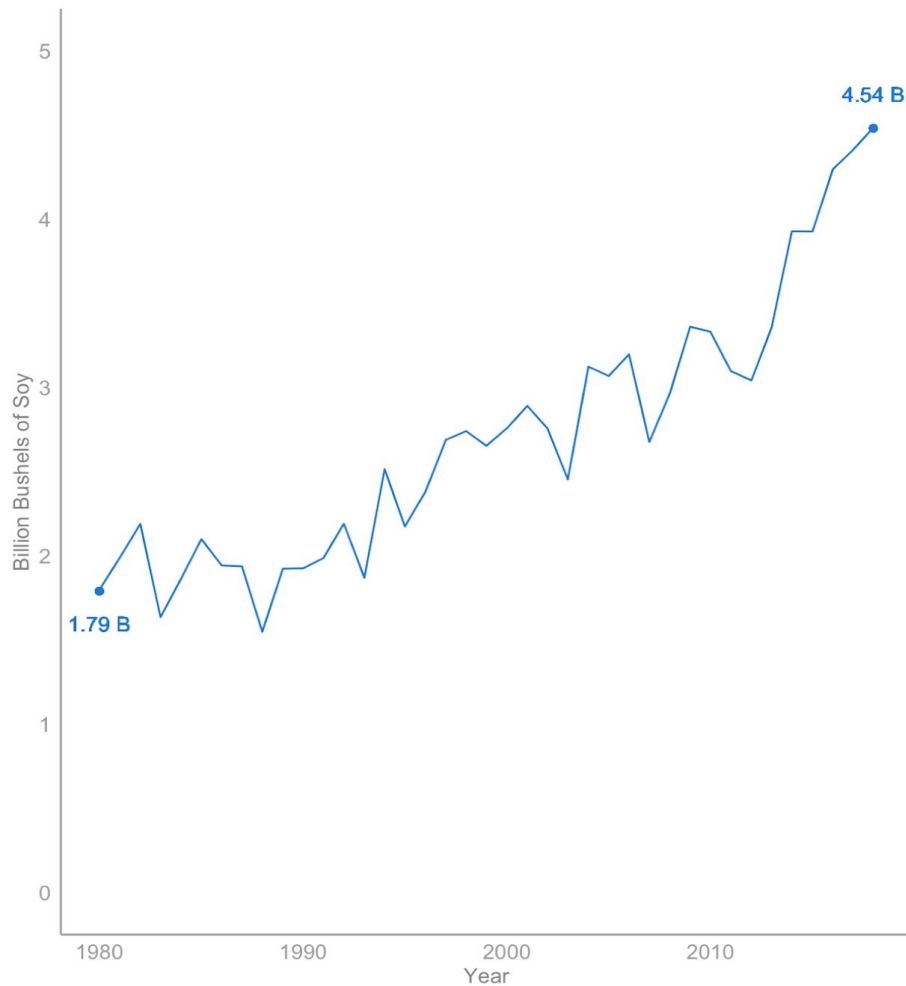


2019 MinneMUDAC

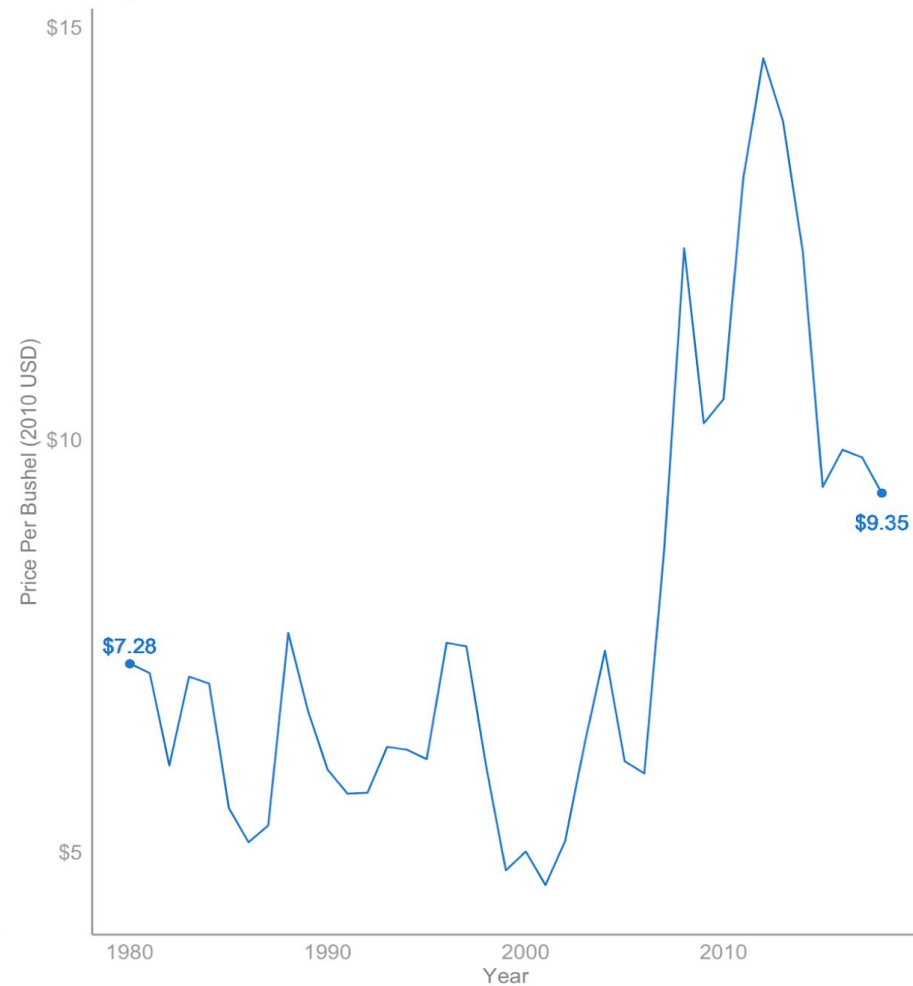
