



# THE YOLO GARDENER

A QUARTERLY PUBLICATION BY THE U.C. YOLO COUNTY MASTER GARDENERS

Spring 2009

## Gardening for Change

Steve Radesovich, Yolo County Master Gardener

You really have to look hard to find good news these days. The economy is tanking worldwide, and California is leading the way with foreclosures, rising unemployment, huge deficits, and a political system unable to tackle our budget problems. Our shrinking fresh water supplies threaten native fish, force farmers to leave fields fallow and homeowners to ration residential water. Global climate change has brought record temperatures and deadly fires to one part of Australia and torrential rain and flooding to others. Worst of all you can't even soothe your psyche by safely munching on your favorite peanut butter chocolate snack.

So how can you, Joe or Jill the gardener, do something positive to address these worldwide problems? The first and best thing you can do is to get off the couch, away from the next bad news, and into the garden. Gardening saves money, benefits the environment as well as your neighborhood, offers healthy physical exercise, and can serve as a needed distraction from the world's woes.

**Grow your own food** – Fresh home grown food saves money and tastes better. By planting your own food you can select vegetable varieties not easily found at the

market. Furthermore, by sharing all those extra zucchinis and tomatoes with friends and neighbors, you strengthen community ties and make your neighborhood a better and healthier place to live.

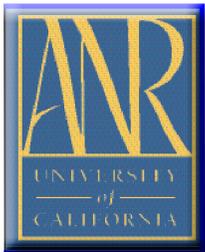
- \* Grow your own food
- \* Become a locavore
- \* Plant trees
- \* Consider lawn alternatives
- \* Water Wisely
- \* Decrease your use of gas powered gardening equipment

**Become a locavore** – Eat food that you grow yourself, or food produced locally by shopping at farmers's markets or roadside farm stands. Get to know the people who grow your food and how they grow it. Support public community gardens where people without gardening space can grow their own food. By eating food grown locally you can help decrease the energy required to ship food from more distant locations.

**Plant trees** – Deciduous shade trees planted on the south side of your home save you money on air conditioning costs and bring summer comfort to your yard and neighborhood. Mature trees in your landscape

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blunt depreciation by increasing property values, and at the same time absorb greenhouse gases, slowing down global warming.

**Consider lawn alternatives** – Irrigation of residential landscapes accounts for more than one half of suburban water use, and a lawn is often the single largest user of water in the home landscape. By using more California native plants as well as plants from similar Mediterranean climates you can reduce water use. A more diverse plant selection also provides a richer wildlife habitat.

**Water wisely** – Determine water needs of different landscape areas and the best application methods. Use a water timer to avoid over watering. Water early in the morning and mulch bare soil to slow down evaporation.

**Decrease your use of gas powered gardening equipment** – Although gas powered mowers, edgers, blowers, hedgers, shredders, and rototillers all may make yard work quicker and easier, they are also noisy and create a significant amount of air pollution. Consider using electric or battery powered equipment. Or better yet, leave the power tools in the garage more often and get additional exercise with hand tools.

From your own back yard you can locally address these state, national and global problems as you enjoy the economic and health benefits of gardening. Yes, you can!

## And The Winner Is...

Jan Bower, Yolo County Master Gardener

While there is much ado about the Academy of Motion Picture Arts and Sciences awards, plants are also given their annual Oscars for excellence. Here are some exciting examples for 2009.

**Best Herb:** There isn't a chef who wouldn't agree that the use of herbs plays an important role in cooking. Fresh herbs are also important for healthy living. Thus one of the most popular annual garden awards is Herb of the Year presented in the first week of May, prior to Mother's Day, during National Herb Week by the International Herb Association (IHA). This annual competition has been going on since 1995.

To celebrate each year's selected herb, some cities sponsor festivals and the IHA and Herb Society of America publish a book to educate the public on growing and using the herb. Selection for Herb of the Year is based on being outstanding in two of three major categories: culinary, medicinal and decorative. The herb selected for 2009 is the Bay Laurel (*Laurus nobilis*), popularly known as Bay Leaf. It is one of a trio of herbs that compose

the classic *bouquet garni* and is used as a staple in most kitchens for flavoring soups, stews, sauces and roasts. It also has bug repellent properties. In its native Mediterranean



Bay Laurel

habitat, it was used medicinally to treat plagues, muscle sprains, ear aches and hysteria. Culturally, it had the reputation of protecting people against natural disasters, especially

lightening strikes, and in ancient Greece and Rome, laurel wreaths were worn by poets, scholars, athletes, soldiers and emperors to symbolize victory or accomplishment (thus, the terms "Poet Laureate" and "Baccalaureate"). In California's mild climate, the bay laurel grows as an

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ornamental evergreen shrub or tree with sturdy, waxy leaves, but it can also be an attractive plant for containers.

