University of California
Agriculture and Natural Resources
UCCE Master Gardener Program
Orange County

The Garden Beet

Fall 2018

This newsletter is provided by the UCCE Master Gardener Program of Orange County.

Trained Master Gardener volunteers, ready to answer gardening questions, extend research-based information to the public about home horticulture and pest management through classes, hotlines, community events and demonstration gardens.

Want to know:

- What to plant when?
- How to manage a pest?
- How to become a Master Gardener?

Visit our website at http://mgorange.ucanr.edu

Contact the Garden Beet at gardenbeet@ucanr.edu

Back to School

If your plan is for one year, plant rice. If your plan is for ten years, plant trees. If your plan is for one hundred years, educate children. -Confucius

This issue has lessons for all ages and planning horizons. If you are focused on the coming rainy season, you can get details about how to adjust maintenance and start winter vegetable gardens in Garden Tips. If you are concentrating on landscape renovation and planting trees you will be sure to enjoy your efforts over the coming decades by selecting climate-adapted natives, learning why citrus varieties are now harder to find at local nurseries, and transplanting trees in a way that increases their odds of success. If you are growing children, you will learn about youth garden programs, a new threat to poultry pets, the botanical background of a spooky holiday ornamental, and Master Gardener-lead classes throughout Orange County covering topics such as holiday centerpieces and decorating with pumpkins.

If you have feedback about this issue or suggestions about future content can get in touch through the Garden Beet's new email address: gardenbeet@ucanr.edu. However, questions specific to gardening challenges are best routed to the hotline (ucceocmghotline@ucanr.edu) for a timely response.

Youth Gardens: Learning & Growing

Here's a pop quiz:

What place in the school offers "hands-on" learning not only in academics but in building social skills such as team work?

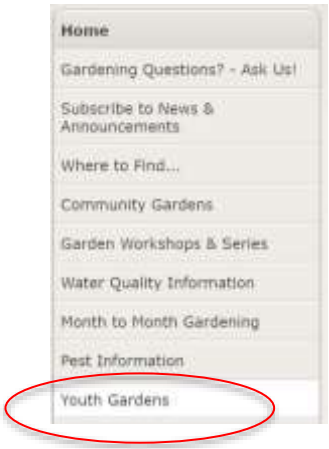
In addition to the classroom, where can teachers offer lessons in math, science, history, language arts, and the environment?

In a country where obesity is a real health issue, where can students learn about where food comes from and develop healthy eating habits?

Continued on next page

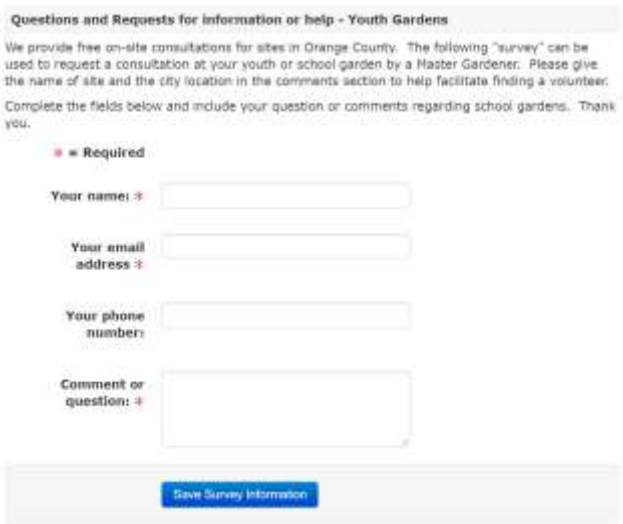
Youth Gardens (continued)

The answer to all the above: The school garden



University of California Cooperative Extension (UCCE) trained Master Gardeners of Orange County are involved in school gardens in a variety of ways. If you want to start a garden at your child's school or are having problems with an existing garden, we may be able to help. Our website, http://mgorange.ucanr.edu/, offers a lot of information about starting and maintaining school gardens. Need to find out when to plant certain veggies or looking for funding sources? That information is available. Also, you can fill out a form to request a site visit to evaluate potential sites or garden problems. Youth garden information can be accessed through a tab on the left side of the home page or through a link at the bottom of the home page.

More than 200 teachers and parents have attended workshops on starting and maintaining school gardens that the Master Gardeners have presented in the past few years. No sessions are planned for the near future, but if you are interested in this training, fill out the survey form at the bottom of the school garden section of the website, indicating your interest and what days (weekday, weekends) work best for you. If there is enough interest we will schedule a training session.



