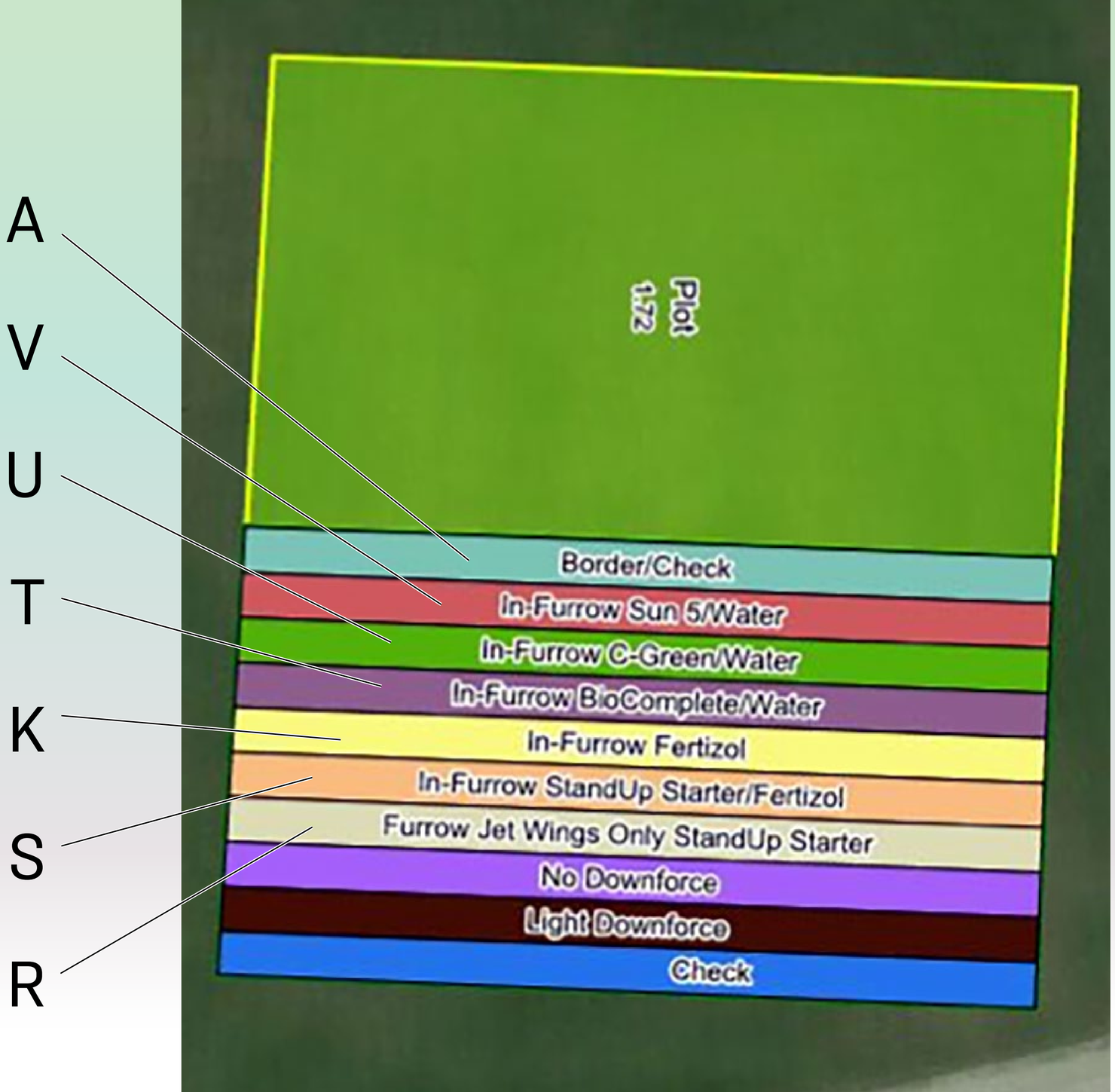
Case study: Sunrise plots

GROW
NEXT GEN

Soybean plot layout at Sunrise Cooperative, South Charleston, OH



What environmental factors affected growth this year?