**Best Perennial:** Members of the Perennial Plant Association picked the *Hakonechloa macra* 'Aureola' for its



*Hakonechloa macra* 'Aureola'

2009 Perennial Plant of the Year. This is not a popularity contest, but rather a vote for the most reliably grown perennial plant of the year. *Hakonechloa* is a deciduous ornamental grass used mainly in landscapes for its golden foliage,

although it does produce tiny, inconspicuous flower spikes from late summer through mid-autumn. This grass is noted for its movement in breezes, offering a cascading or an undulating behavior, like a waterfall. Its leaves are one-half inch wide and bright yellow with narrow green stripes that flush red and pink in the fall. It is particularly attractive when planted where it will cascade down slopes, drape over rocks or crawl over the edges of a wall. The species is native to Honshu Island, Japan, where it is known as Japanese Forest or Hakone Grass. The slow-growing plant is 18 to 24 inches tall and wide at maturity, has few insect or disease problems and is considered low maintenance and easy to propagate. It is one of the few ornamental grasses that tolerate partial shade.

**Best Roses:** The All-America Rose Selections (AARS)

has picked three new and exceptional roses for the landscape: Carefree Spirit (shrub rose), Pink Promise (hybrid tea) and Cinco de Mayo (floribunda). The 2009 winners result from a two-year rigorous testing program in a network of 23 official nationwide gardens that represent all climate zones. The roses were judged on everything from disease resistance to flower production, color and fragrance. Carefree Pink is the first rose



*Carefree Spirit* (shrub rose)

winner in AARS's 70-year history to flourish without the use of fungicide sprays in the trial period in the test gardens.

**Best Rhododendrons:** Twenty-seven rhododendrons selected for their adaptability in eight regions of the U.S. have been awarded Rhododendron of the Year honors for 2009. Plants chosen for the Northwest include Elepidote Rhododendron 'Fantastica,' Lepidote Rhododendron *augustinii*, Evergreen Azalea 'Balsaminiflorum' and Deciduous Azalea *R. occidentale*.

**Best Annual:** Each year the National Garden Bureau, a nonprofit organization that disseminates information on flowers and vegetables grown from seed, selects one flowering plant to showcase based on its desirable characteristics. To be considered, the plant must be easily grown from seed, widely adaptable, genetically diverse and versatile as an ornamental plant. This year's choice is *Nicotiana* or flowering tobacco – a flowering annual that has brightly colored, trumpet-shaped blooms that attract butterflies and hummingbirds.



*Nicotiana*

It grows best in full sun and well-drained soil but will tolerate light shade. *Nicotiana* was introduced into gardens in the U.S. in the early 1800s, but fell out of favor because the plants were so statuesque, reaching up to five feet in height. Newer hybrids are more compact and stay around 12 to 18 inches tall, making them much more versatile in the garden. The semi-dwarf 'Nicki' series produces red, white, rose or lime-green flowers.

**Best Seeds:** All America Selections was created in 1932 to test and promote new garden seed varieties, some of which turn out to be All Stars. AAS picked four seed winners for 2009: Viola 'Rain Blue and Purple' (Johnny Jump-up), Eggplant 'Gretel,' Melon 'Lambkin' (Christmas melon) and Squash 'Honey Bear' (acorn squash). The winners were tested by a network of independent horticultural professionals at trial ground locations across North America and their garden performances were evaluated as superior to all other flowers and vegetables grown from seed. The judges looked for significantly improved qualities, such as earliness to bloom or harvest, disease or pest tolerance, novel colors or flavors, novel flower forms, total yield, length of flowering or harvest and overall performance.

## Seeds of Imagination

Gwen Oliver, Yolo County Master Gardener

Now is the perfect time to get a jump on your summer flowers and vegetables by starting them from seed. A multitude of seed catalogs, as well as the racks of seed packets in the nurseries, seduce us with beautiful, colorful pictures of luscious fruits, vegetables and flowers.

Gardening should be a source of pleasure and not frustration, so start by selecting seeds that thrive in our Mediterranean climate with dry summers and temperatures reaching the 90's and 100's. Next, consider the sun exposure needs of the plants you are selecting, and assess your yard for the sun exposure it will have from May/June through August/September. What areas get sun, is it in the morning or afternoon, and for how many hours in the day? Where is there shade, and how deep or dappled is it?. Quite often an area will be sunny through spring until the neighbor's trees leaf out and cast the area into deep shade.

You can buy pots, 6-packs, or peat pellets, but I advocate recycling what you already have. Those plastic microwave containers that you cooked your entrée in work beautifully for starting seeds. Gallon milk jugs, cut in half around the circumference are also great starter containers. Punch a few holes in the bottom for drainage. The large, lidded plastic containers that strawberries and grapes come in are also perfect.

