



THE YOLO GARDENER

A QUARTERLY PUBLICATION BY THE U.C. YOLO COUNTY MASTER GARDENERS
Summer 2008

Earthworms in the Garden, Redworms in the Leftovers

Steve Radosevich, Master Gardener and Master Vermicomposter

One of the true joys of putting in the summer garden is turning the soil and discovering that earthworms are hard at work helping with the cultivation. For ages farmers and home gardeners have recognized the benefits of earthworms. Now their very presence in your home garden affirms that you are a good soil steward and have helped create a welcome environment for plant growth.

But what is the exact relationship between the common earthworm and healthy soil? Earthworms contribute to soil fertility by digesting decaying plant residues and converting them into casts that are very high in plant nutrients. Furthermore, as worms move about feeding on plant residues, they stir and aerate the soil and excrete gummy substances that improve soil structure.

The gardener's most common contribution to this healthy dynamic is to add organic material regularly to the soil as a food source for earthworms. Decaying plant roots from last year's garden, composted garden waste incorporated into the soil while planting, and organic mulches added after planting all contribute. However, a source of organic material often neglected and discarded because they are too sloppy and difficult to handle are all the good leftovers from the kitchen: banana, potato, and avocado peels; coffee grounds and filters; all the moldy veggies ignored for too long in the fridge; egg shells; corn cobs; and tomato trimmings left over from canning projects.

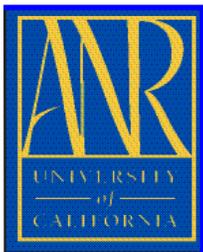


photo by Patt Tauzer Pavao

A Tangle of Redworms, Just Harvested

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By enlisting the help of another species of earthworm, the redworm, or red wiggler, these kitchen leftovers can be converted easily into worm compost, or vermicompost, a valuable soil amendment. Anglers will recognize this creature because it is the worm most commonly sold as fishing bait. This active little worm's natural home is a pile of moist decaying leaves or a manure pile, and it will not typically survive in garden soil. Because it does survive well and multiplies in organic bedding material placed in worm bins, it is the easiest worm to raise in captivity.

By following a few simple guidelines, anybody can set up a home worm bin or worm composting system. The size of your household and how much kitchen waste you produce will partially determine the size of your worm

bin, but typically a bin three feet long by two feet wide by one foot high would handle the leftovers of a family of three or four people.

So how do you get started? The easiest way is to attend a free worm composting workshop where you can learn everything needed to know about raising worms, as well as often receiving a free batch of worms to get started. Yolo County UC Cooperative Extension Master Gardeners will be offering a worm workshop on Wed, June 25th 6:30 to 8:00 PM at the Woodland Community College Greenhouse Orchard. Project Compost at UC Davis also does worm workshops. Call 754-8227 or email projectcompost@yahoo.com for more information. 🌱

Attracting the Good Guys - Beneficial Insects

Linda Parsons, Yolo County Master Gardener

A bug is a bug is a bug. Not so! In recent years, I have stopped focusing on specific bad bugs (insects) in my garden and have learned to take a broader and kinder view of all the bugs in my garden.

I have known since childhood, that bees and lady beetles are good guys (and gals), but I was never sure about the rest of their relatives. I have gone from disdain, to tolerance, to appreciation for many of the bugs that reside in my garden.

It began with observation and wondering. Some years back, I observed many soldier beetles in my garden, and I became concerned. I was considering what to do about them, when I observed one devouring a mass of aphids on a rosebud. I was astounded and pleased at my discovery, and this observation sent me on my way to learning about the bugs in my garden.

I learned that bugs perform many tasks. They can act as predators, parasites, and pollinators. In fact, most bugs are good guys. Bees (including the domesticated honey bee, cutter bee, bumble bee, sweat bee, and carpenter bee) are pollinators. Tachinid flies and many wasps are parasites that lay their eggs in their hosts.

The majority of beneficial insects, such as the lacewing, praying mantis, hover fly, minute pirate bug, soldier beetle, and damsel bug are predators. These bugs are on the front line of pest control in your garden,

guarding against destructive bugs and helping plants reproduce. Nature supplies these beneficial bugs of course, but you can encourage them to remain in your garden by providing them with some essential elements.



UC Statewide IPM Program
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Nearly every plant in a natural environment will sustain at least some damage from pests. However, pests will not over-populate a natural ecosystem if their natural enemies are present. In a healthy, pesticide-free garden, pests will appear, but so will their natural enemies.

Attracting good bugs to your garden requires supplying plants that provide food and shelter throughout the year. Companion planting is an age-old tradition. It's a gardening technique that involves planting two or more plants near each other to derive some type of benefit. That benefit could be more vigorous growth, higher yield, repelling pests, or attracting predators of common pests. One of the most compelling reasons to use companion planting is the ability of certain plants to attract beneficial insects.



photo by Patt Tauzer Pavao

Adult syrphid flies feed on pollen and nectar, but in their larval stage they feed on insects.

