



NORTHEASTERN ILLINOIS SOIL QUALITY CARD

Developed BY farmers FOR farmers to evaluate soil quality in their fields

INSTRUCTIONS

“Soil Quality” means something different to everyone. One definition is “the capacity of a soil to function, to sustain plant and animal productivity, and to maintain or improve water quality”.

The idea for farmers to periodically assess the quality of their soils started in Montana. Farmers worked with the USDA-Natural Resources Conservation Service and Extension to develop a simple tool to evaluate soil quality in the field. The land users wanted a non-technical way to assess current conditions of their soil and to measure changes as management systems were updated. Upper-Midwest farmers and producers all the way to the east coast followed their example.

More recently, farmers in Northeastern Illinois developed this Soil Quality Card. It can be used to:

- evaluate tillage systems
- detect and improve “problem” spots or fields
- make “base-line” assessments of new ground or for precision agriculture systems
- demonstrate that soil quality can be maintained under current farming practices.

How to Use this Card

The Soil Quality Card is for your own use. By scoring the same site in a field over the years, you will develop a record of how your management system is affecting your soil. The card provides a qualitative, subjective assessment of soil quality. Therefore, the scores do not represent an absolute number and they're typically not comparable with the scores of other producers. Since your evaluation may differ from other producers, this card is most effective when used consistently by the same person over time.

Completing one card takes about 15 minutes. Use one card for each site. Consider using additional cards to score more than one site per field. Although it's not a comprehensive record-keeping tool, the card does include space at the top to record some basic production information such as weather, soil moisture and crops. Each card also has two tables. The first table "Field Characteristics" contains items that rarely need to be evaluated because they change slowly. Check the description closest to your field's condition and record your own observations under the section for Notes.

The second table contains "On-going Indicators" that should be regularly monitored (e.g., annually) to determine if management practices are influencing them. Use a shovel to dig at least 8" deep. For each Indicator, circle the number that best describes your soil this year. Reassess your soil over the next few years and compare the results.

Interpretation

The Soil Quality Card gives you a starting point for systematically evaluating and recording changes in your soils. As the Card is used over time, the impact of different management systems may be seen. In addition to using the card, you may wish to use the NRCS Soil Quality Kit to assess your soils more quantitatively. Contact your county USDA Natural Resource Conservation Service or University of Illinois Extension Office for these tools or for help interpreting your results. Further interpretation and management information may be found at the University of Illinois Soil Quality Initiative web page <http://www.aces.uiuc.edu/~asap/resources/isqi/isqi-resources.html>

This sheet may be duplicated *

FIELD _____ DATE _____

LOCATION _____

SOIL NAME/MAP UNIT _____ TODAY THE SOIL IS: Dry Moist Wet

CROP/PLANTS _____ VARIETIES _____ YIELD _____

FIELD CHARACTERISTICS

Characteristics of the field which need to be checked less frequently. Check the box that best describes your field.

	DESCRIPTION			NOTES
Topography	<input type="checkbox"/> Rolling to hilly	<input type="checkbox"/> Gently rolling	<input type="checkbox"/> Flat, more options for management	
Color	<input type="checkbox"/> Light, low organic mater	<input type="checkbox"/> Some organic matter	<input type="checkbox"/> Dark, high organic matter	
Soil Type	<input type="checkbox"/> Clay, non-porous	<input type="checkbox"/> Loam	<input type="checkbox"/> Sandy, porous	
Drainage	<input type="checkbox"/> Non-porous, poorly drained	<input type="checkbox"/> Moderately drained	<input type="checkbox"/> Porous, well drained	

ON-GOING INDICATORS

Rate the present condition of your soil from poor to preferred. For each indicator, circle the number (on a scale of 1-9) that best describes your soil.

INDICATOR	RATING THE INDICATOR									NOTES	SITE
	Poor			Medium			Preferred				
Fall Compaction	Severe. Root growth restrictions in top layers 1 2 3			Some or few restrictions 4 5 6			Little to none below tillage layer 7 8 9				
Structure	Hard, slabby, aggregates hard to break 1 2 3			Somewhat blocky 4 5 6			Crumbly , loose, mellow 7 8 9				
Earthworms per shovel	0-1 worms 1 2 3			2-10 worms 4 5 6			> 10 worms 7 8 9				
Drainage/ moisture	Ponding prevents crop growth in some years 1 2 3			Wet spots prevent timely work but can be farmed later 4 5 6			Entire field can be worked on same day 7 8 9				
Erodibility	Many gullies 2-4" deep or more, wind erosion, ditches full of soil, crop damage, siltation 1 2 3			Beginning signs of gullies, gullies < 2" 4 5 6			No visible signs of erosion 7 8 9				
Other	1	2	3	4	5	6	7	8	9		

*Additional copies of this Card and help interpreting your results are available from your county USDA Natural Resource Conservation Service or University of Illinois Extension Office or at the following web page: <http://www.aces.uiuc.edu/~asap/resources/isqi/isqi-resources.html#Kits>. Further information may be found at the Illinois Soil Quality Initiative web page <http://www.aces.uiuc.edu/~asap/resources/isqi/isqi.html>