**Lab Activity 1.2 - Field Boundary Mapping**

This field exercise is designed to familiarize you with digitizing, GPS mapping of field boundaries and calculating acres for precision agriculture purposes. Field boundaries are the foundation for all precision agriculture spatial concepts and the accuracy of field boundaries is dependent upon the type of GNSS used. Field boundaries are also crucial for establishing grids for GPS soil sampling, section control on sprayers, row by row control on planters, crop scouting, variable rate applications and UAV applications.

**Overview of Sirrus:**



SST Sirrus is an iPAD app that can be utilized to:

* Drive field boundaries using GPS
* Draw field boundaries using on-screen imagery
* Setup a soil sampling operation using either grid, zone or resampling
* Collect Crop Scouting level inputs
* Synching of data back to a SST Summit (software program) through the agX Sync account
* Access Weather information on an hourly, daily or monthly schedule

SST Sirrus can be used in a web-based mobile interface to enable the collection, viewing, reporting, and transfer of site-specific data created and consumed by the service provider and grower markets on mobile devices.

**Materials Needed:**

* iPAD or iPhone with SST Sirrus app
* Wi-Fi enabled – connected to internet or cellular service or GPS device
  + (GARMIN GLO – Portable GPS & GLONASS Receiver, Amazon - $99)

**Activity – Digitizing a Boundary using Online Imagery in the SST Sirrus app**

1. Open SST Sirrus® for iPad and from the Home screen, click the icon in the top left corner to select the Grower level.
2. Click on the **Create Boundary** icon in the lower left corner.
3. Three options are available to choose from: GPS, Draw and Pivot. Choose the **Draw** option. The Draw option is used to “click” around the field to drop vertices.
4. Zoom in to the Field area of your choosing. Click on the screen to drop vertices and choose the **“Close Polygon”** on the bottom right of screen to complete the boundary.
5. You may choose to edit your field boundary prior to saving. To do so, click on the orange wrench icon in the bottom middle of screen. Click on Edit Vertex. This will allow you to move individual vertices with precision accuracy by using the “bullseye” window. Click on Complete Edit Vertex.
6. When finished with the boundary select the **Save** button in the top right of the screen.
7. **Enter the name of the Grower, Farm, and Field**.
8. Choose **Save** and Create Another or Save and Exit.

**Activity – Driving a boundary using GPS in the SST Sirrus app**

1. Open SST Sirrus® for iPad and from the Home screen, click the icon in the top left corner to select the Grower level.
2. Click on the **Create Boundary** icon in the lower left corner.
3. Three options are available to choose from: GPS, Draw and Pivot. Choose the **GPS** option. The GPS option is used to drive around the field boundary using GPS. *At this point the assumption is you have your iPAD with GPS using either the internal or external Bluetooth option. If not, this will need to occur before you can proceed using this functionality.*
4. Move to the area of the field to begin driving the boundary and **“Start”** the process. As you drive you will notice that it is dropping points (vertices) and snapping the line to define the field boundary.
5. When you are finished with the boundary, select the **Stop** button.
6. **Enter the name of the Grower, Farm and Field** and select the **Save** button.
7. **Choose Save** and Create Another or Save and Exit.