



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

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August 2014

In the Kitchen Garden: Breeding Your Own Tomato Variety

Janice Johnson, UCCE Master Gardener of Amador County

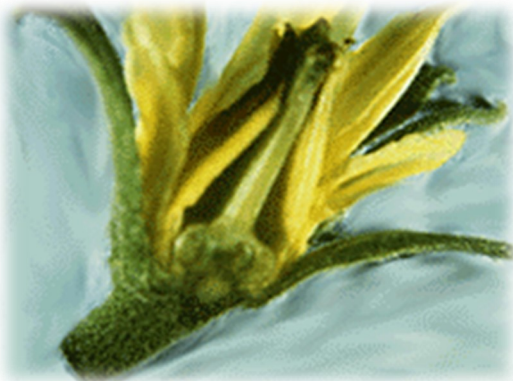
Would you like to have your very own tomato variety?

I did too, but I thought it would be too difficult until I took a class on breeding tomatoes. All it takes is two different favorite tomato varieties and a little patience and you'll have your very own tomato variety to share with friends. How cool is that?

Start with two different open pollinated tomato varieties that you think are special. Use the pollen from one plant to pollinate a flower on the other plant.

Save the seeds of your newly created hybrid and next year you will grow several tomato plants from these seeds.

Each tomato plant will be different from each other and different from their parents. Save the seeds from the best tomato from the best plant each year and use these to grow the next year's crop.



Cross section of a tomato flower



Do this year after year and each new variety becomes more stable. It's hard to believe, but in as little as six to seven years, you will have your very own stable open pollinated tomato variety. If you are lucky enough to have a heated green house you can do it twice each year and cut the time down to only three years.

This is how the heirloom tomatoes we all love or the newly created tomatoes like Green Zebra, Berkeley Tie Dye or Purple Bumble Bee came to be. And you can do it too.

So, what are the mechanics of creating

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El Dorado County
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Breeding Your Own Tomato Variety *(Continued from page 1)*

your own variety? Since tomatoes are open pollinated, each flower has both the female and male parts. Select an unopened flower on one plant; it doesn't matter which of your two parent tomato plants will be the female and which will be the male, the results should be the same.

Next remove the petals and all the male parts from the flower using tweezers. Mother Nature has made this easy by color coding the petals and the male parts of the tomato yellow. You will be left with only the sepals and the female parts which are conveniently color coded green.



Male parts of a tomato flower

Removing the male parts early guarantees that this flower doesn't self pollinate. This is usually done a day or two before you do the pollination. The green female parts will be sticky when the time is right to apply the pollen.

Apply the pollen by removing the yellow male part of an open flower from the other parent plant and either shaking it over the green sticky female parts or by collecting the pollen on a soft artist's paint brush and applying it to the female parts.

Now all you have to do is label this flower with the names of the tomato varieties that you used and to wait to see if your handiwork produces a tomato.

DO NOT eat this tomato, but wait until it is fully ripe and save the seeds for next year's crop.

Here's a link with more details and pictures from UC Davis:

http://tgrc.ucdavis.edu/Guidelines_Emasculating_and_Pollinating_Tomatoes.pdf

The hardest part is left; choosing the name for your new tomato variety!



Female parts of a tomato flower

Oak Trees: Brown Leaves and Galls

Have you noticed that some of the native oaks are already starting to turn brown? Don't worry; this is a normal adaptation to the drought; the trees will recover.

But what about those brown balls hanging on the oak branches? They are oak galls and are harmless, caused by tiny gall wasps. Adult female gall wasps or midges deposit eggs in or on plant tissue. Gall development is poorly understood, but galls generally form several weeks or months after eggs hatch. Larvae feed under the plant tissue; their secretions apparently induce abnormal growth of cells in the plant. Many galls harbor a single, legless larva. Other galls may harbor several larvae, some of which may be different species that are predators or parasites of the gall maker. Among these unusual species is the jumping oak gall wasp, *Neuropterus saltatorius*, which causes discolored spots on the upperside, and seedlike deformations on the underside, of valley oak leaves.

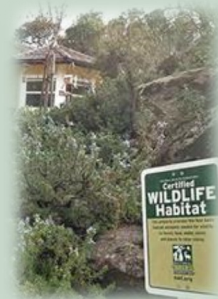
Galls drop in summer from the leaves. Huge numbers may be seen hopping an inch or more above the ground because of the movements of a tiny wasp larva inside each gall.