- April and May, 2019 experienced record rainfall. What is average?
- Many days of rain reported.
- The soybeans were planted around May 21.
- This is a late planting date as a result of the amount of rainfall that Ohio experienced this year. What is a risk to the plants of too much rain after planting?
- How would you describe what happened in the second half of the growing season? (July, August, and September)

Variables

In the test plots, the following were controlled variables:

- Type of seed
- Herbicides applied
- Type of soil

The variables that changed were:

- The type and amount of fungicide used during treatments two times during the growing season.

NutriSolutions®
By WinField United

2025 W STATE ST,
FREMONT, OH,
43420-1553

Farm Name: **SOYBEAN**
Field Name: **PCT**
Sample Name: **U**
Submitter Name: **Casey Cochran**
Report Date: **08/03/2019**
Sample Date: **08/01/2019**

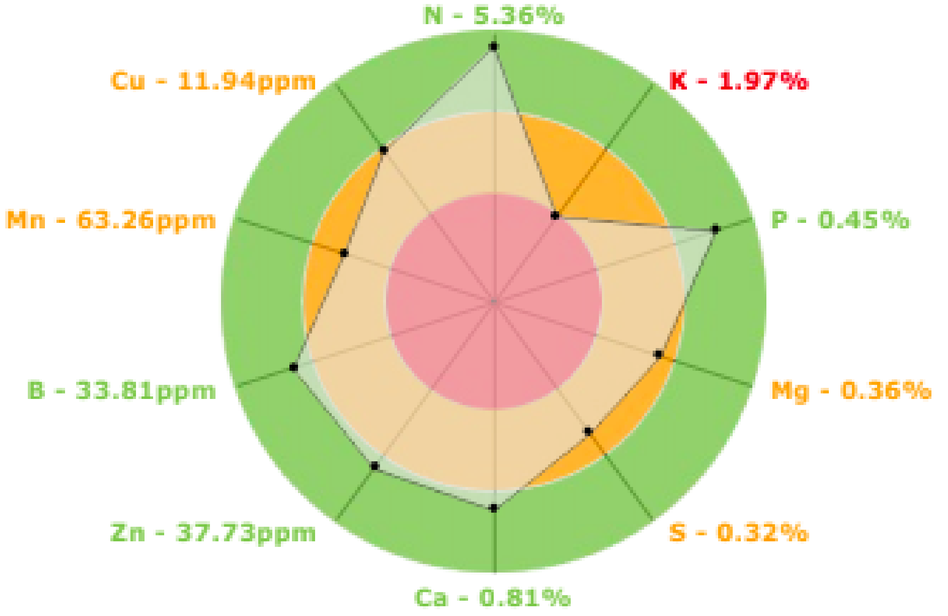
Crop: **SOYBEANS**
Stage: **R4**

GPS Latitude: **39.823041**
GPS Longitude: **-83.617164**

Sample ID: **NS999109416**
Lab: **SureTech**

SUNRISE COOPERATIVE INC-STARBUCK
310 STARBUCK RD,, WILMINGTON, OH 45177
-8880 US,
Ohio,

Nitrogen 5.36% / N-Adequate	Manganese 63.26ppm / Mn-Responsive
Phosphorus 0.45% / P-Adequate	Copper 11.94ppm / Cu-Responsive
Potassium 1.97% / K-Deficient	
Sulfur 0.32% / S-Responsive	
Boron 33.81ppm / B-Adequate	
Zinc 37.73ppm / Zn-Adequate	
Magnesium 0.36% / Mg-Responsive	
Calcium 0.81% / Ca-Adequate	



Note: The closer results are to the center of the graph, the more deficient the nutrient.

Scenario

You and your team are in charge of analyzing and reporting out on the case study from the Sunrise Cooperative test plot in South Charleston. Think about the different components that you are analyzing and how it could apply to a farmer deciding whether to invest in these products.

Here are the materials that will be provided:

- Data spreadsheet with raw data
- Plot map with variables
- Information sheets that describe action of variables
- Example of nutrient data that can be compared

Your conclusions

Use the data in the spreadsheet and the plot key to determine if one or more of the products had a positive effect on the soybeans.

- Identify what positive effect you have found.
- Determine what data analysis provides evidence for that effect.
- Explain how the treatment may have influenced that effect.
- If there is no positive effect, explain the potential reasons why that is the case.