Request a site visit to evaluate potential youth garden sites or request training using the survey form

Master Gardeners have done presentations at children's events, including Imaginology at the OC Fair and Event Center in April, and the Children's Water Festival at UCI in March.

Master Gardeners also work with schools involved in the American Heart Association's Teaching Gardens in Anaheim, Garden Grove, Santa Ana, and Mission Viejo, offering lessons to parents, students and teachers.

Some Master Gardeners are involved with gardens at schools attended by their children or grandchildren. A Master Gardener who retired from teaching recently returned to her former school to start a garden.

UCCE Master Gardeners of Orange County also maintain a youth demonstration garden at the University of California Agriculture and Natural Resources (UCANR) South Coast Research and Extension Center (REC), 7601 Irvine Blvd., in Irvine. The garden features a number of themed beds based on nursery rhymes, Native American legends, and children's picture books while showcasing the variety of materials that can be used to create garden beds, from stone and wood to unusual containers including a wheelbarrow and wash basin. Schools and scout troops have visited the garden for science-based lessons on plants, soil, insects, etc. There is a fee for these activities and visits must be scheduled in advance. For more information contact Master Gardener Coordinator Randy Musser (remusser@ucanr.edu).

If you would like to preview the youth garden, we invite you to visit the Center for the FREE annual UC ANR Urban Landscape and Garden Education Expo on Saturday, September 29th from 9am to 2pm. As a research facility the Center is normally closed to the general public. On this special Saturday you can stroll through the youth garden and compost center, visit the demonstration landscapes, speak with exhibitors and meet with UC experts to discuss timely topics.

Students enjoy learning about vermiculture through examining red wigglers.

It's back to school time and there is no better time to get involved with learning and growing in the school garden. We hope we can help you out.

Waterwise Native Plants

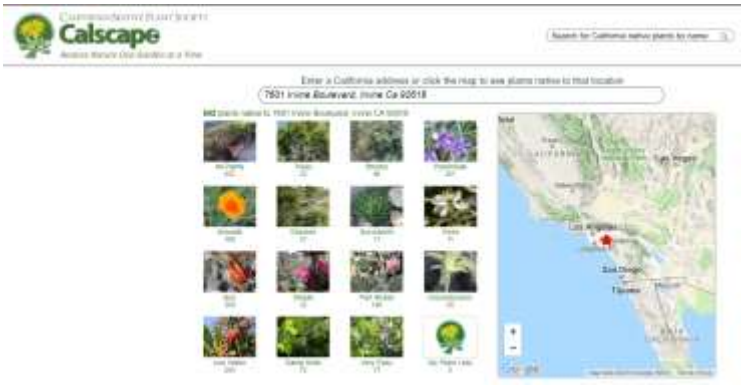
Demonstration landscape Site C at South Coast REC using native Southern Californian plants. See it in person at the Expo 9/29 (see calendar). Image: http://calag.ucanr.edu/Archive/?article=ca.v070n01p6

One of the most dramatic ways to conserve water while preserving curb appeal is to landscape with local native plants. Prized on international markets for their beauty, the water needed to maintain California native plants is only 10% of that needed to maintain turf and 30% of that needed for exotic ornamental shrubs. Native plants can also save you the expense of installing and maintaining elaborate irrigation systems and timers because natives thrive on deep, infrequent watering every three to four weeks during the dry season and can fend for themselves on precipitation during the fall and winter. Many gardeners can fulfill this commitment by hand watering with a hose. This deep, infrequent watering encourages the growth of deep, efficient roots.

Water needs aren't the only reason native plants are considered low maintenance. Because they are adapted to regional climates and ecosystems, they also require less fertilization, soil amendments, and pesticides. An added advantage is their ability to attract and provide habitat for interesting local wildlife.

The best time to plant natives is during the rainy season (October-April).

Step One: Research what plants are native to the area. Websites such as http://calscape.org/ and http://www.landscaperesource.com/ narrow down native plant lists to a specific to zip code or address. These websites also provide details about mature plant size to inform spacing and help determine which plants have similar water needs and could be grouped together in a single hydrozone. For more ideas, visit local public native plant gardens such as Reata Park (San Juan Capistrano) and Shipley Nature



Calscape.org search results in 502 native plant options for the South Coast REC address in Irvine

Center (Huntington Beach). Orange County's chapter of the California Native Plant Society is also a great resource.

Step Two: Position plants to take advantage of where water flows on the property. The best water source is rain water which is delivered in the season and quantity that the plant is adapted for and it does not contain the mineral and salt deposits found in irrigation and drinking water.

