This has sure been a strange summer weather wise.. I’m still waiting patiently for my tomatoes to turn red as I am sure many of you are waiting for your gardens to ripen up! We have completed our 4th Master Gardener training and I am happy to announce that we had 47 trainees pass the 2011 class. Congratulations to all of the new Master Gardeners! Our next training will be in 2013. Our volunteers have been busy planning a Smart Gardening Conference along with a wine tasting fundraiser at Delicato Winery. Both of these events will be in September and you can find more details inside this newsletter. We are also starting to organize a 2012 garden tour. If you support the local farmers markets you may have seen our table at the Lodi, Stockton, or Manteca markets. Stop by and say hello! You never know what we may be giving away that day. We are still hosting monthly workshops in Lodi and Manteca. Check out the upcoming events calendar for more details on all of our classes and events.

Program Spotlight

Marcy Sousa Master Gardener Coordinator

Seed Saving for Fun and …Well... Whatever!

Lee Miller Master Gardener

I could say for fun and profit, but the profit angle is a little dicey though seed saving is likely to save you a little cash. “Whatever” represents all those reasons known only to you as to why you might want to save seeds. Perhaps it is to maintain or learn more basic gardening skills or to identify with centuries old traditions of farmers and gardeners who selected and saved their own seed as a matter of survival. Maybe it is to just learn something new, or to feel more like closing the seasonal cycle of planting, harvesting and saving the seeds for the next cycle. Perhaps you might want to save an unusual plant or one more adapted to your homestead that you enjoy and want to pass the seeds along to friends or the next generation. After all, most of the plants we have are because someone saved the seed.
July
If you haven’t already dug potatoes, it is time and also time to mulch your tomatoes, peppers, dahlias, gladioli and landscape plants to conserve moisture for the hot days of summer. It is not advisable to use lawn clippings as mulch for tomatoes.

Robert Morris, a retired UC professor who trains Master Gardeners on vegetable gardening, tells how he used lawn clippings on tomatoes only to discover, through a colleague at the University, that lawn clippings provide ideal hiding habitat for stink bugs whose bites can cause yellow blemishes on tomatoes. For more information on stink bug pests click here. I have used compost as mulch on peppers and straw for Dahlias and Gladiolus, but haven’t mulched tomatoes regularly as their leaves tend to shade the soil well. Shredded bark or wood chips can work well as landscaping mulch.

Also be on guard for those tomato hornworms which can damage tomato plants and fruit. Picking them off or cutting them in two with scissors works.

Early July is the target time for starting transplants for a cool season vegetable garden. It is an unusual time of year to be thinking cool, yet the summer solstice is past and shorter days are coming. Seedlings of cabbage, broccoli, cauliflower and Brussels sprouts can be started in wooden flats filled with compost. Keep well watered and thin seedlings to avoid crowding. A good variety of Brussels sprouts to grow in the valley is Jade Cross E. I have had crop failures with Long Island Improved, but never with the Jade Cross E.

New blackberry primacanes can be trained on trellising and headed back to 6'. This year’s floracanes that are done cropping for raspberries and blackberries should be removed at ground level.

Make sure all your plants are getting adequate water. You might want to check with a trowel, soil probe meter or shovel to determine how deep you are watering. When it comes to vegetables, root depth varies and will determine how frequent and deeply you should water. For example, onions, leeks, Irish potatoes and corn are shallow rooted at 12-18 inches, whereas tomatoes, winter squash and watermelon are deeply rooted at over 24 inches. The latter should be watered deeply once or twice per week whereas the shallow rooted plants should get less water, more frequently.

It is time for solarization of garden beds. Wet the soil and seal with UV resistant plastic with dirt along the edges in full sunlight for 6 weeks to kill pathogens and weed seeds.

July is the time to start perennial flowers for next year. Seeds of campanula, columbine, foxglove, delphinium, forget-me-not, purple coneflower and rudbeckia can be sown. Bearded irises can be divided anytime but July or August is ideal. Dig with a spading fork and cut the younger rhizomes and leaf fan from the older rhizomes. Discard the older ones and replant the younger divisions and cut back the leaves by half to reduce moisture loss during rerooting. Replant in well drained soil and if the drainage is poor, plant on a berm.

If you haven’t planted summer annuals that bloom into the fall, now is your chance to purchase nursery grown plants such as zinnias, petunias, dahlias, marigolds, portulaca and sweet alyssum.

August
It is time for some summer pruning of any wayward branches on landscape shrubs. Keep wisterias in bounds by heading back any long vines reaching for neighboring trees.

If you have bird pest problems with apples, pears, peaches or grapes, it is time to get out the foil streamers or bird netting to protect your crop.