Because insects have different feeding requirements during their various stages of development, a diversity of plant material is essential to attracting them. Although beneficial insects do feast on pest insects, there may be certain points in their life cycles when their diets are confined to nectar and pollen. So to attract these insects to your garden, you will need to provide a variety of host plants. Fortunately, this is easily done because of the wide variety of choices. In fact, there are hundreds of choices; so providing a list can be difficult. I have decided to narrow down the list by naming some of the most common and universal beneficial plants in three plant families. You likely are familiar with many of them; however, by keeping in mind the shape of the flowers from these three groups, you will have an easier time identifying those you might not be familiar with. While these are by no means the only flower families, they provide the widest choice in selection and are easily obtained and grown.

Plants in the Umbelliferae (Parsley) Family top the list for attracting beneficial bugs. Among these plants are, Queen Anne's Lace (*Daucus carota*), Angelica (*Angelica gigas*), coriander (*Coriandrum sativum*), dill (*Anethum*

gravvolens) and parsley (*Petroselinum crispum*). Note that the flowers are shaped like an open umbrella.

Plants that are in the Lamiaceae (Mint) Family include many common herbs, such as thyme, sage, basil, spearmint, pennyroyal, bee balm, salvia, monarda, and stachys. These plants are characterized by having hollow, square stems with aromatic leaves.

The Asteraceae (Daisy) Family includes daisies, sunflowers, and chrysanthemums, all having a group or cluster of small flowers arranged on a stem. This arrangement provides a flat surface with many florets on which insects can feed. My favorites include feverfew (*Tanacetum parthenium*), goldenrod (*Solidago* spp.), Gloriosa daisy (*Rudbeckia fulgida*), Lemon Gem marigold (*Tagetes tenuifolia*), Cosmos (*Cosmos bipinnata*), Dwarf Alpine Aster (*Aster alpinnus*), Yarrow (*Achillea millefolium*) and Tansy (*Tanacetum vulgare*).

Remember when choosing plants to include low-growing plants as cover for ground beetles (thyme, mint, and rosemary), and a shady, protected area for laying eggs and over-wintering. Also, the tiny flowers of plants in the Umbelliferae Family attract beneficial parasitic wasps, and the composite flowers of the Asteraceae Family attract predatory wasps, hover flies, bees, lacewings, and lady beetles. Including a few of these beneficial plants will make your garden more pleasurable and provide a healthy habitat for the good bugs. Finally, consider providing a birdbath to attract not only birds, but also beneficials.

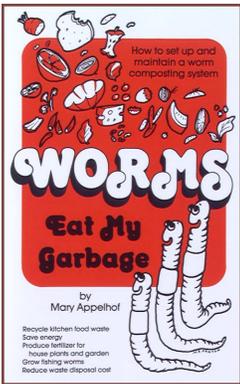
Pesticides can kill good insects, so avoid using broad-spectrum insecticides in favor of oils and insecticidal soaps designed solely for specific pest problems. Tolerate minor pest infestations as they produce food for the beneficial bugs. And enjoy your happy and healthy garden that now includes an insectary for good bugs!

For more information visit <http://www.davesgarden.com> or www.insectary.com. If you would like a reference book, consider either *Pests of the Garden and Small Farm* by Mary Louise Flint or *Good Bugs for Your Garden* by Allison Mia Starcher. 🌱

Dig Into Some Summer Reading—on Soil

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

Sometime this summer (probably around August) you will find yourself with less gardening to do. It will be too hot to do more than pick tomatoes and corn, and figure out what to do with your bumper zucchini crop. What a great time to pick up some books about soil! Here are three you won't want to miss!

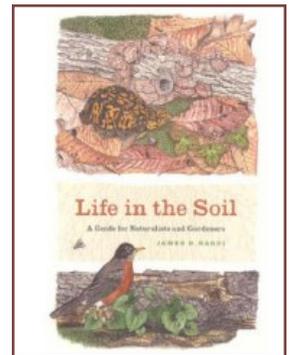


Mary Appelhof. *Worms Eat My Garbage*. Kalamazoo, MI: Flower Press, 1982.

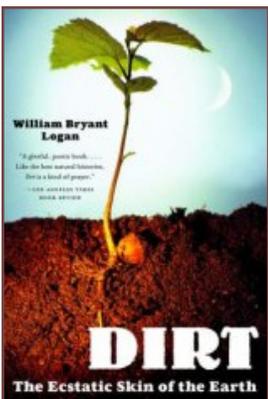
This book is definitely a “how to” book for starting your own worm bin, a great project to begin with a young gardener or even a school classroom. The many good drawings are entertaining and educational. In describing practices to encourage earthworms the book also identifies some good practices for healthy garden soil: not working soil that is soggy, not keeping soil in a waterlogged condition, avoiding compaction of the soil by limiting traffic over it, and others.

James B. Nardi. *Life in the Soil, a Guide for Naturalists and Gardeners*. Chicago, IL: U. Chicago Press, 2007.