Your potting medium can be any good draining soil. Wet the soil with water and pack it into your container up to about a ½" from the top, then level the soil with a board, a popsicle stick, or even a standard dinner knife. Read the back of the package to determine what depth to plant the seed. A good rule of thumb is no deeper than the seed is thick. Scatter the seeds on top, cover with soil, press down

lightly with your hand, and cover with a clear plastic lid. Plastic wrap, the kind you use for food storage in your refrigerator works well, as does placing the entire pot in a plastic bag. Covering your pot with a plastic lid, plastic wrap or putting it in a plastic bag helps to keep the soil moist, but not soggy. Seeds can be killed quite easily if allowed to dry out during germination. When the seedlings emerge and germination is well underway, remove the cover. Seeds will germinate between 65° -75° F. Do not place your seed containers in direct sunlight

After germination, seedlings must receive bright (but not intense direct) light in order for the true leaves to form. (The first set of leaves, cotyledons, are not true leaves.) If a bright window isn't available, fluorescent lights will work well. Place the light source 6" from the seedlings and keep the lights on for 14 to 16 hours/day. Obviously as the seedlings grow, the light source needs to be raised or the platform the containers are on will need to be lowered.

The winter blahs have hit me, and thumbing through gardening catalogs, or perusing the racks of seed packets at the nursery gives me hope. I dream in color and texture, of flowers and vegetables growing bountifully in my yard as I sit on my sunny deck admiring my handiwork. It is easy to get lost in the warmth and beauty, and before I know it, my order form is complete and in the mail. Seduced by the pictures in my mind, I have purchased a very large number of seed packets. Of course when they arrive in the mail, or as I spread them out on the table after coming home for the nursery, I am overwhelmed, and immediately ask myself, "What was I thinking?!"



Seeds  
photo by Gwen Oliver

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1) Take some time to actually think about what you want to plant. Come back in a couple of days after you've had a chance to look at your garden. I can guarantee you'll be happier with your purchases, and your wallet will be happier too! Winter is a great time to evaluate your garden as nature has stripped away the leaves and your eye is not distracted by the infusion of color that the other seasons bring. When you take time to assess, you will get specific ideas of color, texture and fullness needed in your garden beds.

2) Before you buy, read, read, read. Consult a garden guide appropriate for your area, go on line, or consult an expert. Determine if what you want to buy will grow in your climate. Will this plant match the light and water requirements of its neighbors? If the description states "vigorous, spreads quickly" make sure you have the room. This may be exactly what you want for a ground cover, but it may not work in between other plants where your intent was to have something to compliment them, something that will not compete for space. "Naturalizes" also should make you pause and realize that this is a plant that will probably spread and self-sow easily.

Your seedlings may need to be transplanted or "potted up" before you move them outdoors. The earliest for transplanting the seedlings from the tray they are in to a deeper pot is when the second set of leaves appear. Using a good, well-draining potting mixture, carefully remove the seedling with a spoon and plant into the deeper pot.

The whole process of hardening is to gradually transition the young plants from a protected environment to the environment where they will finally be planted. As the seedling matures, you'll be able to gradually move it outside, to an area with shade, filtered light, or morning sunshine for short periods of time. If it is a windy day, these tender plants will need protection from the wind and you may have to bring them back indoors. Over about a 2 week period, you'll gradually get them adjusted to their new home in your garden.

Congratulations. You have successfully started your seeds and now you can enjoy these young plants as they mature, fill in your garden beds and produce flowers and vegetables for you and your family.

Questions about your garden?  
We'd love to help!

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## To Raise or Not to Raise – That is the Question

*Peggy Smith, Yolo County Master Gardener*



*Redwood Raised Bed*  
photo by Jim Fowler

**R**aised bed gardening simply means growing your ornamentals, herbs, fruits or vegetables above the natural level of the ground. Many materials such as wood, bricks, stone or any of the commercial landscape edging materials such as Trex®, concrete block or recycled plastic bender board are available to build a simple raised bed. The benefits of raised beds can also be created without edging by simply using the methods of raised bed gardening on a designated area of soil.

### *What are the benefits of raised beds for vegetable or ornamental plantings?*

1. Raised beds are useful if you have a limited space in your garden. Containers can be used on sunny patios to produce favorite flowers, vegetables or herbs.
2. By raising the soil level to a more comfortable height the strain of bending or kneeling can be reduced, a great advantage for older or physically challenged gardeners.
3. The quality of the soil is improved by constructing a raised bed. Problems of heavy clay, too sandy or heavily compacted soil can be remedied with a raised bed. In an urban setting the topsoil is often buried or scraped away during construction of a suburban environment.
4. Plants can be placed closer together because the soil can be amended to improve root penetration and aeration.
5. The drainage of the soil is improved thus reducing the prevalence of many plant diseases that thrive in a poorly drained soil.
6. The soil is less compacted by creating beds that can be reached easily from designated pathways for planting and maintenance.
7. As a design element, a raised bed can add interest and vertical space to a garden.