Roses should be kept deadheaded, well watered and fertilized to produce fall blooms.

In the vegetable garden, time to transplant the cole crops and seed lettuce, carrots, beets, chard, Chinese cabbage, collards and kale. Flats of onion seeds can be started about August 20th for transplanting in October.

September
Fall is time to plant perennials, bulbs and annuals for winter/spring blooms. With cooler weather, you can plant perennials such as: foxglove, geum, Penstemon, salvia, yarrow, delphinium, coreopsis, gaillardia, and campanula and annuals such as: snapdragons, larkspur, ornamental cabbage and kale, Iceland poppies, primrose and stock. Keep soil moist for optimal growth. Order your spring-blooming bulbs early for best selection and to get them in time for October planting.

Happy Gardening and may all your weeds be small ones.
Raising a child that loves nature and develops a lifelong enjoyment of gardening doesn’t just happen. Knowledge and appreciation of gardening is frequently inspired by a special person in the child’s life who takes time to teach the child about plants, ecology, life cycles and the fascinating creatures that inhabit their environment. Children are naturally curious and love to watch flowers, trees, and vegetables and “bugs” grow and mature.

The Internet is an awesome resource for all kinds of garden related activities for children. It has replaced the many books that we used to learn about our world. The Internet has great appeal because it includes fascinating interactive multimedia that brings information and an abundance of images directly to the young gardener and provides resources that are available at any time. These activities are enriched when shared between an adult and young gardener.

In coming newsletters, I will share some Internet resources that will help you build your child’s skills and develop their natural curiosity to learn about the joys and rewards of gardening. You and your young gardeners can look forward to a variety of sites in each newsletter. Internet themes will include topics such as botany, ecology, entomology, life cycles, recycling, vegetable gardening, garden art projects and seasonal projects. Specific search strategies will also be provided to help you fine-tune your own searches to specific needs and special interests. Help your young gardeners learn how to explore their home garden environment.

Make the most of your time together. Use these resources as a beginning point for explorations and gardening activities. The Internet sites below are just the beginning. Just click the links below and enjoy using these sites to explore a limitless number of exciting resources. With guidance and support, you can help your young gardener grow and learn the joys and rewards of gardening.

Remember, the Internet should always be used with adult supervision and some sites do have links to advertisements, coupons or “pop-up windows” that might not be appropriate for your child. It is always best to preview and become familiar with each site before introducing them to children.

Enjoy!

Click on links below

Environmental Kids Club
Kiddie Gardens -- Gardens for Children and Gardens for Kids
The Kids Garden – Helping Kids Enjoy Creative Gardening
Kids Gardening.org – Helping Young Minds Grow
My First Garden – a Guide to the World of Fun and Clever Gardening
Gems from the Garden: Digging up Activities for All Ages
Organic Gardening – Turn digging in the dirt into a lifetime of love and respect for nature
No Dig Vegetable Garden – Fun and Inspiring Children’s Gardening Ideas
Gardening with Kids – Selected Books for Adults
GardeningChildren.com -- Ten Tips on Gardening with Kids
Asian Citrus Psyllid & Huanglongbing (HLB)

This quarter’s pest and disease of the month are closely connected. You might have heard about the Asian Citrus Psyllid (ACP) in the news or in public service announcements regarding citrus quarantines. The Asian citrus psyllid (ACP), *Diaphorina citri* Kuwayama, a tiny, mottled-brown insect about the size of an aphid, poses a serious threat to California’s citrus trees, including those grown in home gardens and on farms. The psyllid feeds on all varieties of citrus (e.g. oranges, grapefruit, lemons, and mandarins) and a few very closely related ornamental plants in the family Rutaceae (e.g. calamondin, box orange, Indian curry leaf, and orange jessamine or orange jasmine). It is a vector (carrier) of the Huanglongbing, Citrus Greening disease. The disease is apparently not present yet in California, but the vector is present. It is thought that the existence of the vector in Florida has allowed the transmission of the disease from uncared for home citrus trees to commercial orchards. The disease has caused $300 million yearly economic damage in Florida and has induced Florida Citrus growers to make up to 8 nonselective insecticide treatments per year in order to prevent its spread. The disease is particularly insidious due to the fact that it can spread before its symptoms are evident and the symptoms may not show up for 2-3 years. We can all help by obeying the quarantine and by closely monitoring our home grown citrus trees. If you think you have seen this pest call CDFA Exotic Pest Hotline at 1-800-491-1899. For those of you interested, the literal translation of Huanglongbing is “Yellow Dragon disease.” For more information check out the following web sites.

