



# THE YOLO GARDENER

Summer 2010

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

## Cherry Harvest: Good, or Rotten?

Steve Radosevich, Yolo County Master Gardener

As you read this article at the peak of the cherry harvest, you are either enjoying this year's crop - or you have been severely disappointed to find that most of your fresh ripe fruit is rotten. A new cherry pest, the spotted wing drosophila (SWD), found its way to Yolo County cherries last year. Last season, the infestation was spotty. Some local home orchardists enjoyed another healthy, tasty crop while others experienced heavy SWD infestations that left the entire tree with rotten fruit full of squirming worms. A wider infestation is expected this season.



SWD damage

Last year it was first assumed that this was just a regular fruit fly infesting overripe fruit, but it soon became clear that this was something different in that barely ripe fruit still on the tree was being ruined. Further investigations by entomologists found references from the early 1930s in Japan that identified this fruit fly as *Drosophila suzukii*, and named it the spotted wing drosophila because of the black spot found on the wings of male flies.



male D



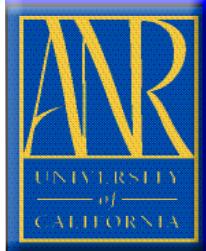
female D

So far, cherries appear to have been the main victim of SWD locally, but infestations in other parts of California have been found in plums, nectarines, and several different types of berries.

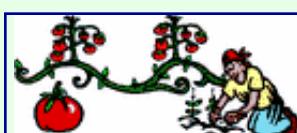
What can you do if you find damaged fruit on your tree? Sprays at this time of year will not protect the crop because eggs have most likely already been laid and maggots are in the fruit. You may be able to salvage some of your fruit by harvesting all of it immediately and sorting out the rotten fruit and fruit with sting marks (egg-laying sites) on the surface. To avoid further infestation of this year's fruit and to possibly reduce next year's SWD population, place all the infected fruit as well as any rotten fruit on the ground in a tightly sealed plastic bag and throw it in the trash. Composting is not known to be a reliable way to destroy eggs and larvae in fruit.

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Because SWD is so new to California, there has been only limited research on how this pest can be controlled in the home orchard. A recent publication, *Spotted Wing Drosophila, Drosophila suzukii: A New Pest in California, Provisionary Guidelines: Management on Cherries in Home Garden*, can be found on the UC Integrated Pest Management (IPM) Web site <http://www.ipm.ucdavis.edu/>. A description of the fruit fly and current management guidelines are discussed, and this free publication also includes photos of the pest and damaged fruit.



## Bamboo 101

Jan Resler, Yolo County Master Gardener

**L**iving on a lot with extremely limited side yards, my husband and I have struggled for the past few years with a dilemma. What could we plant that would provide vertical height for privacy and a view of something other than the side of the neighbor's house while still letting in some sunlight? A recent walk through Davis offered an idea: bamboo! Ah, bamboo, that willowy, graceful, and oft-dreaded plant. Just the thought sent my mind racing to images of furious neighbors and back-breaking excavations. I resolved to do some research. A warning in advance, I found this to be a mighty subject and, despite being twice what I originally intended, the following is but a brief overview.

### Classification

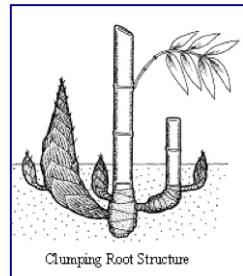
Bamboo is part of the grass family and grows in an amazing variety of climates, from tropical forests in South America to the Himalayan Mountains. More than 1,500 species have been identified, and more are still to be discovered. Plants can range in size from dwarf varieties of only a few inches (*Pleioblastus distichus*) to giant timber bamboo (*Bambusa oldhamii*), over 100 feet. It is one of the fastest growing plants on earth: some mature tropical species have been reported to grow as much as 4 feet in a 24 hour period!

Bamboo is further classified by its root system. There are non-invasive "clumping" type roots, which form in individual circles and expand around the periphery of the plant. The clump grows in size as new shoots arrive each year. And there are invasive "running" type root systems in which rhizome-type roots spread rapidly to varying distances from the parent plant and send vertical shoots from buds.

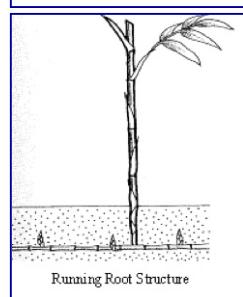
The main stem of a bamboo shoot is called a culm or cane. Each culm is divided into sections by nodes (rigid cellular bundles that lend strength to the culm) and internodes (hollow sections of culm between nodes).

