2025 Corn PKP Fungicide Response Trial

Justin Sarauer - S-3

A note from the team:

We'd like to take this opportunity to say thank you for your participation in our 2025 PKP Fungicide Response Trial! Within Corteva Farming Solution and Digital and Pioneer Agronomy Sciences we aspire to drive innovation in data collection and analytics to access and maximize the value of our seed and crop protection products. Your involvement in robust and leading-edge research is critical to this effort! If you'd like to continue to work with us in a similar manner, please don't hesitate to let us know! Thank you for partnering with us to co-create data and insights that contribute to more sustainable solutions for farmers.

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Stacie McNinch	

Introduction

Yield Map:

Grain yield maps are the primary tool used for evaluating the performance of the various treatments and timings investigated in this study. While we can't guarantee the quality of the calibration for the combine used to collect this data, we use an innovative cleaning tool to identify and remove any erroneous yield data. This tool has been shown to reduce yield variance by a median of 54% and increase the spatial signal to noise ratio more than 24x. Additionally, in order to account for potential Biological treatment drift, the yield data near treatment boundaries is excluded through a buffering process.

Trial Layout:

The layout of your experiment can often have more effect on results than the experimental treatments, so it is important to design trials in a way that enables an 'apples-to-apples' comparison. Treatment maps, along with soil maps, allow us to determine where breaking out results by different soil types may help explain treatment responses more completely.
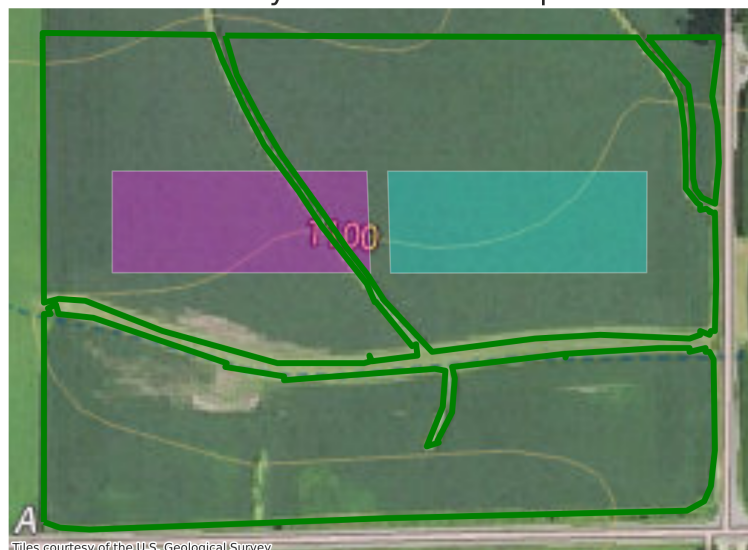
Mean Treatment Results:

These tables show Biological treatment averages, overall and broken out by additional factors such as hybrid and soil type where applicable. While this is a good first start at determining the performance of a treatment, it is important to realize that no two treatment areas are exactly the same, and it may be important to investigate other key variables to see where differences between treatment areas might cause bias.
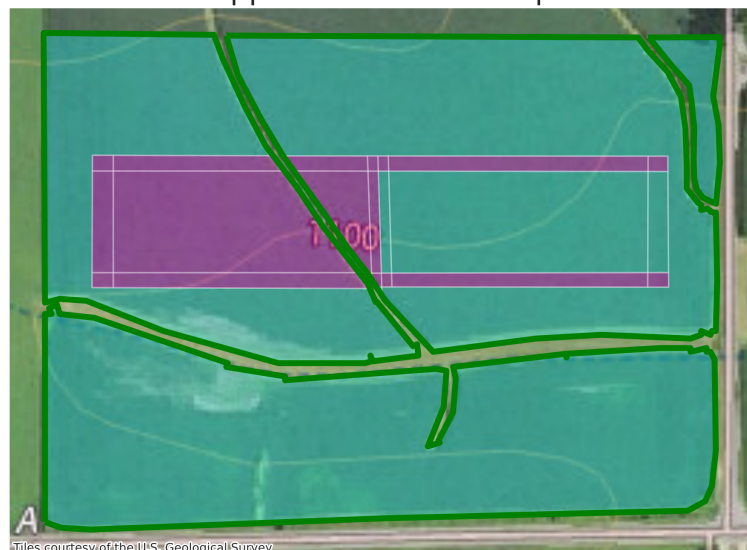
Breakout Treatment Analysis

