

Advice to Grow by...Ask Us! Master Gardener Program

University of California Cooperative Extension



Issue #46

UCCE Master Gardeners of Amador/El Dorado County E-News

September 2014

Fire Blight

Bonnie Toy, UCCE Master Gardener of Amador County

If your pear tree had areas of scorched-looking dead, blackened leaves, twigs, and branches this past spring, you are familiar with the disease known as fire blight. Conditions must have been perfect for the disease, as it appeared in many gardens for the first time this year.

Fire blight is a bacterial disease that can kill branches and whole plants of many members of the pome fruit family, including pear, apple, quince and crabapple. The pathogen is *Erwinia amylovora*. It can invade all parts of the tree.

The incidence of the disease varies from year to year. It is most serious when spring temperatures during pre-bloom and bloom are warmer than average (75° - 85° daytime, 55° + at night), especially if accompanied by intermittent hail and rain.

Once a tree is infected, the bacteria overwinter in cankers formed on twigs, branches or trunks of host trees. The following spring, when the weather is warm and growth resumes, some of the cankers become active and the bacteria ooze from the surfaces in a light tan liquid. Splashing rain or insects carry the bacteria to nearby blossoms or growing shoots.

Bacteria multiply rapidly in the blossom nectar or leaf or shoot tissue, and then can move into the branch. At this point, all the flowers, leaves and fruit above the infected area will die. Infected twigs darken, and tips may bend over in a "shepherd's crook".

There is no cure for fire blight, and most pear varieties are very susceptible, especially when young. Proper cultural practices can help minimize the damage. Conditions that favor rapid shoot growth will increase the likelihood of infection, so control soil fertility and moisture, and avoid late winter pruning.

The only control materials available to home gardeners are copper products. A very weak (about 0.5%) Bordeaux mix sprayed several times as blossoms open may reduce new infections, but also can cause scarring of the fruit surface.

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Pear branch infected with fire blight

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Contact Your Local Master Gardener

Amador County
209-223-6838
Office hours: 10 am–Noon
Tuesday–Thursday
mgamador@ucdavis.edu

El Dorado County
530-621-5512
Office hours: 9 am–Noon
Tuesday–Friday
mgeldorado@ucdavis.edu



Fire Blight *(Continued from page 1)*

To prevent the spread of the disease, all infected wood must be removed. Rapidly advancing infections on pears should be removed as soon as they appear in spring. Be sure to cut far enough below the canker to remove all the infected tissue - UC IPM recommends removing the infected branch, and the branch to which it is attached. After each cut, dip tools in a 1:10 dilution of chlorine bleach or Lysol in water. Risk of spreading the bacteria is lowered if pruning is delayed until summer or winter when the bacteria are no longer spreading through the tree. Remove and destroy all the prunings.

And hope for a better spring in 2015!



Using disinfectant-dispensing shears to prune apple shoot infected with fire blight

References:

<http://www.ipm.ucdavis.edu/PMG/PESTNOTES/pn7414.html>

<http://www.ext.colostate.edu/pubs/garden/02907.html>

<https://www.extension.purdue.edu/extmedia/BP/BP-30-W.pdf>

Greenhouses and Coldframes in Upcountry Gardens

Do you wonder if a greenhouse or coldframe makes sense for you?

The idea of growing plants in a controlled environment has existed since Roman times. At that time only the rich could afford a greenhouse, but with today's modern materials almost anyone can afford a greenhouse. And if not a greenhouse, its smaller cousin, a coldframe.

A greenhouse protects crops from the cold, shielding plants from wind and snow. The sun enters through the glass, warming the plants and soil and the warm air is then trapped by the walls and roof. This can allow you to extend our growing season, which never seems long enough for most upcountry gardeners.

