

FACTS ABOUT SOIL FOR THE HOME LANDSCAPER

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Soil is a term that means different things to different people. To an engineer it is a media on which to put a road or a building. To a parent it is the material that gets the kids clothes dirty. To a person interested in plants it is the substance we use to keep plants alive and growing. At first glance this black or brown stuff we often call dirt seems to be nothing special but in reality it consists of many things.

Soil is made of:

1. Mineral material - sand, silt and clay
2. Organic matter
partially decayed plants and animals
3. Animal and plant life
4. It has a structure
structure is how the soil particles hold together
granular, blocky, loose, etc.
5. It has air and water spaces
this is called porosity
6. It has texture
texture is the feel of the soil
determined by the amount of sand, silt and clay

By volume good natural occurring soil should be:

- 50% air pore spaces - of which 50% are large air spaces and 50% are smaller water spaces
- 45% minerals - the largest being sand, medium size being silt and the smallest being clay
- 5% organic matter

The texture of the soil is the feel of the soil. It is determined by the different percents of sand silt and clay. It determines many things about how the soil will behave.

Clay soils

1. These are soils that have a high percent of clay
2. They have high percent of small pore spaces giving them a high water holding capacity water.
3. They are slow to warm up in the spring.
4. Should not be worked when they are wet.
5. Have a low percent of large air spaces meaning have poor aeration.
6. Addition of organic matter is the best way to modify this type of soil to make it suitable growing media. Organic matter helps separate the soil particles and creates good soil structure.

Silty soils

1. These are the prized garden soils like silt loam or loam

2. They usually have the best aeration, water holding capacity and available nutrients.
3. Provide a good environment for the soil plants and animals
4. Have the best balance of pore spaces

Sandy soils

1. These are the coarser type of soils
2. Have low water holding capacity
3. Tend to dry out rapidly
4. Addition of organic matter increase the water holding capacity and improves the structure of the soil.

How soil can be purchased

Field run

1. This is the cheapest way soil can be purchased
2. The soil is scraped of the source and delivered to the site as is.
3. This is the type that can be seen advertised in the paper delivered at \$5-\$10 per yard.

Screened

1. This is a soil that has been run through a screening machine to remove unwanted material.
2. The nature of the soil will depend entirely on the type of soil from the area where it was taken.
3. A little more costly than field run but well worth the extra expense

Blended Soils

1. This is topsoil that is blended with organic matter or sand in varying percents depending on the company.
2. This is one of the more expensive soils but is well the money especially for garden situations
3. Some blends are called special blends and may have two or more amendments added.

Organic soils

1. These are very dark black or brown soils that are dug out of swamps or old lake bottoms.
2. They are very high in organic matter
3. They tend to dry out very fast and almost blow away

How much soil is needed

If you have ever read on a box of cereal or potato chips "This product is sold by weight not by volume and some settling may have occurred in shipping". This is the opposite of soil, it is sold by volume not by weight. The measurement of this volume - a cubic yard - is not a real precise things. The loader will scoop from a pile or bin a bucket full of soil. The bucket may be a 1/2-yard to a yard or bigger bucket. He than dumps the soil into the truck or trailer. The number of buckets he uses will be determined by the

amount needed divided by the bucket size. Some scoops may be a little more and some may be a little less. In transit and dumping the soil will become compacted making the amount seem less.

Most of the initial cost of the soil is delivery.

Making one-yard loads very expensive and 4 yard loads a little cheaper.

1 cubic yard = 27 cubic feet

22 bushels to a cubic yard

1 bushel = approximately 1.25 cubic feet

1 - 5 gal pail = around .75 cubic feet or a little more than 1/2 bushel