Analysis Treatment Map

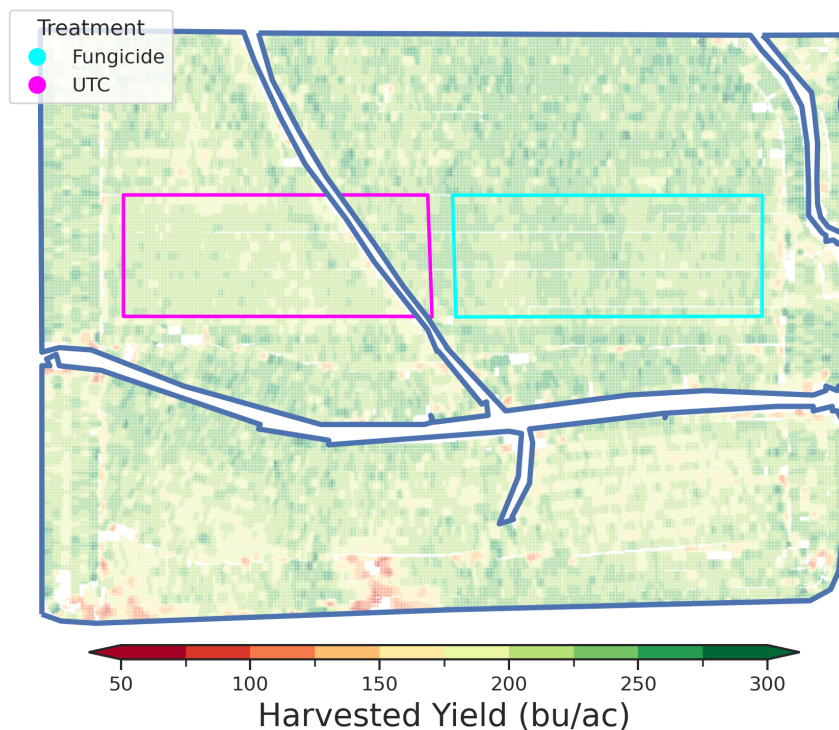Tiles courtesy of the U.S. Geological Survey

● Fungicide   ● UTC

Applied Treatment Map

Tiles courtesy of the U.S. Geological Survey

● Fungicide   ● UTC

Yield Map

Treatment
● Fungicide
● UTC

Harvested Yield (bu/ac)

50   100   150   200   250   300

Breakout Treatment Analysis

Hybrid Planting Map

Treatment
- Fungicide
- UTC

DKC092-14RIB	P91719AM	P97299Q
P9466PCE	DKC092-13RIB	P97037V
P92399PCE	P96567AM	P98125V
P9188AM	P96760V	P9955V
P91083PCE	DKC096-21RIB	P00549V

Soil Type Map

Treatment
- Fungicide
- UTC

- Eleva sandy loam
- Plainbo loamy sand
- Arenzville silt loam
- Seaton silt loam