### Flowering

The mechanism of flowering in the various bamboo species is a mystery. Some varieties flower and set seed for many years after reaching maturity. In this group, individual culms may die after flowering, leaving seed to perpetuate the stand. Other species flower "gregariously" with all members of that species worldwide flowering, and then dying at the same time. This occurred in the 1970's when California lost nearly all *Phyllostachys bambusoides* plants. The consequences of flowering vary from



Clumping Root Structure



Running Root Structure

with permission from  
[www.bamboosource.com](http://www.bamboosource.com)

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species to species. In some species, flowering results in the loss of the whole plant and new plants can only be grown from seed. In others, only the aerial component is lost with the root still able to regenerate, and some varieties flower without the death of the parent plant. The differences could be caused by plant responses to pathogens or nutritional disturbances, periodic asexual regeneration, human interference, or mutation.

## Planting and Containment

Choosing the proper variety of bamboo for landscape depends on factors such as cold-hardiness, area available, and sun exposure. Some tropical varieties may not survive freezing temperatures, and others will survive with unsightly leaf damage. However, temperate varieties usually do well through valley winters. Generally, bamboo enjoys plenty of water, good drainage, plenty of sun (some varieties prefer shade), and regular feeding with a nitrogen fertilizer. Outdoors, bamboo can do well for many years in large containers as long as attention is paid to careful feeding and watering. Containers will limit size and cause them to become root bound over time. Occasional thinning will allow proper water penetration to the center of the root ball. Indoors, it's more difficult to grow bamboo. Light, ventilation, water, and fertilization need to be optimal for good results. Check local nurseries for varieties that do well in your area and for trusted plant resources.

To effectively contain running bamboo outdoors, install a plastic rhizome barrier around the planting area. Plastic is considered more effective than metal or concrete because metal will rust and concrete may crack over time. Barrier plastic should be 40 to 60 mils thick and be placed 22 to 34 vertical inches deep. There should be no breaks in the barrier, and it should be installed with the upper edge (toward the surface) narrower than the deepest edge (toward the root). Roots tend toward the surface and this will direct them upward inside the barrier. Periodic inspection and removal of unwanted shoots will be necessary to control new growth.

Encroachment of bamboo also can be limited by planting it near a creek or pond as roots won't spread into standing water. The opposite is also true; if there is

a large enough area available, leaving the area 15 to 20 feet around the perimeter of the plant un-watered will limit new growth.

## Pests

Because bamboo is not native to the United States, there aren't dense forests for pests to easily hop from one stand to the next. This, and careful agricultural screening, has kept the U. S. free of many bamboo pests that plague other countries. The most common of concern to us are gophers, mites, aphids, mealy bugs, scale, and ants. Carefully check plants prior to purchasing. For gophers, use wire mesh baskets as planting barriers; by the time the basket rusts, the plant will be grown past the tender, irresistible stage. The rest can be fought with the usual arsenal: 1) thorough power washing with the hose once every 1 to 2 weeks; 2) mild insecticidal spray made with a dilution of soap and water (1 T mild detergent powder to 1 gallon water) no more than once every 2 weeks; 3) Neem or other ultra-fine horticultural oil, used as directed; 4) insecticides if all else fails, used sparingly and always as directed.

Bamboo is cultivated worldwide as a durable, sustainable construction material, and food for humans and animals. It also has many craft and landscape uses. Leaves are used in Nepal, Vietnam, and China as fodder for ruminants, rabbits, fish, cattle, buffalo and, most famously, Giant Panda. Studies have shown bamboo to be the nutritional equivalent to alfalfa and to have the carbon sequestration properties of conifers. For these, and so many more reasons, bamboo is revered around the globe. Step into the world of bamboo, you'll quickly become enchanted.

## Resources

\*American Bamboo Society [www.americanbamboo.org](http://www.americanbamboo.org)

\*Bamboo Sourcery [www.bamboosourcery.com](http://www.bamboosourcery.com)  
666 Wagnon Road  
Sebastopol, CA 95472  
(707) 823-5866

\*International Network for Bamboo and Rattan  
[www.inbar.int](http://www.inbar.int)

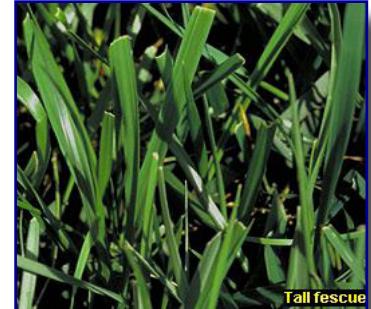
\*Redwood Barn Nursery [www.redwoodbarn.com](http://www.redwoodbarn.com)

# Managing Turf While Preserving the Environment

Jim Fowler, Yolo County Master Gardener

**M**illions of people love the look, feel, and smell of a cool, crisp, well-maintained lawn. But they are becoming increasingly concerned with the environmental costs: excess water usage, larger carbon footprint from gas mowers, and fertilizer run-off into our streams and rivers. You may be one of those caught in this dilemma. Dave Burger, Department of Plant Science at U. C. Davis can allay some of your fears, but only if you are able to tackle a few lawn maintenance challenges.