Step Three: Acquire plants. Although removing plant material from local parks is not suggested and may be illegal in some circumstances, there are numerous places to purchase Orange County native plants. Watch for plant sales at local nature centers or research the selection at local nurseries. Several nurseries even specialize in plants native to Southern California.

Step Four: Install plants. Installing plants properly increases long run success. Native plants require a similar but slightly modified approach from non-native trees and shrubs. For more information, see the article on the next page about planting and staking trees.

Mike Evans watering a secondary basin around a Southern California native plant in the Youtube series about native planting "Plant it Right!"

Installing Trees: Planting and Staking

Planting and Staking Woody Native and Exotic Landscape Plants

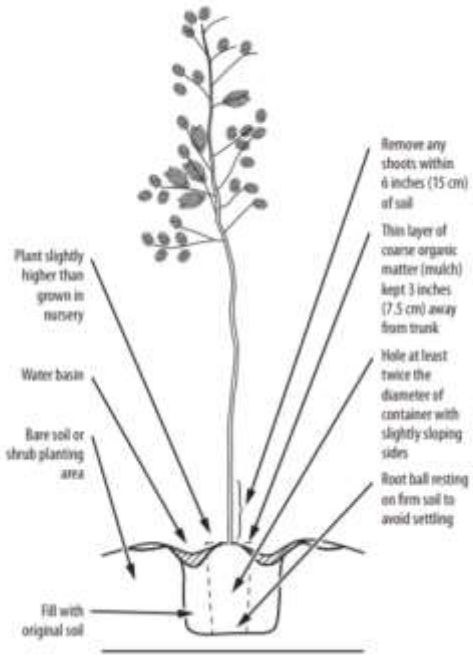
The fall is an ideal time to transplant native and exotic trees and shrubs because they are less likely to experience heat stress while they are establishing new root systems. The following guidelines are an excerpt from the California Master Gardener Handbook.

The nuances of establishing native plants are provided by local native-specialist nurseries and are indicated with italic font. For more detail, search YouTube for the "Plant it Right!" four-part series produced by Mike Evans of Tree of Life Nursery.

Step One: Digging the Hole

Dig the hole the same depth as that of the root ball. Planting more deeply or in loose soil that can settle with time, causing the plant to be deeper than intended, may lead to future problems such as crown rot.

Planting a landscape tree from a container. *Source:* After Harris and Davis 1984, p.1.



The width of the hole should be a minimum of twice the diameter of the container or root ball. The wider the hole, the faster the roots will grow out evenly without bending or crowding them. If planting in compacted soil, it may be necessary to dig deeper to break up impervious zones or layers. If so, wait two to four weeks before planting to give the loosened soil the chance to settle.

For natives, consider digging one and a half times the depth of the root ball and using backfill to raise the root ball to the appropriate height. Score the edges of the hole lightly to encourage root penetration. Thoroughly water the hole and allow the water to infiltrate before proceeding to the next step.

Step Two: Backfill

Place the plant's root ball so it rests firmly on the bottom of the hole. Backfill around the root ball with unamended soil dug from the hole, being sure to water the soil thoroughly to remove air pockets. Recent studies have shown that nothing is gained by amending the backfill with organic matter, fertilizer, or other substances. It is much more efficient to use organic matter as a mulch spread over the soil after planting to improve the soil structure, conserver water, and discourage weeds. Using the remaining soil dug from the hole, construct a water basin that is initially the same diameter as the root ball. Gradually widen

the basin as the plant becomes established. Remove it completely after the first growing season.

Natives should receive a larger basin, following the perimeter of the hole (at least twice as wide as the root ball). This enables the basin to be flooded with more water for deeper, less frequent irrigation. Natives can also receive a secondary basin around the initial basin (three to four feet from the stem of the plant). Ensuring the secondary basin is watered encourages further root growth. There are no suggestions on removing or changing the topography of these basins as the plant matures.

Step Three: Mulching and Irrigation

After planting, add a layer of coarse organic material such as mulch two to three inches deep and irrigate thoroughly (flood the basin) to settle the soil. Keep the mulch three to six inches away from the trunk.

In an In the Garden with Master Gardeners *KUCI interview, Mike Evans indicated that since natives are adapted to local soil conditions and because local mulch sources are of varied quality, native gardeners may not need to prioritize mulch top dressing for natives as much as they would for introduced plant species.*

Judicious water management is critical for newly planted landscape material. The original root ball must not be allowed to become completely dry for any extended period during the establishment of a woody plant. Until the roots grow out and become established in the parent soil, frequent but light watering may be needed. As the plant becomes established, irrigations can become less frequent but deeper.

