High on the Desert Cochise County Master Gardener Newsletter

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The University of Arizona and U.S. Department of Agriculture Cooperating

What is Xeriscape?

Xeriscape, a creative landscaping program which is very popular in the SW and Pacific Coast States, comes from the word "xeros," the Greek word for "dry," but the look of a Xeriscape can be lush and colorful. A Xeriscape yard can provide shade, beauty, and color, and save you water, money, and time.

To Xeriscape, apply the seven basic landscape principals:

1. Start with a plan. Put higher water use plants close to the house and group plants, shrubs, and trees according to their water needs.
2. Limit turf areas. Use grass where it provides functional or recreational benefits.
3. Install an efficient irrigation system. Consider drip irrigation systems.
4. Harvest rain water.
5. Improve the soil. Decomposed organic mulches provide plant nutrition and improve water absorption. Cover the soil—it minimizes evaporation and reduces weed growth.
6. Use low water plants. Visit your local nurseries for assistance.
7. Remember appropriate maintenance. Careful pruning, weeding, and watering will increase your water savings.

The Master Gardeners and *Water Wise* wish to thank the four families that shared their Xeriscape gardens for the May garden tour. The tour was very well attended and gave the public a good idea of what can be accomplished with a Xeriscaped garden. Watch for the next garden tour the first Saturday in September.

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Penstemons

What exciting flowers penstemons are. Everyone was commenting on the abundant growth of penstemons along Buffalo Soldier Trail last month. Those were *Penstemon parryi*, native to the Arizona desert. Some penstemons, as well as most native plants, are protected by the Arizona Department of Agriculture. Most native plants cannot be removed without permission from the land owner and a permit from the Department of Agriculture.

Another name for penstemon is Beardtongue. The genus name means five stamens, however you'll see only four as the fifth has lost its anther and has a bunch of hairs near the tip. There are over 275 species of penstemon. They are native to the Western United States and Canada, and can be found in almost every environment from mountains to deserts to plains. They have tubular flowers just right for hummingbirds. Flowers range in color from shades of blue with some a deep purple, many reds, and even white. They do best in full sun with little water. Penstemons need very little care. They like well drained soil—not enriched. Mulching can cause diseases to develop. They are susceptible to powdery mildew.

Penstemons are perennials, but short lived, usually only three to four years. Do not deadhead the plants. Allow the seeds to sprout as they will replace the parent plant, or they can be transplanted to other parts of the garden.

Before planting be sure to find out the future size of the plant—its height and width. This information did not come with my first penstemon nor with the lavender plant I bought at the same time. I thought that three feet of space between the plants would be sufficient. However, both plants have over a three foot diameter which means they are crowding each other, and the penstemon is losing.

If you really want to learn more about penstemons join the Penstemon Society. Included in membership is a choice of fifteen free penstemon seeds from the seed exchange. Write to Penstemon Society, Ann Bartlett, 1569 S. Holland, Lakewood, Colorado 80232 for more information.

Karen Devine
Master Gardener Trainee

Harvesting Time!!!

From June through October, Southeastern Arizona boasts the state's largest assortment of direct-sales farms, offering nuts, vegetables, honeys, jellies, vinegars, salsas, baked goods, meats and much more, depending on the harvest time for the year.

For a free *Fresh Farm Produce* brochure that includes a map, harvest calendar, and a list of all the farms, send a self-addressed stamped business envelope to: Willcox Chamber of Commerce and Agriculture, Produce Brochure, 1500 N. Circle Rd. Willcox, AZ 85643.

While visiting the farms in the Willcox area you might plan to take in some of the other attractions in the area. For information, contact the Willcox Chamber of Commerce and Agriculture at **willcoxchamber@vtc.net** or by telephone at (800) 200-2272. Their web site is **www.willcoxchamber.com**

Robert E. Call
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Carolyn Gruenhagen
Editor

Cuttings 'N' Clippings

❄ The next regular meeting of Cochise County Master Gardeners Association is 5:00 p.m. May 5, 2004 in Room 106 at of the University of Arizona South campus. De Lewis, Master Gardener will talk about planting in your garden.

