SE MN Envirothon 2017

Soils

Soil Station Learning Goals

1. Soil Formation
    A. How the 5 soil forming factors influence soil appearance and properties.
    B. Identify basic soil horizons (O, A, E, B, C).
2. Soil Properties
    A. Soil properties such as texture, structure, and color.
    B. How organic matter affects soil properties.
3. Interpretive Soil Resource Data
    A. Where and how to find soil survey data.
    B. Interpreting soil maps.
4. Soil health and soil erosion
    A. The five principles of soil health.
    B. How tillage and crop rotations affect soil properties
    C. Economic and environmental impact of erosion
    D. Identify basic conservation practices that reduce soil erosion in both agricultural and urban settings.

Suggested Resources

For sections 1-3:

- "From The Surface Down – An Introduction to Soil Surveys For Agronomic Use". Soil Conservation Service. (available from local or State Natural Resources Conservation Service offices and on the web) http://urbanext.illinois.edu/soil/Surface/surdown.pdf

Interpretive Soil Resource Data:

- The Web Soil Survey http://websoilsurvey.nrcs.usda.gov/app/
- Paper copy of soil survey. https://www.nrcs.usda.gov/wps/portal/nrcs/surveylist/soils/survey/state/?stateId=MN

Soil Health:

- https://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/

Soil Conseration:

- https://www.nrcs.usda.gov/wps/portal/nrcs/detail/mn/technical/ecoscience/agronomy/?cid=nrcs142p2_023679
- Section 4 of eFOTG https://efotg.sc.egov.usda.gov/treemenuFS.aspx

Soil Biology:

- http://soils.usda.gov/sqi/concepts/soil_biology/biology.html. From this site, information on soil biology (including a Soil Biology Primer, and Soil Quality) can be obtained. This is an excellent reference.