UC IPM Exotic Pest Asian Citrus Psyllid  
State Senate Briefing  
Florida Information

Dallisgrass

My weed of the quarter is Dallisgrass, *Paspalum dilatatum*, a wide bladed perennial grass that aggressively takes over lawns as warm weather arrives. The appearance of Dallisgrass is similar to that of crabgrass, but it is a perennial and therefore doesn’t die out in the winter. This means that the chief way to control crabgrass through use of pre-emergent herbicides won’t work for control of existing Dallisgrass infestations. Most pre-emergent herbicides for grasses will prevent infestation, but none will eliminate existing clumps. Additionally, one of the main herbicides used by both professionals and homeowners, MSMA, Monosodium methanoarsenate, Weed Hoe, contains organic arsenic and has been removed from use on residential lawns effective Dec. 31, 2009. Unfortunately the UC-IPM page 7491 has not been amended for this change. As far as nonchemical management goes, while frequent mowing will not eliminate this weed it will keep seedheads from forming and slow its spread. One of the best ways to prevent its development is to keep a tall, thick healthy lawn which can out-compete Dallisgrass seedling growth. Scalping your lawn with weedeaters or short mowing leave open areas where weeds can get a foothold. Please click here for more on how to control Dallisgrass in various situations.
Snap Dragon & Monkey Flower - Flower and shrub of the quarter

Snapdragon—*Antirrhinum majus*
Family Scrophulariaceae (Figwort family)

**PLANT IDENTIFICATION**
Snapdragons are perennial plants usually treated as annuals. There are various forms best suited for borders, edges, beds, pots, or rock gardens. The Chinese Lanterns strain has trailing stems and is best suited for hanging baskets. Flowers are bell-shaped or lobed and come in various colors. They bloom mostly in spring and early summer and attract butterflies. In mild areas, flowers can also bloom in winter.

**OPTIMUM CONDITIONS FOR GROWTH**
Snapdragons do well in areas with full sun and need regular water. In areas with mild winters and hot summers, snapdragons will bloom from winter through spring. For more information on snapdragons, click here.

Monkey flower—*Diplacus, Mimulus* spp.
Family Scrophulariaceae (Figwort family)

**PLANT IDENTIFICATION**
Monkey flowers are woody perennial plants. Some species are short-lived and may be grown as annuals. Monkey flower gets its name from the funnel-shaped, two-lipped flowers. Flowers form in spring and summer and are orange, peach, red, white, cream, yellow, rose, maroon, or brown. Leaves are sometimes sticky.

**OPTIMUM CONDITIONS FOR GROWTH**
Monkey flower has a wide range of needs that varies by species. They may do well in areas with full sun, partial shade, or full shade. Some species need little water; others need moderate to regular amounts of water. Provide good drainage. Prune off old blossoms. For more information, click here.

Crape Myrtle - Tree of the Quarter

Crape myrtle—*Lagerstroemia* spp.
Family Lythraceae (Loosestrife family)

**PLANT IDENTIFICATION**
Crape myrtle trees are deciduous shrubs or small trees; dwarf forms are available. They are known for lovely fall color foliage; many flower colors are available.

**OPTIMUM CONDITIONS FOR GROWTH**
Crape myrtle trees can grow in all climatic zones; they do best in full sun. They should be watered deeply but infrequently. To encourage the next season’s bloom, prune during the dormant season. For more info on growing Crape Myrtles, click here.
This book review is dedicated to the memory of Master Gardener, Bob Cox, who crafted many Growing Knowledge articles and who encouraged me to read this book. Bob was an excellent scholar of landscaping techniques, a lover of garden books and a first-class writer who’s pleasant and joyful disposition endeared him to all in our group. We miss him.

The Brother Gardeners, Botany, Empire and the Birth of an Obsession by Andrea Wulf, 2009, Alfred A. Knopf, New York, 354 p. is a book dealing with the history of gardening in England and how it came about that the English people are such inveterate gardeners and garden lovers. My wife purchased this book for me and I must confess that I put down a partly read novel by Barbara Kingsolver to read Brother Gardeners. Two of my loves come together in this book, horticulture and history.

The book’s first few chapters deal with John Bartram, the American plant and seed collector and his English counterpart, Peter Collinson, also a plant collector. Both were Quakers and both had a love of botany. When I was visiting my son in Philadelphia a few years ago we went to see John Bartram’s home and farm on the Schuylkill River in Philadelphia which is now maintained as a local park. So I had some knowledge of the role John Bartram played in collecting plants, but this book gave much more detail on his collecting American exotics and shipping them to England despite the vagaries of trans-Atlantic shipping in those times.

