# OJT Training Module Cover Sheet

## Title: 124 How to describe roots in soil.

**Type:**  
- ☑ Skill   
- ☐ Knowledge

**Performance Objective:** Trainee will be able to …  
- Describe and record roots using the *Field Book for Describing and Sampling Soils*.

**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.  
- Have soil samples and field locations with pit, trench, road cut, or auger borings available.  
- Have the *Field Book for Describing and Sampling Soils* available.  
- Have hardcopy of the 232 soil description form or Pedon PC available.

**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:**  
- 101 How to use the *Field Book for Describing and Sampling Soils*.  
- 102 How to fill out a 232 soil description form.

**Notes:**  
None

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**Approved by:**  
Shawn McVey
The Five-Step OJT Cycle for Procedural Training (Skill)

- **Cycle Step 1**: Trainer/Trainee establish shared mental model
- **Cycle Step 2**: Trainer demonstrates task as Trainee observes
- **Cycle Step 3**: Trainer coaches as Trainee performs task
- **Cycle Step 4**: Trainer observes Trainee performs task and gives feedback
- **Cycle Step 5**: Trainer/Trainee debrief
## OJT Module Lesson

**Title:** 124 How to describe roots in soil.

<table>
<thead>
<tr>
<th>WHAT</th>
<th>WHY, WHEN, WHERE, HOW, SAFETY, QUALITY</th>
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</thead>
<tbody>
<tr>
<td><strong>Cycle step 1</strong></td>
<td>Trainee should access via the internet and read Soil Survey Manual, Chapter 3 section on roots. Access hardcopy or via the internet and review material about roots in the Field Book for Describing and Sampling Soils.</td>
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<tr>
<td><strong>Cycle step 2</strong></td>
<td>Do the following:</td>
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<tr>
<td>1. Review what can be recorded according to the Field Book and SSM.</td>
<td>Note that quantity, size, and location are usually recorded. Note that this is done on a vertical plane, recording the average of 3-5 unit areas within that vertical plane. Note that each unit area varies in size with the size class of the roots being considered. Review the SIZE table, first and last columns. Discuss what is typically seen, including cropland, pasture, rangeland, and forestland situations as applicable in the survey area.</td>
</tr>
<tr>
<td>2. Demonstrate how to describe and record roots as they occur in the survey area.</td>
<td>Do this in the field. <em>Create a vertical plane within a horizon.</em> <em>Determine first size class.</em> <em>Determine unit area size to be assessed.</em> <em>Select 3-5 units of that size within the vertical plane created.</em> <em>Record quantity, size, and location.</em> <em>Repeat for each size class observed within the horizon via the vertical plane.</em></td>
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<tr>
<td><strong>Cycle step 3</strong></td>
<td>Coaching the trainee, have the trainee describe and record roots as appropriate in the survey area.</td>
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<tr>
<td><strong>Cycle step 4</strong></td>
<td>Repeat cycle step 3 without coaching. During project activities, assign the trainee the task of describing and recording roots as soil descriptions are completed.</td>
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<tr>
<td><strong>Cycle step 5</strong></td>
<td>Answer any questions. Repeat any steps as necessary.</td>
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OJT Module Lesson Measurement of Learning

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<td>Describe roots routinely during project activities.</td>
<td>During project activities, assign this task to the trainee. Sign off on performance when target proficiency is achieved.</td>
</tr>
</tbody>
</table>

SF-182

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