

## Functional Soil Maps

Functional Soil Maps offer the user greater insight into optimal seed placement which can maximize product performance, and lead to a greater potential R.O.I.

Functional Soil Maps use statistical models and data science with accurate 3D elevation measurements to understand the relationship between soil properties, field topography, and water movement across that topography and through the soil profile. The hard lines from the USDA (SSURGO) map are replaced with transitional areas that provide a better understanding of the relationship of soil, weather, and seed. This better understanding leads to a more accurate defining of management zones, and combined with better weather prediction, offers even greater insight into seed product management.

Functional Soil Maps currently include the Functional Soil Survey, the Productivity Index, and are an Advantage Acre Plus feature.

## Functional Soil Map Access

A field must be selected from the Growers and Fields menu on the left side of the screen, then:

1. Click **Soil** button in right side of the black menu bar
2. Click on the **Functional Map** tile located on the left menu

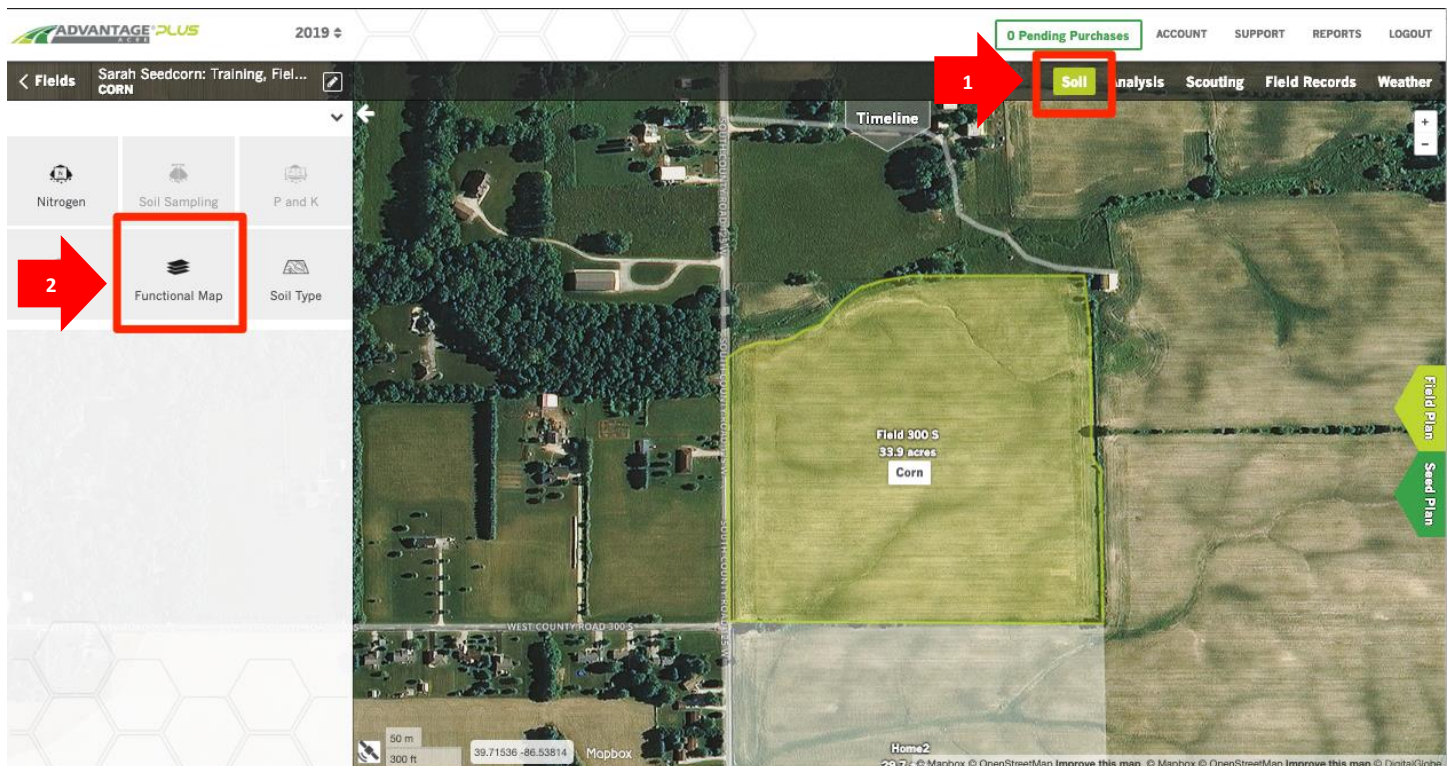


Figure 1: The **Soil** button and the **Functional Map** tile

With the **Functional Map** open, the user has two drop down options:

