



March/April 2013

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What's wrong with this sycamore tree/leaf? Find the answer on page 7

Master Gardeners Know Everything... Right?



Spring is one of the busiest times of year for our master gardener program. Fairs and festivals are kicking off, seasonal farmers' markets will soon be opening, and the questions will start coming into the office as people start exploring around their yards and gardens. Since you are a "master" gardener friends and family turn to you for ALL of their questions... You do know everything right?!?! Keep in mind, when you are wearing your master gardener hat (or badge) we want to stick to UC

recommendations. We do not want to recommend Great Aunt Mary's concoction for controlling snails. The pest notes are available as a resource and there is valuable information on many UC websites. It's a safe bet that as you are working the booth at Earth Day or the Home and Garden Show people are going to ask you what is wrong with their plant. What insect is eating their tender seedlings. Remember that "I don't know" is an acceptable answer. Many times what they are describing and what you are visualizing are two different things. Encourage a call to our hotline where their information and question can be written down and researched. You're not expected to know everything so try not to stress too much as the questions start coming in.

Volunteer Hours & CE Units

Volunteer hours and CE units... will you be ready? Just a reminder that our calendar year will end June 30th and we will start with new volunteer time and CE units as of July 1st. Take a minute and make sure you are on track to complete your required hours for recertification. There are lots of spring opportunities coming up to earn volunteer time and the MG training classes can earn you some easy CE units. All current MGs should have 12 CE units (hours) and 25 volunteer hours. If you are making up "owed" hours please make sure you are on track to get those covered as well. **Your hours and time are important to us!** Its important to keep track of AND enter your volunteer hours and CE units. When we report to the county your time = \$\$\$\$. From July 1, 2011 to June 30, 2012 volunteer hours that were reported tallied up to 4,740 hours. The UC values master gardener volunteer time around \$19/hour (This number fluctuates a little from year to year) That's just over \$90,000.00 you all contributed in time back to San Joaquin County in 2011-2012. I've heard volunteers say that once they've reached their required time they stopped adding hours. Please continue adding hours earned so we can have an accurate picture of what MGs are doing in the county. This will also get you closer to earning one of the 250 increment hour pins! To make things a little easier you can add hours in "batches". For example if you are writing an article for the newsletter and it takes you 6 hours over 3 days to complete it, just add 6 hours and pick a day. You don't have to enter them separately. I appreciate all of your hard work and commitment!





Soil temperature rant from Farmer Fred:

March (and early April) is still too early for many of the heat loving vegetables to be thrust into the ground, unprotected. Soil temperatures in the area are still in the high 40's-low 50's, too cold for tomato and pepper plants to put on any active growth. And the less active the growth cycle, the less ability the plant has to stave off insect and disease problems. One way to determine the best time to plant your summer vegetable garden: Sit in the garden bed for 60 seconds, pants off. If you can stay there, comfortably, go ahead and plant. Or you can check out his [blog page](#) and view the recommended soil planting temperatures.



Master Gardener UC IPM Site

A page just for MG's! There has always been a Master Gardener resource page. In the past it was hidden from the general public and unfortunately many MG's. With the overhaul of the IPM website the link for the Master Gardener Resource page is much easier to find!

Its on the right side of the main "home and garden" IPM page. You can get to it by [clicking here](#).

You will be able to find information from advanced IPM trainings like the one we just hosted in San Joaquin county along with the

Ants IPM training we went to several years ago. There are tools for identifying plants and weeds as well as training presentations. It's a well organized site designed to make your life a little easier!

IPM Resources for UC Master Gardeners

UC MASTER GARDENERS

Search home and garden:

[Training & Presentations](#) | [Kiosk Information](#) | [Order materials](#)

How to manage pests

Find solutions

- [Household Pests](#)
- [Search pests by plant host or pest category](#)
- [UC Guide to Healthy Lawns](#)

Pest Notes

- [List of all Pest Notes \(or download PDF\)](#)
- [Recent changes](#)

Quick Tips

- [In English](#)
- [In Spanish](#)
- [Order cards](#)