*Half Barrel Raised Bed*  
photo by Peg Smith

### *Planning a Raised Bed*

1. Decide the function of the raised bed. What are you going to grow?
2. Study the sun exposure of your garden and place the bed to meet the needs of the plants you wish to grow. Maximize the sun for annual vegetables and full sun loving ornamentals. Find a shady spot for shade loving ornamentals.
3. Use a hose, water soluble marking paint, sand or cut a groove in the soil to outline and visualize your bed shape and size. For ornamentals irregular shapes add interest to a garden. Consider long, flowing curves if the bed will need to be mowed around. For vegetable plantings a rectangle or square is a more practical and easy to care for shape.
4. Check for easy access to water.

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5. Decide if you need to build a formal edging for the bed and select the edging material that suits your overall garden “feel”.

### ***Constructing a Raised Bed***

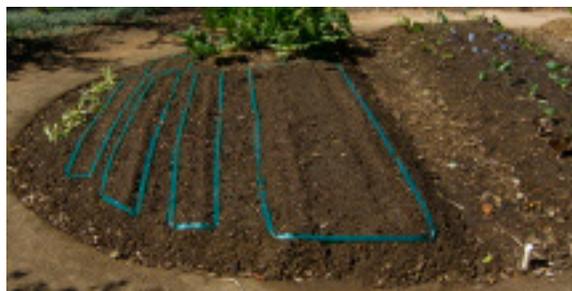
The ideal size for a raised vegetable bed is about 48” wide. Most gardeners can reach into the center of a 48” wide bed comfortably. Design the width for your own reaching, bending and kneeling capabilities. If your bed is up against a wall or fence about 36” is a more accessible width. The width of the pathway is dependent on an individual’s physical needs. If you will be kneeling to access the bed, measure from your knee to your foot. This should be the minimum path width as it will allow you to kneel without twisting as you work the bed. Similarly consider if you will be using a “scooter” or bench to garden, and size the path to allow for comfortable access without strain.

1. Finalize the perimeter shape of the bed. Clear all roots and debris from the outlined site.
2. Install the desired edging. There are many ways of securing your raised bed framework together. Lag bolts or screws are commonly used. Metal or wooden stakes can be used to anchor the raised bed frame. Many garden supply catalogues have commercially available “stacking corners” that allow the construction of more complex angles than 90’. A raised bed can be as simple or as complex as you need. See photos for a simple wooden construction.
3. Level the sides as you construct the perimeter for ease of irrigation and drainage.

### ***Improving the Soil***

Taking the time to prepare the soil well as you construct the bed, though time consuming and requiring a little muscle, will pay great dividends in drainage and yield. If you need to, ask a friendly neighbor to help prepare the soil. Once well-prepared, a raised bed requires much less digging maintenance. Inside the perimeter of your raised bed use the “double digging” technique.

1. Dig across the narrowest edge of the bed removing the soil down about six to eight inches. Place the soil in a wheelbarrow and save.
2. Add whatever soil amendment materials you have such as humus, compost, worm castings, peat moss to the soil and work in thoroughly. Each approximate shovelful of our local clay soil can easily accommodate a shovelful of well decomposed compost or humus. If you are adding sand to heavy clay soil you need to add at a rate of two shovelfuls of sand to one of clay. (N.B. Use the brown/tan “felt” sand. Do not use the gray “fill” sand.)
3. Dig the next row of soil down to approximately six to eight inches turn this on top of the previously dug row. Add humus etc to the exposed soil of the second row then dig the next row again turning the soil on top of the previous row. Continue this process until reaching the end of the bed.
4. Place the soil saved from the first row on top of the last row.
5. Then dig the length of the whole bed adding humus etc to the top layer.
6. Rake and level the soil then water. Assess the drainage of the bed. The soil will settle from the watering



*Mounded Raised Bed*  
photo by Peg Smith

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*Stone Raised Bed*  
photo by Peg Smith

and you will be able to judge if additional soil needs to be added to reach a satisfactory depth for the bed.

### ***Irrigation***

Raised beds can be hand watered or drip irrigated. Conventional irrigation system spray sprinklers encourage weeds in the paths and are water wasteful. When designing and installing the layout for drip irrigation consider grouping together plants with similar requirements for water needs.

### ***Planting***

Place larger plants so that they do not shade smaller plants. If the bed is against a wall or fence place taller plants or perennials to the back then group low growing annuals to the front so they are within easy reach when it is time to replace them. Allow adequate room for plant growth. Most plant labels give a clear indication of size and spread.

### ***Mulching***

Applying mulch to a depth of about 3" reduces watering needs by reducing the evaporation rate of water from the soil. Mulch keeps the plant roots cool in hot summers and will suppress weed growth. Mulching material such as bark is available at most gardening outlets.