The first challenge is to choose the appropriate turf grass for your climatic conditions. Turf grasses are generally divided into cool-season and warm-season grasses. And, though no one grass is perfect for all conditions, Dr. Burger says the number one grass in California is a cool-season variety, Tall Fescue (*Festuca arundinacea*). It performs well in winter and is relatively tolerant of low water conditions. Among the most popular warm season grass is Common Bermuda Grass (*Cynodon dactylon*). However, so that lawns will remain green year round, most lawn grasses sold are mixtures of various types of grass. To determine which grass, or grass mixture, best suits your conditions, refer to Turf Grass Selection for the Home Landscape from <http://anrcatalog.ucdavis.edu/IntegratedPestManagement/8035.aspx>



Tall fescue

## "Turfgrass Facts"

from the May, 2010 issue of *Popular Science Magazine*

\*Freshwater used for landscaping every day: **7 billion gallons**

\*Time homeowners spend mowing the lawn every year : **1.57 billion hours**

\*Volume of gas guzzled by lawn mowers annually: **800 million gallons**

\*Area of lawn needed to make enough oxygen for one person per day: **625 sq. feet**

\*Carbon dioxide that residential lawns could store per year: **37 billion pounds**

\*Area of the U.S. covered by residential lawns: **33,000 sq. miles**

The next challenge is to adjust your water usage properly. Just a little knowledge can save millions of gallons of water every year. You can play your part by examining the efficiency of your watering system. Make sure that all parts of your irrigation system are in proper working order. Check to make certain that your system is not over-spraying onto sidewalks, streets, and driveways.

Run a simple coverage test. Uniformly place containers over the lawn. Turn on the watering system for a set period of time. Measure the depth of water in each container. Adjust the irrigation system so that each container will collect approximately the same depth of water. The test will also tell you how many inches of water you can deliver in a specific time. Dr. Burger also recommends that you check the local evapotranspiration rate for your area (how much water is being lost to evaporation and transpiration from plants), and water to replace only the amount of water lost. The information for your area can be accessed at <http://wwwcimis.water.ca.gov>

To create a lawn able to use the water you give it more effectively, you should raise mowing heights within the recommended ranges, reduce nitrogen fertilizer during dry periods, apply adequate levels of potassium, remove thatch,

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and reduce compaction through aeration. As for the latter, Dr. Burger recommends that aeration should be done using machines with hollow tines instead of solid tines. The first removes a plug of soil while the latter can actually increase compaction problems by pounding the core down into the soil instead of removing it. You can also select drought tolerant turf grasses such as Improved Bermudagrass, Buffalograss, or Zoysia.

The next challenge is to avoid overusing nitrogen fertilizer. Much of the fertilizer used on urban lawns finds its way into the water systems through runoff. Dr. Burger says there are a number of ways to prevent this. First, make certain to control the application of fertilizer. Keep it on the lawn and away from sidewalks and driveways. Second, when watering, make certain that water is not running off your lawn into the street. This may mean you will have to divide the amount of time allotted for weekly watering over a period of hours or days in order to avoid runoff. Third, use less fertilizer. The reduction can be accomplished through a technique called grasscycling.

Grasscycling simply means leaving the grass clippings on the lawn instead of disposing of them in the street or landfills. Use a mulching mower that cuts the grass clipping into smaller pieces so that they filter through the turf to the ground below where they decompose, letting loose their stored nitrogen. Contrary to urban myth, grass clippings contain little lignin: if the grass is cut at its proper height, the clippings will not contribute to thatch problems. In addition you will cut the need for commercial fertilizers by as much as two-thirds.

The last challenge is reducing the carbon footprint of the lawn. Lawn is already fairly efficient at sequestering CO<sub>2</sub>, but using carbon producing, gas-power mowers can offset this gain. Instead, use an electric mower, or better yet, get a little more exercise and use a reel type push mower.

So, you CAN have your cake and eat it too. By following the steps above you can be a proud owner of a beautiful lawn for the kids and dogs to play on, and without feeling guilty. And, by meeting the challenges of responsible turf management, you will know that you are being a better steward of our planet.



