



SOIL IN JACKSON COUNTY IMPORTANCE AND AMENDMENTS

The Importance of Soil Health

Productivity

Soil is the building block to productivity of vegetation: from forests, to flowers, to crops. Without healthy soils, productivity will diminish, and plants won't receive their needed nutrients.

Water retention

Healthy soils retain the right amount of water needed for healthy vegetation and drainage needs. Unhealthy soils either hold either too much or too little water.

Erosion concerns

Soils in poor health can erode and degrade slopes, banks, and even endanger infrastructure. Poor soil structure doesn't properly hold together, and therefore erosion occurs. This erosion can also create severe sedimentation concerns, posing serious water quality risks to streams and rivers.

Soil Types in Jackson County

There are hundreds of soil types in Jackson County. Such types include the following textures (in various combinations):

- Clay
- Silt
- Sand
- Loam
- Other complexes with Cobble, Gravel, Stone, and Rock Outcrop.

In order to improve the health of your soil, you need to determine your soil type.

How to Test Soil by Hand

Feel test

Rub moist soil between your fingertips. Sand will feel gritty, silt will be smooth, and clay will be sticky.

Ribbon Test

Moisten soil with some water to a putty-like consistency and make a soil ribbon, or rolled strand, using your fingers. Sand will not form a ribbon, silt will form a weak ribbon, and clay will form a long, strong ribbon.



Mason Jar Test

Use this test to determine your soil's percentage of sand, silt, and clay:

1. Collect a sample of soil from the desired area.
You will want enough to fill the jar about 1/2 full.
2. Fill the jar with water, leaving enough room to shake to mix.
3. Tighten lid and shake vigorously for a few minutes.
4. Leave the jar to settle out for several hours or overnight.

SOIL AMENDMENTS

- Return to your jar and measure the full height of the settled soil (it should now appear in layers).
- Measure each consecutive layer of your soil's components. The soil sample will have settled out into layers of silt, clay, and sand.
- Calculate the % of each component by dividing each smaller height, by the total height, and multiplying by 100. These numbers will be the approximate percent of each component.

Infiltration Test

Use this test to determine your soil's infiltration rate:

- Dig a hole in the soil of question, one foot deep, measuring with a ruler.
- Fill hole with water, allowing it to drain a couple times.
- Pour the water once more, timing the water and measuring the depth
- The time it takes to drain the depth of the hole, is the rate (inches/hour)

How to Research Soil Type

In addition to hand testing, you can look up your soil type using the website called Web Soil Survey. This website accesses the Jackson County Soil survey, which includes survey data conducted by USDA. Data included in your personalized soil report includes the soil profile, drainage class, depth to water table, frequency of flooding, and common vegetation.

Soil Amendments

Once you determine your soil type and needs for your landscape, you can then determine the soil amendments needed.

- Clay soils can be amended with compost and peat moss
- Sandy soils can be amended with humus, peat moss, and manure
- Silt soils can be amended with compost, aged manure, or straw



The soil triangle, showing percentages of sand, silt, clay, and loam.

Resources

[Web Soil Survey](#) – zoom in on any area in Jackson County to determine soil type. Utilizes data from the Jackson County Soil Survey.

[Jackson County Soil Survey](#) – survey conducted by United States Department of Agriculture. Soil Survey data is accessed by the Web Soil Survey. Look up soil profile, drainage class, depth to water table and frequency of flooding, common vegetation, among others.