A green house has some unique considerations compared to gardening outside. Heat and humidity, plus pests and diseases can be more of a problem if you are not prepared. If you want to grow warm-weather crops all year, then you have to be prepared to pay a high cost for the luxury. Most upcountry greenhouse gardeners are just happy to extend the growing season for a month or two and to have a place for their tender plants in the winter



Join several of the UCCE Master Gardeners of Amador County in a discussion about upcountry fall and winter vegetable gardens, coldframes and greenhouses. This free class is **Saturday, September 13th**, from 9:00 AM to noon. The class will be in the Amador County Ag building at 12200 Airport Rd, Martell.

There will also be fall vegetables for sale.

Shady Characters

Stacy Ryerson, UCCE Master Gardener of Amador County

Many homeowners plant shade trees to escape the blazing summer sun, but then struggle with what to plant in the shade under those trees. It's not uncommon to see ferns, fuschias, camelias, and hydrangeas struggling for survival, even with thick layers of mulch and continuous drip irrigation. Some of our most commonly planted shade trees are so thirsty that there is little hope of sufficient available moisture to keep damp shade plants thriving.



Madrone

At the other end of the spectrum, drought tolerant low water trees will suffer greatly from the irrigation required for a damp shade garden. With some planning it is possible to have healthy shade trees, and lovely shade gardens, by creating hydrozones.

As UCCE Master Gardeners we encourage the creation of hydrozones when planning any garden. A hydrozone is a landscape area where plants with similar water needs and soil characteristics are grouped together. This minimizes the risk of over watering, which is the most common reason for the decline of landscape trees and shrubs.

Creating a favorable hydrozone includes:

- a) Mulching to conserve soil moisture, control weeds, and maintain a uniform soil temperature;
- b) Using irrigation practices that avoid root and crown diseases by watering established trees and shrubs at their drip line instead of allowing water to pool in basins at the crown; and
- c) Planting appropriate plants with similar moisture needs that won't compete.

While drought tolerant trees such as Arbutus, Birch, Camphor, Carob, Elder, Hazel, Holly, Honey Locust, Madrone, Magnolia, Manzanita, Mulberry, Olive, and Tulip trees have low water needs and provide shade, planting a damp shade garden around a low water tree can jeopardize the health of the tree. The presence of too much moisture will cause long term problems with fungus, crown or root rot, weak limbs subject to wind breakage, and an increased vulnerability to insect attack.

Thirsty trees such as Alder, Ash, Bay Laurel, Beech, Cedar, Cottonwood, Dogwood, Douglas Fir, Elm, Eucalyptus, Hawthorne, Maple, Mountain Ash, Oak, Pine, Poplar, Redwood, Sequoia, Spruce, Sycamore, Walnut, Willow, and Yew are so thirsty that although they create a cool oasis in an otherwise arid environment, they suck up every drop of water in the soil in order to do so. They are not good candidates for damp shade gardens because the damp shade plants will be forever competing with the tree for moisture. You can take steps to conserve precious moisture, such as mulching, but even mulching won't be sufficient to keep a damp shade garden hydrated under a thirsty tree without applying a high volume of water.

Mulching has benefits other than just moisture conservation when applied correctly. While mulch actually improves the soil health and is important for optimum tree growth, it's critical that it never be piled around tree trunks. Keeping mulch back 4"-6" will maintain air circulation to prevent pest and moisture damage to trunks. Research shows that even thirsty trees will thrive in hot, dry summer climates when mulched out to just **beyond their drip line** because cool, damp soil beneath a deep mulch favors the growth of necessary mycorrhizae.

The word mycorrhizae describes a symbiotic association between a beneficial soil fungus (Myco) and the roots (rhiza) of the plants. This relationship is advantageous for both organisms because the plant gains increased water and nutrient uptake from the soil by the intricate net of the fungus. The fungus uses the carbon provided by the plant for its physiological functions, growth and development.

By utilizing the hydrozone principles of grouping plants that won't compete for moisture, and mulching to conserve existing moisture and maintain a cool favorable soil environment for the mycorrhizae, you can have healthy vigorous shade trees and beautiful dry shade gardens.