Bartram was a self taught botanist and initially had little time for it as he was busy building a home and farming in 1727. Collinson, was a fellow of the Royal Society. He was interested in receiving plants in return for many books that he sent to Philadelphia’s Lending Library that had been established in 1731 by Benjamin Franklin and associates. The Library secretary was unable to send plants, but recommended Bartram as a local person with some botanical knowledge and thus began a four decades long and mutually rewarding relationship. Bartram collected plants and seeds and shipped them to England and was paid by Collinson and other subscribers that he recruited.

This period coincided with the empire period in England and wealthy large estate owners desired new natural landscapes. Bartram provided American trees, shrubs and perennials that filled the bill for exotics that would grow in England without need for hothouses as did the many exotics from tropical climes. It also coincided with the publication of the Gardeners Dictionary by Philip Miller which was a comprehensive manual of practical gardening and provided a template for gardening encyclopedias to follow. It did much to popularize gardening in England. Collinson had one of his subscribers send a copy to Bartram which greatly facilitated his botanical knowledge. Frankliana alatamaha, is a showy shrub Bartram found in Georgia in 1765 on his southern expedition. It was named after Benjamin Franklin and was extinct in the wild a few decades later. It was introduced into England in 1774.

Another section of the book was about Linnaeus and his binomial system of nomenclature that revolutionized classification in biology. Linnaeus classified plants based on the sexual parts of flowers. This was highly controversial as would be any new paradigm. He prevailed by hard work and the force of his genius. His classification was more readily accepted in America than in Europe. One of his students, Daniel Solander, was sent to England to help Collinson classify material provided him by Bartram. Solander stayed in England and though he had been engaged to Linnaeus’ daughter never returned to Sweden. He joined with Joseph Banks on a famous voyage of discovery on the Endeavour with Captain James Cook. Banks was a wealthy man who loved botany and thus funded his own participation and that of Solander, two artists and assistants to the tune of £10,000. He left a lady friend who sequestered herself for the 3 years of the voyage in expectation of marriage on his return. I suggest you read the book to find out how this romance ended. The Endeavour stopped in Tahiti to observe an eclipse of the sun by Venus. Here Banks and Solander filled a herbarium with over 300 specimens while the crew spread syphilis widely. They sailed on to make a landfall in Australia where so many new plants were collected for the herbarium that Cook named their anchorage, Botany Bay.
Banks became a pivotal influence for finding useful plants and animals that would increase British Empire wealth. He convinced George the III to transform the royal garden at Kew into the world’s largest botanical collection with Banks named as its director in 1773. For many years he sponsored plant collectors and collections including the *Bounty* expedition by Captain Bligh for breadfruit plants from Tahiti which were to be used to feed slaves in the West Indies. The result was one of the world’s most famous mutinies. A later voyage did procure the plants.

There is much more to this book than I can possible describe here. There is a multipage glossary which lists name, date and notes on plant introductions to England. This book is an outstanding depiction of the people and the times that made England a nation of gardeners and the gardening center of Europe. I highly recommend it.

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**Growing Knowledge**

**Marcy Hachman** Master Gardener Coordinator

At a recent conference I had the pleasure of meeting Amy Stewart, a CA native author of several books including her newest “*Wicked Bugs.*” She was our keynote speaker during dinner… dinner and deadly bugs and she did a great job captivating every master gardener at the conference.

For every human on Earth there are roughly 200 million insects. "We are seriously outnumbered." Amy Stewart respects that. She understands that insects do good. She knows they are integral parts of the food chain, that they pollinate the plants we eat and keep soil healthy. She knows we could not live without them. But she didn't write a book called "*Wicked Bugs: The Louse That Conquered Napoleon's Army & Other Diabolical Insects*" to extol their virtues. She wrote it to chronicle their most dastardly deeds. She wrote it to make you shudder and itch as you learn how the smallest of creatures can decimate forests and crops, collapse cities, thwart armies and inflict horror-movie levels of pain, suffering, festering disease and gruesome death upon millions of humans, while changing and shaping the course of history. She wrote this book to scare the bugs out of you.

Stewart is not an entomologist, but she is a consummate storyteller with a curious mind. She makes it very clear that she’s just an interested writer, and that translates to the fun, playful tone throughout the book. It’s well-researched and written with characteristic wit, whimsy and reverence. Accompanied by Briony Morrow-Cribbs’ gorgeous entomological etchings and drawings, the book is arranged in alphabetical order by species, and then divided into five dubious categories: Horrible, Painful, Destructive, Dangerous and Deadly.

*Wicked Bugs* is a great little gross-out guide, something I’ve been torturing my friends with at unsuspecting moments by whipping it out and reading the first description I land on. It’s also super-informative and fun, packed with interesting factoids.