This book would also be a great resource for a home or classroom library, encouraging soil scientists of all ages to look carefully at the biodiversity of soil and even smell its “earthy” aroma. Soil is an ecosystem, with many different organisms: springtails (collembola), spiders, earthworms, fungal hyphae, and others. The characteristic smell is an indicator of actinomycetes (very common microbes in soil – similar to bacteria). A section of color plates enhances the chapter by chapter presentation of diverse kinds of life, from microbes to mammals. Illustrations in the chapters support the world wide scope of this book. You will learn, in addition to the more familiar ground squirrel and armadillo, about mammals such as the numbat, viscacha, tenrec, and solenodon.



William Bryant Logan. *Dirt, the Ecstatic Skin of the Earth*. New York: W.W. Norton, 1995.



This is a work of literature about something which gardeners know intimately, but need to appreciate more. Logan considers the origin of soil in geologic terms and time frame, and puts the relatively brief impact of human agriculture and other uses of soil within this context. Definitely for adult readers, this book in fewer than 200 pages covers a provocative array of subjects besides garden soil. For example: in place of the burial site of Rhode Island's founder Roger Williams and his wife, later diggers found only “A nearby apple tree had wound its roots around the corpses...weaving in living roots the shapes of ..man and wife.” (p. 57).

So, stay cool this summer, and enjoy digging into some summer reading...on soil!



Micro Crop Raising: Grow More in Less Space

Jan Bower, Yolo County Master Gardener

For those who have small yards with limited space, but long to grow vegetables and herbs, and for those who have room for a huge vegetable garden, but find its maintenance becoming more of a chore than a joy, here are some ways to accomplish efficient and high yield gardening in a small space.

Square foot gardening eliminates planting in rows and the need for aisles. It involves constructing a raised bed frame at least six-inches tall, filling it with rich, friable soil (plenty of compost) and dividing it into a grid composed of one-foot squares, using plastic separators or wooden lathes. A different vegetable or herb is planted in each square. When one crop is finished, another is planted, which allows for year-round gardening. The number of squares depends on the amount of space allocated for the bed. For example, a 4 x 4 foot bed allows for 16 squares of planting area and the possibility of growing 16 different plants. The smallness of the garden facilitates careful scrutinizing of the contents in each square, which results in tidiness with very little waste and good productivity.



Upside-down growing is another technique that is popular for growing tomatoes, as well as peppers, eggplants and cucumbers, in a small space. One apparatus

uses four steel cages with liners hung from a four-arm steel plant hanger. Plants grow downward through 17 quarts of soil to an opening in the bottom of each cage. Similar devices are a single tomato tree, which has room for three tomato plants and holds 40 quarts of soil, and a 25-inch square bin, which has openings in its bottom for eight tomato plants and an open top that can be planted with complementary plants, like basil, parsley and salad greens. The bin holds 80 pounds of topsoil and is supported by four steel pipes on a base filled with sand to keep it stable and upright. This revolutionary upside-down growing system eliminates the need for weeding, staking or tying plants.

The use of self-watering planters with built-in water reservoirs protect plants from drying out with fewer disease and pest problems. These planters can be placed in wooden enclosures that are painted or stained to match home décor or put on trolleys that can be rolled to convenient, sunny spots around the home. Many garden catalogs also feature a three-tiered steel plant stand that can be placed against a wall or in a corner on a porch, deck, balcony or patio. The straight or corner stands can be assembled in a line, circle or stair step on which are placed galvanized trays that hold soil and water. Plants can be placed directly into the trays or into pots that can be set on the stands. The stands range from 24 to 40 inches wide and are generally 24 inches high.

Vertical planting occupies much less space than ground planting. Tomatoes, peppers, zucchinis, squashes and eggplants can be grown on a steel ladder, spiral, cage or stake in a raised bed or border. Pole bean towers, pea fences, cucumber trellises, melon nets and grape arbors also work well in a limited space. In a test garden at the Garden Supply Company, a bean tower yielded 2,400 beans between mid-July and late September in a 1½ square foot area.

Mini grow boxes, as small as 1½ x 3 feet and 8 inches deep, are perfect for planting food crops in narrow

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areas along a foundation or walkway. The boxes can be made of recycled black plastic, which absorbs heat to warm the soil early in the season and helps retain moisture all summer, or of logs, brick, cement blocks or rocks. Window boxes, railing boxes, whiskey barrels and hanging baskets can be planted with decorative edible crops, such as kale, peas, artichokes and strawberries or edible flowers, such as nasturtiums, lemon verbena and violas. It may also be possible to find a space or two to sneak in an edible plant among the trees, shrubs and flowers in a yard. Swiss chards and rhubarb work well as fillers and can be very colorful, as can herbs, such as rosemary, sage and thyme. Hydroponics, crops grown in mineral nutrient solutions instead of soil, are another way to grow more in less space, but that is a topic for another article. 🌱

Environmentally Sound Lawn Management

Jim Fowler, Yolo County Master Gardener

Americans are in love with their lawns, and with good reason. Well-maintained lawns are attractive. They reduce dirt, noise and heat, provide play areas for children and are excellent at erosion control. However, poorly managed lawns can also waste water resources and add to the pollution of our waterways through the run-off of excessive fertilizer and weed killers. Inefficient gasoline power mowers also add greatly to poor air quality in our major urban areas. All of these drawbacks, however, can be reduced significantly with proper lawn management.