## Plant Collecting Part II: African Violets

Willa Pettygrove, Yolo County Master Gardener



*Saintpaulia*

My most loyal readers may remember my 2007 column (Planning Your Collection—then Planting It) about another plant collection of mine, *Euphorbia* succulents. You might think these two plant categories have nothing in common. One is adapted to very arid conditions, while the other seems delicate and often is pampered on the window sills of ladies of a certain age. The two have several things that matter, however, if one is a plant collector: they come in a variety of interesting forms, they grow slowly and bloom unexpectedly, and they tolerate a fair amount of abuse in challenging growing conditions. In addition, both happen to be found in Africa, and both permit me to use my collection of small flower pots for something useful. But mostly, I find them both fun and rewarding!

African Violets (they are African, but not violets) of the genus *Saintpaulia* are one of several in the family *Gesneriaceae* that have been popularized as houseplants in more temperate climates. Their “cousins” include *Streptocarpus*, *Gloxinia*, and *Episcia*. They often have tubular, spectacularly colored flowers and velvety leaves.

*Saintpaulia* is no exception here; according to *Hortus III* (1976, p. 994), it comes from East Africa and contains about 21 species of “perennial hairy herbs.”

My collection is still small and is quite informal as collections go. Lacking variety names, I made up my own. ‘Doris Blossom’ is named after the woman who gifted it to me more than five years ago. ‘Mystery’ was a plant that didn’t bloom for a very long time and now is showing its very beautiful self. ‘Rebecca’ actually came with a plant label bearing that name. Rescued from a discount store’s After-Mother’s-Day sale, it has responded well to TLC and blooms quite dependably. ‘Violet White Ruffle’ is one that plant fanciers might also describe as “picotee,” but I like my name better. All tolerate Davis water, are fed when I remember, and are repotted only when they look unhealthy. Rarely, one is attacked by tiny, white sucking insects. These can be picked or washed off with a strong stream of water.

My latest achievement in this small hobby is to propagate successfully some new plants. Using a method I last saw at Grandma’s house decades ago, I put a leaf cutting from ‘Doris Blossom’ dipped in rooting compound in moist potting soil, and then inverted a jar over it. After several weeks, I peeked to learn there were tiny leaves forming at the base of the petiole. My ‘Mystery’ plant was easier; noting that it had a double crown, I bravely sliced down between the two and formed two plants. Both are doing well. This winter, the Parks Seed catalog offered, of all things, African Violet seeds. Put me down for a packet! I’ll try anything at least once.

There used to be a club called “Yolo Violeteers.” I once attended one of their shows and sales held at a retirement home in Woodland. I’m afraid to speculate what happened to its membership. But if you hear of its revival, let me know.

# Companion Planting: Good Buddies in the Garden

*Jan Bower, Yolo County Master Gardener*

## Concept

Companion planting is based on the idea that some plants benefit other plants when they are grown in close proximity. This association, known as a botanical “buddy system,” can result in better growth, higher yields, pest control, and weed repression. The concept of companion plants goes back in history to the Native Americans, particularly the Iroquois, who traditionally planted corn, beans and squash together. These plants were known as the “Three Sisters.” The squash took nitrogen out of the soil, while the beans put it back, and the tall corn provided shade, thus improving production. The concept is applied here to small scale, mostly vegetable home gardening; however, as scientific and horticultural testing increases, its application to commercial crops should become more practical and popular.



## Practices

Listed below are ways of creating beneficial plant associations:

**Trap Cropping:** plant a secondary plant that attracts pests away from the main crop.

**Symbiotic Nitrogen Fixation:** reduce the need for nitrogen fertilizer by planting legumes (peas, beans, or clover) that add nitrogen to the soil.

**Physical Spatial Interactions:** share the space of a tall growing, sun loving plant with a low-growing, shade tolerant plant, *e.g.*, corn or sunflowers companion-planted with squash or lettuce.

**Nurse Cropping:** sow annual crops to assist in the establishment of perennial crops and grasses, *e.g.*, use oats to reduce weeds and prevent erosion and excessive sunlight from reaching alfalfa, clover, and trefoil seedlings.

**Beneficial Habitats:** create a habitat that attracts and supports a population of beneficial insects (ladybugs, lacewings, hover flies, spiders, and wasps) by reducing pesticide use and providing host insects, nectar, pollen, water, and shelter.

**Security through Diversity:** mix different types of plants in the garden so if pests or adverse conditions destroy some plants others will still remain.