Team U05

Data Doggos

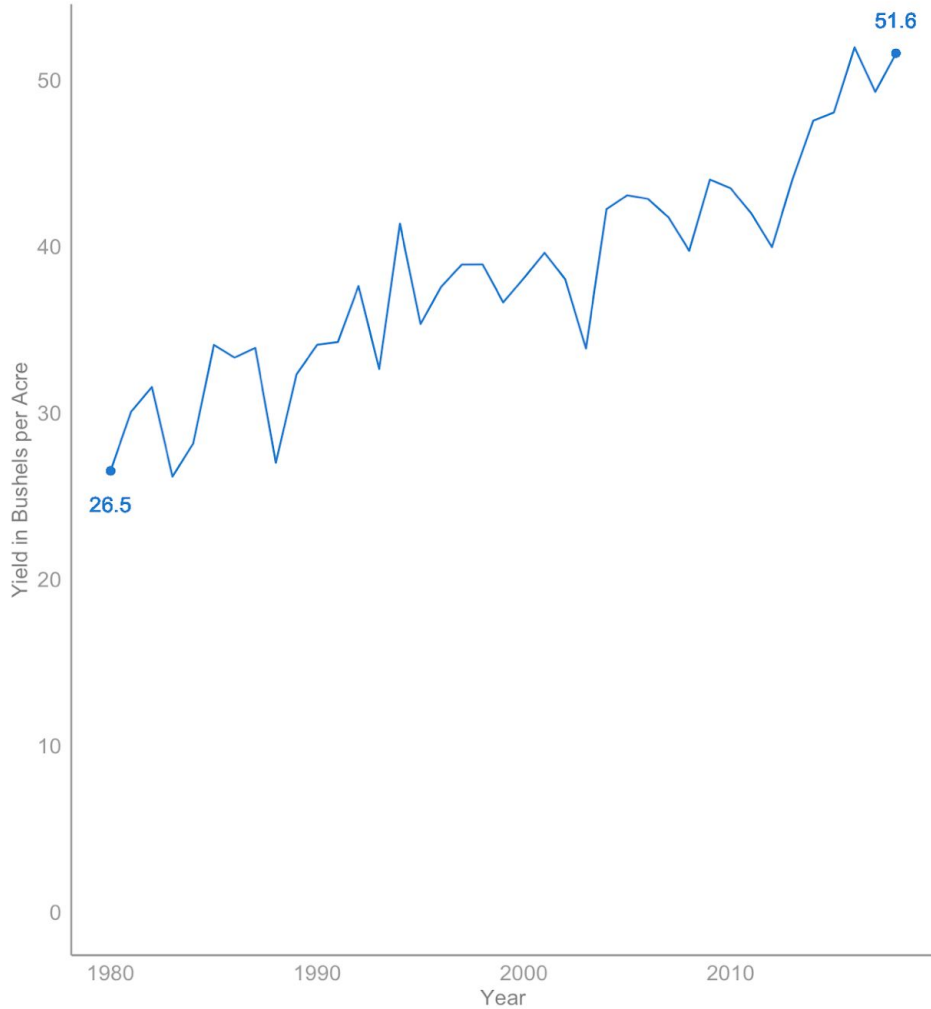
1980-2018 Bushel Production Increased 253%