By far the most important aspect of lawn maintenance is that of proper irrigation. In order to properly irrigate you must first know how much water your lawn needs.

This can be discovered scientifically by calculating the evapo-transpiration rate of the lawn under different climate conditions. (That is: how much water is lost through evaporation and transpiration of the lawn.) You can do this by using the formula $ET = ETo \times Kc$ where ETo is the amount of water lost multiplied by a constant (Kc) that has been scientifically established for the type of grass in your lawn. ETo can be acquired by going to <http://wwwcimis.water.ca.gov/> and clicking on the data tab. For the Kc value of your type of turf see the table on the following page.

A far simpler way to determine water needs of your lawn is by filling a large, flat can with water and then measuring

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

Master Gardener Hotline..... (530) 666-8737

Our message centers will take your questions and information. Please leave your name, address, phone number and a description of your problem. A Master Gardener will research your problem and return your call.

E-Mail..... mgyolo@ucdavis.edu

Drop In.....Tuesday & Friday, 9-11 a.m.
70 Cottonwood St.
Woodland, CA 95695



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its level with a ruler every day for a week. The amount of water that evaporates is the amount of water that needs to be replaced. To be effective watering must be uniform. The time it takes your system to apply an inch of water on the lawn and the uniformity of that application can then be measured by laying out several cans of the same size in a pattern on the lawn area. The irrigation system should be run for fifteen minutes and then the water level in each can be measured. If watering is uniform there should be about the same amount of water in each can. If not, the system needs to be inspected and adjusted for broken or maimed heads. The system also should be checked at the beginning of the season and periodically throughout to maintain optimal water delivery.

To reduce evaporation and to avoid potential disease problems the replacement irrigation should be done between 2:00 a.m. and 8:00 a.m. Divide the time needed to deliver the amount of water lost in a week in half so that you can water twice a week. If this amount of water is running into the gutter then divide your watering schedule into further segments until there is no longer a run-off problem.

Fertilizer should be applied twice a year in the spring between March and April and in the fall between September and November. However, don't over-fertilize,

as the excess is likely to be washed from your lawn into storm drains, polluting waterways with excessive nitrogen, causing algae blooms and killing fish.

The use of fertilizer can be cut back dramatically by using "grass cycling." Instead of dumping clippings in the street allow them to stay on the lawn by using a mulching mower, or at minimum the clippings should be composted. In one study, Ali Harivandi, a University of California Cooperative Extension Advisor who specializes in turf, soil and water, measured lawn clippings left in the street and found that three out of four pounds of nitrogen applied to the lawn are lost in the clippings. The lawn should be mown frequently when it is dry and no more than one-third of its height removed at a time; this one-third rule reduces the degree of root resorption that follows removal of nitrogen by mowing. To reduce carbon emissions use a push mower; if that is not possible then use an electric mower.

By following these simple steps you can enjoy the benefits of a healthy lawn and while still being environmentally responsible. More information on environmentally sound lawn maintenance, including keys to turf types and weeds, as well as solutions to lawn problems, may be found by going to <http://ipm.ucdavis.edu/PMG/menu.homegarden.html> and clicking on "Lawns and Turf." 

K Values for Turf		
Month	Cool-Season Turf	Warm-Season Turf
January	0.61	0.55
February	0.64	0.54
March	0.75	0.76
April	1.04	0.72
May	0.95	0.79
June	0.88	0.68
July	0.94	0.71
August	0.86	0.71
September	0.74	0.62
October	0.75	0.54
November	0.69	0.58
December	0.60	0.55
Annual Average	0.80	0.60

From "What we Know About Landscape Requirements: <http://ucrurf.ucr.edu/topics.htm>



Argentine Ants

Peggy Smith, Yolo County Master Gardener

Is there anything "good" about the ants that march through and invade our houses seeking the smallest morsel of food? How do we prevent or treat an ant infestation?

There are about 200 species of ants in California. The most common is the Argentine ant, which is about 1/10" long and dark brown to black. The Argentine ant was probably introduced to our state around 1890 in a shipment of goods from South America. When crushed they have a distinctive "musky" odor.

The Argentine ants are a California success story in that they have thrived since their introduction. Because they are not native to California, there are no natural predators or parasites present to keep their population numbers in check. Also, there is a genetic similarity among the Argentine ants located on the West Coast. Consequently, there is no colony-to-colony fighting as is typical for other types of ants. Argentine ants also differ from other ant colonies in that they will have more than one queen in a nest so the colony boundaries are less clear, and if a queen dies, the colony has the advantage of several other queens for continuity.

How an ant colony works

Ants commonly nest in the ground and under logs and wood. The life cycle follows the egg/larvae/pupae/adult pathway common to many insects. Unlike many other insects, however, ants form a social unit, called a colony that has an organizational structure designed to enhance its survival. The colony's queen has the function of laying eggs and assisting with the nurturing of the larvae. After she mates with a male, they die. The few males in the colony are taken care of by non-reproducing female worker ants, who keep the colony functioning by foraging for food, tending the eggs and larvae, building tunnels, and generally keeping the nest clean.