Ant videos

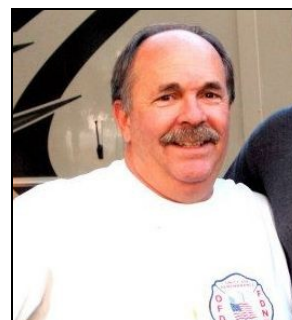
- [Managing Argentine Ants Around the Home \(20 mins\)](#)
- [Shorter video clips](#) are listed in the Ants menu

MG Spotlight—Jeff Ramsey 2011

Jeff Ramsey is a 2011 MG Graduate. He retired after 33 years as a fire fighter. He has also been a commercial bee keeper and still collects swarms when he gets a call. If you were to find him out in the garden one of the things he would be doing is harvesting vegetables. His favorite time of the year is spring and he loves mornings. He loves fresh fruit pies along with fresh abalone too. His favorite place to eat is Stockton Joes. When asked about his favorite place to visit he said "I love California. The north coast, the Sierra's , the

Channel Islands. The whole state." In his spare time he likes to scuba and skin dive. Jeff dislikes weeding in the garden. One of his favorite quotes is from Ben Franklin, "When we give up liberty for security we loose both." One last tidbit about Jeff: "When in the fire department I was a member of a FEMA urban search & rescue team that was sent to New York after 9/11. I was also sent to New Orleans one day after hurricane Katrina. I received several unit citations and the medal of valor." You can "like" *Ramsey Family Farms* on

Facebook to see some really neat pictures of Jeff's farm, hens and bee keeping that he does. (Pictured far left)



Got Mulch?

Karrie Reid, Environmental Horticulture Advisor, San Joaquin County

Anything used to cover the surface of the soil is called mulch. It may be inorganic, like rock or chipped rubber; it may be organic like straw, shredded leaves, chipped wood or bark. Mulch is often confused with compost, but while compost may be used as a mulch, its primary use is as a soil amendment. Larger sized materials used for mulch, however, generally should not be dug into the soil. **Why mulch?** Much research has been done over the years to determine the effects of using different types of mulch. The following benefits of organic mulch have been repeatedly confirmed:

1. Less water is lost from the soil. With the surface covered, less evaporation happens, reducing your water need.
2. Soil temperatures fluctuate less. Soil stays cooler in summer and warmer in winter. This is a healthier environment for root growth and function, and fewer plants die from heat stress or frost. This is especially important for shallow-rooted plants.
3. Weeds are reduced. Excluding light reduces the number of weed seeds that sprout, and those that do are easier to remove.
4. Water infiltration increases. Covering the soil surface prevents the crusting that causes water to run off before infiltrating.
5. Soil and plant health is improved. Soil nutrient levels, structure, beneficial microbial activity, and other factors of soil health are all increased over time with the use of organic mulch.

Organic vs. Inorganic Although inorganic mulch may have some of the same benefits as organic (reduced water loss and weeds), it does not add anything beneficial to the soil's health over time. **Rocks** are appropriate for specific landscape situations, such as dry river beds, sections for succulents and other rock garden plants, or gravel for paths that allow water to infiltrate. Rocks absorb and hold a great deal of heat, and care should be taken to locate only heat-tolerant plants in or adjacent to rocks. **Rubber mulch** application should be reserved for under jungle gyms where its greatest feature, shock-absorbency, can be of use. It adds nothing beneficial to the soil, and may release toxic heavy metals into the soil or runoff water, especially if the source of the rubber is recycled truck tires.

What's the best source? The North County sanitary landfill contracts the recycling of all wood and greenwaste delivered to the site. A wide variety of high quality chipped and screened products is available for sale there at very reasonable prices. They are located at 17720 e. Harney lane in Lodi, and are open the same hours as the dump: Monday - Friday, 7-4; Saturday, 8-4. The best source is the one you can afford that also meets your needs. Several landscape supply businesses around the county have variously sized products for sale by the cubic yard. Most deliver and waive the delivery fee for yardages over a certain minimum.

What type and how deep?

