



Training Guide:

Soils, Amendments & Fertilizers

SETTING UP

Materials needed:

- One sample of **two to three different types of soil** – enough for all students to use
- Trays for soil samples (enough for small groups depending on # of students)
- Vinegar
- Water
- Paper towels or wet wipes
- Copies of GardenNotes #252: Worksheet: Soil Texture & Free Lime Lab, figure 4 and GardenNotes #222 for reference in case students forget their materials.
- Soil triangle(s) for students to review – recommend laminating (in this packet)

>> OPTIONAL HOMEWORK: AFTER CLASS

GardenNotes #252 – Soil Texture by Measurement

Please note there is an optional at home activity outlined for students in this worksheet. You can demonstrate this in class and encourage students to try it at home.

GardenNotes #253 – Web Soil Survey

Demonstrated by instructors in class, this optional activity encourages students to explore soils where they live, work, and play in Colorado. Furthermore, it encourages application of course content including soil amendments, mulching and fertilizers.

ACTIVITY 1: GARDENNOTES WORKSHEET #252

TEXTURE BY FEEL LAB

Time: 30 minutes

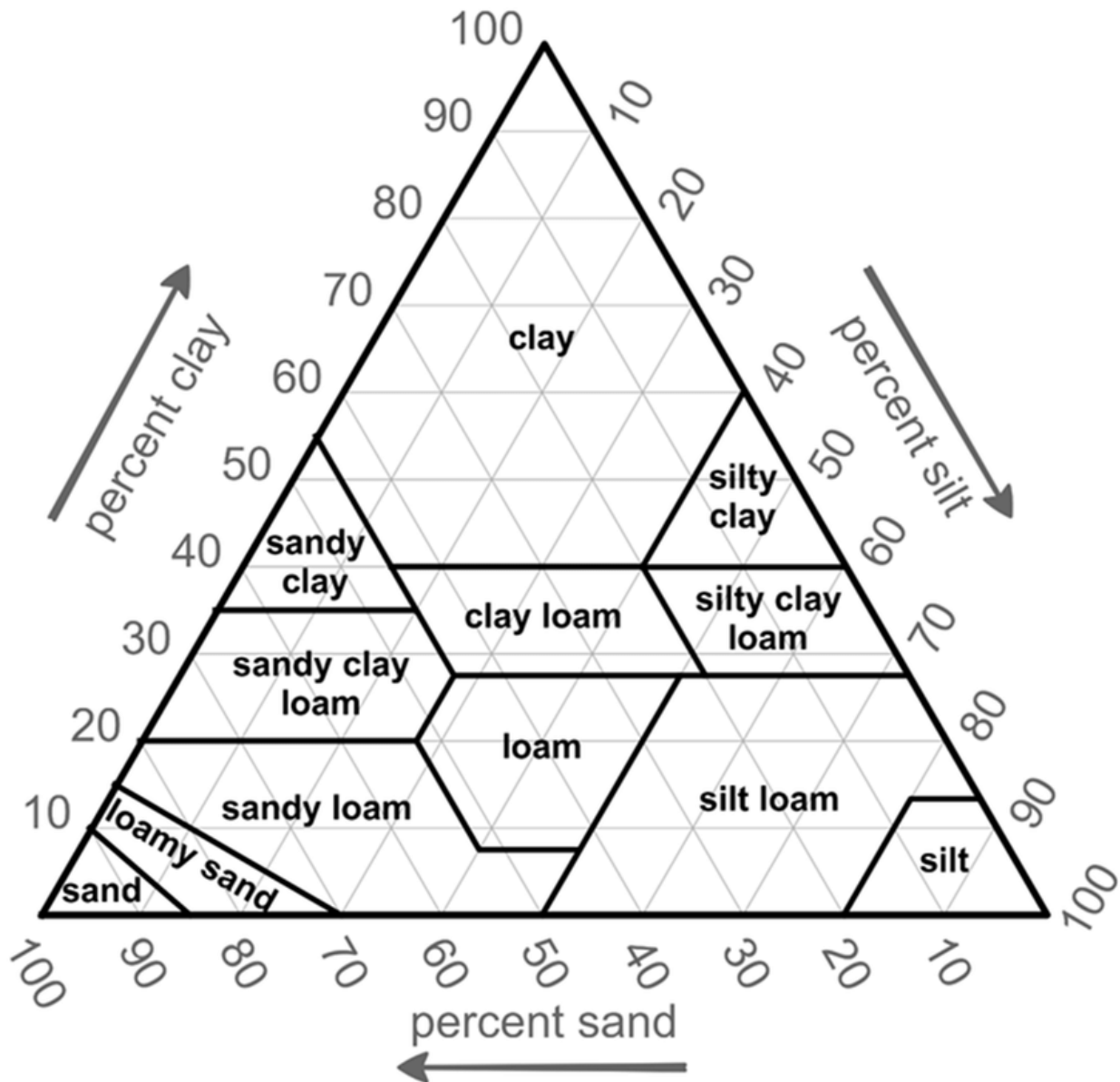
- Handout GN 252 Worksheets + soil samples in trays + water + paper towels/wipes to small groups for sharing.
- **NOTE:** *Save some dry soil in separate jars/containers for the free lime lab.*
- Have students get their hands dirty... feeling/determining texture and demonstrating the ribbon test with each sample.
- Have students complete questions in worksheet individually or as a small group.
- Refer to GardenNotes #214, Estimating Soil Texture by Feel, figure 4 to try to determine the texture of two to three soils you have provided.

ACTIVITY 2: GARDENNOTES WORKSHEET #252

FREE LIME TEST LAB

Time: 20 minutes

- Pass out vinegar for testing.
- Have students try the free lime test by placing a heaping tablespoon of crumbled dry soil in a cup. Moisten with a few drops of vinegar. If the soil-vinegar mix bubbles, the soil has free lime. This means gardener will not be able to effectively lower pH. (Reference GardenNotes #222)
- Have the students answer the questions on the lab worksheet.



Source: USDA Soil Texture Triangle