**Intercropping:** try mixed, relay, row, or strip intercropping (also known as interplanting), keeping in mind the spatial arrangement, density, maturity dates, and architecture of crops involved.

## Symbiotic Relationships

The effect plants have on one another is important not only for crops in the vegetable garden, but also for flowers, grasses, shrubs, and trees. For example, mint, rosemary, and garlic create a strong scent that repels aphids,

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ants, and other pests from companion plants, such as members of the cabbage family and roses. Flowering plants, such as daffodils, oleanders, hyacinths, scillas, and lilies of the valley, repel insects and look beautiful in the garden, but they are poisonous to dogs and children if ingested. Beans and peas should not be planted close to members of the onion family, i.e., garlic, chives, leeks and shallots, because the excessive nitrogen given off by beans encourages more foliage and less bulb in onions, and the sulphurous gas given off by onions is toxic to peas. Yet, beans and peas planted with carrots do well.

What this means is that learning what plants to pair as companions takes experimentation, and what may be successful in one garden may not be successful in another garden. In a way, fruits and vegetables are like people, they thrive on companionship. It is believed that food crops will yield up to twice as much when they are surrounded with companion plants. The accompanying chart shows a small sample of companion plants that work well together.

<i>Crops</i>	<i>Good Buddy Plants</i>
Asparagus	Asters, Basil, Marigolds, Parsley, Tomatoes
Beans	Beets, Cabbages, Corn, Cucumbers, Dill, Radishes, Rosemary, Savory
Beets	Catnip, Garlic, Kohlrabi, Lettuce, Mint, Onions
Broccoli	Dill, Garlic, Geraniums, Nasturtiums, Onions, Rosemary
Cabbage	Beets, Chard, Dill, Geraniums, Mint, Onions, Rosemary, Spinach, Thyme
Carrots	Beans, Chives, Lettuce, Onions, Peas, Rosemary, Sage, Tomatoes
Celery	Cosmos, Daisies, Snapdragons
Corn	Beans, Cucumbers, Peas, Potatoes, Pumpkins, Squash, Sunflowers
Cucumber	Beans, Beets, Carrots, Marigolds, Peas, Radishes, Sunflowers
Eggplant	Beans, Marigolds, Peppers
Garlic	Broccoli, Cabbage, Carrots, Peppers, Potatoes, Tomatoes
Lettuce	Carrots, Cucumbers, Radishes, Strawberries
Onions	Beets, Cabbage, Carrots, Lettuce, Savory
Parsley	Asparagus, Carrots, Chives, Onions, Roses, Tomatoes
Peas	Beans, Carrots, Cucumbers, Corn, Radishes, Turnips
Potatoes	Beans, Corn, Cabbage, Horseradish, Marigolds
Pumpkins	Corn, Marigolds
Radish	Cucumbers, Lettuce, Nasturtiums, Peas
Spinach	Fava Beans, Strawberries
Squash	Corn, Marigolds, Nasturtiums
Tomato	Asparagus, Basil, Carrots, Marigolds, Nasturtiums, Onions, Parsley
Turnip	Peas

## Bristlecone Pines

### Awe and Admiration

Fred Deneke, Yolo County Master Gardener

**I**magine being older than the Parthenon (about 2,400 years old), the Great Wall of China (about 2,600 years), or the Great Pyramids at Giza (about 4,500 years). Then, imagine being alive and witnessing the coming and going of countless civilizations.

Three foxtail pine species are native to higher elevations in the western United States, and all can live for over 2,000 years: Foxtail Pine (*Pinus balfouriana*), Great Basin Bristlecone Pine (*P. longaeva*), and Rocky Mountain Bristlecone Pine (*P. aristata*). Great Basin Bristlecone Pines, native to California, Nevada, and Utah, are far from being giants in height. Most are less than 30 feet tall. But assuredly, they are the giants of longevity since they are considered to be the oldest living individual organisms on Earth. To be fair, clones (colonies) of creosote, quaking aspen, huckleberry, and others are estimated to live 10,000 years or more. Clones of King's Holly (*Lomatia tasmanica*) may have lived for over 43,000 years! But, since clones spread asexually by suckers, none of the original tissues remain. There are few growth rings to count, and no magnificent specimen has lived on one specific spot. The age of these clones is certainly impressive, but they lose much of the romance of bristlecone pines.



photo by Jim Eastman

*P. longaeva*  
along the Methuselah Walk

The oldest documented Great Basin Bristlecone Pine was nicknamed "Prometheus" and grew in eastern Nevada for 4,862 years. Unfortunately, the reason that its exact age is known is because it was cut down in the mid-1960's solely to determine its age! As great a loss as that was, it likely spurred efforts to preserve bristlecones. The oldest documented living Great Basin Bristlecone Pine is estimated to be at least 4,841 years old and is nicknamed "Methuselah." It is a mere 30 feet tall and grows somewhere along the Methuselah Walk in the Ancient Bristlecone Pine Forest within the Inyo National Forest, near Bishop, California.

