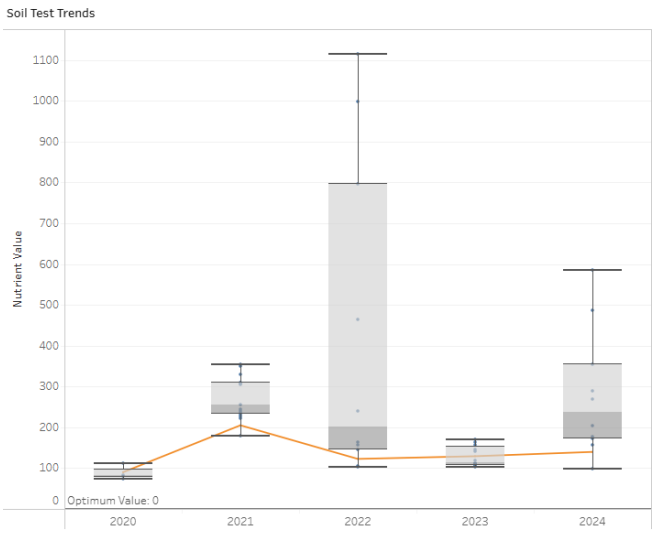
Soil Test Trends Dashboard

Last Modified on 04/21/2026 8:44 am CDT

Select a Customer under **Filters** to display data.



By plotting soil test data over time, Growers can monitor how their nutrient practices vary across multiple soil sampling events, and this data can be visualized using a Box-Whisker or Tukey plot.

The Tukey plot serves as a non-biased, non-spatial complement to SKY Mapping's nutrient Layer. As a measure of central tendency that is resilient to outliers, it is one of the best tools for understanding the general concentration of the field's nutrients.

The Tukey plot answers important questions for the Grower:

1. Based on a two-, three-, or four-year sampling strategy, are application practices maintaining desired nutrient availability year after year?
2. Are critical nutrients being overapplied?
3. Are critical nutrients being underapplied?

The Tukey plot has five main components:

- **Minimum** – Minimum soil test value (less outliers)
- **Q1** – 1st Quartile or 25th percentile; represents lower 25% of the data
- **Q2** – Median, IQR, or 50th percentile; represents middle 50% of the data
- **Q3** – 3rd Quartile or 75th percentile; represents upper 25% of the data
- **Maximum** – Maximum soil test value (less outliers)

Because the mean is often biased by outliers, the Tukey plot uses the median, which is more robust in conveying the central tendency of soil test data.

Use the Reference Line drop-down and select Optimum Value. Enter the optimum value for the nutrient selected (ppm or lbs). The Optimum Value is displayed as a horizontal line across all Tukey plots. If the optimum line falls in the Inter Quartile Range (IQR), overapplying or practicing an over-optimum strategy are possible.

Likewise, an optimum line that falls below the IQR indicates application practices may be failing to keep up with potentially critical nutrient availability. Soil test points above or below the lower or upper whiskers represent low or high outlier values in the data respectively.