Larger chunks stay put in windy areas and are perfect for large-scale landscapes and for under trees. The weight and size can cause them to roll off steep slopes, though. With large shrubs and trees, a 3 to 4-inch layer should last about 3 years before needing to be topped off. Be sure to keep the mulch about 3 inches from the base of the trunks to prevent rot. The shredded "gorilla-hair" type product weaves together and holds best on slopes. Smaller bark nuggets or chipped wood works nicely in beds with smaller or delicate plants like annuals or tender perennials. A 2 to 3-inch layer will provide benefits without smothering plants. Be aware that it will break down and need to be replaced about every other year. In very windy sites, it may also be prone to blowing away. **NEVER USE MULCH RIGHT NEXT TO THE STREET CURB.** This is a violation of the state's Water Efficient Landscape Ordinance: In heavy rains the mulch floats away, clogging storm drains and adding an excess of solid material if carried into the storm water system. Use black-dyed mulch only in shade. If used in sun, the mulch absorbs heat and actually raises soil and surface temperatures high enough to scorch plant leaves it contacts. Mulch large landscape pots and planters. Though often overlooked, large landscape pots, like those used in commercial developments for small trees, shrubs, topiary, or seasonal color, benefit greatly from the addition of a 1 to 2-inch layer of organic mulch. Water use is significantly reduced by covering the pot soil. It also hides drip heads and reduces losses from the occasional "shooting" dripper.

How much do I need? There are on-line calculators that will tell you how many cubic yards you need depending on how deep you want the material. You can calculate it yourself easily if you know the area in sq. ft. :

CUBIC YARDS = (Area in sq. ft.) × (#in. deep) ÷ 324 Example: (9' × 25') × (3" deep) ÷ 324
225 × 3 ÷ 324 = 2 cubic yards





2014 Statewide Master Gardener Conference

October 7th—10th, 2014 Tenaya Lodge near the south entrance of Yosemite National Park.

The 2014 MG conference has been set. This conference comes around once every 3 years. I want to let everyone know now that its not going to be cheap. Lodging at Tenaya will be around \$169 a night (per room with double occupancy) and we are trying to get the registration fee as low as we can but right now its over \$300 due to facility costs. I want to encourage you to start saving now for this event. \$25.00 a month starting in April will get you to the conference. The conference committee is working on sponsorships and other possibilities to try and lower the conference

Crop Rotation chart
Adapted from Family Relationships Table, Vegetable Research & Information Center, University of California Cooperative Extension.

Remember to Rotate Your Crops!

Make it a habit to change the location of crops each year. Rotating crops in the garden not only enhances soil fertility, but it can be effective against insect and disease pests that develop on a narrow range of vegetable plants. Moving crops to different sites isolates such pests from their food sources. This practice reduces the chances that soil borne insect and disease pests will gain a permanent foothold in your garden.



Backyard gardeners with limited space should at least avoid planting exactly the same crop or crops from the same family (see the following chart) year after year in the same part of the garden. For example, do not follow melons with cucumbers or squash, and do not plant peppers, eggplant, or potatoes where tomatoes grew the year before.

Top Ten Families of Vegetable Crops Grown in Home Gardens		
Scientific and Common Family Names and Vegetables in Those Families		
<p>Amaryllidaceae (Onion Family) chives garlic leek onion</p> <p>Chenopodiaceae (Goosefoot Family) beet chard spinach</p> <p>Cruciferae (Mustard Family) broccoli Brussels sprouts cabbage cauliflower Chinese cabbage kale kohlrabi mustard greens radish rutabaga turnip</p>	<p>Compositae (Composite Family) endive globe artichoke Jerusalem artichoke lettuce</p> <p>Cucurbitaceae (Cucurbit Family) chayote cucumber muskmelon pumpkin squash watermelon</p> <p>Gramineae (Grass Family) corn</p> <p>Lillaceae (Lily Family) asparagus</p>	<p>Leguminosae (Legume Family) dry bean fava bean lima bean snap bean pea</p> <p>Solanaceae (Nightshade Family) eggplant tomato pepper potato</p> <p>Umbelliferae (Parsley Family) carrot celery Florence fennel parsley parsnip</p>

New Snail and Slug Active Ingredient Now Available in CA

Cheryl Wilen, Area IPM Advisor and UC IPM Advisor Extension Coordinator UC Statewide IPM Program