The incredible age of these trees was first documented in the 1950's by Edmund Schulman from the Laboratory of Tree-Ring Research at the University of Arizona. His work added about 1,500 years to the age of the previously known tree record holder, and spurred scientific research in dendrochronology and dendroclimatology. These research fields date events and archaeological dwellings, and study historical weather and climatic patterns, fires, and volcanic eruptions. Ironically, Schulman died at a young 49 years of age, just before a 1958 *National Geographic* article enlightened the world about these relics of ages past.

What enables these trees to survive for so long? Interestingly enough, their longevity seems to be due to harsh, unfavorable growing conditions. Great Basin Bristlecone Pines in California are found on the steep, rocky, eastern slopes of the White Mountains along the tree line between 9,500 and 11,500 feet. The soil is dolomitic limestone that is white, alkaline, and low in nutrients. Snow loads are heavy in winter, and the soil is dry in summer. Growing seasons are short. Sunlight and winds can be strong, and tree trunks are polished and sculpted by blowing ice and sand. These harsh conditions result in very slow growth; Lanner states, "... it is not uncommon to find 100 to 200 rings per inch of radius. By contrast, a fast-growing coast redwood (*Sequoia*) can form annual

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the enemy of many trees, seldom spreads far in bristlecone pine forests since trees are usually far apart and there is minimal ground cover or brush.

Is the great longevity of Great Basin Bristlecone Pines a result of environmental conditions or genetics? Lanner concludes, based upon his research, that it must be both. One piece of his genetic evidence, according to Lanner, is that “roots, trunks, and branches are arranged in semi-independent sections that contain damage when it occurs so that the whole tree is not harmed.” Needles can remain on the tree for up to 45 years, far longer than the 5 or so years common for other pine species. Their wood is dense, resinous, and rot resistant. Lanner found no evidence of senescence in the oldest trees as would be expected for animals a fraction of the age of the bristlecones. Exactly why remains a worthy subject for research that could have applications for increased longevity in humans.

Then what kills these noble trees? Wood rot, soil erosion, gravity, and perhaps global warming. Older bristlecones, especially in areas with greater moisture, can have fungal decay of their heartwood, ultimately reducing the structural strength of trunks and roots. Bark beetles, carpenter ants, and other insects can cause further weakening. Trees older than about 1,000 years have extensive root exposure that only increases with age because they so often are rooted on very steep slopes seemingly for an eternity. At some point, trees topple under the influence of weakened roots and trunks, winds, steep slopes, and gravity. Sadly, continued global warming could accelerate the loss of bristlecones since warming temperatures stimulate a slow migration of future bristlecones to cooler, higher elevations. Escape routes are limited since these trees are already near mountain peaks.

As much as I have studied books and pictures of Great Basin Bristlecone Pines, I was ill-prepared for a firsthand visit during the summer of 2009. A 4½-mile hike along the previously mentioned Methuselah Walk required four hours, not necessarily because of the 9,500 foot elevation and low humidity, but because every rounding of a bend required a stop to admire new wonders. Descriptive adjectives whirled through my head. These dramatic, gnarled, polished, weathered, sculpted, ancient, and statuesque trees were stunningly beautiful. Here the ubiquitous noise of the human world seldom interrupted the delightful sounds of nature—the singing of birds and of wind through the ancient pines. The Methuselah Walk is unlike the nearby Yosemite Valley experience because of the solitude and quiet magnificence.

My four-hour adventure along the Methuselah Walk inspired me to do even further research; I even sowed Great Basin Bristlecone Pine seeds. Various references told me bristlecones would make either excellent or poor bonsai. Well, that about sums up a lot of conflicting information one finds on any gardening topic. I now have a seedling that gives little hint of its potential. My next progress report will honor its centennial!

Who knew that one species of tree could spark so much awe, archeological research, medical research on longevity of plants and humans, climate research on historical flood and drought cycles, and inspiration for art, hiking, AND gardening.

