-Persona 1:

Brian needs an automated soil analysis and fertilizer application tool because otherwise, he has to perform many soil sample analyses within spreadsheets or Excel to determine the best nutrient program for his crops.

Requirements:  
- Fertilizers shall be measured and dispensed based on the plant type and readings from the device.

- Experiment with one crop and note the details for the requirements provided.

- Collect data of nitrogen, phosphorus, soil moisture, pH, potassium, and soil temperature.

-Persona 2:

-Janet:

Janet needs a new way to monitor her plant samples because she doesn’t have enough time to do it herself due to upcoming research deadlines.

Insights about the user: researchers tend to be very busy and are constantly looking for new cutting edge technology to assist them with data collection and analysis.

-Persona 3:

Morgan needs a way to set a reminder to change the soil for a plant. This insight occurred to me when I was brainstorming user interface design while thinking about our project specifications. Our project specified an app that helps monitor plants and it also mentioned notifications. I thought it would be useful to set reminders for specific plants so that it pops up as a notification.

Morgan needs a way to remember when to water and fertilize her plants because she is busy with work and forgetful. The mobile app has notifications and a way to set reminders to help not forget important plant things.

Plant Nurturing System Requirements:

-Watering system: Dispenses water in relation to soil moisture sensor data within 10% of the recommended value for a ‘class’ of plant (dry, moderate, moist environment, etc.)

-Fertilizing system: Dispenses fertilizer in relation to soil nutrients sensor data and ideal / goal conditions stored on the server for each class of plant.

Nutrients include:

* Nitrogen
* Phosphorus
* Potassium

-Monitor important plant metrics such as moisture and sunlight.

-The system should work for potted indoor plants as a base case.

-User should be able to access data from the sensors in a graph format. Should be able to specify what day of data the graph is showing.

-Using an IEEE communication protocol.\*

-Waterproof following a waterproofing standard. (IP67?)

Recommendations from Group 4:

-More specific on requirements for app

-Size requirement for device

-we should look for standards about using fertilizers