When foraging, ants typically send out "scouts", a few ants that will mark a trail for other worker ants to follow once they have identified a food source. A typical ant nest can have thousands of members, most of whom are worker ants. With their system of marking a trail, in only a matter of hours, these ants can launch a full-scale invasion.

Feeding Habits

Ants are foragers and scavengers. They will consume living and dead insects as well as the dead carcasses of animals. Ants are also attracted to the sweet honeydew produced by mealybugs, whiteflies, scales, and aphids. Ants will tend these insects, capturing the honeydew they produce, all the while protecting them from predators



and parasites. Ants can also move these insects to new host plants throughout a garden, thus spreading an infestation.

Interaction with Humans and Houses

California's wet winters and dry summers cause a typical pattern of times when you might notice lines of marching ants in your house even when there does not appear to be a readily available food source. Because of their need for moisture, ants will enter houses in summer, where they are often found in bathrooms and kitchens. In fall and winter when the rains start up, they will seek to escape the sodden soil by once again entering into homes. During these excursions, ants are also strongly attracted to sugar, oil, and protein as food sources.

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How to deal with and invasion of ants

Prevention is the best way to deal with most ant invasions and is the best defense inside the house and out in the garden.

In the house

Keep food sources, particularly sugar and oil, in well-sealed containers. Empty all garbage frequently and wash out containers on a regular basis. Check houseplant containers frequently for infestations. To control an infestation of ants indoors, you will need to:

- *remove the attractant or food source,*
- *vacuum the trails of ants,*
- *wipe the trail pathway with soapy water or window cleaner,*
- *if possible, find the access crack into the home and use caulk or petroleum jelly to seal the opening, remove infested house plants from the house and submerge the pot to just above the soil line for 20 minutes in a solution of 1 to 2 tablespoons of insecticidal soap in a quart of water.*

In the garden

Keep plants and mulch several inches away from homes and other structures. Clean up all fallen, rotting fruit. To prevent ants from tending and moving aphids etc. from host to host, prune to make sure that limbs and branches do not allow multiple accesses to the plant by touching the ground or building. This focuses the ant access to the main trunk of the plant or tree where a band of sticky Tangle foot can be applied. Check and renew this band every 2 to 3 weeks as it will become coated with the trapped dead ants and allow other ants to walk on top of them and once again gain access to the tree.

If you discover or disturb an ant colony, pyrethrin, derived from the chrysanthemum flower, can be used as an insecticide for treatment but it does have a very short residual so you have to do a good job of soaking the colony in order for it to be effective. Commercial ant stakes or baits work through the process of the natural foraging behavior of ants. The ants take small amounts

of the bait back to the colony and feed the larvae thus helping reduce the population. A commercial pest control regular program of spraying will only treat the foraging exposed ants and will not treat the colonies.

Ants - is there anything good?

Ants are useful because they feed on fleas, caterpillars, termites, dead insects, and decomposing tissues of animals. Studies have shown that the Argentine ant has slowed the advancement of the fire ant into California. If we can control the inconvenience of an ant infestation in the house and reduce the aphid spread in our gardens, ants do have a positive aspect. 🌿

To Mulch, or Not to Mulch

Laura Cameron, Yolo County
Master Gardener



What a difference a day makes! One day I had a beautiful majestic shade tree covering my entire front yard. The next day the city removed my “one moment away from hurting someone” tree. Not only was I in shock, but my shade lawn really took a hit. A lifetime of shade and then suddenly, full sun, day after day after day.... Neither of us truly recovered from the loss, though it was much harder on the lawn, which proceeded to develop rampant weeds and an invasion of crabgrass.

My next step: what to do with the current lawn/dandelion/crabgrass field? I decided to go straight to mulch. I put risers on the sprinkler heads and covered the entire lawn with cardboard, overlapping the edges. After thoroughly wetting the cardboard, I covered it with two to three inches of small bark. I could then punch holes through the cardboard and plant where needed. This “sandwich” method works quite well as long as you make sure the edges overlap to keep the light exposure down. As time goes by, the cardboard/lawn/dandelions will decompose and improve the quality of my clay quite nicely. Success smells sweet.

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While I used cardboard as a mulch, I could have used many other materials just as well. In fact, any material, whether organic or inorganic, is a mulch if it is used to cover the soil. Mulches are advantageous to the gardener because they smother weeds, conserve moisture, prevent surface crusting, improve water penetration, slow evaporation and cool the soil. For many, it also improves the look of the garden by giving the surface uniformity in appearance.



*Organic mulches.
Photo by Jack Kelly Clark.*

O r g a n i c Mulches include compost, wood chips, bark chips or nuggets, grass clippings, sawdust, leaves, newspapers, chipped and shredded prunings or other wood products. Organic materials have the advantage

of slowly decomposing over time, adding organic material to and improving your soil, but they must be renewed or replaced periodically to be effective.