For the last 30 years, home gardeners have been using mollusk (snail and slug) baits that contain metaldehyde. About 10 years ago, iron phosphate came on the market and is now also widely used. Recently, a new active ingredient, **sodium ferric EDTA**, has started showing up on the shelves. You can find this active ingredient in new formulations of Corry's Slug & Snail Killer as well as Dr. T's Slug & Snail Killer, Slugexx, Ferroxx, Ironfist Slug & Snail Bait, and Amdro Snail Block Slug & Snail Killer. Depending on the brand, they will contain 2 to 6% active ingredient. Although all these active ingredients are effective against snails and slugs, there are important differences. Metaldehyde works very quickly, and your customers will see foaming and dead snails by the morning if they apply it at night. However, metaldehyde can cause poisoning and even death to dogs and other mammals that might feed on it.

Iron phosphate is much safer but also much slower acting. Snails may stop feeding on plants after consuming iron phosphate baits but can take up to seven days to die. On the plus side, iron phosphate may be more effective during high humidity or rainy conditions than metaldehyde.

The newest active ingredient, sodium ferric EDTA, works in a similar manner to iron phosphate but is somewhat faster (three days instead of seven). Because EDTA is used to make the iron (ferric) more available and therefore kill the mollusks faster, your customers should still be cautioned that these new products, as well as the others, ought to be used in a way so that pets and children won't be tempted to eat the pellets. Also point out that recommended application rates for sodium ferric EDTA may be somewhat lower than iron phosphate. To be most effective, products containing any of these active ingredients should be broadcast or spread, not piled, near areas where the mollusks are causing damage. Customers should also be reminded to remove plant debris and other snail and slug hiding places as well as avoid overwatering, which increases mollusk activity.

For more information about snail and slug management, in a detailed format, see *Pest Notes*: [Snails and Slugs](#).



C. A. Wilen, UC

Figure 4. Don't pile snail baits. The white iron phosphate pellets in this photo show a proper scattering technique.

May I Introduce...Convergent Lady Beetles

You may start to notice these alligator looking critters in your garden soon dining on the aphids attacking your roses. Ever wonder what they are? Lady beetles (lady bugs) take about 3-6 weeks to mature from egg to adult. Eggs (picture 1) are oblong, yellow, measure about 1 mm (1/25 in) in length and are laid on end in groups on leaves and stems near aphids. Young lady beetle larvae (picture 2) usually pierce and suck the contents from their prey. Older larvae and adults chew and consume their entire prey. Larvae are active, elongate, have long legs, and resemble tiny alligators. Pupation (picture 3) occurs in sheltered places on stems or other substrates. Convergent lady beetles (picture 4) undergo complete metamorphosis and have one or two generations per year.



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Did you know... You can hover your mouse over anything that is blue and underlined and by clicking on it you will be directed to a webpage with more information about that subject! Try it!!



Cool Tools! UC Guide to Healthy Lawns

The UC IPM website has a great resource for turf care. The [Guide to Healthy Lawns](#) covers information on new lawns, renovations, established lawns as well as pests and other related topics.

Now is a good time to start thinking about fertilizing cool season grasses such as fescue. Confused on how much to apply and when? Check out the [fertilizing page](#). Use the [calculator](#) to determine the amount to apply. Not sure what type of grass you have? Use the [key](#) to figure out what is planted in your yard.

Warmer weather means mowers will busy. Make



sure your mower is ready to go and that you are properly mowing your lawn with [these helpful tips](#). Warmer weather also means sprinklers will be turned back on after a winter hiatus. When do you water your lawn?

Do you know the output of your sprinklers? Find out the best times to water and how to determine your sprinkler output [here](#).

Critters, weeds and other pests can be identified [here](#). Here's to a happy, healthy lawn!

