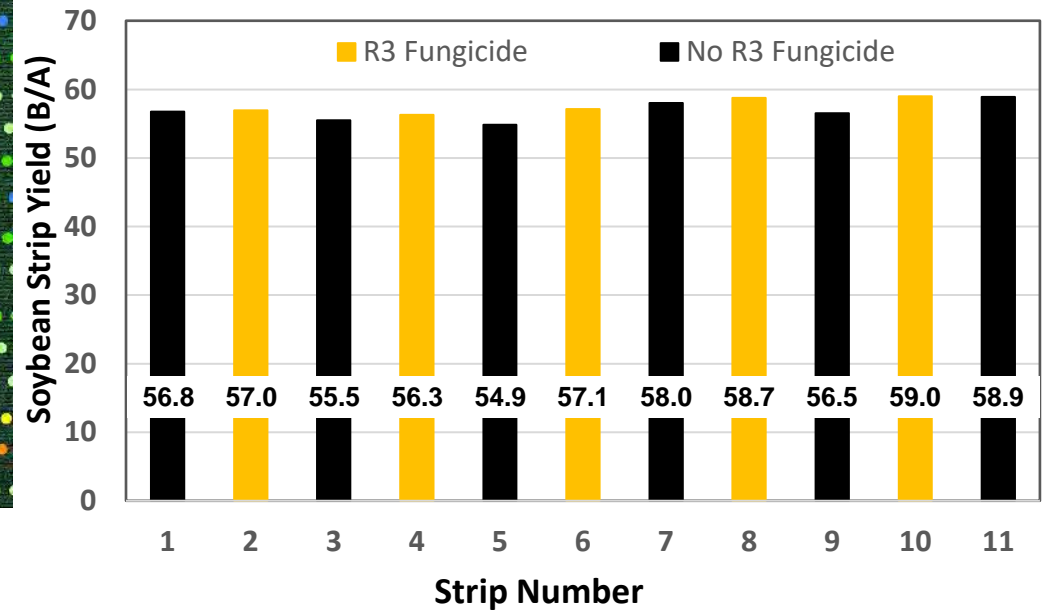
Treatments	Mean (SD)	Delta Control
	<i>bushels/acre</i>	
All strips	72.7 (3)	--
Control (N)	70.6 (2.3)	--
R3 Fungicide (F)	74.4 (3.0)	3.8



# Soybean R3 Fungicide Trial Site 2108 Benton County

Summary of yield data. There is evidence that R3 fungicide increased yield at this location. We did not use strips 12 and 13 in this analysis because of harvest issues.

Treatments	Mean (SD)	Delta Control
	<i>bushels/acre</i>	
All strips	57.1 (1.4)	--
Control (N)	56.8 (1.5)	--
R3 Fungicide (F)	57.6 (1.2)	0.8



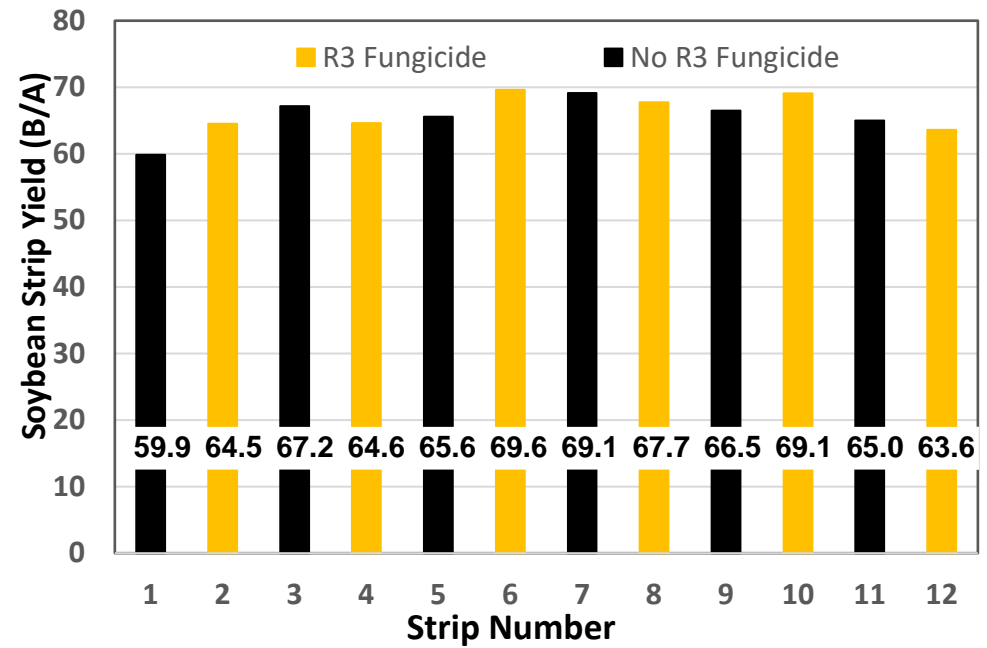
Map of soybean yield and areas used to determine strip yield. Points are 5 yield-point averages. Soybean harvested 10/18/2021; imagery taken at 100m on 8/6/2021.