1. Functional Soil Survey
2. Productivity Index

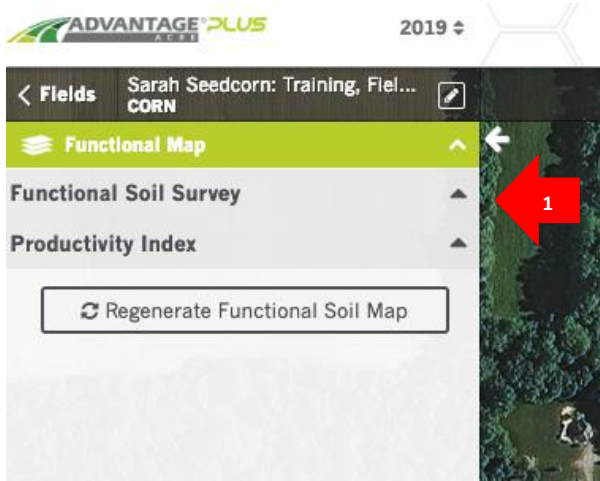


Figure 2: Functional Map drop downs

## Functional Soil Survey

The Functional Soil Survey offers more detailed information about multiple soil properties than available from either SSURGO, or Soil Samples. The five scale colors represent low to high values for each property, not a rating of good or bad.

Click on **Functional Soil Survey** (Figure 2) drop down to reveal these properties:

**Available Water Storage**  
**Top Depth Restrictive**  
**Water Table Depth**  
**CEC**  
**Organic Matter**  
**Slope**

**Clay**  
**Silt**  
**Sand**  
**Elevation**  
**Topographic Wetness Index**

Click on any property to generate a map and customizable information histogram for that specific field. Figure 3 is an elevation example.

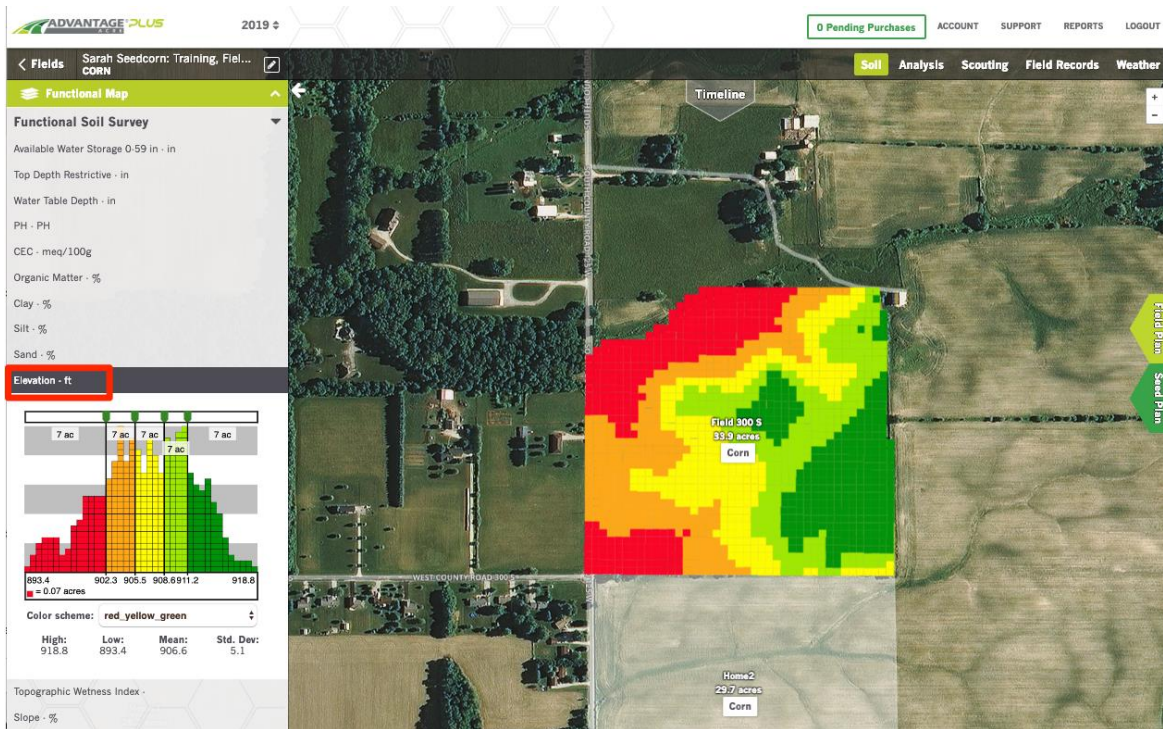


Figure 3: Functional Soil Map Elevation Property

## Productivity Index

The Productivity Index is a culmination of the layers of the Functional Soil Survey combined with weather forecasts from WeatherTrends360. The Productivity Index is a relative scale of soil productivity potential and not an estimation of yield. The weather forecast component is a smaller contributing factor to the index.

Click on the **Productivity Index** (Figure 4 - Arrow 1) drop down to generate a map and customizable information histogram for that specific field. The user may move the green slider tab (Figure 4 - Arrow 2) at the top of each color zone right or left to select a sorting range as needed. The default ranges will reset if any slider tab is moved to the extreme side of the histogram in either direction.

The **Regenerate Functional Soil Map** (Figure 4 - Arrow 3) button may need to be used the first time the Functional Map is used on a field. The Color Scheme (Figure 4 - Arrow 4) drop down may be used to reveal five more color scheme scale options.



Figure 4: The Productivity Index is a relative scale of soil productivity potential and not an estimation of yield.