### ***Maintenance***

1. Water regularly and evenly depending on the individual plant needs. For example deep soak tomatoes once or twice a week depending on how fast the soil dries out. Water shallow rooted annuals such as radish, lettuce etc more frequently. A raised bed should not be soggy with water.
2. Maintain a good layer of mulch.
3. Rake back the mulch then top-dress the bed with compost or slow release fertilizer in the spring and fall, then replace the mulch.
4. Control weeds on a regular basis.
5. Watch for seasonal insect pests and diseases. To control insect pests and diseases use the least toxic methods of control by using Integrated Pest Management techniques.
6. For vegetable beds rotate the crop plantings seasonally. For example do not plant tomatoes in the same bed each year.

A simple, well-constructed, well-prepared raised bed will provide a healthy growing medium, requiring a minimum of maintenance for any garden design.

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## Best Bang for Your Buck

*Or how to buy plants for the yard and not break the bank*

Laura Cameron, Yolo County Master Gardener

Most gardeners encounter a certain amount of sticker shock whenever they decide to add plants to the yard. Alternatives abound, from highway strip shopping (best done in the dead of night, but the selection is quite boring) to boutique nurseries. I have never been convinced that highway strip shopping is appropriate, but boutiques can be pricey. Below are a myriad of other ideas that are more practical than either.

The first rule of thumb is having an idea of what you want for your yard before starting out. As the saying goes, don't go the grocery store hungry. Don't head into the nursery without a plan, an idea, a color scheme, something that you can focus on.

Shop Wholesale/Retail Nurseries. They generally have better prices.

Buy the one gallon versus the five gallon – The roots are healthier in the one gallon can.

If you are covering a lot of ground buy plants that will get big and bushy. Ex: One Artemesia Powis Castle will beautifully fill a 4' x 6 area.

Forgo annuals, buy perennials only.

Start from seed.

Save and collect seeds for planting next year.

Cuttings.

Know what you are buying –Society Garlic multiplies rapidly, buy one pot and in a year you will have a lot to divide and replant. Same thing happens with Lamb's ears and many other plants. Be careful, you don't want something that self sows

easily and will take over your yard. You might end up with a yard full of borage.

Buy plants that are native to the area or work well in your zone

Don't buy a \$5 plant that needs \$20 worth of amendments to live.

Incorporate vegetables in your garden, randomly – food and beauty.

Buy fruit trees bare root.

Plant 3-4 different fruit trees with similar needs (water, sun, fertilizer...) in a tight grouping and keep bush size. Plenty of fruit for the family, including enough for canning and sharing.

Buy healthy plants.

Buy 3-4" pots – in two years my 3" pot covered a 3' x 4' spot in the yard.

Count how many plants are in pot. Back to Society Garlic – 2-4-3-5, buy the one with 5 and you have a head start.

Have an exchange plan with friends and neighbors.

Share your bulbs. They need dividing every few years.

Go shopping with a friend; buy the 1 gallon pot with 4 little plants and you each get two plants.

Buy what appeals to you, what you love.

Appreciate and want every plant you bring home.

These are only a few ways to get more *bang for your buck*. What other ideas do you have?

\$\$ \$



## Oxalis: Flower, Snack or Weed?

*Patt Tauzer Pavao, Yolo County Master Gardener*



*Grandgirls gathering oxalis*  
photo by Patt Tauzer Pavao

Tumbling through the “sourweed,” on a sunny spring day, my brothers, sisters, and I loved chewing on the stems that grew in almost every corner of our old farmhouse yard. More recently, my grandgirls have discovered the same joys. Plus, the three of them will spend hours gathering the largest bouquets their little hands can manage. When they visit in March or April, every vase or jar we can find is filled with the perky yellow flowers that have pestered me out in the yard nearly every day since the rains started in November.

I now know that what we so fondly called “sourweed” is better known as the highly invasive Bermuda buttercup or *Oxalis*, and it is a plant with which I have a very complicated relationship. Flower, snack, or weed? that is the underlying question. If the plants would stay in the corners or along the fence line, I wouldn’t mind, but that is not to be. The heart-shaped “clover” springs up everywhere. This year I have even found it in bare spots in the lawn, in my somewhat passive compost pile, and among the roses awaiting their winter pruning.

I am not sure where this rash of *Oxalis* originated. I didn’t plant it. However, many people do. It is often grown as an ornamental by people who don’t realize its invasive tendencies -- once it is planted it will spread throughout every uncultivated corner of the garden. Spreading into the lawn is unusual because mowing is one of the ways to reduce its invasiveness, but it can happen!

With its bright yellow flowers and shamrock-type leaves, the plant itself is rather pretty, especially when growing in large areas. It grows in the sun when the weather is cool, and in the shade when it is hot. Usually most of mine thrives until the warm weather hits, and then it is gone...at least above ground. Underneath the surface is a different story.

