



# CropProphet

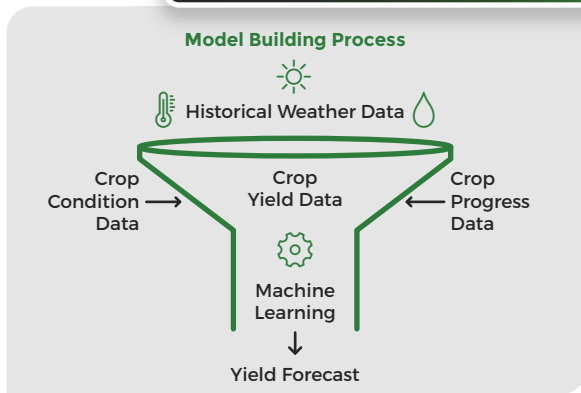
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## QUANTIFYING THE IMPACT OF WEATHER ON GRAINS YIELDS

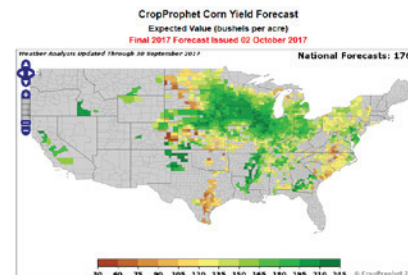
### Process

- 1 Rigorous predictor selection
- 2 Elimination based on contribution to accuracy
- 3 Leave-one-out cross validation
- 4 Independent models for predicting at each county
- 5 Native aggregation from county to state/national
- 6 Two Independent Sets of Models - Field Surveys

- Benefits:**
- Process design eliminates overfitting risk
  - Focuses on estimating the impact of weather

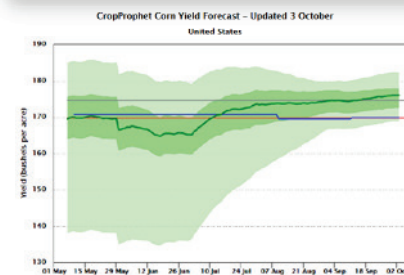


### Forecasts



**Crops:** Corn, Soybean, Winter Wheat  
**Extent:** County, State, National  
**Data:** USDA NASS, Weather Data, Satellite Data  
**Type:** Yield, Production

- Benefits:**
- Quantification of the yield impact of the ECMWF and GEFS model
  - Weather centric process ensures early detection of sig events



**Models:** Year-to-Date, 14 & 28 Day Forecasts, GFS/ECMWF  
**Season:** May 1 to October 1

### Data & Delivery

- Benefits:**
- Customers have called our interface the best in the business
  - Enables systematic algorithm development

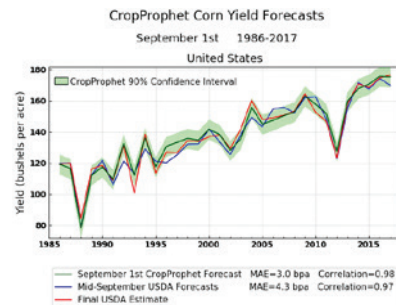
**Service is available via:**  
 SaaS Service providing web-access  
 FTP Service providing real-time data access

### Optimize Your Trading Model - Available Data:

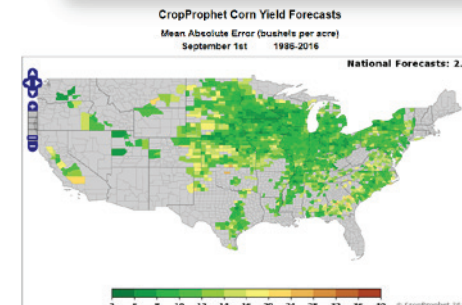
Type	Purpose	Available
Cross Validated	Accuracy Testing	40 years
In Sample	Fine-Tune Trading Models	16 Years
Out of Sample	Look Forward Only	10 Years

### Accuracy & Results

- Benefits:**
- Back tested trading model: 23.8% annual return over 15 years



**Corn Correlation: 0.98**  
**Soybean Correlation: 0.98**



**Corn MAE: 3.0 bpa**  
**Soybean MAE: 0.8 bpa**