

Get To Know Your Soil

One of the most important things a homeowner can do is check the pH of their soil. A home pH test can be purchased at a local garden center, or a soil test kit can be requested from a local Rutgers Cooperative Research & Extension county office. A soil pH test and complete soil test allows a homeowner to determine the proper amounts of lime and fertilizer to apply to their lawn.

The United States Department of Agriculture, Natural Resources Conservation Service assisted in creating a Web Soil Survey which allows the public to produce a customized soil survey for an area of interest.

To access the **Web Soil Survey**, please visit:
<http://websoilsurvey.nrcs.usda.gov/app/>

Downer- New Jersey State Soil

Downer soils are used mostly as woodland. The natural vegetation consists of mixed oaks, hickory, and scattered pines. Some areas are cultivated for high-value vegetable and fruit crops that are usually irrigated. Downer soils occur on 291,319 acres in New Jersey. These soils are dominantly in the eleven counties of southern New Jersey. They have medium natural fertility and require fertilization for maximum crop production.

The Downer series was established in Gloucester County, NJ in 1960.



Information about Downer Soils was taken from a document prepared by the United States Department of Agriculture - Natural Resources Conservation Service.
http://soils.usda.gov/gallery/state_soils/

For more detailed information about the soil types found in Gloucester County, please refer to the Web Soil Survey. If you require further information, please contact your local Soil Conservation District.

Soil Conservation Districts in New Jersey

BERGEN

700 Kinderkamack Road, Suite 106
Oradell, NJ 07649
201-261-4407
<http://www.bergenscd.org>

BURLINGTON

Tiffany Square, Suite 100
1289 Route 38
Hainesport 08036
609-267-7410
<http://bscd.org/>

CAMDEN

423 Commerce Lane, Suite 1
W. Berlin 08091
856-767-6299
www.camdenscd.org

CAPE-ATLANTIC

Atlantic County Office Building
6260 Old Harding Highway
Mays Landing 08330
609-625-3144
<http://capeatlantic.org/>

CUMBERLAND/Salem

PO Box 68, Route 77
Deerfield 08313
856-451-2422
<http://cumberland-soil.deeweb.com/>

FREEHOLD

(Monmouth & Middlesex)
4000 Kozloski Road
PO Box 5033
Freehold 07728
732-683-8500
www.freeholdscd.org

GLOUCESTER

14 Parke Place
Sewell, NJ 08080
856-589-5250
www.gloucesterscd.org

HUDSON, ESSEX & PASSAIC

15 Bloomfield Avenue
North Caldwell 07006
973-364-0786
hepscd@bellatlantic.net

HUNTERDON

687 Pittstown Road, Suite 1
Frenchtown, NJ 08825
908-7889466
hcsd@att.net

MERCER

508 Hughes Drive
Hamilton Square 08690
609-586-9603
<http://mercercsd.org/>

MORRIS

Court House, PO Box 900
Morristown 07960
560 W. Hanover Avenue,
Morris Township
973-285-2953
www.mcsd.org

OCEAN

714 Lacey Road
Forked River 08731
609-971-7002
www.ocscd.org

SOMERSET-UNION

Somerset County 4-H Center
308 Milltown Road
Bridgewater 08807
908-526-2701
thurlow@co.somerset.nj.us

SUSSEX

186 Halsey Rd, Suite 2
Newton 07860
973-579-5074
<http://home.earthlink.net/~sussexscd2/>

WARREN

224 Stiger Street
Hackettstown 07840
908-852-2579
<http://warrencountyscd.org/>

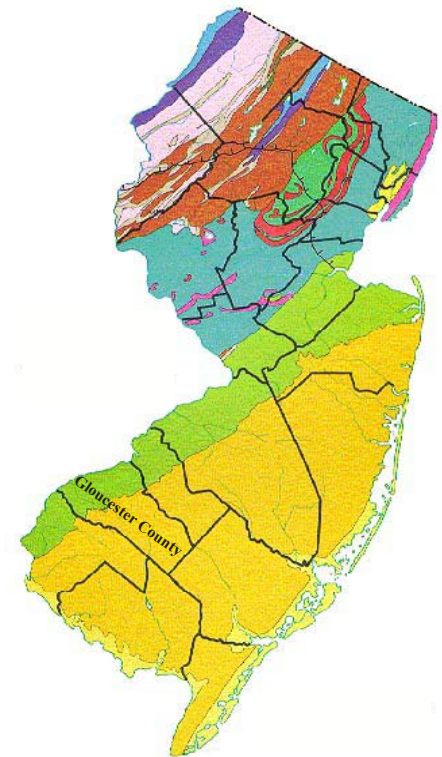
State Soil Conservation Committee

New Jersey Department of Ag.
PO Box 330, Trenton, New Jersey
08625
609-292-5540
www.state.nj.us/agriculture/rural/natrsrc.htm