Bear's Breeches

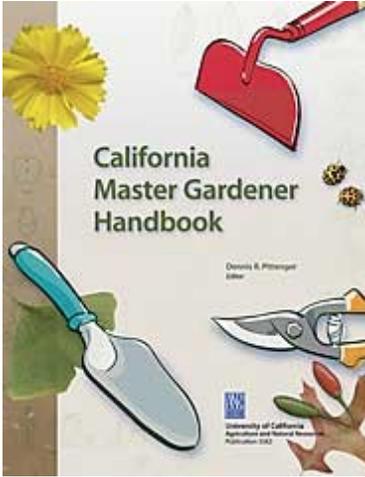
(Continued on page 4)

Shady Characters (Continued from page 3)**A Selection of Dry Shade Plants**

- Acanthus balcanicus* Bear's Breeches. Tall white and purple spires of somewhat thorny flowers. Hardy.
- Aegopodium podagraria* Bishop's Weed. Hardy, can be invasive.
- Ageratina altissima* White Snakeroot.
- Anemone sylvestris* Wood Anemone. White flowers.
- Antennaria* Pussytoes.
- Aquilegia chrysantha* Western Native Columbine. Yellow flowers look better and tougher than other colored hybrids.
- Arabis* Rock Cress.
- Artemisia ludoviciana*.
- Bergenia cordifolia* Heart Leaf Bergenia. Pink flowers.
- Blepharoneuron tricholepis* Mountain Mist Grass.
- Brunnera macrophylla* Siberian Forget Me Not. Sky blue flowers.
- Campanula punctata* Spotted Bellflower.
- Campanula rapunculoides* Creeping Bellflower. Hardy, invasive.
- Cheilanthes* Lip Fern.
- Crucianella (Phuopsis) stylosa* Crosswort. Pink flowers.
- Cyclamen hederifolium*, *C. purpurascens* Hardy Cyclamen.
- Cynoglossum nervosum* Hound's Tongue.
- Digitalis grandiflora* Yellow Foxglove.
- Digitalis lutea* Straw Foxglove. Long blooming yellow spikes.
- Dryopteris x complexa* Hybrid Male Fern.
- Duchesnea indica* False Strawberry.
- Epimedium spp.* Barrenwort. Yellow/white/mauve flowers.
- Euphorbia amygdaloides* var. *robbia* Daphne Spurge.
- Festuca arizonica* Pine Fescue.
- Filipendula vulgaris* Dropwort. Ferny foliage.
- Galium odoratum* Sweet Woodruff.
- Geranium macrorrhizum* Creeping Cranesbill. Rose pink flowers.
- Geranium x cantabrigiense* Cambridge Cranesbill.
- Heuchera x 'Pewter Veil'*, 'Chocolate Ruffles', 'Raspberry Regal', 'Pewter Moon', and 'Palace Passion'. These Coral Bells have leaves of bronze, plum, and beet red.
- Hypericum* St. John's Wort.
- Iberis sempervirens* Candytuft.
- Jamesia americana* Waxflower.
- Juniper communis* Mountain Juniper. Provides good shrubby structure and can take shade.
- Juniper squamata* 'Blue Star'. Provides good shrubby structure and can take shade.
- Kolkwetzia amabilis* Beauty Bush. Pink blossoms.
- Lamium galeobdolon* 'Hermann's Pride' Yellow Archangel.
