

It Starts with The Soil

ALL NEIL DIBOLL ARTICLES ARE
CONDENSED FROM PRAIRIE NURSERY CATALOG

Soils can be divided into three basic classifications: sands, loams, and clays. There is great variation within these basic groups, but these categories will suffice for the purpose of describing where a given plant will grow.

Sandy soils, referred to as *light* soils, contain large-sized soil particles that are loose and easy to work. They allow water to drain readily, and tend to be low in nutrients. Sandy soils tend to be more acidic than the more fertile loams and clays. If your soil's pH is below 5, consider adding lime or wood ashes to raise the pH to 6 or 7.

Clay soils are known as *heavy* soils. Consisting of small, tightly packed soil particles, clays tend to be dense and hard to work. They're generally rich in nutrients, have a high water-holding capacity, and can be very productive.

Loamy soils are *intermediate*—between sands and clays. Composed of different-sized particles, they combine fertility and moisture-

holding capacity with good drainage. Easier to work than clays, better consolidated than sands, loamy soils are an excellent growing medium.

Dig into your soil when it's dry. A sandy soil will seldom exhibit clods. Any clods that do form will crumble easily. A loamy soil will have clods that can be sliced cleanly with a shovel. Clay soils tend to form hard, persistent clods. Rather than slicing through them, a shovel will get stuck or will shatter the clod into many hard, little blocks of soil. If you're in doubt, take a soil sample to your local county extension agent or soils lab.

If you have a sand or clay soil and wish to improve it, add large quantities of organic matter. Compost and dead leaves are excellent. Do not use sawdust or wood chips. These require a long time to break down and rob the soil of nitrogen. Avoid uncomposted manure. It contains large numbers of weed seeds.

Another method of improving poor soils is to plant a *green manure crop*, such as buckwheat or winter wheat. These crops improve the soil by bringing up nutrients from the lower soil and converting them into organic plant matter. The crop is plowed under while actively growing to incorporate the roots and leaves into the soil.

Clay soils with low levels of organic matter can be difficult to work. The fine soil particles pack together tightly, impeding drainage and air exchange. In the heat of summer, clay soils harden and prevent downward root growth. Clay soils warm up slower in spring and compact if worked when wet. Each of these problems will retard root development and plant growth.

There are many plants that can grow in clay soils. With good initial care, these flowers and grasses will flourish even on difficult sites. Their roots will gradually work their way down into the clay, opening and improving it, just as these plants have done for thousands of years.

Soil moisture is equally important in deciding what species to plant. **Moist soils** have a generous amount of water in the subsoil throughout the growing season. They may have periods of standing water in the spring or fall.

Dry soils include sandy and gravelly soils that drain readily and never have standing water, even after a heavy rain.

Mesic (medium) soils include well-drained loams and clays. These soils may have standing water for short periods after a hard rain. *za*

"We are of
the soil
and the
soil is
of us."
—Luther
Standing
Bear

COMPOSTING

Composting vegetative waste speeds the natural process whereby organic material is returned to the soil to add fertility. Aged compost can be worked into the soil at planting time or added as a surface mulch any time. Alternately layer combinations of as many of these items as you have available...

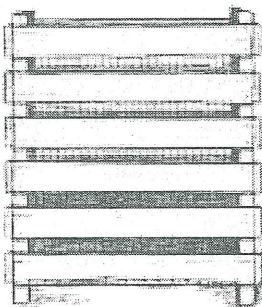
Green waste: Kitchen wastes (avoid dairy, meat or synthetic products), grass clippings.

Brown waste: Shredded leaves, sawdust (not from treated wood), straw, uncolored paper products.

Topsoil: It stocks your compost with the organisms needed for decomposition.

Manure: Fresh or aged, but no pet wastes.

Keep the pile moist by watering or covering it to retain moisture. Good air circulation is necessary, so sides of the



bin need to 'breathe.' Once the pile reaches about 4 feet cubed, start a new pile. Turning the pile with a pitchfork from time to time will speed the process, which will take anywhere from three to 18 months. You have humus when the material is dark and crumbly, bearing no resemblance to the original components, and has a fresh, earthy smell.