MG Spotlight— Sharon McDonnell 2008

Sharon McDonnell is a 2008 MG graduate and was one of the first to reach 1000 recorded volunteer hours in our county and earn her gold badge. She is a member of the MG Advisory Committee and sits on several other committees as well. If you were to find her out in the garden she would most likely be weeding and grooming her plants. Sharon volunteered her yard for the 2012 Garden Tour we hosted as well as being a key part of the planning committee for the tour. She loves salmon and Out-back Steak House. When asked about her favorite place to visit she answered

Alaska, "because its beautiful there." A chore she dislikes doing is washing her husbands stinky, filthy work clothes! (I can second that chore!) When she's not volunteering with the MG program she might be babysitting her grand daughter or grooming one of her dogs. Her favorite time of year is Spring and the month April (which happens to be her birthday month). Sharon is my right-hand gal when it comes to master gardener trainings. In 2011 she didn't miss a class volunteering and has volunteered to come every class this year as well. She makes it a point to hand out name badges so she can

get to know the new trainees. She is a well-liked familiar face to all.



Brown Widows Get Foothold in SoCal

Mary Louise Flint, UC IPM

During the last 10 years a new widow spider has moved into parts of Southern California. The brown widow spider, *Latrodectus geometricus*, is closely related to the well-known black widow spider, *L. hesperus*, which occurs throughout much of California.

A recent survey of widow spiders in Southern California led by retired UC Riverside entomologist Richard Vetter revealed new information about the distribution of the new invader. Vetter's group found that, like the black widow, brown widows are outdoor spiders rarely found inside homes.



But they also found that brown widows tend to inhabit more exposed outdoor habitats such as under eaves or window ledges, under garden furniture with solid—not mesh—tops, or under the recessed handles of plastic trash bins. Black widows, in contrast, prefer more protected habitats such as in garages or sheds, under debris or woodpiles, or in a protected hole in an outer wall. Unlike black widows, brown widows weren't found in natural dry habitats or agricultural areas; they prefer urban environments and structures.

The researchers report anecdotal evidence that the brown widow spider may be displacing the black widow spider in some urban habitats. This is probably good news for residents because brown widow spider bites are infrequently reported compared to black widow bites and rarely cause severe symptoms in humans. In fact, despite their growing numbers, there is only one verified case of a brown widow bite in Southern California, and reported symptoms were mild.

Brown widow spiders are mottled brown in all stages and resemble immature black widow spiders, so some skill is required to distinguish the two species. The easiest way to identify an infestation of brown widows is to find its egg sacs, which have pointy protuberances in contrast to the more round black widow egg sac. For more information about how to identify brown widows, visit the UC Riverside [Center for Invasive Species Research](#) (CISR) Web site.

Currently brown widow spiders are known to be common in Los Angeles, Orange, San Diego, Riverside and San Bernardino counties. They have also been reported in Ventura and Santa Barbara counties, and experts believe they may eventually move up the coast of California and also into the Central Valley. For more information about widow spiders and their management, see the [Black Widow and Other Widow Spider Pest Note](#) and the CISR Web site mentioned above.

What's Wrong Answer– Anthracnose (from page 1)

Anthracnose is a group of diseases found on many deciduous and evergreen trees and shrubs; some trees such as sycamore, ash, and evergreen elms can be noticeably blighted. Often called leaf, shoot, or twig blight, anthracnose results from infection by any of several different fungi.

Anthracnose fungi occur primarily on leaves and twigs. On deciduous trees these fungi overwinter in infected twigs. In spring many microscopic spores are produced and spread by

splashing rain or sprinkler water to new growth where they germinate; the fungus enters the leaves and newly expanded twigs.

For new plantings, choose varieties that are resistant to the anthracnose fungi. Plant them widely apart to maximize air circulation and increase sunlight, both of which facilitate faster drying of leaf surfaces when trees are fully grown. Once symptoms develop or become severe, anthracnose cannot be effectively controlled during the

current season. Rake and dispose of fallen leaves and twigs during the growing season and during the fall. Prune during winter to increase air circulation in the canopy and remove the previous season's infected twigs and branches. For more info, [click here](#).



Chinese elm
anthracnose cankers

The difference between open-pollinated, heirloom, and hybrid seeds

By Christy, Seed Savers Exchange

Deciding which seed to plant can be a daunting task, and the decision is often more complicated than simply trying to pick which beautiful tomatoes to grow. Among the more important decisions every gardener makes is the choice between open-pollinated, hybrid, and heirloom seed varieties. Each of these seed types has something to offer, depending on the gardener's needs, interests, and values.