- Lamium maculatum* 'White Nancy', 'Shell Pink', and 'Beacon's Silver' have silver streaked foliage. Pink/white/lavender flowers.
- Luzula nivea* Snowy Woodrush.
- Luzula sylvatica* Woodrush.
- Lychnis coronaria* Rose Champion. Silver leaves, scarlet flowers.
- Mahonia repens* Creeping Grapeholly.
- Malva moschata* Musk Mallow. White flowers.
- Mertensia lanceolata* Narrowleaf Chiming Bells.
- Microbiota decussata* Russian Arborvitae. Looks somewhat like a juniper, but will go brown over winter, well suited to dry shade.
- Origanum* Oregano.
- Paeonia tenuifolia* 'Rubra Plena' Fern-Leaf Peony. Ruby red flowers.
- Paxistima canyi* Mountain Lover.
- Penstemon hirsutus* var. *pygmaeus*, *P. procerus*, *P. richardsonii*, *P. smallii*, *P. virens*.
- Persicaria (Polygonum) affinis* Border Jewel, Himalayan Fleeceflower.
- Phlox bifida* Sand Phlox.
- Phlox douglasii*.
- Phlox subulata* Moss Phlox.
- Prunella vulgaris* Self Heal. Spreads easily.
- Pulsatilla patens* Western Pasqueflower.
- Ribes x gordonianum*. Hybrid flowering currant. Raspberry pink flowers with yellow throats.
- Rubus deliciosus* Boulder Raspberry. Showy white flowers.
- Rubus x tridel* 'Benenden'. Showy white flowers.
- Salvia bulleyana*.
- Salvia forskaohlii* Woodland Sage. Long blooming navy blue spikes of flowers.
- Salvia glutinosa*.
- Salvia sclarea* Clary Sage.
- Sedum acre*, *S. album*, *S. nevi*, *S. ternatum* Stonecrop.
- Sedum kamtschaticum* 'Variegatum'. Creamy edges.
- Sempervivum* Hens and Chicks.
- Solidago caesia* Wreath Goldenrod.
- Solidago sphacelat* 'Golden Fleece'.
- Spidelia marilandica* Indian Pink.
- Stachys byzantina* 'Helene von Stein'. Lamb's Ears. Velvety sage green foliage and lavender flowers.
- Stachys macrantha* Showy Betony.
- Symphytum grandilorum* Lesser Comfrey. Creamy bell shaped flowers.
- Tanacetum parthenium aureum* Golden Leaved Feverfew.
- Teucrium scorodonia* 'Crispum' Curly Wood Germander.
- Thymus pseudolanuginosus* Woolly Thyme.
- Verbascum phoeniceum* Purple Mullein.
- Viola odorata* Perennial Violets. Purple/white flowers.
- Waldsteinia fragarioides* Barren Strawberry.
- Xerophyllum* Turkeybeard.
- Yucca pallida* Pale Yucca.
- Yucca rupicola* Twist Leaf Yucca.