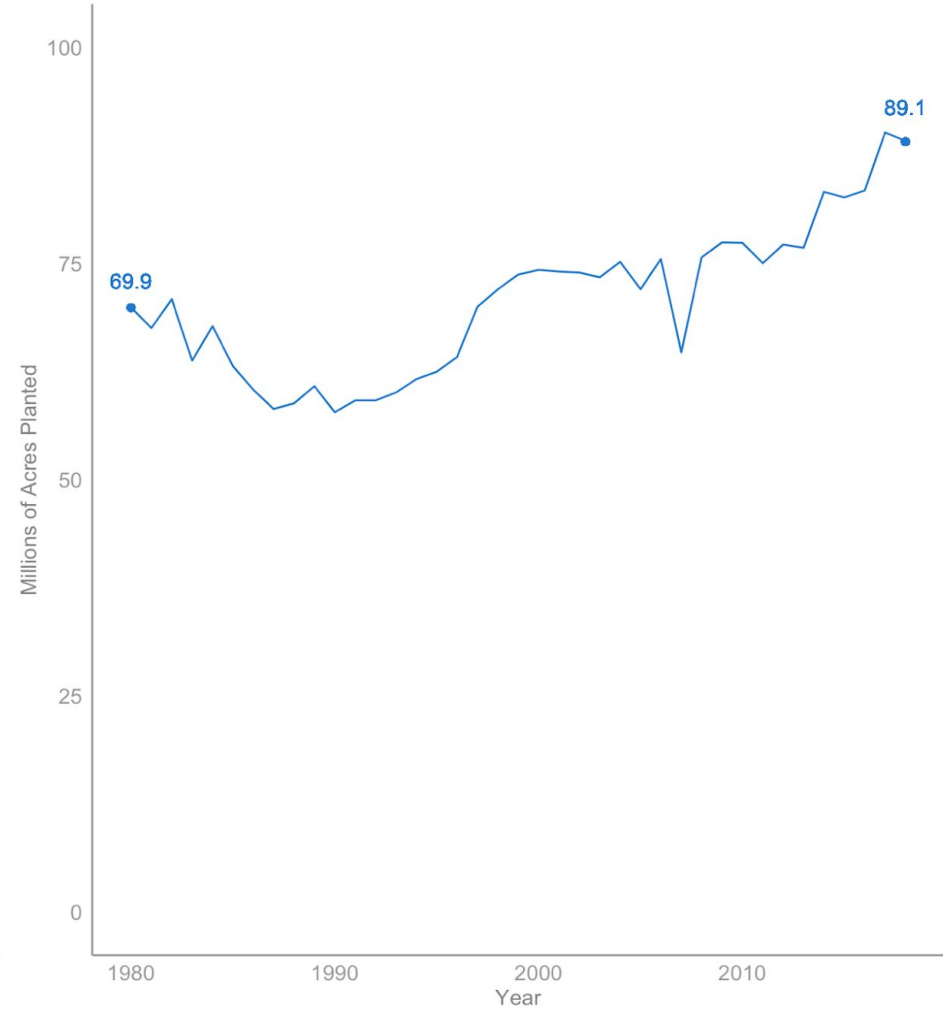
Soybean Price



Yields Increased 1980-2018



Acres Planted Increased 1980-2018

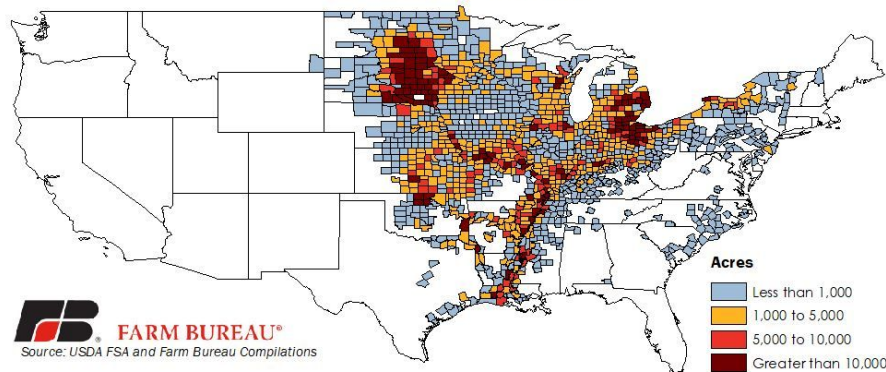