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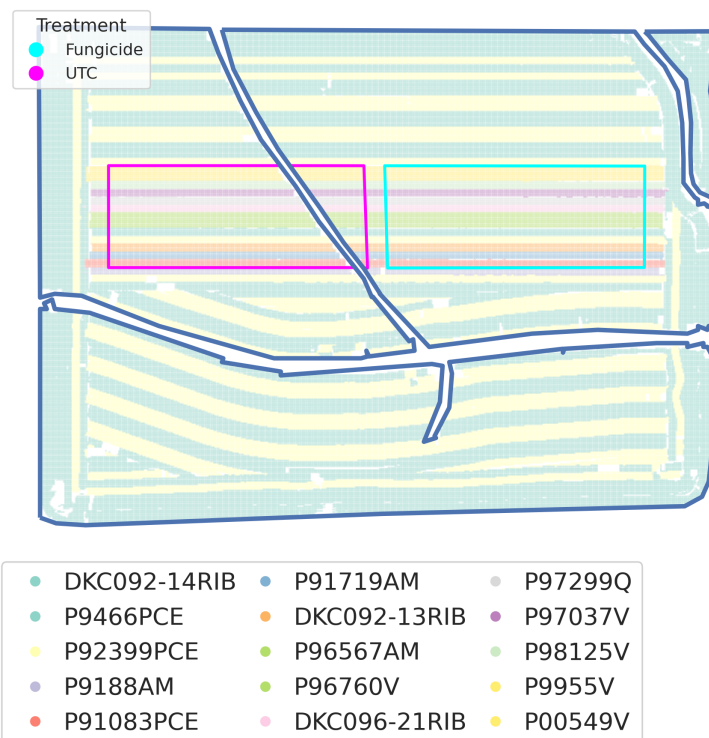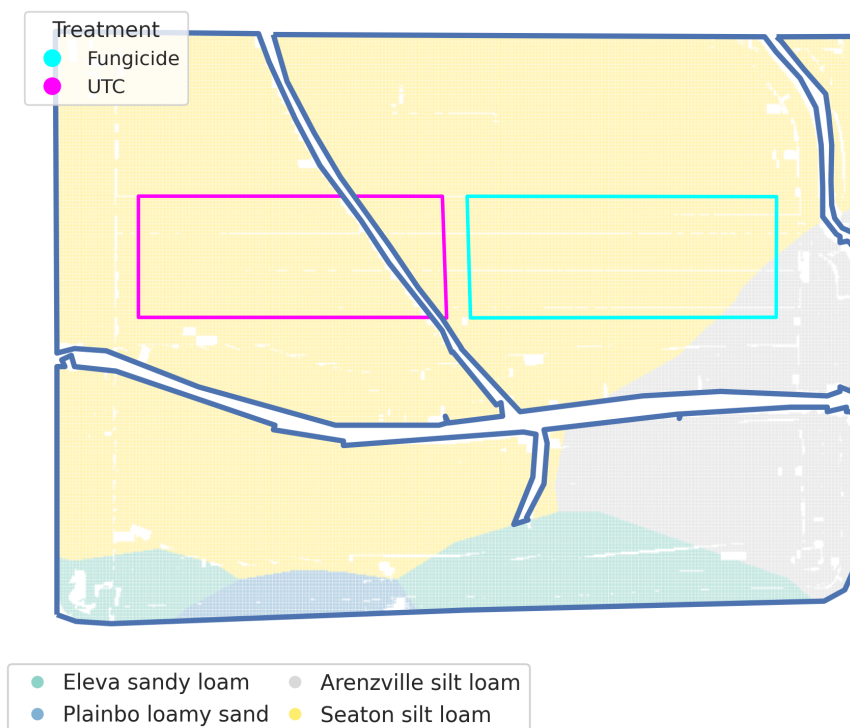
Breakout Treatment Analysis

Mean Treatment Results:

Hybrid	Treatment	Yield (bu/ac)	Moisture (%)	+/- Advantage to Fungicide	Area (ac)
All	Fungicide	222.8	22.0	+11.2	2.2
All	UTC	211.6	20.7		2.1
P00549V	Fungicide	222.7	22.3	+18.5	0.2
P00549V	UTC	204.2	20.4		0.1
P98125V	Fungicide	230.5	23.0	+17.5	0.2
P98125V	UTC	213.0	21.2		0.2
P9955V	Fungicide	226.9	22.4	+17.3	0.2
P9955V	UTC	209.6	21.2		0.1
P97299Q	Fungicide	223.5	22.6	+12.4	0.2
P97299Q	UTC	211.1	21.1		0.2
P91083PCE	Fungicide	220.9	19.4	+11.8	0.2
P91083PCE	UTC	209.1	18.7		0.2
DKC092-13R IB	Fungicide	221.3	21.7	+11.0	0.2
DKC092-13R IB	UTC	210.3	19.9		0.2
P96760V	Fungicide	224.8	22.4	+9.3	0.2
P96760V	UTC	215.5	21.0		0.2
P9466PCE	Fungicide	222.0	21.3	+9.2	0.2
P9466PCE	UTC	212.8	20.6		0.2
P96567AM	Fungicide	220.1	22.3	+8.7	0.2
P96567AM	UTC	211.4	21.6		0.1
P97037V	Fungicide	225.5	21.8	+8.5	0.2
P97037V	UTC	217.0	20.7		0.1
P91719AM	Fungicide	219.0	20.7	+7.5	0.2
P91719AM	UTC	211.5	20.2		0.1
DKC096-21R IB	Fungicide	220.6	22.2	+7.2	0.2
DKC096-21R IB	UTC	213.4	21.1		0.1

P92399PCE	Fungicide	218.4	21.0	+6.6	0.2
P92399PCE	UTC	211.8	19.8		0.2
P9188AM	Fungicide	208.3	19.6		0.0