

Recommendations

- Evaluate soil quality periodically (about every 3 years) to document changes.
- Periodic assessments in a field should be done by the same person and under similar soil moisture conditions.
- Assessments are qualitative and do not represent absolute measures.
- For better assessments, check several spots per field.
- Examine the distribution of indicator values. Even if most of the indicators are scored 10 (healthy), the soil may still have serious problems.
- Careful consideration should be used to identify the cause of the problem(s).
- Impaired properties may need immediate action and should be closely monitored.
- Keep completed Soil Quality Cards on file for future reference.
- For more information on soil quality, contact your local USDA Natural Resources Conservation Service office, county agent, agribusiness, or visit the GCTA web site at gcta-ga.org

(Revised October 2002)

Soil Quality Card for Georgia



A locally adapted tool designed by farmers for farmers

Developed by:



What is Soil Quality?

The terms ***“soil quality”*** and ***“soil health”*** are used interchangeably.

There are many definitions of soil quality, but basically, it is the ability of the soil to:

1. Absorb and hold water
2. Support plant and animal life
3. Act as an environmental buffer

Soil quality is very important to all people. Healthy soil absorbs and holds more water, and has better physical, chemical, and biological properties. If we have good soil quality, we will have productive land, good water quality, good air quality, and a healthy environment.

How to Improve Soil Quality

Management greatly affects soil quality. Farmers throughout Georgia are increasing the amount of soil organic matter in their land and improving the soil's quality by following some basic agronomic principles. They are:

1. Use soil tests, nutrient management, pest management, crop rotations, etc.
2. Leave adequate amounts of crop residue on the soil surface each year (at least 2 to 4 tons/acre/year).
3. Use cover crops, especially on fields where low residue producing crops such as cotton, peanuts, soybeans, tobacco, and vegetables are grown.

4. Eliminate all tillage, even light disking.

5. Practice continuous long-term conservation tillage.

Also, talk with other conservation tillage farmers. They can give you some ideas on how they are changing the quality of their land. And join the Georgia Conservation Tillage Alliance, Inc., a farmer to farmer exchange of ideas and information.

About this Card

The ***Soil Quality Card for Georgia*** is a locally designed and adapted field tool. It was developed by Georgia farmers in partnership with the Georgia Conservation Tillage Alliance, Inc. (GCTA) and the USDA Natural Resources Conservation Service.

It was developed for farmer use in evaluating changes in soil quality as affected by field management.

Regular use of the ***Card*** allows you to record long-term improvements in soil quality on different fields and with various farming and management systems.

In addition to farmers, the ***Card*** can also be used by agricultural support professionals such as soil conservationists, soil scientists, county agents, crop advisers, consultants, and agribusiness representatives.

Educators, students, garden clubs, and others may also find the ***Card*** useful.

How to Use the Georgia Soil Quality Card:

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

- Turn over a shovel full of soil (about 6-8" deep) and rate each indicator 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	Observations	Preferred ^{1/}										Indicator Values			
		1	2	3	4	5	6	7	8	9	10	1	5	10	
1. Crop Growth													Uneven stand; stunted crop growth; discoloring common	Some uneven stand; stunted growth; slight discoloring	Even stand; vigorous & uniform crop growth
2. Soil Erosion													Excessive soil movement by water and or wind	Some visible soil movement by water and or wind	Little or no soil erosion by water and or wind
3. Soil pH ^{2/}													pH 1.0 lower than needed	pH 0.5 lower than needed	Proper pH for the crop(s)
4. Soil Fertility ^{2/}													More than 2 elements not within UGA recommendations	Two elements not within UGA recommendations	All elements within UGA recommendations
5. Surface Soil Color													White, light gray, or red	Dark gray or light brown	Dark brown or black
6. Soil Tilth/Structure													Cloddy; hard; crusty; Difficult to work	Some visible crumbly structure	Crumbly; mellow or loamy and easily worked
7. Water Infiltration/ Water Holding Capacity													Excessive runoff; ponding; or very low water holding capacity	Some runoff; some ponding; or poor water holding capacity	Very little runoff /ponding; Good water holding
8. Biological Activity													Little or no sign or animal life in the soil	Some living organisms or signs of animal activity in the soil	Numerous signs of animal life in the soil
9. Compaction/Crusting													Can not push probe or wire flag into soil; crusting is prevalent	Can push probe or wire flag in soil with force; some soil crusting	Probe or flag enters soil easily; no soil crusting
10. Crop Residue (right after planting)													0-30% of soil surface is covered with crop residue	50-70% of soil surface is covered with crop residue	>70% soil surface covered with crop residue
11. Winter Cover Crop													No living or dead cover on the soil surface	50-90% of soil surface covered by cover crop or winter weeds	>90% of soil surface covered with cover crop
12. Soil Organic Matter ^{2/}													<1% in the top 1/2 inch soil	1-2% in the top 1/2 inch of soil	>2% in the top 1/2 inch
13. Other Indicator(s)															

^{1/}Ratings 1 to 10 are comparative and are determined by the user.

^{2/}Lab analysis is needed.

Make your soil as good as it can be. Leave your soil in better shape than you found it for future generations.