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*P. longaeva* seedling  
2" tall, 1 month old



Rosalind Creasy

## Sustainable Gardening and Winter Vegetables

**Laura Cameron**, Yolo County Master Gardener

In March, the California Center for Urban Horticulture and the UC Master Gardeners hosted a day-long workshop titled, “Your Sustainable Backyard: Edible Landscaping.” The featured speaker of the day, Rosalind Creasy, is a pioneer of edible landscaping, which incorporates the design principles of ornamental landscaping that also includes edible plants.

Preparing the hardscape is important: design your yard the way you want it to look, layout your beds, pathways, patios, planters, and hedges. Plant edibles with perennials and annuals, and don’t be afraid to add dwarf fruit trees. Remember that fruits and vegetables need at least six hours of mid-day sun to prosper. If you have an established yard, consider incorporating herbs and vegetables into your landscaping. If you decorate a pathway with annual flowers, consider planting basil one season and lettuce another. Use rosemary, a flowering perennial as one of your foundation plants. Redoing a yard isn’t necessary. Stand back and look. Can you pop a tomato plant in somewhere? Is there a barren spot that squashes and pumpkins can cover? Can the bricked-in bed hold a few veggies?

Because of limited sun in her back yard, Rosalind created her edible landscaping out front. At first her neighbors were frightened; the barren look when she started especially worried them. Rosalind’s vision of an edible landscape grew, and the neighborhood sighed in relief. Her yard did not look like a typical vegetable garden; it became a beautiful splash of color and vibrancy, of variety and excitement. The neighborhood kids flocked to her yard to play and everyone began to enjoy the fruit of her bounty.

Instead of a trellis of roses, choose a trellis of cherry tomatoes. Plant your herbs in a knot garden, or carrots as a meandering stream. Include perennials, annuals and vegetables all together. Whatever style of garden you enjoy; edible landscaping can be a part of it. Check out her site at [www.rosalindcreasy.com](http://www.rosalindcreasy.com) and see what can be created.

Why consider edible landscaping? Three reasons are flavor, time, and money saved. One season Rosalind planted a 5 x 20 square foot bed of veggies to determine how much produce she could grow and how much money she could save. The summer crop produced about 236 pounds of vegetables and saved about \$700 (cost of purchase in a store). Because she mulched well, weeding wasn’t an issue, and beyond the initial bed preparation and planting, she didn’t need to spend much time in the garden.

### Vegetable Planting Time

Even as the fruits of spring plantings are still coming in, it is time to prepare for winter vegetables. In June start seeds for Brussels sprouts. July is a good time to directly seed Brussels sprouts, cabbage, parsnips, cauliflower, broccoli, carrots, rutabaga, and lettuce. This also is a good month to transplant seedlings or purchased plants of celery, sweet potatoes, corn, winter squash, cucumbers, and eggplant.

In the month of August, sow seeds for carrots, rutabaga, lettuce, and turnips. You can also transplant seedlings or purchased plants of Brussels sprouts, cabbage, spinach, sweet potatoes, eggplant, peppers, winter squash, beets, potatoes, corn, and beans.

The fruits of your harvest will mainly feed you December through February along with some early and late harvests. If you haven’t planted vegetables yet, try edible landscaping and see how that works for you. For those with established vegetable gardens, edible landscaping is a perfect way to branch out and try more varieties of vegetables.



# Summer Gardening Tips

Linda Parsons, Yolo County Master Gardener

**S**urely, summer will be here soon. Our cool, and damp spring weather has brought forth lush foliage and flowers. Such weather also brings more than the usual garden maladies, including fungal diseases on plants and lawns. For those who planted their vegetable gardens early in April, some veggies are experiencing cold stress and are not thriving or seem to lack vigor. Most of these problems will disappear, once our day time average temperatures rise above 75°F.

Unless you are an early morning gardener, take a few moments to protect yourself by putting on a broad brimmed hat, sunglasses, and sunscreen before you get started. Garden gloves also are a must for protection. For ease of cleaning up afterwards, slather your hands with hand cream and dig your finger nails into a bar of ivory soap. And, 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; this will save 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](http://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 this for some areas of your garden. For more information visit [www.centralparkgardens.org](http://www.centralparkgardens.org) or the Master Gardener website at [www.ceyolo.ucdavis.edu](http://www.ceyolo.ucdavis.edu).

## Pests and Diseases

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

Whitefly, spider mites, and katydids enjoy feasting on many kinds of plants. Thrips and horntail wasps disfigure roses, and leaf miners and hornworms chew tomatoes. Blasts of water and handpicking (hornworms) deter most infestations. Next, use a homemade or commercial soap or oil spray. Doing this 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](http://www.ipm.ucdavis.edu) for control guidance.