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**Useful Web-sites**

**Sacramento Audubon Society**

Interested in attracting birds to your garden? Visit the Sacramento chapter Audubon web-site for some great tips on attracting birds to your garden as well as common birds found in our area.

**UC ANR Catalog**

Find free handouts of various topics related to gardening at this UC web-site. Click under free publications then search by the topic you are interested in. You can also find books to purchase for your home garden library on the web-site too!

**UC Blog Web-site**

Interested in following some new blogs? Check out the list of blogs available through the UC. Some of our favorites are Bug Squad and the CA Water Blog. One of the newest not even on the list yet is a [CA weed blog](#) from the Weed Science Dept. Lots of great information out there at...
If you are serious about seed saving then a good topical book is worth procuring. One is *Seed to Seed* by Suzanne Ashworth, published in 1991. It is currently in its second 2002 edition with Kent Whealy added as second author. Another book from 1991 is: *Saving Seeds: The Gardener's Guide to Growing and Storing Vegetable and Flower Seeds (A Down-to-Earth Gardening Book)* by Marc Rogers and Polly Alexander. I am more familiar with the first edition of *Seed to Seed* than with the other books. The latter two are available new or used from Amazon Books and other book vendors.

The rise of hybrid seeds has diminished the opportunities for seed saving, because seed saved from hybrids revert to something else that is not likely to be productive or as good as the hybrid. We want to save seeds from open-pollinated plants and we also need to make sure they haven’t been cross-pollinated to produce a hybrid that we can’t use. Heirloom tomatoes and lettuce are two plants that are open-pollinated and mostly self-pollinated. These are good ones to start off. Now and then we will move on to more complicated issues in seed saving.

Most tomatoes have retracted styles and hence are only self-pollinated. However there is some possibility of potato leafed heirloom tomatoes not having retracted styles and hence vulnerable to cross-pollination. Therefore, it might be prudent to separate such plants as much as possible. So far I have not noticed any problem getting the potato leafed varieties to come true to type and I have not consciously separated them.

Well-ripened tomatoes should be cut in half across the stem-blossom end axis so that the seed cavities are cut in half and the pulp and seeds are easily extracted by squeezing the halves or scooping with a spoon. Place them in a pint or quart plastic container such as those used for cottage cheese, yogurt or sour cream. Add a cup of water to the pulp, label as to the tomato source and ferment in a warm place, not in the sun, for 3 days, until there is a white mold film appears. This is a stinky operation, so keep it outdoors. Stir it once a day if you can, but this is not critical. The purpose of this is to rid the seeds of the gel sacs surrounding the seeds which keep them from germinating while inside the tomato. Don’t go much longer than 3 days or seeds may start to germinate. After 3 days, pour off the water, any floating seeds and most of the pulp. Put the seeds in a strainer and wash them thoroughly. Afterward, spread them to dry in a glass or ceramic dish located in the shade, as too much sunny heat can damage the seed. When the seeds are dry place them in an envelope or vial and label the variety, seed source and date. I have planted viable tomato seeds that have been re-frigerator-stored for 20 years!

I have saved lettuce seed which is mostly self-pollinating, but it can cross-pollinate with wild lettuce or other varieties unless separated by bloom time or a distance of 25 ft. Seeds are ready from 12-24 days following bloom. I usually cut the plant and shake it vigorously into a 5 gallon bucket and then winnow the chaff and white feather material that needs to be separated from the seeds. Winnowing is often done by pouring seed from one container to another in a slight breeze or in front of a slow fan. However Ashworth recommends two sievings to separate the seeds since the materials are nearly the same weight as the seeds. She recommends a screen that allows the seed to go through and keeps the chaff and then she uses a screen that retains the seeds and gets rid of the fines. I found that winnowing worked well enough since I had so much seed, I didn’t mind losing some by winnowing from one bucket to another. The seed should be good for 3 years.

This year I am saving carrot seed. Since I had two varieties going to seed at once and all carrots readily cross pollinate, I composted one variety and decided to save only seeds from the Nantes type. If I had wanted to save both varieties I would have had to have planted them ½ mile apart or cage them.
Recipes of the season—Zucchini

Zucchini Boats on the Grill

Ingredients
- 2 medium zucchini
- 1 slice white bread, torn into small pieces
- 1/4 cup bacon bits
- 1 tablespoon minced black olives
- 1 jalapeno pepper, minced
- 3 tablespoons diced green chile peppers
- 1/4 cup minced onion
- 1/4 cup chopped tomato
- 6 tablespoons shredded sharp Cheddar cheese
- 1 pinch dried basil
- seasoned salt to taste
- ground black pepper to taste

Directions
1. Prepare the grill for indirect heat.
2. Place the zucchini in a pot with enough water to cover. Bring to a boil, and cook 5 minutes. Drain, cool, and cut in half lengthwise. Scoop out the pulp to about 1/4 inch from the skin. Chop pulp.
3. In a bowl, mix the zucchini pulp, bread pieces, bacon bits, olives, jalapeno, green chile peppers, onion, tomato, and Cheddar cheese. Season with basil, seasoned salt, and pepper.
4. Stuff the zucchini halves with the pulp mixture. Seal each stuffed half in aluminum foil. Place foil packets on the prepared grill over indirect heat. Cook 15 to 20 minutes, until tender.