Fall Sale: UCANR Gardening Books

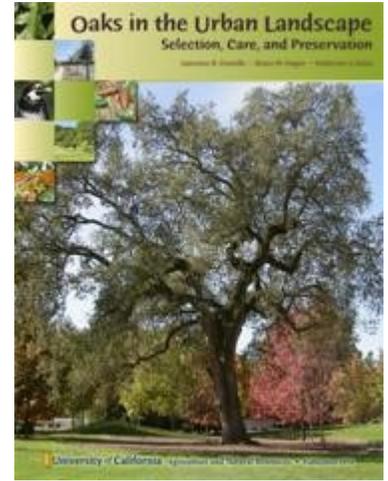
September is a great time for gardening in California. Get your plants off to a good start with these great home gardening guides from the UC ANR online catalog. Order online by September 30 and receive great discounts. Click on the book covers below to purchase.



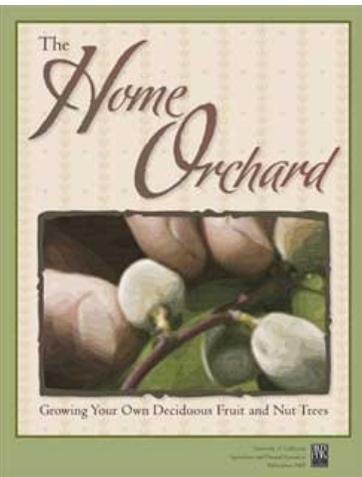
~~\$30.00~~ **\$22.50** - Save 25%



Weed ID Cards: ~~\$25.00~~ **\$18.75**



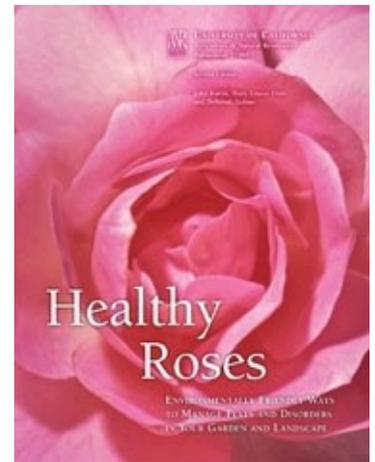
~~\$55.00~~ **\$41.25** - Save 25%



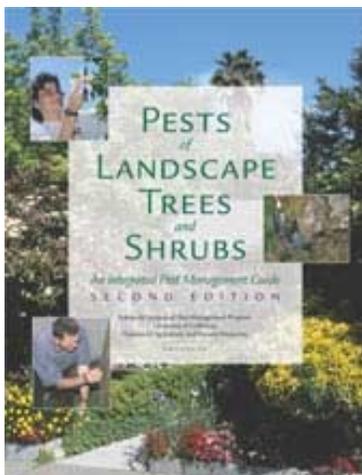
~~\$25.00~~ **\$18.75** - Save 25%



Landscape Pest ID Cards: ~~\$20.00~~ **\$15.00**



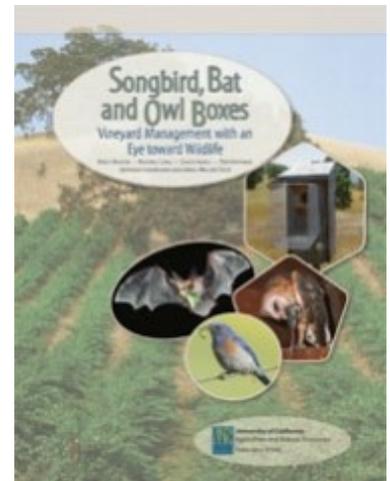
~~\$10.00~~ **\$7.50** - Save 25



~~\$42.00~~ **\$31.50** - Save 25%



Tree Fruit Pest ID Cards: ~~\$15.00~~ **\$11.25**



~~\$15.00~~ **\$11.25** - Save 25%

UCCE Master Gardener Calendar Focuses on Beautiful Gardens with Less Water

The UCCE Master Gardeners of Placer County are pleased to announce their 13-month gardening calendar for 2015. This year's theme is "California Dreaming... Beautiful Gardens with Less Water". It is filled with informative articles about ways in which gardeners can have gorgeous landscapes without using an excessive amount of water.

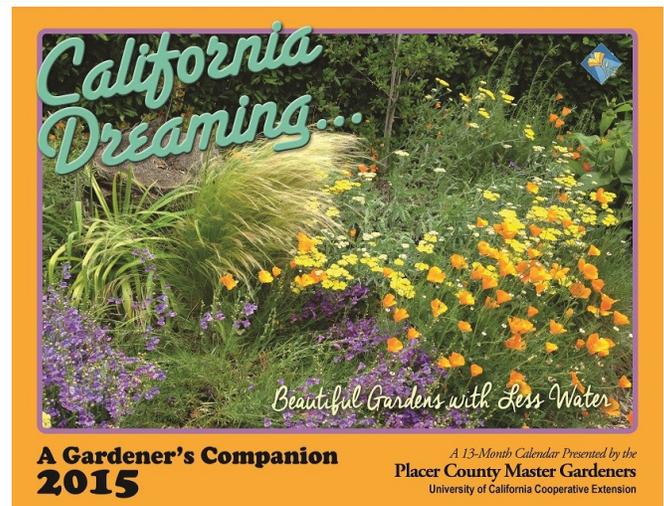
Calendar highlights include:

- Monthly "What to Plant" section filled with great information for first-time gardeners wondering where to start.
- Organic gardening techniques for novice and advanced gardeners.
- Online calendar references.