4.5 Million Acres were not able to be planted due to weather conditions

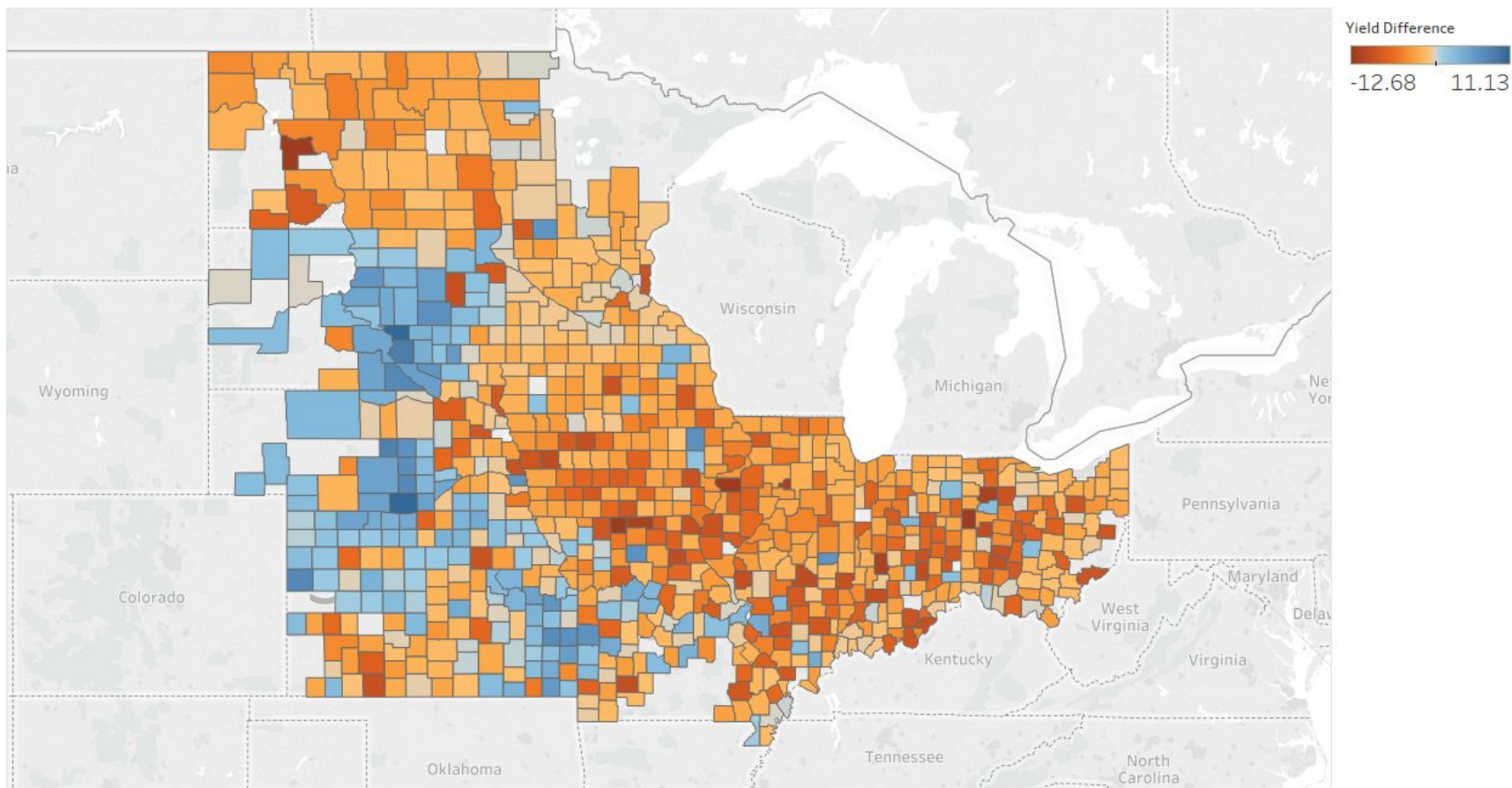
Averaged **950,000** acres prevented over the last decade