Great way to keep the house cool by not using the oven and a great dinner recipe for that abundance of zucchini in the garden!

Easy Chocolate Zucchini Cake

Ingredients:
- 1/2 cup (4 ounces) butter, softened
- 4 large eggs
- 1 teaspoon vanilla extract
- 1/4 teaspoon almond extract
- 1 cup sour cream
- 1 chocolate fudge cake mix with pudding in the mix, about 18.25 ounces
- 1/2 teaspoon ground cinnamon
- 1 medium zucchini, shredded, about 1 1/2 cups shredded
- 1 cup semisweet chocolate chips
- 1 cup chopped pecans or walnuts

Preparation:
Grease and flour a 12-cup Bundt cake pan or 10-inch one-piece tube cake pan. Heat oven to 325° (350° for a light-colored pan).

In a mixing bowl with electric mixer, beat the butter until light; beat in eggs and flavorings. Beat in the sour cream and cinnamon, then slowly beat in the cake mix. Stir in the zucchini, chocolate chips, and pecans.

Spoon the batter into the prepared pan and bake for 40 to 50 minutes, or until a toothpick or cake tester comes out clean when inserted in the center of the cake. Cool on a rack for 15 minutes. Invert the cake onto a serving plate to cool completely. Frost the cake or dust with powdered sugar.
The Help Desk

Frequently Asked Question for Summer

My cucumber plants are covered with tiny white insects. What are they and how do I get rid of them?

Those tiny white insects are most likely whiteflies. The tell-tale sign of this pest is the white cloud of flying insects that may be seen when the plant is disturbed. Whiteflies are usually found on the undersides of leaves, where they feed and lay eggs. They develop rapidly in warm weather and are a common pest of many vegetable, ornamental plants, and citrus. Their host range is quite broad and includes weeds and crops. While there are several whitefly species, the most common pest species in California are the greenhouse whitefly (Trialeurodes vaporariorum) and the silverleaf or sweet potato whitefly (Bemisia species). Both of these may feed on plants in the cucurbit family, including cucumbers, squash and melons. Adult whiteflies are white and sometimes have darker markings on their wings. They derive their name from the mealy, white wax covering the adult’s wings and body. Nymphs, which cause most of the damage, are oval, legless, and don’t move. They are sap-sucking pests, like aphids. High populations cause leaves to turn yellow, shrivel, and drop prematurely. The honeydew excreted by nymphs collects dust and leads to sooty mold growth. Honeydew attracts ants, which interfere with the activities of natural enemies that may control whiteflies and other pests. While whiteflies are a perpetual pest in many vegetable gardens, they rarely kill the plant.

Outbreaks frequently occur when natural enemies (including lacewings, big-eyed bugs, minute pirate bugs, lady beetles and parasitic wasps), have been disturbed or destroyed by pesticides, dust buildup, or other factors. Control damage by removing heavily infested leaves. Adult whiteflies can be removed by a hand spray of water or by a hand-held vacuum cleaner. This is best done in the cool part of the day, when they are least active. You can also install a yellow sticky board in your vegetable garden to trap adults. These can be purchased or handmade, using plywood, yellow paint and a sticky substrate, like Tangle-foot. Insecticidal soaps may be effective, as well as horticultural oils. Use only if natural enemies aren’t present and be sure to apply good coverage, including the undersides of leaves.

To prevent future outbreaks, consider using reflective mulches (which repel whiteflies), avoiding dust, choosing less susceptible plants, and eliminating use of pesticides that kill whitefly’ natural enemies.