# Soybean R3 Fungicide Trial

## Site 2109 Franklin County

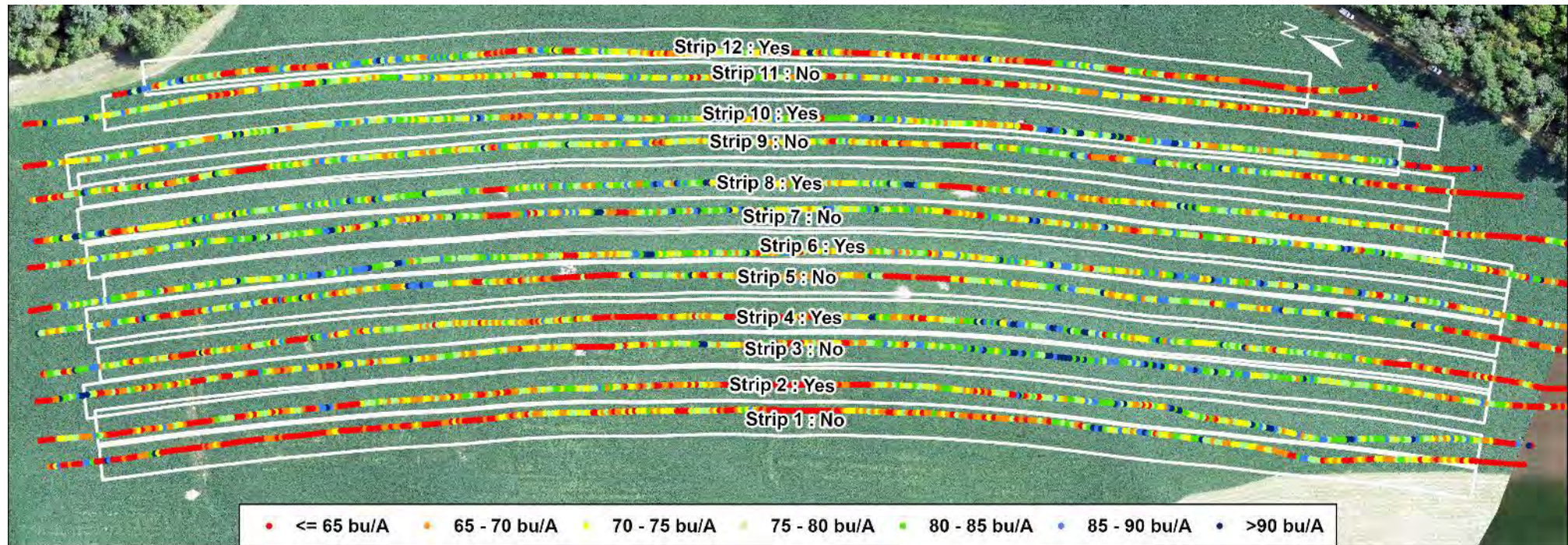
Summary of yield data. There is limited evidence that R3 fungicide increased yield at this location. There was a 50% chance the increase was  $\geq 0.8$  bushels per acre.

Treatments	Mean (SD)	Delta Control
	<i>bushels/acre</i>	
All strips	66.0 (2.8)	--
Control (N)	65.5 (3.1)	--
R3 Fungicide (F)	66.5 (2.6)	1.0



Map of soybean yield and areas used to determine strip yield. Points are 5 yield-point averages. Soybean harvested 9/14/2021; imagery taken at 100m on 8/11/2021.