Previous record set in **2015** was **2.2M**

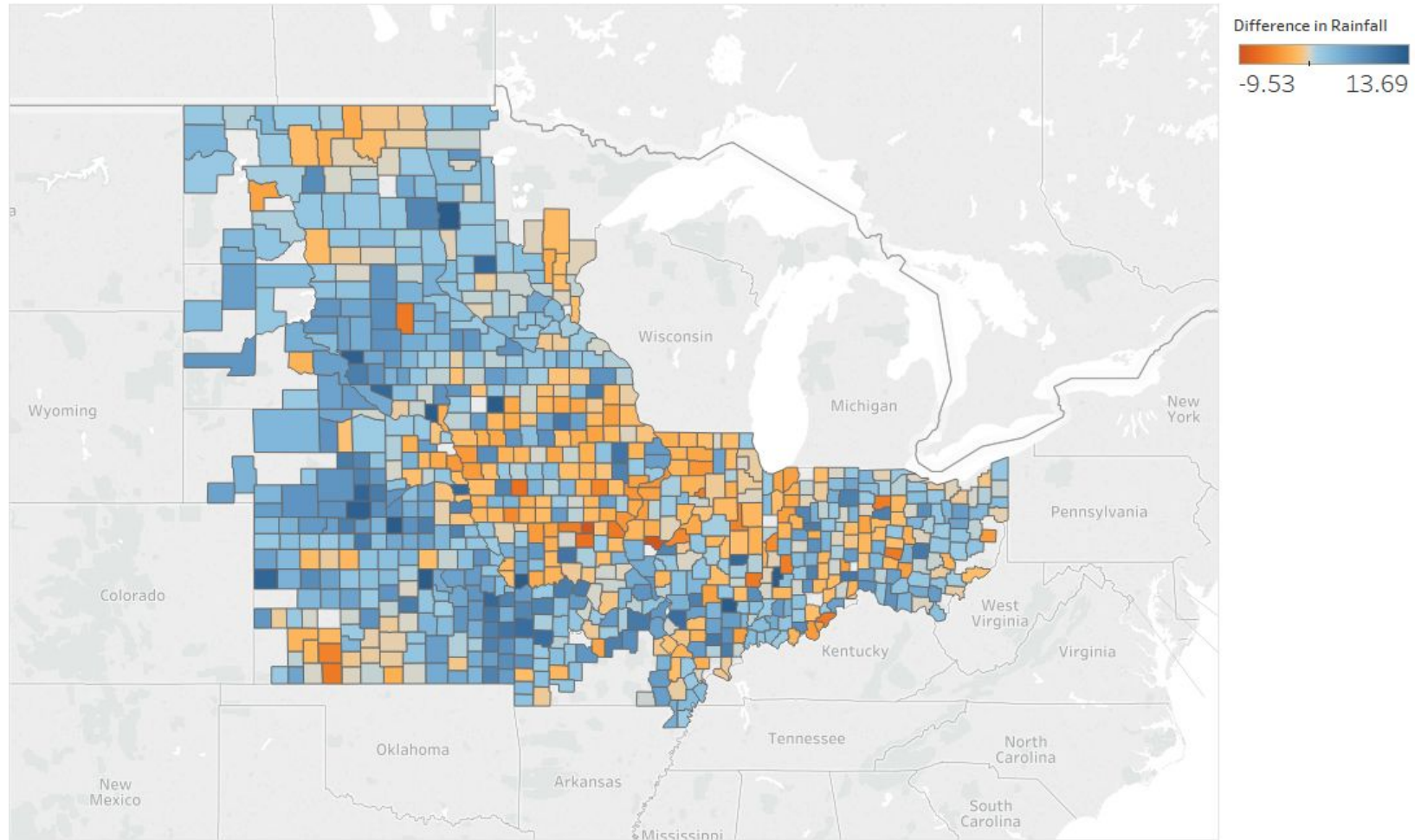
**Figure 6. Soybean Acres Prevented From Being Planted, 2019
August 22 Release**