Each month of this full-color calendar includes an informative article that discusses ways to beautify your landscape and gardens without requiring a large amount of water. It is coupled with beautiful photographs, making it a fun and affordable gift for friends and relatives.

Note that our calendar cover and the photo for December include Mexican Feather grass. While this is a lovely ornamental grass, we have informed our readers that it is an invasive plant, and have referred them to a website where they can find alternative plants. We believe it is important to educate the public about invasive plant species.

The calendars are available [online](#) for \$13 and at the UCCE office in both El Dorado and Amador counties for \$10.



Decorating with Live Flowers and Dried Seeds

It's wonderful to decorate serving platters for dinner parties with live flowers—they look so beautiful!

Just make sure they are safe to have around food.

In the spring when your Azalea is full of vibrant pink blossoms, wouldn't they look beautiful on top of a key lime pie? No! Leave the blossoms on the plant—the whole plant is fatally poisonous.

Wouldn't the red mistletoe berries from your yard look stunning on a fruit platter? No! Both children and adults have died after eating mistletoe berries.

What about holly berries? Nope—your guests will spend time in the bathroom with their body purging itself from both ends.

Did you bring home a gift from your recent trip to Thailand of dried castor beads for the new mother next door? Did you know the beans are fatal, especially to small children who like to suck on their mom's jewelry as she holds them?

Take a few minutes to explore the UC Davis *Safe and Poisonous Garden Plants* website and plant lists online, then bookmark them for easy reference for peace of mind.

http://ucanr.edu/sites/poisonous_safe_plants

http://ucanr.edu/sites/poisonous_safe_plants/files/154528.pdf



Fall Flowers for Bees

As summer nears its end, the honey bees are hungry.

That's why retired Extension apiculturist Eric Mussen of the UC Davis Department of Entomology and Nematology advocates that we plant flowers for late summer and fall to help the bees. Often we think of spring as the season for planting bee plants, but mid- to late summer and fall is when they really need our help.

Malnutrition is one of the factors suspected in colony collapse disorder (CCD), the mysterious malady in which adult bees abandon the hive, leaving behind the queen bee, immature brood and food stores.

Visit the [Harry H. Laidlaw Jr. Honey Bee Research Facility](#) website for a list of bee plants.



A honey bee on sedum. Photo by Kathy Keatley Garvey



Public Education Classes – Free!!

Most classes are from 9 a.m. – Noon. Please call ahead to confirm locations.
Click on the class title to schedule an email reminder for the class.



Amador County

Unless otherwise noted, the location for all Amador County classes is the GSA Building, 12200-B Airport Road, Jackson. Questions? Call 209-223-6838.

September

6: Pruning Fruit Trees

Learn when and how to properly prune your fruit trees. Bring your pruning shears and gloves for a hands-on pruning experience.

Location: Church of Jesus Christ Latter-Day Saints, 12924 Ridge Road, Sutter Creek; one mile from Highway 49. Meet at the rear parking lot.

13: Planning Your Winter Garden and Greenhouse

Would you like to continue to harvest luscious, home-grown vegetables even after the heat of summer subsides? If so, now is the time to plant for a winter harvest. Learn how to grow a successful winter vegetable garden. Explore the world of greenhouses and coldframes to see if one makes sense for your garden.

27: Nourishing Your Soil

Learn about the all-important plant medium, soil. This class will discuss types of soil, what we find in the foothills, and how it affects everything that is grown. Soil amendments that enrich your garden through composting, vermiculture, mulches, cover crops, and lasagna gardening will be discussed—when you need to add materials, what to add, and how much to add—so you can save money, garden responsibly, and have the best results ever!