*Synthetic mulches.
Photo by Jack Kelly Clark.*

I n o r g a n i c mulches include

such things as sand, gravel, plastic, landscape cloth, gravel, pebbles, shredded tires or other inorganic materials. While these will provide similar benefits for the garden they will not improve the soil. If you choose rock mulch, consider placing a landscape fabric underneath to create a layer between the mulch and the soil to prevent the rock from sinking into the soil. Synthetic mulches, or landscape fabrics, have been developed to replace black plastic in the landscape. They are porous and allow water and air to pass through.

Whether you choose to use an organic or an inorganic mulch the main purpose for its use is to prevent weeds from germinating by blocking the light to the soil. Therefore how deep you need to mulch is determined by the size of the mulch you use. The coarser the mulch, the more depth you'll need.

The University of California IPM website <http://www.ipm.ucdavis.edu/PMG/GARDEN/ENVIRON/mulches.html> contains numerous mulching choices and tips. 🌱

Weed management around ornamental trees and shrubs

Keep weeds or other plants away from the base of trees and shrubs with handweeding or mulching. Don't allow your lawn to grow within a foot or two of trunks. Remove all weeds, lawn, and other plants before mulching. Herbicides should not be necessary. You can use organic mulches such as wood chips, bark chips, sawdust, or compost with or without fabric barriers. Instead of a fabric barrier, you can use a newspaper mulch. Wet some newspaper and put a layer about 2 sheets thick around trees and shrubs. Place a 2 to 4-inch layer of mulch on top on the newspaper. Be sure to keep mulch at least 6 to 12 inches away from the base of trees and shrubs.

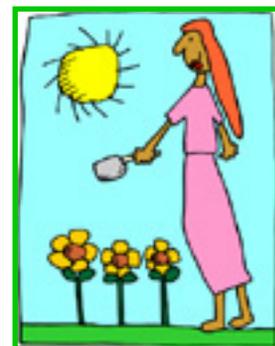
Weeds around trees and shrubs are difficult to mow, can harbor pests, can promote crown diseases, and can compete for water and nutrients.

<http://www.ipm.ucdavis.edu/PMG/GARDEN/PLANTS/WEEDS/treeshrubweedmgt.html>

Summer Gardening Tips

Linda Parsons, Yolo County Master Gardener

Before you venture into your garden take a few moments to protect yourself by putting on a broad-brimmed hat, sunglasses, sunscreen, and garden gloves. Unless you prefer to drink out of the garden hose, take along a large glass of ice water. Also, assemble the tools and supplies you plan to use, as this will save you countless trips to the garage or tool shed.



Water

Become familiar with the water requirements of your plants. Many gardeners are including more drought-tolerant plants in their gardens. Remember to place plants with similar water requirements together in your garden to maximize water efficiency. For a comprehensive list of Water Efficient Plants, visit the Master Gardener Free Handout List at www.ceyolo.ucdavis.edu. Day lily (Hemerocallis), lavender (Lavandula), yarrow (Achillea millefolium) and rosemary (Rosmarinus officinalis) are among my favorites.

Additional ways to conserve water and keep your plants happy are to keep the weeds to a minimum and add mulch to your garden. Two inches of mulch will inhibit weeds, conserve water, and keep your plant's feet cooler. Also, if you are not using drip irrigation, consider mulch for some areas of your garden.

A workshop on *Water Wisely: How to Irrigate Effectively* will be held in the Davis Central Park Gardens on Saturday, June 7th at 10: 30 a.m. For more information visit www.centralparkgardens.org or the Master Gardener website at www.ceyolo.ucdavis.edu.

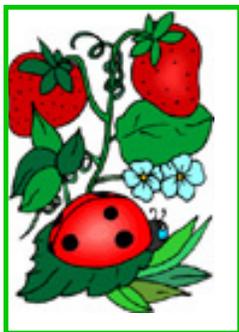
Pests and Diseases

Prevention is the easiest way to minimize plant damage. Stroll through your garden several times a week to scout out potential problems. Check leaves and flowers for evidence of pests and diseases. Typically, more pest problems occur during the summer months.

Whitefly, spider mites, and katydids enjoy feasting on many kinds of plants. Thrips and horntail wasps disfigure roses, and leafminers and hornworms chew tomatoes. Blasts of water to knock aphids and other small insects off the plant or handpicking larger insect pests (hornworms) deter many infestations. Or, for infestations of small, soft-bodied insects such as whiteflies, aphids, and mites, a homemade or commercial soap or oil spray can be used. To make your own soap spray, add 1 teaspoon of mild liquid soap (Ivory) to 1 gallon of water. If you wish to also prevent certain fungal infections, such as powdery mildew, you can add 1 1/3 tablespoons of baking soda to the solution. When spraying soaps or oil, be sure to do it during the cooler parts of the day. Also, test the solution first on a few plants to make sure the plant does not suffer any ill effects.

Spraying with water or soap once a week in the morning, usually keeps the pests under control. If this fails, consult the Integrated Pest Management site at www.ipm.ucdavis.edu for control guidance.

A Master Gardener workshop, *Identifying Common Pests and Beneficial Insects*, will be held in the Davis Central Park Gardens on Saturday, June 7th at 9 a.m. Bring a magnifying glass if you plan to attend. It is amazing the critters you will see with this simple aid.



