

OJT Training Module Cover Sheet

Title: 1012 Understand the importance of organic matter and soil carbon to soil quality and soil health.

Type: Skill Knowledge

Performance Objective: Trainee will be able to:

- Understand why organic matter deserves special attention within the soil quality area of interest.
- Understand the effects organic matter has on soil.
- Understand the importance of organic matter and soil carbon to NRCS activities.

Target Proficiency:

- Awareness Understanding Perform w/ Supervision
 Apply Independently Proficiency, can teach others

Trainer Preparation:

- Trainer should be familiar with the assigned reading/review material in the lesson plan that follows.
- Be familiar with the soil quality concepts.
- Be familiar with soil carbon and its role in soil quality.
- Be familiar with the concept of “Managing for ‘C’ instead of ‘T’.”
- Be familiar with the Quiz provided to ensure that key learning points addressed are covered during reading and/or discussion.

Special Requirements:

Initiate an external learning request with a SF-182 in Aglearn for this activity. Instructions and a template are located on the training webpages for OJT modules.

Prerequisite Modules:

None

Notes:

None

Authors:

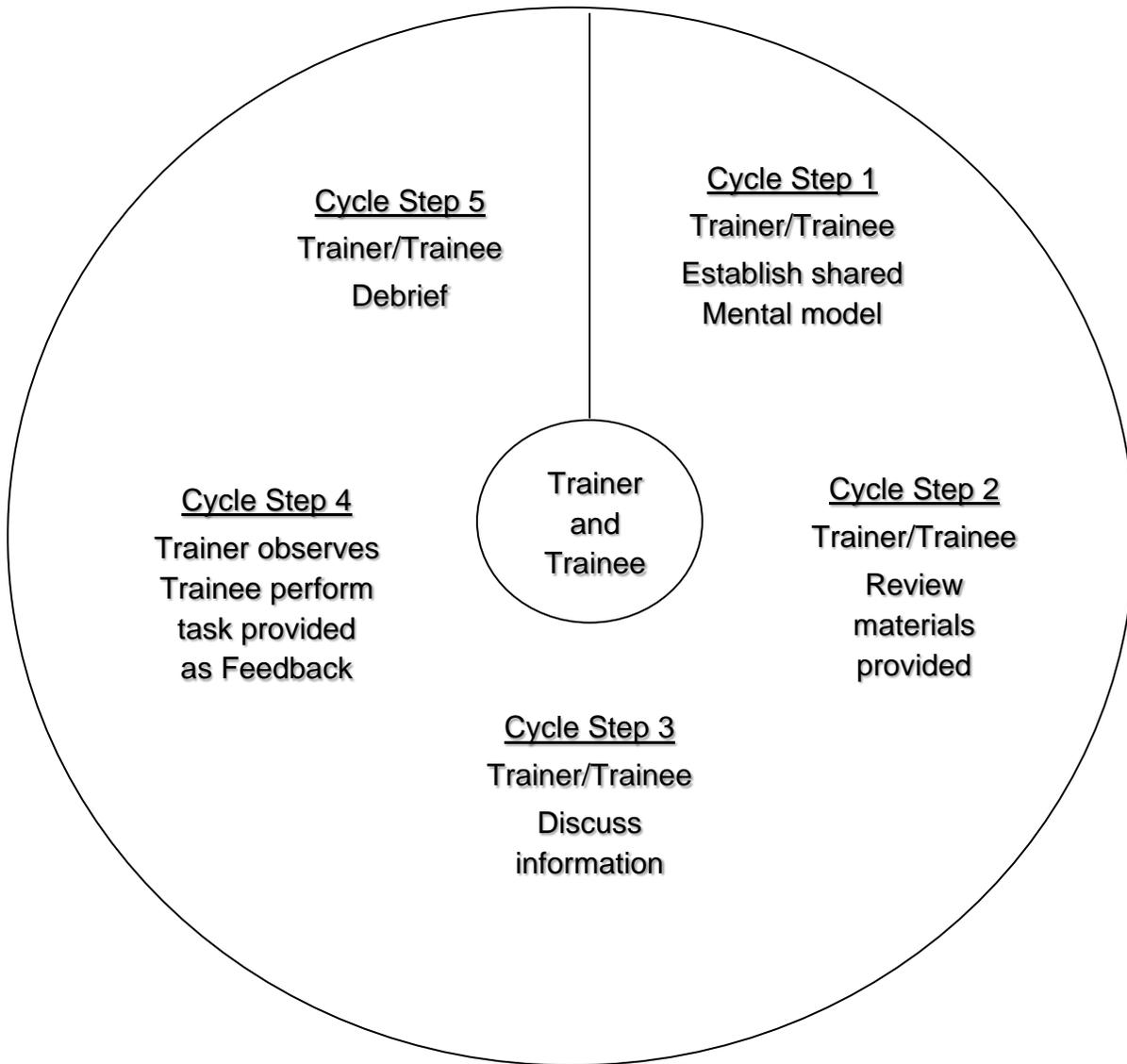
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The Five-Step OJT Cycle for Declarative Training (Knowledge)