[UCCE Master Gardeners of Amador County Facebook page](#)

El Dorado County

Unless otherwise noted, the location for all El Dorado County classes is the Veterans Memorial Building, 130 Placerville Drive, Placerville. Questions? Call 503-621-5512.

September

6: Native Plants & Critters in the Garden

A beautiful and productive garden can also be a certified National Wildlife Federation haven. Learn how to provide good water and shelter for creatures great and small from MGs Thorne Barrager and Judy Thompson.

13: Planting Your Soup

This class is a co-presentation of the UCCE Master Gardeners and Master Food Preservers of El Dorado County. Learn how to prepare the soil, choose the plants, fertilize, and harvest some of the soup's main ingredients. In the second part of this presentation learn how to store, dry and freeze these ingredients. The last part of the presentation will be an actual cooking demo of the dried, stored and frozen products in order to make a great soup in less than 15 minutes.

27: Living with Native Oaks

El Dorado County is graced with handsome and enduring California Oaks. New construction, irrigated lawns and cultivated land can endanger them, and they need proper care to continue to thrive. Join Master Gardener Heidi Napier for a presentation on the various methods to maintain and protect these wonderful trees.



[El Dorado County Master Gardener Facebook page](#)

[Download the full 2014 class schedules for both Amador and El Dorado counties.](#)



UCCE Master Food Preservers—Free Classes

El Dorado County

Email: edmp@ucdavis.edu Phone: (530) 621-5506
 All classes at El Dorado County Fairgrounds from 10-Noon.
[El Dorado County 2014 Class Schedule](#)

[Sep 6: Pickles, Relishes & Sauerkraut](#)

[Sep 9 & 13: Vinegars, Condiments & Chutneys](#)

[Sep 16 & 20: Dehydrating & Freezing](#)

[Sep 23 & 27: Conserves, Butters & Marmalade](#)

[Sep 30: Apples, Pears & More](#)

Amador/Calaveras County

Email: acmp@ucdavis.edu Phone: (209) 223-6857
 All classes are from 10-Noon.
[Amador/Calaveras County Class Schedule](#)

[Sep 13, 10-12: Preserving Late Summer Fruits](#)

Calaveras County Senior Center, 956 Mountain Ranch Road, San Andreas

[Oct 4: 10-12: Apples 4 Ways](#)

Amador County GSA Bldg., 12200-B Airport Road, Jackson

Have a home food preservation question?

Call the UCCE Master Food Preserver Hotline: (530) 621-5506 or submit an [online information request form](#). If you have a food safety or preservation question, please call and leave a message; we will be happy to return your call. Or send a question through email or fill out the online information request form.

Pest Notes

Free Pest Notes are available on a variety of topics. For more information, call or email your local UCCE Master Gardener office.



To explore the Pest Notes on the UC Integrated Pest Management (IPM) website, go to <http://www.ipm.ucdavis.edu>.

Amador & El Dorado Counties Master Gardener Newsletter
 Editor: Janice Johnson
 Layout Editor: Sue Mosbacher

Not on our e-newsletter distribution list yet? Know someone who would like to receive our newsletters and notifications on classes and events? Sign up online at <http://ucanr.edu/mqenews>.

Get Answers to Your Gardening Questions Online

http://cecentralsierra.ucanr.edu/Master_Gardeners

- Information about Master Gardeners and how to become one
- List of public classes
- Calendar of Master Gardener events
- Useful links to gardening websites
- Home gardening publications

Got a specific question? Just email us!

Amador: mgamador@ucdavis.edu
 El Dorado: mgeldorado@ucdavis.edu



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Should you need assistance or require special accommodations for any of our educational programs, please contact us at 530-621-5502.

The University of California working in cooperation with County Government and the USDA.