Sustainable Landscaping in California: How to Conserve Resources and Beautify your Home Landscape

Download this free UCANR publication written by UCCE Horticulture Advisors Janet Hartin, Pam Geisel, Ali Haravandi, and Rachel Elkins, all of whom have ties to the UC Master Gardener Program as advisors or trainers.

This publication is available as a free download through the [UC ANR Catalog Online](#) and contains over 20 pages of in-depth information for anyone interested in adopting sustainable practices in a home landscape.



Myths and Truths: Will Epsom Salts Make Your Garden Grow Better?

Janice Johnson, UCCE Master Gardener of Amador County

My friend Cathy saw an eye-catching photo from Facebook recommending using a foliar spray of Epsom salts to improve tomatoes and roses. It kind of, sort of, made sense because blossom end rot in tomatoes can be a calcium or magnesium deficiency. She shared it with me, your number one skeptic.

My skepticism about this turned out to be well deserved.

One of my favorite garden authors is Dr. Linda Chalker-Scott, PhD, Associate Professor and Extension Urban Horticulturist, WSU Puyallup Research and Extension Center. She has looked at the research related to Epsom salts applied to crops as a fertilizer and as a pesticide.

She says that there is no published, scientific research on Epsom salt effects on roses.

For tomatoes, she says that there are two reports from over 60 years ago. When tomatoes were grown in magnesium deficient soil, a foliar application of Epsom salts relieved magnesium deficiency; however, no improvement in yield was reported. An automatic application of Epsom salts to plants or soils that are not magnesium deficient is a poor management strategy that can injure the plants and contaminate the soil.

Dr. Scott has kindly given me permission to copy the following from her website:

Epsom Salt in the Garden Does It Work?



The Bottom Line

The urge to use common household products as garden fertilizers and pesticides is compelling for many consumers who want simple, cheap approaches to landscape management. However, the use of any chemical in a landscape should be thoughtfully considered:

- Is it necessary?
- Can it cause damage?

The science behind the use of Epsom salts is only applicable to intensive crop production in situations where magnesium is known to be deficient in the soil or in the plants. It is irresponsible to advise gardeners and other plant enthusiasts to apply Epsom salts, or any chemical, without regard to soil conditions, plant needs, and environmental health.

Dr. Linda Chalker-Scott, PhD
Associate Professor and Extension Urban Horticulturist
<http://www.puyallup.wsu.edu/~Linda%20Chalker-Scott/>



2014 UCCE Master Gardener/Farmers Market Tomato Tasting Results

Bobbie Brubaker, UCCE Master Gardener of Amador County

The 2014 annual Tomato Tasting at the Sutter Creek Farmers Market on Saturday, August 23, was a great success! Those participating in the competition and those tasting the competition all were treated to tasting a wide variety of home grown tomatoes, exploring many options to consider planting in next year's garden.

Thanks to our hosts, the Sutter Creek Farmers Market, and to all the entrants and UCCE Master Gardeners of Amador County who made this event possible.

The one entrant from Sacramento didn't do too badly, but the local growers came out on top.

Thanks again to our judges: Steve Muni, George Erdosh, and Chef Darius Somaly from the Hotel Sutter.

Congratulations to the following winners!

Red tomato

- 1st place: Japanese Black, from Steve Honeychurch of Plymouth
- 2nd place: Brandywine, from David Brubaker, Sutter Creek
- 3rd place: Early Girl, from David Brubaker, Sutter Creek broke the tie with Ace and Big Beef

Other high scorers were Beef Master, Arkansas Traveler, and Black Krim.

Cherry Tomato

- 1st place: Sungold, David Brubaker of Sutter Creek
- 2nd place: Sungold, from Deb Lyons of Pine Grove
- 3rd place: Sungold, from Jim Carr of Volcano broke the tie against 3 other Sungolds.

Scorers of note included Sweet Million, Isis Candy, and Matt's Wild.

Non-Red Tomato

- 1st place: Green Tiger, from Janice Johnson of Pioneer
- 2nd place: Lucky Tiger, from Janice Johnson of Pioneer
- 3rd place: Carbon, from Deb Lyons of Pine Grove

Other scores of note were Blush, Japanese Black Trifle, and Pineapple.

Largest Tomato

- 1st place: Black, from Jim Carr of Volcano, 1lb, 5 and 7/8 oz
- 2nd place: Porterhouse from Dave Taylor of Pioneer, 1lb, 5/8 oz



Master Gardeners check in and prepare tomatoes for the judging and tasting.



Judges George Erdosh, Chef Darius Somaly, and Steve Muni celebrate with Master Gardeners Bobbie Brubaker and Janice Johnson.