Bermuda buttercup spreads from tiny bulbs that hide easily in the soil and are very hard to eradicate. Cultivating the soil spreads them, so tilling is about the worse thing a gardener can do to the infested area. And moving infested soil to any other area definitely will make matters worse. However, by mowing the plants before they bloom, pulling the rest out by hand, and then sifting the soil to remove all the bulbs, a vigilant gardener might be able to stay on top of an invasion. But this definitely is not a one-time treatment! Getting on top of *Oxalis* calls for a crusade of repeated cutting, digging, and sifting.

Recently a fellow gardener suggested I torch the plants by arcing over them with a propane torch. Supposedly, a quick pass cuts off oxygen to the plant and kills it. Since I harbor visions of a fence catching fire, the house burning down, and the pandemonium of sirens as firefighters rush to my rescue, I haven’t tried that yet. I have tried spraying the plants with vinegar but to no avail.

A gardener who is serious about having a yard free of *Oxalis* might want to solarize the infested soil before cultivating it for other uses. This process, which takes about 4 weeks, is best done in the summer months. (see <http://www.ipm.ucdavis.edu/PMG/PESTNOTES/pn74145.html> *Soil Solarization for Gardens and Landscapes*)

However, if you are like me, you might guard the rose garden and the vegetable patch, let the buttercup have the fences and back corners, and learn to love the plant for happy-go-lucky nature. For more information, refer to ” <http://www.ipm.ucdavis.edu/PMG/PESTNOTES/pn7444.html> “Creeping Woodsorrel and Bermuda Buttercup.”

## Rototilling: Friend or Foe

Stuart Pettygrove, Cooperative Extension Soils Specialist  
and Willa Pettygrove, Yolo County Master Gardener



Is it progress when scientific findings confirm something that seems obvious? A recent study from Alabama<sup>1</sup> suggests the tried and true from Grandpa's day may merit a second look.

Master Gardeners helped researchers at Auburn University to investigate the impact of different garden tillage methods on soil. In simplest terms, the research compared manual double digging with power tilling and other mechanized methods.

The double dig method, explained at the web site <http://communitycrops.org/doubledig>, is a preferred method for many home gardeners to correct soil problems such as compaction. In contrast, the use of a tiller (with tines mounted either in front of or behind the drive wheels) may actually worsen these problems.

Double digging is hard work, but doesn't result in the same impacts on the soil. Mechanized tilling methods transfer energy into the soil: "the faster the tines of a tiller rotate, the more energy is transferred into the soil just beneath the tines." The effect of energy transfer in this case is compaction. In the worst case, as with soils subjected to regular plowing, a layer that is impervious to root growth, and even water, may form. Using one person walking on soil as a baseline (6 pounds/square inch), Auburn researchers estimated that a garden rototiller could transfer over a hundred times as much energy to the soil (107 to 750 pounds/square inch). The effects of tilling may be especially pronounced in sandy soils. The expected differences were not as evident for "deeper, finer textured, loamy soil with adequate rainfall."

The results of this research are not conclusive, but are interesting. They suggest that repeated cultivation with a large tiller (5 horsepower in the case of this study) may contribute to damage to soil structure, especially in sandy soils. The occasional use of a smaller, lightweight tiller might not create the same problems. Double digging, if one is able, can help to correct problems associated with mechanized tilling practices.

As a final note, the implications of research in Alabama for Yolo County gardeners are open to question. The presence of very different soil types, and the consistent use of irrigation, could make a big difference in research results if a study were undertaken here.

C.C. Mitchell, C.B. Pinkston, A. Caylor, and C.B. Elkins, Auburn University and USDA-ARS Soil Dynamic Laboratory, Auburn AL. <http://www.nacaa.com/journal/2008/Mitchell%20Paper-tillagesdh.pdf>.

### Double Digging Procedure for Deep Soil Preparation

1. Measure the area you want to double-dig, marking the corners with pegs. The beds should be 1.5 m wide, and can be as long as you want. Lay out beds across (perpendicular to) the slope if the ground is not level.
2. Spread several wheelbarrows of compost or animal manure on the area you have measured out. Cover the soil completely with a layer at least 5-8 cm (2-3 inches) deep.
3. Dig a narrow trench, about 30 cm (1 foot) wide, and about 30 cm (1 foot) deep (generally until you can see the subsoil). Set aside the topsoil you have dug out; you will need it later.
4. Using the digging fork, loosen the subsoil along the bottom of your first trench to a depth of another 30 cm (1 foot).
5. Now turn a strip of topsoil 30 cm (1 foot) wide and deep into the first trench, mixing in the compost or manure, filling the first trench completely and forming a second trench next to it.
6. Loosen the subsoil below the second trench, as in step 4.
7. Repeat this process until you reach to the end of your measured bed. You will notice that the level of the topsoil has been raised up from all the organic material being incorporated, as well as through breaking up the subsoil.