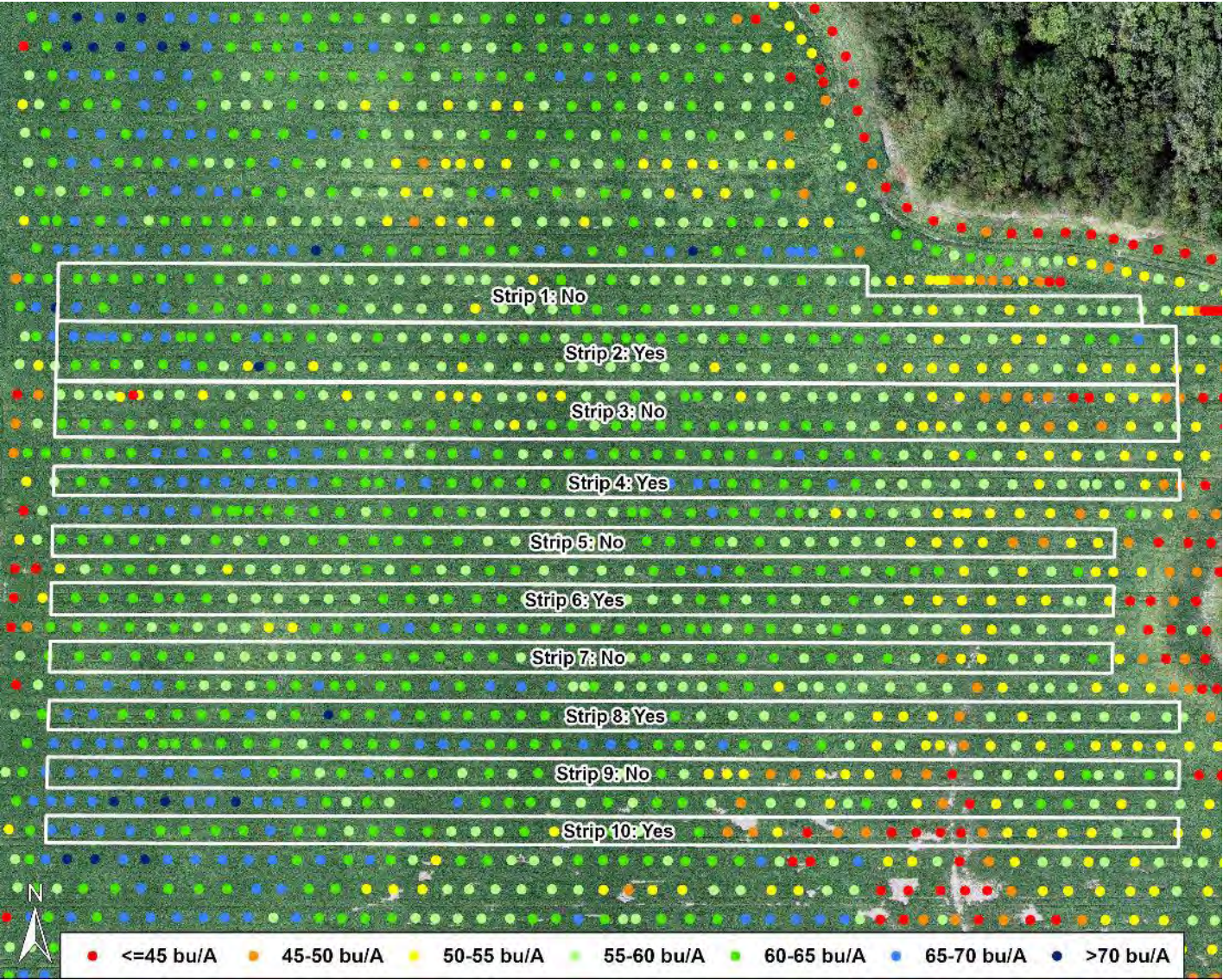
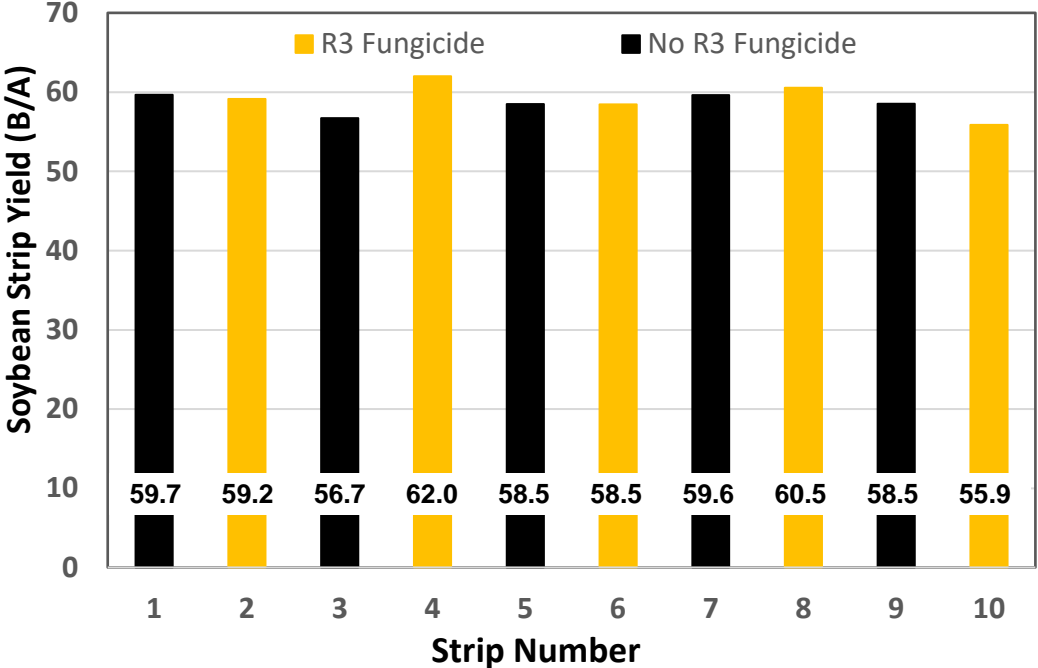
Product used: Trivapro.



# Soybean R3 Fungicide Trial Site 2111 Macon County

Summary of yield data. There is some evidence of a small positive effect of R3 fungicide on yield. There was a 70% chance of a yield increase and a 50% chance the benefit was >0.5 B/A.

Treatments	Mean (SD)	Delta Control
	<i>bushels/acre</i>	
All strips	58.9 (1.8)	--
Control (N)	58.6 (1.2)	--
R3 Fungicide (F)	59.2 (2.3)	0.6



Map of soybean yield and areas used to determine strip yield. Points are 5 yield-point averages. Soybean harvested 9/26/2021; imagery taken at 100m on 9/13/2021.