

AFE / NESFP / NRCS Soils Laboratory
Richardson's Dairy, Dracut, MA
Instructors: Jennifer Hashley and NRCS Staff

Learning Objectives:

- Develop familiarity with soil quality assessment techniques
- Practice field-testing soil quality indicators
- Practice taking a Soil Test and interpreting results
- Observe various tillage implements
- Learn about considerations for on-farm Nutrient Management
- Learn about NESFP Agricultural Resource Library

Agenda for Session:

- I. Introduction to NESFP
- II. Introduction to Massachusetts Soils / Soil Types and Overview of Farm Site
 - a. Hands-on exercise in assessing soil texture / soil physical observations
- III. Assessing Soil Quality
 - a. Introduction to basic indicators of soil quality (soil health)
 - b. Hands-on practice conducting soil quality field tests (based on USDA Soil Quality Assessment Guide)
 - c. Report / Review observations and findings
- IV. Soil Testing & Results Analysis
 - a. Practice taking soil test
 - b. Review samples of previous soils tests and assess recommendations for farmer nutrient / fertility management
- V. Tillage Methods and Impact on Soil Structure
 - a. Observe NESFP soil tillage equipment
 - b. Practice assessing soil moisture levels to determine appropriate tillage scheduling
- VI. Soil Fertility / Nutrient Management
- VII. Overview of NESFP Agricultural Resource Library

Handouts:

- Following three sections from the document **USDA Guidelines for Soil Quality Assessment in Conservation Planning**
 - a) *NRCS Soil Health Card Template* (pg. 35)
 - b) *Best Time for Assessments of Indicators* (pg. 38)
 - c) *Suggested Management Solutions to Soil Quality Problems* (pg. 30)
- ATTRA – *Sustainable Soil Management*
- ATTRA – *Alternative Soil Amendments*
- ATTRA – *Sources of Organic Fertilizers and Amendments*
- The New Farm – *Why Soil Health Matters*

Links:

Guide to Soil Texture by Feel-<http://soils.usda.gov/sqi/files/CTinstructions.pdf>

Soil Quality Assessment for Conservation Planning Farmer Relevance of Soil Quality Indicators-
<http://soils.usda.gov/sqi/files/Assess.pdf> -

Resources for further reading / research:

USDA Web-based Soil Survey: <http://soils.usda.gov/survey/> OR
<http://websoilsurvey.nrcs.usda.gov/app/>

Start with the Soil – Grace Gershuny

The Nature and Properties of Soil – Brady and Weil

NESFP Resource Library Resources:

Compost, Vermicompost - NOFA Handbook

Fertile Soil – A grower’s guide to organic and inorganic fertilizers

Building Better Soils - Fred Magdoff / SAN

Organic Soil Fertility Management – NOFA Handbook

NESFP Videos:

Farmers and Their Weed Control Machines - UVM

Compost – Truth or Consequences

Farmers and Their Innovative Cover-Cropping Strategies - UVM

Soil and Water Management – Educational Television Center Media Services

Building an Organic Soil – NOFA video series