❄ Saturday, June 5 from 9:00—10:30 a.m. a free *Water Wise* Workshop will be held at the University of Arizona South called ***Ay, Caliche! And Other Soils,*** with Sandy Kunzer, Geologist, and Betsy Kunzer, Physical Scientist.

The Virtual Gardener—Root Camp I

This month I will begin discussing how to turn your plant recruits into healthy, happy garden warriors through root training. This time I will cover the basic functions of plant roots, and over the next few months I will continue this topic with a discussions of how to pick plants with healthy roots at the nursery, how to properly install the plants once you've brought them home, and finally how to train your newly installed plants to grow a healthy root system.

Most plants have two parts, the part we see that sticks out of the ground, and the part we don't see that is (usually) buried in the ground. The part that grows above the ground—stems, trunks, branches, leaves, flowers, and fruit—is all many people seem to care about. Too often the roots—the parts we can't see—are ignored, and as we shall see, that is a mistake.

A plant is a tiny chemical factory. Like any factory it takes in raw materials, uses energy to process them, and produces some products. The raw materials are water, atmospheric gasses, and soil minerals; the energy used to process them comes from the sun; and the final products include sugars, starches, cellulous, proteins, fats, and other constituents of the plant. So what part do roots play in this process? Let's see.

One important function of the roots is to provide the foundation for the plant. Without strong, well-anchored roots holding them to the soil, plants cannot stand upright. We've all seen examples of poorly rooted trees that have fallen over or been uprooted in a windstorm. Taproots that grow straight down make the plant very resistant to being pushed over. Shallow fibrous roots growing outward grip the soil tightly and make the plant resistant to uprooting.

Besides holding the plant up, roots also conduct the mining operations that extract raw materials from the soil and make them available to the processing system. To do this, the roots tunnel into the soil, branching and rebranching throughout a large area. The ends of the smallest branches are covered with tiny root hairs that absorb water, gasses, and dissolved minerals from the soil. These raw materials then pass back up through the system of roots and stems to the chemical laboratories in the solar collectors (leaves) where they are transformed to the final products using the energy of the sun. Some of the final products are used to construct the above ground parts of the plant and some travel back down to the roots to nourish them and allow them to continue to grow.

Contrary to popular opinion, most of the root mass lies at fairly shallow depths in the soil. The bulk of the roots for even large plants, like trees, are usually found less than five feet below the surface. This allows them to efficiently collect rainwater and breathe in oxygen and other atmospheric gasses that are present at shallow depths in the soil.

So, all this theory is heady stuff, but how can it help us grow better plants? Tune in next month to find out. If you would like to learn more about the functions of roots, point your browser at **http://plantphys.info/Plant_Biology/roots.html**. This Web page is part of the syllabus for a college-level course on plant physiology taught by Professor Ross Koning of Eastern Connecticut State University. In addition to information about plant roots, Professor Koning's site contains lecture notes and laboratory exercises for a broad range botany courses.

Until next time. Happy surfing.

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June Reminders

- Check tree ties
- Remove stakes if tree can stand alone
- Mulch trees & shrubs
- Remove faded flowers & fertilize roses
- Stake tomato plants and watch for curly top—remove
- Prevent blossom end rot by even watering
- Water! Water! Water!

Call Before You Dig

Before starting any project that requires digging underground, you must contact the Arizona Blue Stake Center. This is a free service provided by your local utilities. Within two working days of your call, each utility will come to your property and mark the location of its lines so you can dig safely. Arizona law requires utility line location before digging. So play it safe and call before you dig!

1-800-782-5348

Call's Comments . . .

If the onions you planted last fall are starting to develop seed heads you should harvest them. Harvesting is normally done when about 25% of the onion tops are drying down or 1 to 5% of the plants have flower heads forming. Bend over the remaining leaves by stepping on them or a second alternative is to mow them off. This is done so that root growth will be minimized which aids in harvesting. Bulbs are usually dug after a week or 10 days while the onions are left in the ground curing. However, if rains are coming, dig the onions as soon as possible to decrease possible rot of the bulbs. After digging place bulbs in mesh sacks, boxes, or spread out to allow them to dry. Discard any diseased or damaged bulbs.

Robert E. Call
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