For seed-saving purposes, the most significant distinction among these types is that gardeners can save true-to-type seed from open-pollinated and heirloom varieties, but not hybrids. Here are a few more distinctions that might help you decide what to grow this season:



- **Open-pollination** is when pollination occurs by insect, bird, wind, humans, or other natural mechanisms. Because there are no restrictions on the flow of pollen between individuals, open-pollinated plants are more genetically diverse. This can cause a greater amount of variation within plant populations, which allows plants to slowly adapt to local growing conditions and climate year-to-year. As long as pollen is not shared between different varieties within the same species, then the seed produced will remain true-to-type year after year.
- An **heirloom** variety is a plant variety that has a history of being passed down within a family or community, similar to the generational sharing of heirloom jewelry or furniture. An heirloom variety must be open-pollinated, but not all open-pollinated plants are heirlooms. While some companies create heirloom labels based on dates (such as a variety that is more than 50 years old), Seed Savers Exchange identifies heirlooms by verifying and documenting the generational history of preserving and passing on the seed.
- **Hybridization** is a controlled method of pollination in which the pollen of two different species or varieties is crossed by human intervention. Hybridization can occur naturally through random crosses, but commercially available hybridized seed, often labeled as F1, is deliberately created to breed a desired trait. The first generation of a hybridized plant cross also tends to grow better and produce higher yields than the parent varieties due to a phenomenon called 'hybrid vigor'. However, any seed produced by F1 plants is genetically unstable and cannot be saved for use in following years. Not only will the plants not be true-to-type, but they will be considerably less vigorous. Gardeners who use hybrid plant varieties must purchase new seed every year. Hybrid seeds can be stabilized, becoming open-pollinated varieties, by growing, selecting, and saving the seed over many years.



So what's it going to be—hybrid, open-pollinated, or heirloom varieties? While hybrids have their benefits, choosing open-pollinated varieties conserves the genetic diversity of garden vegetables and prevents the loss of unique varieties in the face of dwindling agricultural biodiversity. Furthermore, focusing on heirloom varieties creates a historical connection to gardening and food production, building a more sustainable future by carrying on our garden heritage. By choosing open-pollinated and heirloom varieties, you have the ability to help conserve biodiversity and to contribute to the stories behind our seeds.

[Click here](#) to visit the Seed Savers website.



Fun at the SF Flower Show!





Bruce (above) and Win (below) taking part in the hand on exercise deciphering pesticide labels.



Kathy (above) using a microscope to check out an insect in a class. (Below) SJMG's exploring the roach table.



Advanced IPM Training March 2013



Cherie and Sharon looking at the ant table during a class break-out session, Rich (trainee) and Harry (pictured right) listening to one of the opening speakers.





Blake answering a question at the hands on part of the February Drip Irrigation class. Lee and Kathy working with the class attendees at the breakout session. (Pictures far left)



Bill and Rich from Team Native working in the garden.



Pruning Day at Lee's. Nancy Jean (left) demonstrating rose pruning while Claire and Jeff observe. Marilyn is demonstrating grape pruning.

Just because it's really cool...



(C) Photo by Kathy Keatley Garvey

FIRST PHOTO--When honey bees sting, it's usually a clean break. Extension apiculturist Eric Mussen getting stung. (Photo by Kathy Keatley Garvey)



(c) Kathy Keatley Garvey

SECOND PHOTO-- (Above) Honey bee pulling out abdominal tissue. This picture won the ACE feature photo award. (Photo by Kathy Keatley Garvey)



(c) Kathy Keatley Garvey

THIRD PHOTO-- (Above) Honey bee trying to escape after stinging. Worker bees die after stinging which usually occurs while they are trying to defend the hive. (Photo by Kathy Keatley Garvey)

FOURTH PHOTO — (Right) A strand of abdominal tissue. (Photo by Kathy Keatley Garvey)



(c) Kathy Keatley Garvey



Advise To Grow By

Your Pinterest Inspiration- Plant Labels



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Left: Cut up mini blinds with pencil— Pencil is better than pen or marker for labels