Weather Effect by County



Difference in July and August Rainfall by County



Between 2017 and 2019 acres planted
fell by

15%

A decrease from 90.2 million to 76.7 million acres

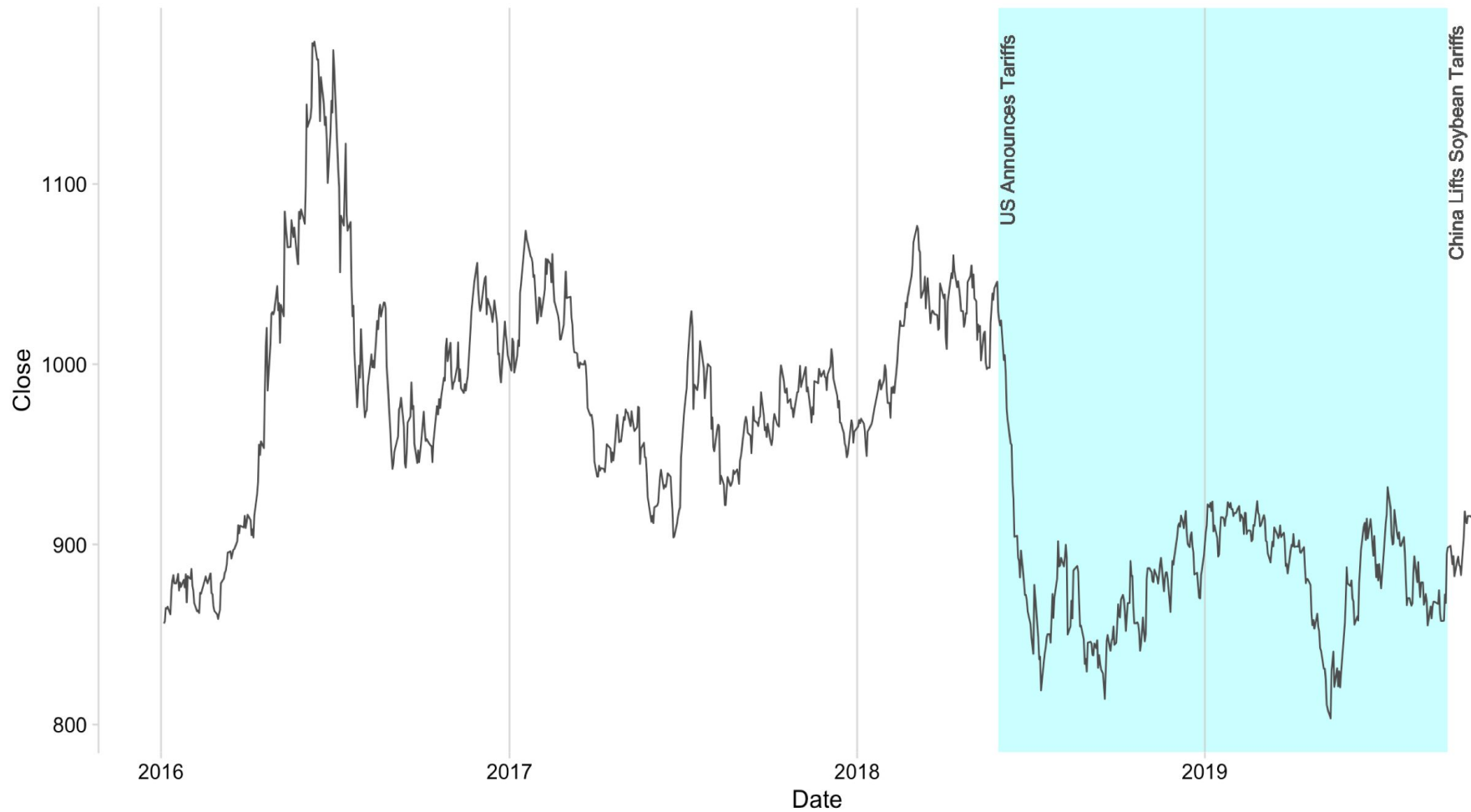
Tariffs

Trade Tensions Ease as China Drops Some Pork and Soybean Tariffs

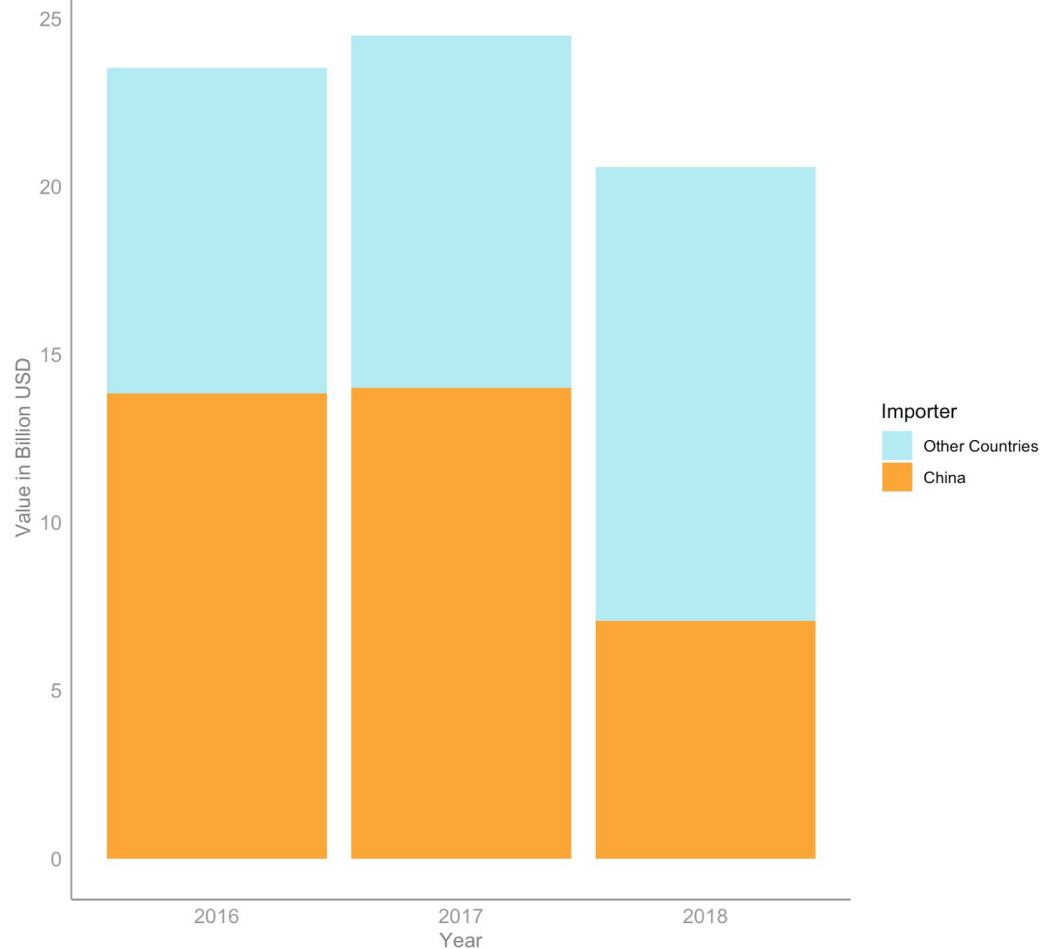


Soybean and corn fields in Bristol, Wis. United States soybean exports have been hurt by Chinese tariffs. Tannen Maury/EPA, via Shutterstock