Also watch for slugs, snails, and earwigs in your garden. They lurk about in damp, dense foliage areas. Slugs and snails can be controlled by commercially available iron phosphate products, which are both effective and nontoxic. Copper tape is also available at your garden center to use in repelling slugs and snails.

To help control unwanted pests, consider incorporating plants that attract beneficial insects. Some good choices are yarrow, cosmos, feverfew, thyme, lavender, and parsley.

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Lawns

The lovely, lush green lawn of springtime is giving way to the more troubled summer lawn. As with all your garden plants and trees, lawn watering needs to be monitored and adjusted according to the weather. Each time you water your lawn, the root zone (5-6 inches deep) should be moistened. Once you determine the time it takes to achieve this, you can set your watering timer or schedule. Two inches a week is best to keep your lawn thriving. Over-watering can cause root rot and lawn fungus. Keep a garden journal and devise several watering schedules, depending on the season. I consult mine regularly to keep track of water and planting schedules.

If one area of your lawn receives more sun or has faster drainage, you may need to increase watering in this section. During the summer months you may need to water two or three times a week, depending on the temperature. If it rises above 100° F, you will need an extra watering day. Fertilize your lawn now and be sure to water it in to prevent fertilizer burn.

Other ways to keep your lawn healthy are to be sure your sprinklers are clean and working properly, and to allow the grass to grow a bit taller by raising the blade on your mower. You should never remove more than 1/3 of the grass blade during mowing. Another benefit of leaving your lawn a bit longer is that it crowds out weeds.

If you see irregular, brown patches in your lawn, you may have sod webworm. These worms feed at night and can destroy a lawn in a few days, if it is heavily infested (15 or more grubs per square yard of turf). To detect this pest, visit your garden at twilight and see if small (3/4 inch) moths are flying over your turf. You can also pull up the damaged turf and see pinkish grey to yellowish brown grubs feeding on the roots of your grass.



Fruit

If you haven't thinned your fruit trees and vines, they can still benefit. Thin fruit trees (apple, peach, cherry, apricot, and grapes) so that there is 6 inches between each fruit or cluster. This may seem drastic, but your fruit will be larger and more flavorful, and it will reduce the risk of broken limbs and branches. Mature fruit trees need a deep soaking every 3 to 4 days during crop production. Grapes do best with deep water to a depth of 18 inches and then allow them to dry to a depth of 6 inches between watering. Birds can be deterred by using netting and by placing shiny objects in the canopy.

Vegetables and Herbs

The most popular vegetable (technically a fruit) is the tomato. It usually grows effortlessly and is happiest when it is deep watered (8 inches), 2 times a week. This helps reduce cracking, ridging, and blossom end rot.

To keep vegetable crops continually blooming, harvest regularly, and continue inspecting for pests. In August, pinch back the plants to help the existing fruit ripen before the cooler weather arrives. Harvest herbs just as the flowers begin to form for the most intense flavor. If your harvest is bountiful, dry your herbs by hanging them upside down in bunches for future use.

It's time to begin thinking about your fall vegetable harvest. Fall vegetables, such as broccoli, cabbage, snap peas, beets, carrots, and winter squash need to be seeded in July or transplanted in August.

Flowers

Flowers need to be deadheaded to encourage repeat blooming. Continue to fertilize your flowers, especially heavy feeding roses, every six weeks through October. For a full October bloom, prune your roses back by 1/3 in August. If you prefer the beauty of rose hips, then refrain from pruning your roses in August.



Potted plants and hanging baskets need a weekly feeding of liquid fertilizer (15-30-15), and more frequent watering. Herbaceous plants such as cosmos, delphiniums, foxglove, and peonies may need to be staked. And don't forget to weed!

Prune spring blooming shrubs (camellias, azaleas, bridal wreath spirea) after the blossoms drop. Fertilize after pruning to encourage bud set for next spring. It is not too late to plant seeds for quick blooming summer flowers such as nasturtiums,

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sunflowers, and cosmos. You can also plant summer blooming bulbs, such as dahlias and cannas.

If you need a relaxing break, grab your favorite garden chair and enjoy an inspiring garden book. Several authors new to me are Julie Moir Messervy who wrote two garden design books: *The Inward Garden: Creating a Place of Beauty and Meaning* and *The Magic Land: Designing Your Own Enchanted Garden*. Ken Druse has two wonderfully inspiring books entitled *A Passion for Gardening* and *The Natural Habitat Garden*. 🌿

ASK URSULA



Dear Ursula,

As a child I always loved sunflowers and would like to incorporate some into my garden. I would love to know more about cultivation and varieties. Are there any that are not so tall?

Dear Gardener:

There are more than seventy species in the genus *Helianthus*. Although sunflowers are native to the Americas they are loved in Russia and the Ukraine where they are grown for their edible seeds and cooking oil. The Russian Mammoth can reach a height of fifteen feet and provide as many as one thousand seeds per head! The popularity of these plants stems from the fact that they are very easy to grow and give quick results, blooming in as little as sixty days with seeds ripening in ninety.

Thanks to the effort of plant breeders the selection of varieties of *Helianthus annuus* is ever widening. Heights range from eighteen inches to more than eight feet. Some varieties have flowers the size of a child's head while others are more petite and closer to the size of a large daisy.

