

## Dr. Kaleita-Forbes

- Layering technique for soil “packing”
- go from dry to wet when doing the sample
- Research How different soils hold water [soil water holding capacity] [Field capacity water/soil content]
  - Going beyond that capacity can ruin the experiment
- Most common soil types and mappings: web soil survey
- Water levels measured by volume: volumetric water contents (of the soil)
- Permanent Wilting point: when a plant needs to expend more energy to suck up the water than it's worth
- How much water to use should fall between the permanent wilting point and the field capacity.
- Recommendation is air dried
- Oven dried soil is an option, but easy to screw up
  - If you over dry it, it can destroy the results
- 2 or 3 5 gallon buckets of soil needed
- Needs to see if the hygroscopic sensor dries out at the same rate as the soil
- Most industry sensors are “dielectric” and can read almost instantly
  - Lag time is fairly easy, 1-2 hours is acceptable.
- Tensiometer does have a bit of lag, measures soil/water tension

## Web stuff

- Places like Nebraska have more of a need for this type of software
  - This is directly related to the need of irrigation, see rainfall chart
  - Another reason is very sandy soil that doesn't retain soil
- Irrigate entire field or just parts?
  - Most conventional systems do the whole field
  - Technology is advancing, such as center-pivot irrigation
- Min, Max, and Average of nodes
- DO organize by field