Gloucester County Soil Conservation District

Soils Guide

Gloucester County



Gloucester Soil Conservation District

14 Parke Place Blvd. Ste. C
Sewell, NJ 08080
Phone: 856-589-5250
Fax: 856-256-0488
www.gloucesterscd.org

Soil - What Is It?

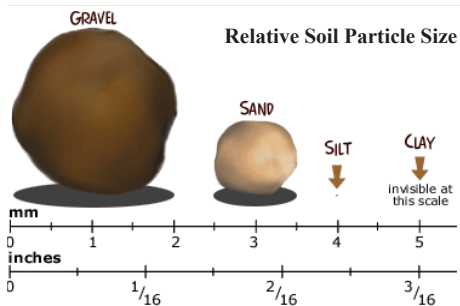
Understanding soil characteristics is an important aspect of lawn and garden maintenance. Knowing what soil types are present, allows a homeowner to determine the proper amount of fertilizer and water needed to maintain a healthy lawn and garden.

Soil is a mixture of mineral particles (sand, silt, clay, gravel, stones), water, air, and organic matter or humus. Soils are formed by the parent material in a given area. Parent material is the bedrock, which over time, breaks down into smaller pieces (sand, silt, clay, or gravel, depending on the composition of the parent material) as a result of weathering. Organic matter mixes in with the broken up pieces of the parent material to form soil.

The quantity of sand, silt, and clay particles found in a soil sample, determines soil texture.

Particle	Size	Texture
Sand	Largest .05-2mm	Coarse, gritty
Silt	Small .002 to .05mm	Smooth
Clay	Flat <.002mm	Sticky when wet

Water and air occupy pore spaces between mineral particles. Pore spaces are essential to the life of soil organisms, provide water and air to plants' roots, and aid in soil productivity.



Clay Soils

Clay soils are composed of microscopic mineral particles. These tiny, flat particles fit closely together, limiting pore space between particles for air and water. Wet clay soils dry out slowly due to the slow drainage of water. Clay particles are well supplied with nutrients, and the slow drainage prevents loss of those nutrients by leaching.

Sandy Soils

Soils in Gloucester County are predominately sandy soils because there is a greater number of sand particles present. These soils have comparatively large particles that are round in shape. The particle size and shape allow for abundant pore spaces between particles, which hold larger amounts of air and do not hold water well. As a result, sandy soils have excellent drainage, warm quickly, but also dry out quickly. Frequent watering is necessary, but this washes out valuable nutrients. As a result, sandy soils require large and regular amounts of lime to maintain optimum health.

Loam Soils

Loam soils are between the extremes of clay and sand. Their mineral composition is a mixture of sand, silt, and clay particles. The characteristics of loam soils are midway between those of clay and sand. Loam is the "ideal" soil, draining well but not drying out too quickly, and having enough soil air for healthy root growth. (see soil texture triangle, right)

Organic Matter

Organic matter is vital to the fertility of all soils, especially to sand and clay. Organic matter is the decaying remains of once living plants and animals. Gardeners add organic matter to their soil to improve or maintain the soil's texture, provide nutrients to plants, and to encourage healthy root growth. Organic matter added into soil will improve aeration and drainage of clay soils. In sandy soils, organic matter helps to hold water and can supply much needed nutrients to plants.

Humus

Organic matter includes such items as ground bark, peat moss, leaf mold, sawdust and wood shavings, manure, compost, and many other plant remains. Soil bacteria and other organisms work to break down the organic matter, forming humus. Humus is the soft material that helps bind together minute clay particles into a larger mass. This improves aeration and drainage. Humus will also fill in pore spaces in sandy soils to help hold in water and nutrients.