In most gardens, sunflowers are usually grown as a background plant. If your space is more modest choose one of the dwarf varieties such as 'Elf,' which has gold four-inch flowers that appear on stalks only

sixteen inches tall. These also look great in pots and flower boxes. 'Sunspot' is another small variety with larger flowers. 'Teddy Bear' has fuzzy double flowers, resembling pompons, and is about two feet tall. 'Sunrich Orange' is about four to five feet tall and is pollen less, which makes it a good choice for bouquets. 'Sunrich Yellow' is a sister variety that can be grown as a companion. "Italian White" has cream-colored petals and a chocolate center, shiny leaves unlike other sunflowers, and is multi-branching. It blooms nonstop from midsummer until frost. One of my favorites is 'Color Fashion Mix.' The five-inch wide flowers grow on six to eight feet stems and range in colors from gold, yellow, bronze, and reddish brown.

As the name implies, sunflowers need to grow in the sun. The hotter the location is the better, which makes them useful in our intense summers. If you want a prize-winning giant, water more often. If you want shorter stems for cutting, water infrequently. Sunflowers will grow in poor soil but prefer rich, well-drained soil that is full of organic material. Seeds can germinate in soil temperatures as low as 46 degrees F so you can get an early start. In some gardens, birds will steal the early leaves and even eat the seeds. If this is the case, start seeds indoors in four-inch peat pots. Seedlings are generally spaced one to three feet apart depending on the mature size. It's okay to space them closer for a denser effect but your plants will not grow as tall and may be more prone to fungal disease. Rust can affect taller varieties. If you want to harvest the seeds wait until the petals wilt and the flower heads turn yellow on the back side, then cut and hang them upside down to dry in a well ventilated area. To dislodge the seeds, rub two heads together.

I hope this will help you to find and grow the sunflower that is best suited to your garden.

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 xtleegx@dcn.org

AFTERNOON CLASSES

Summer 2008 Home Food Preservation Workshops

- ⌘ Watch demonstrations
- ⌘ Help make jam, can fruit, tomatoes and pickles
- ⌘ Use research based methods to prevent foodborne illness
- ⌘ Go home with a jar to taste

Safe home food preservation



Afternoon Workshop Dates:

Jams and Jellies Monday, June 16 from 1:00 to 3:00 p.m.

Canning Fruit and Tomatoes: Tuesday, July 8 from 1:00 to 3:00 p.m.

Pickles and Salsa: Friday, July 18 from 1:00 to 3:00 p.m.

Location: University of CA Cooperative Extension

70 Cottonwood Street,

Woodland, CA 95695

To Register: call 530-666-8143

Cost: \$10.00

More classes will be set up for August and September, if there is interest.

Sponsored by: Nutrition, Family & Consumer Sciences, U. C. Cooperative Extension, Yolo Co. Make check payable to "UC Regents"

EVENING CLASSES

Summer 2008 Home Food Preservation Workshops

- ⌘ Watch demonstrations
- ⌘ Help make jam, can fruit, tomatoes or pickles
- ⌘ Use research based methods to prevent foodborne illness
- ⌘ Go home with a jar to taste

Safe home food preservation



Evening Workshop Dates:

Jams and Jellies Thursday June 16 from 6:00 to 8:00 p.m.

Canning Fruit and Tomatoes: Tuesday July 8 from 6:00 to 8:00 p.m.

Pickles and Salsa: Thursday July 17 from 6:00 to 8:00 p.m.

Location: University of CA Cooperative Extension Office

Norton Hall, 70 Cottonwood Street,

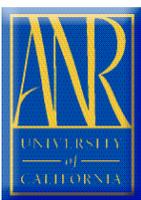
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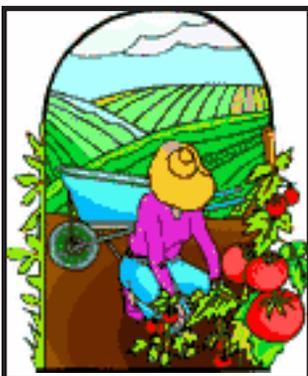
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U.C. Cooperative Extension
 Yolo County Master Gardeners
 70 Cottonwood Street
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The Yolo Gardener

Summer 2008

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email: mgyolo@ucdavis.edu

Please put: *Yolo Gardener* in the subject line

or

Yolo County UCCE
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STAFF

Jim Fowler, Managing Editor
 Thelma Lee Gross, Editor
 Barbara Ohlendorf, Editor
 Patt Tauzer Pavao, Layout

WRITERS

Jan Bower, Laura Cameron, Jim Fowler, Barbara Ohlendorf, Linda Parsons, Stuart Pettygrove, Willa Pettygrove, Steve Radosevich, Peggy Smith

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<http://ceyolo.ucdavis.edu/newsletter.htm>

Delynda

Delynda Eldridge, Master Gardener Coordinator

Diane

Diane L. Metz, Yolo County Director

Nutrition, Family and Consumer Science Advisor Solano & Yolo Counties