

AGRO / EMS 2051 Laboratory Midterm

Be familiar and able to work problems with the below main points from Labs 1 - 5. Re-read introductions to lab exercises, review questions and re-work calculations and problems.

- Know definition of texture and soil separates. Be able to use textural triangle.
- Understand the principle of Stokes' Law and methodology (including calculations) of a mechanical analysis by the pipette method.
- Influence of texture on soil properties, including fertility.

- Definitions of particle density, bulk density, gravimetric water content and volumetric water content.
- Relationship of porosity to bulk and particle densities.
- Oven- and air-dry mass conversion.

- Soil orders, including brief definitions and which are found in Louisiana.
- Factors of soil formation.
- Horizon development.
- Morphological properties used in field descriptions of soils (like done in lab).

- Be able to use a soil survey to determine soil acreage, crop yield, etc.

- Be able to use Darcy's Law to calculate volumetric flow rate, conductivity, flow length, etc.