OJT Module Lesson

Title: 1012 Understand the importance of organic matter and soil carbon to soil quality and soil health.

WHAT	WHY, WHEN, WHERE, HOW, SAFETY, QUALITY
Cycle step 1	Trainer and Trainee review objectives of the training, agree on what the trainee will be expected to learn and how the trainee should be able to use this knowledge.
Cycle step 2	Trainer and trainee access via the internet and read/review: <ul style="list-style-type: none">• Soil Quality (overview)• The role of Carbon in soil quality• The concept of planning for “C” instead of “T”
Cycle step 3	Trainer and trainee discuss what the trainee has read and/or reviewed. Trainer leads discussions regarding organic matter, soil carbon, and NRCS efforts in relationship to these. Trainer answers questions and addresses concerns of the trainee.
Cycle step 4	Trainer asks trainee specific questions about organic matter and soil carbon and their importance to soil quality and soil health.
Cycle step 5	<ul style="list-style-type: none">• Trainer addresses any questions and concerns expressed by the trainee.• Trainer reinforces reason for the training.• Trainer reviews key points the trainee should have gleaned from the training.

OJT Module Lesson Measurement of Learning

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WHAT	WHY, WHEN, WHERE, HOW, SAFETY, QUALITY
Quiz	Complete the quiz below

SF-182

Trainee and/or supervisor access Aglearn to verify completion of the module via its SF-182.

Quiz

1. Organic matter is that fraction of the soil composed of anything that once lived.
 - a. True
 - b. False
2. Organic matter includes plant and animal remains in various stages of decomposition.
 - a. True
 - b. False
3. Organic matter, in a well-decomposed state, forms "humus."
 - a. True
 - b. False
4. Organic matter provides a carbon energy source for soil microbes.
 - a. True
 - b. False
5. Organic matter stabilizes and holds soil particles together, thus reducing the hazard of erosion.
 - a. True
 - b. False
6. Organic matter aids the growth of crops by improving the soil's ability to store and transmit air and water.
 - a. True
 - b. False
7. Organic matter stores and supplies such nutrients as nitrogen, phosphorus, and sulfur, which are needed for the growth of plants and organisms.
 - a. True
 - b. False
8. Organic matter retains nutrients by providing cation-exchange and anion-exchange capacities.

- a. True
- b. False

9. Organic matter maintains soil in an uncompacted condition with lower bulk density.

- a. True
- b. False

10. Organic matter makes soil more friable, less sticky, and easier to work.

- a. True
- b. False

11. Organic matter retains carbon from the atmosphere and other sources.

- a. True
- b. False

12. Organic matter reduces the negative environmental effects of pesticides, heavy metals, and many other pollutants.

- a. True
- b. False

13. The amount of organic matter in the soil is controlled by a balance between additions of plant and animal materials and losses by decomposition.

- a. True
- b. False

14. Practices that increase the content of organic matter are those that enhance the production of plant materials.

- a. True
- b. False

15. Mold board plowing and other practices that rapidly increase the rate of decomposition of plant material may result in a net loss of organic matter.

- a. True
- b. False