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So What IS Sustainable Gardening?

by Dorothy M. Downing, UC Master Gardener

One of the goals of the Tulare/Kings Master Gardeners is to educate the community about sustainable gardening/landscaping. It's a term that we are hearing more and more frequently, but just what does it mean? Generally, sustainability means the ability to continue indefinitely without external inputs. But how does that relate to gardening?

Sustainable gardening is gardening in an environmentally friendly way. It is a garden that thrives naturally with a minimum input of water, labor, fertilizer and pesticides. How you maintain your garden or landscape can have important positive or negative effects on the quality of the soil, air, water and vegetation that we all use. Sustainable landscape practices are gardening techniques that not only save you money by saving energy, water, and time, but will also help to improve environmental quality. Here are some sustainable gardening practices that will help you conserve and protect our natural resources.

Soil. Soil is one of the most important components of a sustainable garden. A desirable soil characteristic is good drainage, which allows rainwater to penetrate and prevents excess runoff, sedimentation, erosion, and flooding. Soils that drain well also help clean, store, and recharge groundwater. By storing water and by slowing the delivery of water to plants, you are conserving water and improving the environment.

The type of soil you have — sand, clay, or loam — influences how fast water penetrates before running off, how often plants will need to be watered, and how much water you'll need to apply with each irrigation. Observe what happens to your soil when you wet it.

Sandy soils are very porous and water penetrates through them quickly without puddling. Compared with plants growing in clay soils, those in sandy soils need water more often, but you don't need to apply as much. Excess water just flows beyond the root zone and is unavailable to plant roots.

Clay soils are very dense and water infiltrates more slowly than in sandy soils. When water is applied too quickly, it puddles or runs off before being absorbed. Clay soils are slow to dry out and the air channels are filled with water. Plants grown in them are particularly at risk of diseases and other problems that result from not enough oxygen near the roots because of saturation. Stretch the time between watering so soils can partially dry. Apply water slowly so it doesn't run off before it can be absorbed to a depth that is usable by roots.

Loam soils absorb water easily without heavy puddling or runoff. They are a blend of sand, silt, and clay soil particles. You can recognize a loam soil by picking up a moist handful; when you let go, it holds together but falls apart easily with some gentle prodding.

Most garden soils are a mixture of sand, clay and loam. Identify what predominates in your soil and adjust your watering accordingly. You can add organic soil amendments to increase the nutrients and beneficial microorganisms and improve soil structure. Soil amendments improve porosity in clay soils and improve water holding capacity in sandy soils. When you add organic matter to the soil, be sure to work it into the entire garden bed, not just the planting holes.

Plant Material. The goal of sustainable gardening is to create a garden that is well adapted to your site, so select plants that are compatible with your garden's soil condition. If there's a commonly accepted catchphrase of sustainable gardening it's this: the right plant in the right place.

When you choose plants for your garden, be sure to select plants that are not invasive here and are adapted to our climate zone (local natives and plants from other Mediterranean climates). Plants that are well-suited to our weather will grow well with low water usage. Native plants are better for the environment than exotic plants, generally requiring less fertilizer and other additives, less water, and less effort in pest control. They are especially important to our native wildlife.

Even the most drought-tolerant plants typically require careful watering during their first year, and sometimes longer. They need time to establish root structure. So don't assume a plant is drought-tolerant until at least its second full season. This is especially true of any plant placed in the ground in the spring, which is one of the reasons fall planting is usually best-it gives the plant more time to get established before experiencing the stress of a hot summer.

There are plenty of sustainable plants to choose from — ones that require no spraying, no synthetic fertilizer, little or no supplemental watering and little or no fussing by the gardener at all. They're earth-friendly and gardener-friendly plants, so what's not to love? Look for UC Arboretum All-Stars plants at http://arboretum.ucdavis.edu/arboretum_all_stars.aspx

If you already have invasive species of plants in your garden such as Ivy, Vinca major, Pampas grass, Giant Reed, Tree of Heaven or others known to be invasive, take action and replace those species with adapted non-invasive species. Plant-Right has a listing of alternative plants which are non-invasive and garden-adapted. Check out Plant-Right at http://www.plantright.org.

Next week I will discuss the remaining practices characteristic of sustainable gardening: Composting and Mulching, Watering, and Integrated Pest Management.

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