This Spring, our temperature and humidity were erratic and thus caused an increase in powdery mildew and rust fungus on susceptible plants, such as crape myrtles and roses. Warmer temperatures will jump start infestations of aphids, spider mites, and katydids. Carefully exam your plants now, before these problems overwhelm you and

### Simple Soap Fungicide

1 teaspoon of mild liquid soap (Ivory)

1 gallon of water

1 1/3 tablespoons of baking soda

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your plants. If necessary, use a hand lens to check the underside of the leaf. This is where these problems can first be detected.

To help identify the pest or disease your plant may have, consult [www.ipm.ucdavis.edu](http://www.ipm.ucdavis.edu) for an extensive list of articles and photos featuring pests and diseases that are common in the garden.

Continue to watch for slugs, snails, and earwigs. They are still lurking about in your garden, especially in damp and dense foliage areas. Slugs and snails can be controlled by commercially available iron phosphate, which is both effective and non-toxic. 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.



*lavender*

## **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 moist. 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 will need to water two or three times a week. If the temperature 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 higher is that it crowds out weeds.

If you see irregular brown patches in your lawn, you may have sod web worm. 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 damaged turf and discover whether there are pinkish grey to yellowish brown grubs feeding on the roots of your grass.



*photo by David Tauzer  
Elberta Peach, after thinning*

If you want additional information on watering your lawn consult <http://www.ceyolo.ucdavis.edu> and select the article on Lawn Irrigation.

## **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, more flavorful, and it will greatly reduce the risk of broken

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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. Specific help for thinning fruit trees and growing better table grapes can be found at [www.ceyolo.ucdavis.edu](http://www.ceyolo.ucdavis.edu).

The Cherry Maggot (*Drosophila suzukii*) has invaded home cherry crops for the past several summers. The maggots are not discovered until the cherries are ready to harvest. There are several methods of reducing or eliminating this pest. The most environmentally friendly method is to use Spinosad with 4-6 tablespoons of molasses per gallon of water. For a complete discussion of this pest problem visit <http://www.redwoodbarnnursery.com> or <http://www.farmerfred.com> or <http://www.ipm.ucdavis.edu/EXOTIC/drosophila.html>

## 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. Many of our local nurseries are offering more unusual tomato varieties, including Green Zebra and Brandywine. For a longer harvesting season, select determinant tomato varieties.

To keep vegetable crops continually blooming, harvest regularly, and continue inspecting for pests. In August, pinch back the plants to help the existing fruit to 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.

Now is the 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 for your fall vegetable garden.

## 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). They also require more frequent watering.



Claude Monet  
Gladioli

Herbaceous plants such as cosmos, delphiniums, foxglove, and peonies need to be staked or supported. Continue to keep your garden free of weeds.

Prune spring blooming shrubs (camellias, azaleas, and bridal wreath spirea) after the blossoms drop. Spring blooming vines such as lavender trumpet vine and clematis should be pruned after the blooms have faded. Fertilize after pruning to encourage bud set for next spring.



Green Zebra Tomatoes

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It is not too late to plant quick blooming summer seeds, such as nasturtiums, sunflowers and cosmos. You can also plant summer blooming bulbs, such as dahlias and cannas.

Continue to harvest your vegetable and herb crops on a regular basis, to promote and prolong summer's bounty.

If you tend your summer garden like the good friend it is, it will provide a season of bountiful rewards and be a welcoming summer retreat.

Summer finds me in the garden: early and late. Early hours greet me with birdsong, cool grass under my feet, and soft morning colors. Mid day breaks way to butterflies, bees, and dragonflies flitting amongst the warm scented flowers. The Delta Breeze rustles the trees as they dance in dappled sunlight at day's end. Crickets and an occasional Screech Owl remind me, that even in the garden moonlight, I have company.

Is there any place more inspiring than a garden? Do you think of song, poetry, art, culinary delights, or times idled away with pets, friends, and family? Summer gardens are a delightful place to find your inspiration. Use your senses to find that which brings you joy.

Enjoyable summer reading includes:

*Monet's Passion: Inspiration, and Insights from the Painter's Garden*, Elizabeth Murray

*The Magic of Monet's Garden: His Planting Plans and Color Harmonies*, Derek Fell



Claude Monet  
Sunflowers

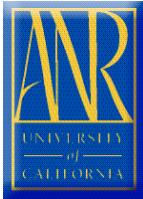
**“I perhaps owe having become a painter to flowers.”—Claude Monet**  
**Questions about your garden?**  
**We'd love to help!**

**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](mailto:mgyolo@ucdavis.edu)

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



U.C. Cooperative Extension  
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Woodland, CA 95695



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