In the Hen House: Which Came First, the Chicken or the Egg?

Janice Johnson, UCCE Master Gardener of Amador County

It's the age old question: Which came first, the chicken or the egg?

When you are ready to start your flock of chickens you have three choices.

1. You can buy eggs and hatch them.
2. Or you can buy mature chickens.
3. Or buy young chicks.

Each method has advantages and disadvantages, but one way will be right for you.

If you have children or if you have never watched an egg turn into a chick in twenty one days, hatching your own eggs might be for you. Since hatching healthy chicks requires only two things, constant heat and humidity, you can buy an affordable reliable incubator for as little as fifty dollars. Fancier and more expensive incubators have more features, like automatic egg turning. You can buy fertilized eggs online by Googling "hatching eggs" and you'll be amazed how many different breeds you can buy.

If you are lucky to have friends with hens and a rooster who have extra eggs, they can give you some to hatch.

The disadvantage of hatching your own eggs is the extra cost of buying an incubator, which you may only need once. You will also need to stay home for a couple months to monitor the incubator and to care for the newly hatched chicks. But the experience of hatching your own chicks can be worth it!



If you don't want to bother with the cost of an incubator you can buy mature chickens.

You can find adult chickens for sale by checking local ads or the "for sale" signs posted at your feed store. Some areas have a monthly poultry auction.

A disadvantage of buying mature chickens is that they may not be social, since you did not hand raise them, and they may not be good pets.

The biggest disadvantage is that they may be unhealthy. You can inspect the chickens for obvious signs of good health like

having a bright red comb, bright eyes, and perky attitude.

But that is not always enough.

The last time I bought adult chickens, they carried Marek's disease that didn't show up until their chicks were almost grown. I've had chickens most of my life and this is the first time I've had such an unpleasant experience.

Most people start their flock by buying baby chicks. You can buy them either at your local feed store or from a mail-order hatchery. When a chick hatches, it doesn't need food or water for a couple of days, so the hatcheries put the chicks in the mail and send them across the country. It used to be that you had to order at least 25 chicks at a time, since it took that many to fill the box so the chicks didn't rattle around and to keep them



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Which Came First, the Chicken or the Egg? *(Continued from page 5)*

warm. Now there are some hatcheries that have special boxes and they send as few as three chicks, but the cost per chick is much higher.

I like buying chicks for several reasons.

I socialize with them from the start, which makes them good pets when they grow up. New chicks from a feed store or direct from the hatchery are almost always healthy and free of disease. But mainly, I love to watch them scurry around; they are so cute!

Regardless whether you start with eggs, chicks, or adult chickens; be sure to take some time and pick breeds that will suit your needs. *(See my article in the [May 2014 E-News](#) about breeds.)*

A backyard with happy chickens can give your family not only eggs, but a lot of enjoyment.



Survey: Local Master Gardener Public Classes—When, Where, How?

UCCE Master Gardeners of El Dorado and Amador counties need your input on our future classes.

It is our charge to educate our community about current gardening issues and to give advice on how to become better home gardeners. To help us understand your needs as a home gardener we have created a short ten-question survey. You can complete the survey online by clicking this link or pasting it into your browser: bit.ly/1qCsRld.


Master Gardeners are local volunteers trained by the University of California Cooperative Extension in all aspects of home gardening; from growing awesome veggies, to caring for perennial and annual plants, as well as fruit trees, soils, pest management, weather, weed control and more. The survey asks what day of the week, what times, and what locations are best for our free public gardening classes. It asks what class topics interest you -- such as edible landscaping, roses or gardening with children.

The survey takes only a few minutes to complete. Please help us and complete the survey now. We value your input.

For more information about UCCE Master Gardeners of Amador and El Dorado counties current public education classes and activities, go to our UCCE Central Sierra Master Gardener website at http://cecentralsierra.ucanr.edu/Master_Gardeners and click on your home county.

Thank you for taking the time to complete this survey. We value your input.

UCCE Master Gardeners




In which county do you live?

El Dorado
 Amador

33% completed

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Public Education Classes & Events for Amador and El Dorado Counties – Free!!



Most classes are from 9 a.m. – Noon.
Please call ahead to confirm locations.

Click on the class title to go to our public website and 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.](#)

*"It didn't occur to me that... that gardening, like music, could demand practice, patience, a willingness to make mistakes."
— Amy Stewart*





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 2 & 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 Question for the Master Food Preservers?

Call the 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
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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!

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 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.