Sustainable soils education

The Dirt on Dirt: Part 3—Presenter’s Guide

Introduction

Part 3 focuses on specific management practices that can be used to achieve improvements in Soil Quality. The first part discussed some basic principles of soil science. The second segment went into more detail with respect to the sub-disciplines within soil science. Both of these topics should have been presented with a soil quality “bent.” That is, discussion of the information presented in terms of what is considered beneficial or desirable from a soil quality standpoint.

You can approach this segment in two ways. First, you may choose to simply present and discuss the information so that attendees can use as they see fit. A more active way to conduct this session is to have the attendees use this information to actually develop a management plan for their property.

Included with your presentation and curriculum materials you will find a simple soils management plan for an actual farm field. This purpose of providing this plan is so that participants can visualize what a plan might look like. It should be noted that the development of a plan is personal – that being it is for the plan developer / land owner for their own purposes. As such, there is no set format or necessary contents. A plan may include as little or as much as the writer thinks is necessary. As the presenter, you can go over this plan being sure to discuss the parts of the plan (site assessment, goals, management discussion, action plan). You will also find a .pdf file that contains supporting documents for the plan. This includes a soil map from Web Soil Survey, soil test reports for the site, and several characteristic maps generated by Web Soil Survey. You might find these useful for other parts of the series in addition to using them for the plan.

Educational objectives

* Understand how management affects soil quality parameters.
* Set soil quality goals for a piece of property.
* Develop a management plan for improvements to this property.
* Develop a “to do” list of action items with respect to the information presented.

Activities and discussions

Slide 3

Review information presented in the first two parts. Ask the audience what they remember as being important to them. If any out of class activities were assigned or suggested you can debrief on these too.

Slide 4

If you did not go through a soil test report in the last session it is appropriate to do it here. Discuss the recommendations.

Slide 5

Put as much of the information that is available in the attendee’s plans.

Slide 6

Discuss setting soil quality goals for the property. What is desirable, what is achievable?

Slide 7

If pertinent to the audience, you can have BMPs for Nitrogen, Tillage, and other agronomic practices available for discussion.

Slide 8

Develop goals regarding environmental impact for the individual’s land. What are local issues? How will management affect these one way or another?

Slide 10

If drainage is not a relevant topic for the attendees you can skip these three slides.

Slide 12

Participants should identify existing drainage for their site. This, as well as any drainage objectives, should be incorporated into the plans.

Slide 13

Assess any erosion problems that are present. Correcting these should be added to a list of goals for the property.

Slide 24

Assess current tillage practices and determine any necessary changes. It is important for the instructor to have a conversation with the attendees at this point about what is meant by “striking a balance” between tillage and conservation. Assist the attendees in determining what is appropriate for their situation.

Slide 26

Go back to the attendee’s assessment of erosion problems. Ask what they think would work to correct these problems, and discuss.

Slide 33

Use the property management plan provide and/or have other property management plans available to show what approaches may be taken, and what types of action items are necessary. You might consider developing a plan yourself of local relevance, or leading the class through development of a single plan which they can all give input on.

Slide 36

You may choose to spend time developing individual plans. You may also choose to send the participants home to work on a plan and bring them in later to review.

Be sure to conduct an evaluation. It is also desirable to follow up with attendees to see whether they developed a plan, and followed through with action items. You can best communicate the value of your activities if you can quantify economic value, or environmental benefits that are attributable to attendance of this class.

Resources

* Slide 1 – NRCS
* Slide 2 – Gyles Randall, University of Minnesota
* Slide 3 – Ryan Miller, University of Minnesota
* Slide 4 – Brad Carlson, University of Minnesota
* Slide6 – NRCS
* Slide 7 – NRCS
* Slide 10 – Brad Carlson, University of Minnesota
* Slide 11 – Brad Carlson, University of Minnesota
* Slide 12 – Brad Carlson, University of Minnesota
* Slide 13 – Brad Carlson, University of Minnesota
* Slide 14 – Tom Coffman, NRCS
* Slide 15 – NRCS
* Slide 16 – NRCS
* Slide 17 – Brad Carlson, University of Minnesota
* Slide 19 – NRCS
* Slide 20 – Brad Carlson, University of Minnesota
* Slide 21 – Brad Carlson, University of Minnesota
* Slide 22 – Brad Carlson, University of Minnesota
* Slide 23 – Brad Carlson, University of Minnesota
* Slide 24 – Brad Carlson, University of Minnesota
* Slide 25 – NRCS
* Slide 26 – NRCS; Don Breneman, University of Minnesota; Brad Carlson, University of Minnesota
* Slide 27 – NRCS; Brad Carlson, University of Minnesota
* Slide 28 – NRCS
* Slide 29 – Brad Carlson, University of Minnesota; NRCS
* Slide 30 – Jill Sackett, University of Minnesota; Brad Carlson, University of Minnesota; NRCS
* Slide 31 – Dean Lemickson, MN Department of Transportation; NRCS
* Slide 32 – Diane DeWitte, University of Minnesota
* Slide 33 – Brad Carlson, University of Minnesota
* Slide 34 – Tim Arlt, University of Minnesota
* Slide 35 – Brad Carlson, University of Minnesota
* Slide 36 – unknown, University of Minnesota
* Slide 37 – Brad Carlson, University of Minnesota
* Slide 38 – Brad Carlson, University of Minnesota



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