\*excerpt from *Sustainable Agriculture Extension Manual*



# Spring Gardening Tips

Linda Parsons, Yolo County Master Gardener

Spring ushers in an exciting time for gardeners as they prepare for their garden to re-awaken from its winter rest. It can be overwhelming as you attempt to ready your garden for the burst of growth and activity that comes with warmer and longer days. The following tips will help you prioritize your garden activities.

## SPRING CLEANING

Although March brings breezes loud and blustery, this is the time to get out into the garden for spring-cleaning.

- Examine trees and shrubs for winter damage. Prune damaged foliage and branches.
- If you haven't pruned your roses and fruit trees, this is the last month to ready them for their spring bloom.
- Do not prune early flowering rhododendrons, magnolias, camellias, azaleas, viburnum and forsythia. It is best to prune them after the blossoms are spent or wait until early fall.
- Apply the final application of dormant spray to all fruit trees before the buds swell. Roses need to be sprayed to prevent over-wintering insects and fungal spores.
- Weeds are starting to sprout, so take care of them before they take over.
- Once your spring bulbs have finished blooming, dead head (remove blossom ends. Don't remove the leaves until they turn yellow. This will help the bulbs store energy for next spring's bloom. If they are unsightly, braid them or fold them over and secure with twine until you remove them in late spring.



## FERTILIZING, COMPOSTING AND MULCHING

Your plants are hungry. Begin to lightly cultivate your perennial garden, being careful not to dig too close to your plants. Loosen the soil as soon as it is not too wet to work.

- Add soil amendments, such as compost, peat moss and organic fertilizer.
- Roses and fruit trees need special attention now. In addition to organic rose food and soil amendments, I add a cup of alfalfa pellets and two tablespoons of Epsom salt to each rose plant. These help the rose to produce more basal breaks (new growth) and more chlorophyll.
- Be sure to use fertilizer that is recommend for each plant type. In particular, too much nitrogen will make the plant grow too quickly, producing growth which will not be as sturdy and which is more susceptible to sucking insects.
- Resume your feeding schedule for your lawn and fruit trees.
- Fertilize spring blooming plants, such as camellias and azaleas after they bloom. Repeat for the next three months.
- Fertilize your houseplants.
- Mulch your garden to a depth of 3 inches. The reward will be fewer weeds and less watering in the months ahead.

## PLANTING

- Your perennial plants need attention now. Remove any old growth. Dig and divide crowded perennial plants.
- If you want early blooming annuals, plant candytuft, pansies, violas, dianthus, Iceland poppies and primroses. If you are thinking of planting or replacing a shrub, this is the best time.



- Visit your local nursery, the UC Davis Arboretum plant sale March 14, 2009 or consult garden catalogs or books to find the perfect plant. Be sure that the plant you purchase will thrive in the garden area you have selected. Most shrubs need little care if they are thoughtfully selected.
- Take the Annual Woodland Rose Garden Tour on April 26, 2009

Summer blooming bulbs, corms, tubers can be planted now. Some colorful choices are cannas, begonias, lilies, and dahlias. If you are looking for shade plants, astilbe, columbine, coral bells, dicentra, foxglove, hostas, nepeta, pulmonaria and ferns are good choices.

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(continued from page 12)

- For drought tolerant and sunny location plants, consider one of the popular grass plants such as Russian Sage, Muhlenbergia and Rabbits Tale Grass. After you have completed your planting, be sure to lightly fertilize your plants and mulch well. Remember that plants do better if they are planted at or slightly above grade.
- If you are planning to grow your vegetables from seed, begin your seedlings indoors under lights. By late April or early May you can harden off and plant the seedlings in your vegetable garden. The soil temperature needs to be 50 degrees Fahrenheit before you set out your young plants.

## DISEASE AND PEST CONTROL

- If you have applied your dormant oil and fungicide, your plants will be off to a good start
- Periodically check plants, especially roses, for signs of black spot, rust and mildew. They often appear first on the interior or lower parts of plants. If spring is especially rainy, you need to be more vigilant and spray more often.
- While you are checking for disease, note whether slugs, snails and earwigs are munching on your plants. As the weather warms, aphids, mites, thrips and scale creep into your garden. These pests are usually kept in check by a variety of beneficial insects such as lacewings, mantises, ground beetles, tachinid and robber flies.
- If you need to use commercial pesticides, consult <http://ipm.ucdavis.edu/> for excellent information on controlling pests and diseases.



## LAWN CARE

Lawn is often the forgotten plant and one of the most neglected plants in the garden. Lawn does surprisingly well if given a modicum of care. Most importantly, it needs to be fed and watered regularly.

