

Maine Soil Quality Assessment Card



Instructions

How to Use the Card

Tools Required

- A shovel, a wire flag, and a pencil!

Soil Quality Assessment

- Select a field for evaluation and record the field and/or farm ID and the date on an assessment sheet.
- Soil erosion, drainage, and infiltration are “whole field” observations and can be recorded via “windshield surveys” during rain events.
- Keep track of your crop’s health throughout the growing season. Pay attention to responses to water stress to assess your soil’s ability to maintain adequate moisture.
- Pick a day when the soil is somewhat moist to examine the soil and record what you see.

- Turn over a shovel full of soil about 6”- 8” deep.
- On the Assessment Sheet, rate each indicator by marking an X or shading out the box that best represents the value for that indicator. Refer to the explanations for ratings of 1,5, and 10 for help in determining your choice. Enter additional observations and comments (such as weather conditions and additional dates of observations) in the space provided for “observations”.

Do this yearly and track progress towards your soil quality goals.

- This card is most effective when filled out by the same user over time and under similar soil moisture levels.
- Using the card in more than one spot per field will improve accuracy.

Other activities, comments, observations

Questions or Comments?
 Contact Lisa Krall, Soil Scientist
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Additional records about this field

Use this space to record planting, tillage, and soil amendments as well as additional activities and observations that are significant. This will help you determine management activities that improve your soil's quality.

Last Soil Sample Taken: / /

Notes:

Crop History

Date	Crop (s)	Comments (seed rate, germination rate, etc.)

Soil Amendments Added

Date	Material	Rate	Comments (application method, weather)

Tillage Operations

Date	Operation	Comments (weather, soil conditions, etc.)

Rotations Planned:

Year	Crop

How to Use the Maine Soil Quality Card:

Tools Required: A shovel and a soil probe, or wire flag

Observe field over a period of time and weather conditions to rate indicators 1 through 5.

- Turn over a shovel full of soil (about 6-8" deep) and rate each indicator (6-10) by making an "X" or shading out the box that best represents the value for that indicator.
- Determine soil compaction by simply pushing the probe or wire flag into undisturbed soil and noting the resistance.

Date: _____ Evaluation by: _____ County: _____ Farm: _____ Field: _____ Crop Rotation: _____
 Tillage System: _____ Soil Moisture Level (check one) Good for planting ___ Too wet for planting ___ Too dry for planting ___

Indicator	Best -----> Worst										Indicator Rating			Observations / Comments
	1	2	3	4	5	6	7	8	9	10	1	5	10	
1. Soil Erosion											Little or no soil erosion	Some visible soil movement	Excessive soil movement	
2. Drainage, Infiltration											No ponding or runoff, water moves through soil steadily. Soils drain and warm quickly in the spring. Limited delays in field operations. Yield reductions only in very wet years.	Water ponds for short periods and/or some runoff occurs. Field may be water-logged after heavy rains, causing minimal yield reduction. Soils drain and warm somewhat slowly in the spring. Some delays in field operations.	Water ponds for long periods of time and evaporates more than it drains. There may be excessive runoff. Soils stay wet for long periods and delay field operations, reducing yields.	
3. Soil Moisture											Soils hold water for long periods of time without ponding. Crop stress rare.	Water runs out after a week or so. Crops occasionally are stressed.	Plant stress two days after a good rain.	
4. Crop Growth											Even stand, vigorous and uniform.	Somewhat uneven stand or somewhat stunted or discolored	Uneven stand or stunted or discolored	
5. Crusting											Soil maintains an open and porous surface all growing season, seedling emergence is not impeded.	Some surface sealing, minimal effect on seedling emergence	Soil surface seals after rain events or tillage. Seedling emergence inhibited. Rain soaks in slowly.	
6. Soil Color (org. matter)											Topsoil clearly defined and darker than the subsoil.	Surface color closer to subsoil color.	Topsoil color similar to subsoil color.	
7. Soil Tilth, Friability											Crumbly, easily worked, breaks apart easily	Some visible crumbly structure, Somewhat cloddy, Somewhat difficult to work, breaks apart with some pressure.	Cloddy, hard, crusty, or difficult to work. Difficult to break apart clods or soil is dust like and blows easily	
8. Soil Structure and stability											Soil aggregates remain intact and easily seen after soil disturbance.	Observable, intact soil aggregates make up less than half of the soil mass after disturbance.	Soil aggregates are not observed after disturbance. Soil is too loose or too cloddy.	
9. Compaction											Probe or flag enters soil easily; unrestricted root penetration	Can push probe or wire flag in soil with force; some restricted root growth	Can not push probe or wire flag into soil severely restricted root growth	
10. Biological Activity / Earthworms											Many signs of animals in the soil, earthworms, holes or casts. Soil has fresh earthy smell	Some living organisms or signs of life in the soil Some earthworms, few holes and casts	Little or no sign or animal life in the soil of animal	
Other														