For further information refer to:
White Fly Pest Note
## July

**Saturday, July 16, 2011, 10:00 - 11:30 a.m.**  
**San Joaquin Master Gardener Workshop:**  
Attracting Birds and Beneficials to your Garden  
Classes are free  
Manteca Library  
320 W. Center, Manteca

## August

**Saturday, August 6, 2011, 8 a.m. - 2 p.m.**  
**Fair Oaks Horticulture Center Workshop**  
Harvest Day - Sacramento's Ultimate Garden Event!  
Workshop is free  
Fair Oaks Park, 11549 Fair Oaks Boulevard, Fair Oaks, CA 95628  
Listen to speakers, watch demonstrations, visit educational booths, tour the gardens, sample fresh tree-fruit, grapes, and vegetables. Visit the plant clinic for advice.  
[More info click here](#)

**August 13, 2011, 10:00 – 11:30 a.m.**  
**San Joaquin Master Gardener Workshop:**  
Composting and Green Waste Reduction: Building a Healthy Soil  
Classes are free  
San Joaquin County Historical Museum at Micke Grove ($5 parking if not a Museum member)  
11793 N. Micke Grove Road, Lodi

**August 20, 2011, 10:00 - 11:30 a.m.**  
**San Joaquin Master Gardener Workshop:**  
Composting and Green Waste Reduction: Building a Healthy Soil  
Classes are free  
Manteca Library  
320 W. Center, Manteca

## September

**September 10, 2011, 10:00 - 11:30 a.m.**  
**San Joaquin Master Gardener Workshop:**  
Turf Grass 101: Managing a Healthy Lawn  
Classes are free  
San Joaquin County Historical Museum at Micke Grove ($5 parking if not a Museum member)  
11793 N. Micke Grove Road, Lodi

**September 17, 2011, 10:00 - 11:30 a.m.**  
**San Joaquin Master Gardener Workshop:**  
Turf Grass 101: Managing a Healthy Lawn  
Classes are free  
Manteca Library  
320 W. Center, Manteca

**September 24, 2011, 10:00 – 11:30 a.m.**  
**Fair Oaks Horticulture Center Workshop**  
Nurture the Soil, Conserve Water and Energy, Winter Vegetables  
Workshop is free  
Fair Oaks Park, 11549 Fair Oaks Boulevard, Fair Oaks, CA 95628  
Learn tips and tactics to analyze and improve your soil. Explore lawn alternatives. Plant a winter vegetable garden. Prepare the irrigation system for winter.  
[http://cesacramento.ucdavis.edu](http://cesacramento.ucdavis.edu)

To register for classes [click here](#). Spaces are limited! Cost is $20.00 and includes lunch.

**September 17, 2011, 6:00 - 8:00 p.m.**  
**Master Gardener Fundraiser - Wine Tasting and Silent Auction**  
Delicato Winery.  
[Click here](#) to purchase tickets and support the Master Gardener Program. Proceeds will help support educational outreach.

**September 17, 2011, 10:00 - 11:30 a.m.**  
**San Joaquin Master Gardener Workshop:**  
Turf Grass 101: Managing a Healthy Lawn  
Classes are free  
Manteca Library  
320 W. Center, Manteca
So now you are a genuine vegetable gardener! All the planning, planting, and nurturing have resulted in generous harvests. Your friends and families are enjoying nutritious, delicious meals. Neighbors are being gifted with the extras. And you still have buckets and baskets full of tomatoes and zucchini!

“Putting food by,” is a tried and true old time tradition gaining current interest as we have become more interested in having healthful, fresh food, buying in farmers markets and growing our own. The benefits of taking on food preserving projects are many. You can enjoy wholesome, fresh tasting food all year; nutritious and healthy foods, free of additives with reduced packaging, plus the enjoyment of the process and in sharing of our bounty with others.

There are many methods for “putting food by.” The three most common are canning, freezing, and drying. Others include curing, fermenting, smoking, and root cellaring. Let’s be clear: taking on food preserving activities requires some of your time, effort, and money! Space for storage may also be an issue. Each method has its advantages and disadvantages. As you consider these, be sure that you will feel the rewards and enjoyment of the process and the results!

The expected and necessary result in all food-preserving processes is to destroy destructive enzymes and to kill spoilage or dangerous bacteria in the foods so that they can be held safely in storage. The goal is to do this while retaining as much as possible the color, texture, and flavor of the food. Since each process does this differently, it is important to identify which processes work best with each food. This choice should also include the end use of the food in question. If texture and shape are important, tomatoes for example should be canned. If the end use is for a sauce or soup, freezing is acceptable and easier.

Let’s look at an overview of the basics for each of the three main methods: canning, freezing, and drying. Note that the specific directions for each of the particular food you are preserving can be found by clicking here. And it is vital for safety, as well as successful results, to follow directions precisely. References for excellent resources for detailed instructions and information follow this article.

Whatever method is chosen, start with the freshest produce possible, preferably straight from the garden, harvested early in the morning when it is cool. Prepare so that the fruits or vegetables are washed, free of blemishes, and trimmed or cut specific to instructions for the recipe. Use only recipes, instructions, and equipment specified for the process you are using. Never change ingredients or amounts and follow directions precisely.