- Check your irrigation system and be sure that the lawn is getting the proper amount of water. The amount will gradually need to be increased as the days become longer and warmer.
- You will also need to raise the mower blade to a height of 3 inches, as spring gives way to summer.
- Re-seed thin spots in your lawn and begin your fertilizing and mowing schedule in March.
- While it is easier to use commercial fertilizer, applying a light topcoat of compost to your lawn will greatly benefit your lawn's growth and health.

## FINAL SPRING TOUCHES

- Paint the lower trunks of young trees with water thinned white latex paint to prevent sunburn and borer problems. Stake tall growing perennials and vegetables before they begin to bend over in late spring. In late spring, thin fruit trees, leaving 4 to 5 inches between each fruit. This will help the remaining fruit to mature properly and keep the branches from being over-weighted and splitting.
- Deadhead spent flowers to assure a long blooming season in your garden.
- Plant containers with your favorite annuals and herbs.
- Clean and re-stock bird feeders. Sharpen and maintain garden tools.
- Hang your hammock or set out your favorite garden chair. Relax with some lemonade and take time to enjoy a new gardening book. *Garden Retreat: Creating an Outdoor Sanctuary* by Barbara Ashman or *The Inward Garden: Creating a Place of Beauty and Meaning* by Julie Messervy are two wonderfully dreamy adventures to enjoy as you welcome spring into your garden.

### Environmental Friendly Gardening Workshops and Plant Sale

March 28, 2009

9:00 a.m. - Noon

Woodland Community College

2300 E Gibson Rd, Woodland, CA

- Building and Maintaining Healthy Soil, 9:00 a.m.
- Vegetable Gardening Basics, 9:35 am
- Bee-Friendly Gardens, 10:10 am
- Water Wise Alternatives to Lawns, 10:45 am
- Water Conservation Irrigation Practices, 11:20 am

The plant sale features heirloom tomato seedlings started from seed by Master Gardeners and house plants and annuals propagated by WCC students.

## ASK URSULA



Dear Ursula,

My friend gave me some Allium bulbs this past fall but I forgot to plant them. Is it too late? If not, how do I take care of them in the future?

**Dear Gardener:**

Alliums are one of my favorite plants. These plants are related to the onion family but will only give off the characteristic odor if the stems are crushed. Dried flowers are often used in floral arrangements. I think you will be fine if you plant them now because we have had a dry winter and thus the soil shouldn't be too heavy to work. I cannot guarantee that they will bloom the first year because frequently after proper division they will need a year of rest and growth before they will bloom again.

There are more than 500 species, which vary greatly in size and color. Allium giganteum "Gladiator" is one of the tallest varieties. Its spectacular, 6 inch blooms sit atop 4 foot or taller stems and are brilliant lilac. The largest varieties look best in a group of five or so, placed at the center of a bed where they can make a strong statement. Smaller Alliums look great clustered among other spring flowers. Alliums are healthiest if they stay fairly dry so combine them with other relatively drought tolerant plants.

These plants like sandy loam so add

some compost to the soil and a bit of sand if it doesn't drain quickly. Work the amendments deeply into the soil well below where the bulb will sit. Plant your bulb so the base sits at a depth that is three times the height of the bulb. You can mix a little bulb food in the soil that you add back to the hole; this will provide enough nutrition for the first season's flowers. Tamp the soil lightly on top of the planted bulb and water immediately.



*Allium*  
photo by Linda Dodge  
Dept. of Plant Sciences, UCD

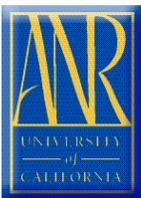
You should fertilize again in the spring, in the summer after the blooms fade, and again during final fall cleanup. Removing flower heads after they bloom will encourage larger flowers for next season.

If you like Alliums go through some catalogs to add to your collection. Although the largest varieties may be expensive, they will pay you back in impressive impact for years to come.

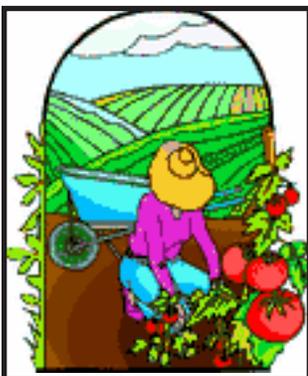
**HAPPY GARDENING!**

Ursula

*Ask Ursula features gardening advice from our own Ursula Hartmann, Yolo County Lifetime Master Gardener. Send any questions for Ursula that you may have to Thelma Lee Gross at [xtleegz@dcn.org](mailto:xtleegz@dcn.org)*



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# The Yolo Gardener

Spring 2009

## Send a Letter to an Editor!

email: [mgyolo@ucdavis.edu](mailto:mgyolo@ucdavis.edu)

Please put: *Yolo Gardener* in the subject line

or  
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**70 Cottonwood St.**  
**Woodland, CA 95695**

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