China-US Trade War Impacts on Soybean Futures Closing Price



China Decreases Soy Imports From US by 50% in 2018



China's total soy imports
decreased by

**More than
50%** in 2018.

Livestock and Soymeal

80% of a soybean is ground into soymeal

Soymeal is the most popular livestock feed because of it's high **Protein**

94% of total meal goes to **Poultry, Pork, Beef Industries**

Asian Swine
Flu kills **15%**
of Worlds
Pig Population



China pork
Production
drops **30%**



China **doubles**
pork imports from
US while building
back lost pig herd



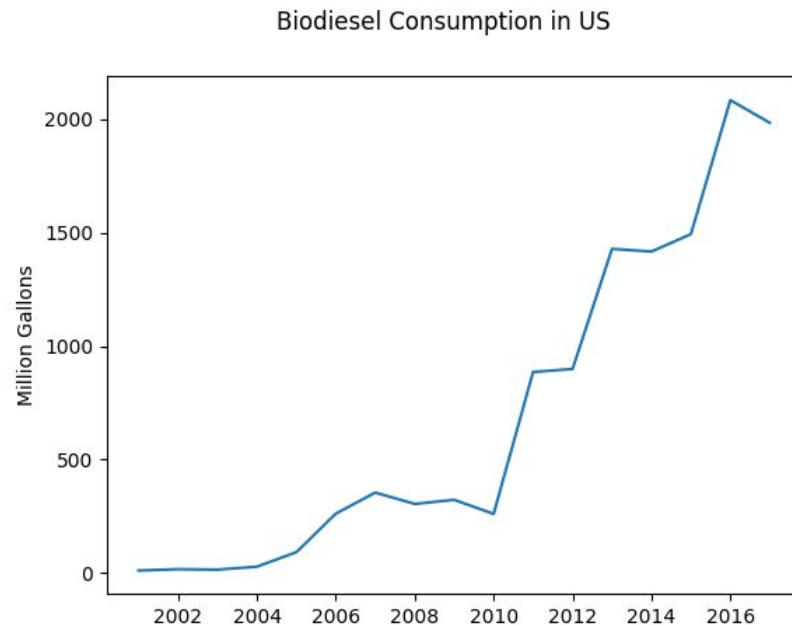
US pork **requires**
more soymeal to
feed higher
demand of pigs

Asian Swine Flu

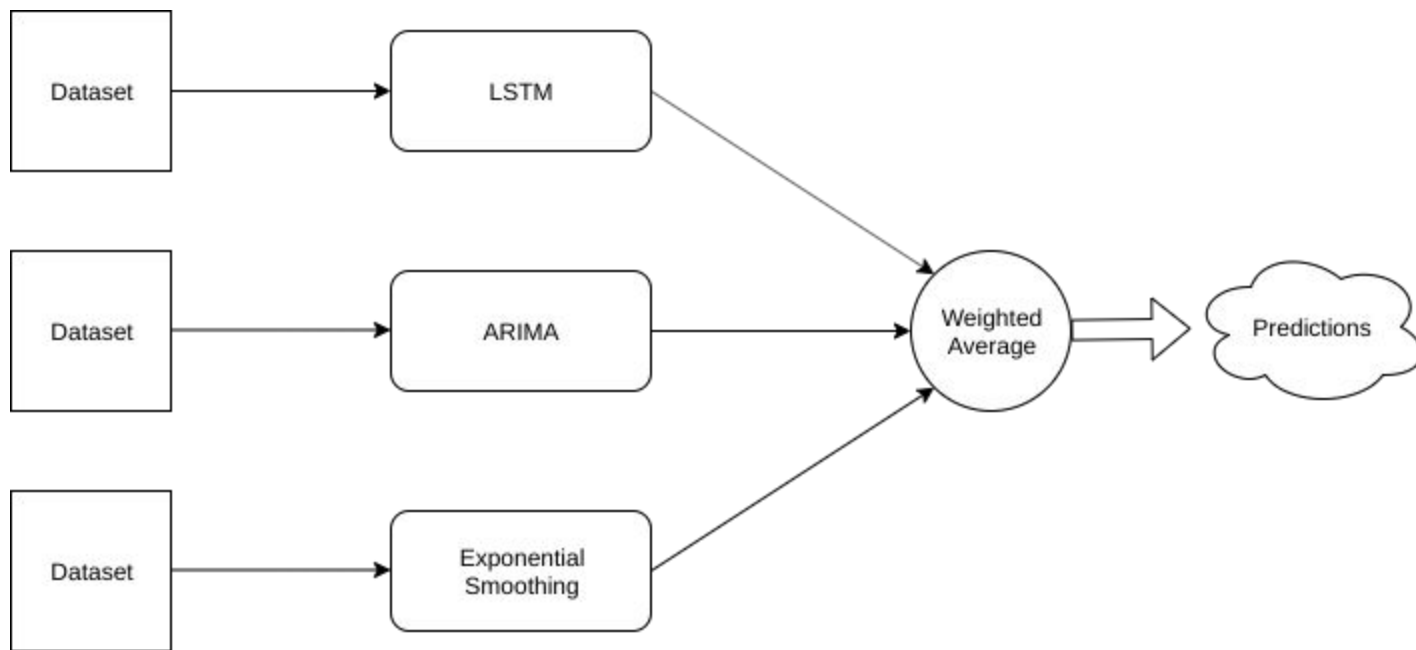
Modeling

Predictors:

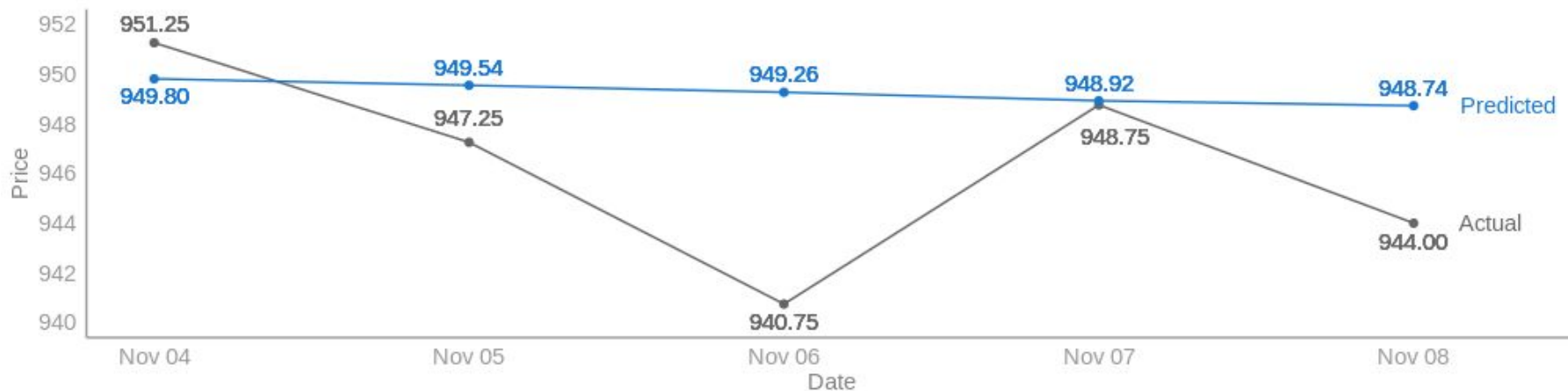
- Monthly USDA Estimates
 - Area Planted, and Total Supply
- **Scarcity** as Stock to Use %
- Historical Prices (**Soy, Corn, Oil**)



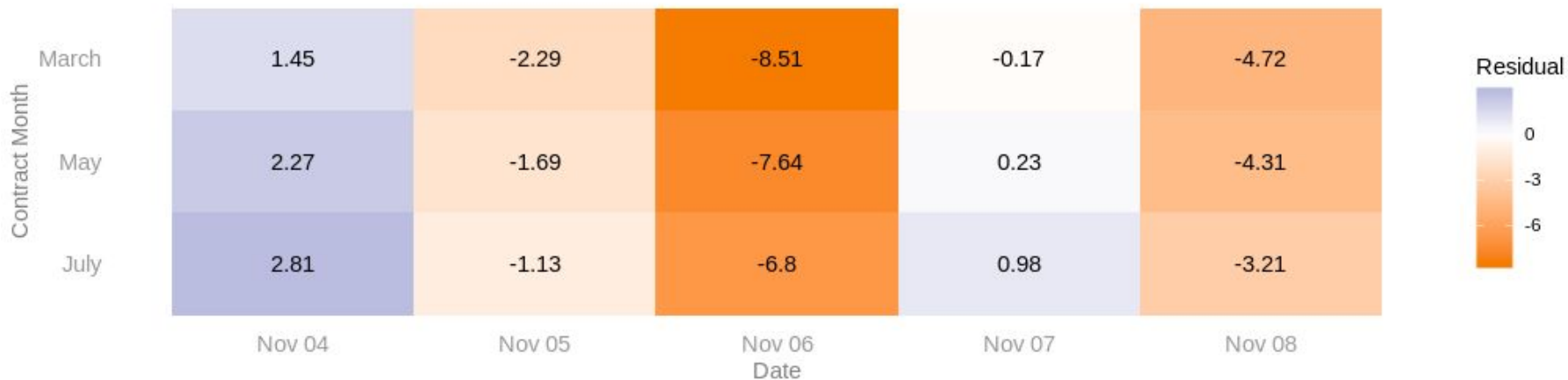
Model Architecture



March Contract Predictions



Model Residuals



Insights to the Farmer

Learn the **broader market** surrounding Soybeans

Watch **substitute** products prices (Corn/Crude Oil)

Implementation of crop **diversification**

Sources

- USDA World Agricultural Supply and Demand Estimates
- Investing.com price history
- US Soybean Board
- CME Group
- UN Comtrade
- NOAA
- Yahoo Finance

THANK YOU