**CANNING BASICS** The way canning works is by heating the product in the jar in boiling water to a temperature, which kills harmful bacteria and also forces air out of the jar. As it is cooled down, the lid is pulled down, sealing the jar.

**FREEZING BASICS** The freezing process destroys destructive enzymes and kills harmful bacteria by keeping the food at or below 0º Fahrenheit. Choose foods for freezing that will hold their colors and textures well when defrosted, unless the texture will not matter for their intended end use such as in sauces, soups, or blended drinks. For best results, as much air as possible should be eliminated from the storage container. This also helps to prevent freezer burn and ice crystal formation.
DRYING  Many fruits, vegetables, and herbs can be dried. If you are starting out, drying is easiest and a good way to begin. Drying foods preserves them by removing the moisture that supports dangerous bacteria and enzymes. Most home dried goods retain 5-20% of their moisture. There are several methods for drying foods using the sun or indoors by using or creating the right amount of heat. Some methods can be less reliable or dependable due to outdoor climate inconsistency or the inability to maintain the correct temperature uniformly for the entire product. One thing to consider is that, unless sun drying, costs can be higher than for canning or freezing. Choose foods for drying that dry well and those you want for a specific purpose such as dried foods or fruit leathers for snacking.

References and Links

UC Sacramento County Master Food Preservers
Univ. of Missouri Extension
Preserving Your Harvest
Ball Preserving Web-site
Ball Blue Book Guide to Preserving, 2004
Putting Food By, Janet Greene, Ruth Hertzberg, Beatrice Vaughn, 2010
Stocking Up III: the All-New Edition of America's Classic Preserving Guide
by Carol Hupping , Rodale Press
San Joaquin UC Master Gardeners invite you to attend our 1st Annual Smart Gardening Conference
Saturday September 24, 2011 • 8:30 am - 4:30 pm at the
Robert J. Cabral Agricultural Center
2101 E Earhart Avenue, Stockton 95206

Register today and learn some easy and practical ways to make your landscape sustainable from Master Gardener Experts who are trained to help you create a healthier garden and yard. 8 class topics to choose from!

Cost is $20.00 (includes lunch)

For more info call 953-6112 or visit our web-site at http://sjmastergardeners.ucdavis.edu
You can help support the Master Gardener Educational Outreach Programs

Join us at Delicato Winery
Saturday September 17, 2011
6:00-8:00 p.m.

Enjoy wine tasting provided by Delicato Winery,
Appetizers and a Silent Auction

Tickets must be purchased in advance by contacting the Master Gardener program at 953-6112 or by clicking here to buy tickets on our web-site.
(Tickets can be purchased by credit card, cash or check)

Proceeds will help support Educational Outreach within the Master Gardener Program
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On September 17, 2011 San Joaquin County Department of Public Works, City of Lodi and the City of Stockton will be hosting the annual San Joaquin County Cleanup. Last year, San Joaquin County’s signature environmental event benefited from the dedication and passion of over 1,200 volunteers, clearing 20 miles of waterways from approximately 24,000 pounds of trash.

The Cleanup provides regional awareness of environmental issues and empowers our residents with the tools to protect the environment. It is important to understand any trash, chemicals or debris left outside may enter a stormdrain. When anything other than rain enters stormdrains it too flows to the nearest waterway damaging the health of our rivers, Delta and ocean. It’s vital we keep the waterways clean before they become hazards to our community.

**How to help in your daily lives:**

Never throw trash on the ground.

Never through anything out your window.

Never dump anything down a stormdrain.

Make an effort to prevent pollution by reducing your waste, reusing products and recycling.

Visit our website to view cleanup locations for 2011 and join us at your local waterway to experience first-hand the beauty of nature and how a little bit of effort goes a long way in protecting the health of where you live, work and play. Cleanup supplies are provided.

Contact Cynthia G. Madrid (209) 468-3073 for more information or visit [www.sjcleanwater.org](http://www.sjcleanwater.org)

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**13th ANNUAL SAN JOAQUIN COUNTY CLEANUP DAY**

Elisa Moberly Solid Waste Dept.

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**Have a gardening question?**

Bugs, water conservation, native plants, pruning, fruit trees, tomatoes, lawns?

**Call the Master Gardener Office**

**Tuesday-Thursday 9:00 am - 12:00 pm**  953-6112
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FREE OIL FILTER EXCHANGE EVENTS Saturdays and Sundays in July!
Offer* good at ALL San Joaquin County:
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For details call (209) 468-3066 or go to www.SJCreecycle.org

*Terms and conditions apply. See participating retailer for details.
Funded by a grant from the Department of Resources Recycling and Recovery (CalRecycle).