Even as immature plantings, natives can tolerate longer intervals between watering. After installation, do not water for two to four weeks. Frequent light watering can encourage shallow, less resilient root systems to develop and increase the risk of crown rot.

Ongoing water should be applied to natives in a way that mimics natural rain showers. This consists of applying a total of one and a half to two inches of water cumulatively over three days to evenly wet the area up to four feet away from the original planting hole. In the dry summer season, these showers should be scheduled every three to four weeks. If particularly hot dry weather is forecasted, it is best to water before rather than during or after the heatwave to fortify the plant. Creating more lush vegetation can be accomplished by a brief five-minute "sprinkle" every seven to ten days. The best times to water are in the morning or early evening. In the rainy fall and winter season, natives may be able to manage with little or no supplemental watering if the region is receiving average or better quantities of precipitation.

Step Four: Staking

If newly planted trees will not stand upright without support or if frequent, heavy winds are a problem, staking may be necessary. Staking to support a tree should be as low as possible on the trunk but still high enough that the tree will return to an upright position after being

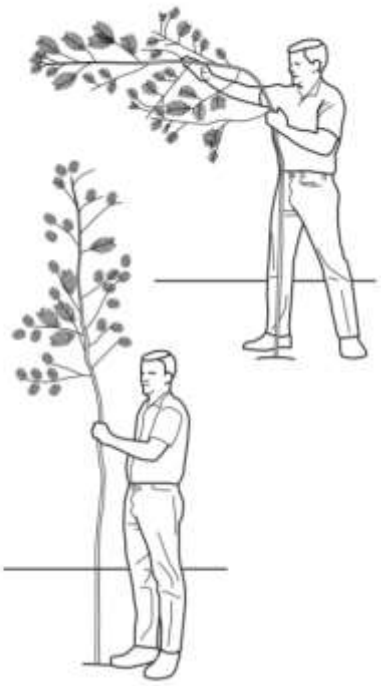
deflected. Attach ties at the height at which the trunk will return to upright when the top is released.

Use two support stakes, one each on opposite sides of the trunk, positioning them so that a line drawn between them would be at right angles to the most troublesome wind direction. Make the stakes as short as possible but high enough to hold the tree upright under calm conditions. The tree should return to vertical after the wind has bent the top.

Trees Sold with Stakes?

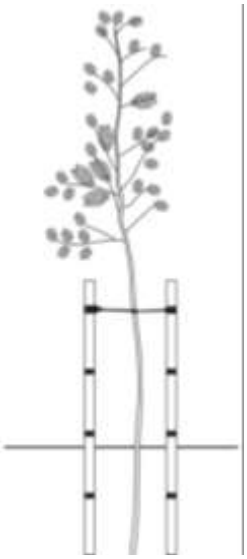
With few exceptions, there is little need to stake trees for trunk support if they were grown properly with adequate space in the nursery. However, many nurseries stake trees for ease of handling and to maximize space; thus, they may be staked for about one growing season when planted in the landscape. Trees with large tops in proportion to their roots may be staked. Even these trees can often stand without staking by simply thinning out about a third of the branches to lighten the crown and reduce its wind resistance.

Loosely tie the trunk to each stake at just one level, at the inflection point near the top determined by bending the top to one side and releasing. This technique allows the trunk below the tie to bend in the opposite direction from the top during a wind. Material used for ties should have a broad surface to minimize rubbing or girdling and have some elasticity to provide greater flexibility as well as support. Each tie should form a loose loop around the trunk, one right above the other, and the two together should provide necessary support at the right place.



Stakes should be no higher than necessary to hold the tree upright, while allowing the top freedom to move in the wind. To find the correct height, grasp the trunk with one hand and bend the top (left). If the top returns to its upright position when released, tie the trunk to stakes at the height of the bend (right). *Source:* After Harris et al. 1978, p. 6.

Cut both stakes just above where the last tie is placed to prevent the trunk from being damaged by rubbing or hitting the stake above the tie.



As the tree grows and becomes better established, remove or lower ties and shorten the stakes so they do not rub against the trunk and cause injury.

Provide flexible movement at the tying point without allowing the tree to contact the stakes. Trees whose trunks and tops are allowed to flex, give, and move a little develop stronger wood, a larger root system, and less wind resistance, because the top is free to bend. They become more

Article Image Source: http://ucanr.edu/sites/gardenweb/files/28946.pdf

self-supporting at an earlier age than trees that are rigidly staked. Ties can probably be removed by the end of the second growing season. Use stakes for the shortest possible time.

Step Five: Protecting new plantings from mechanical damage

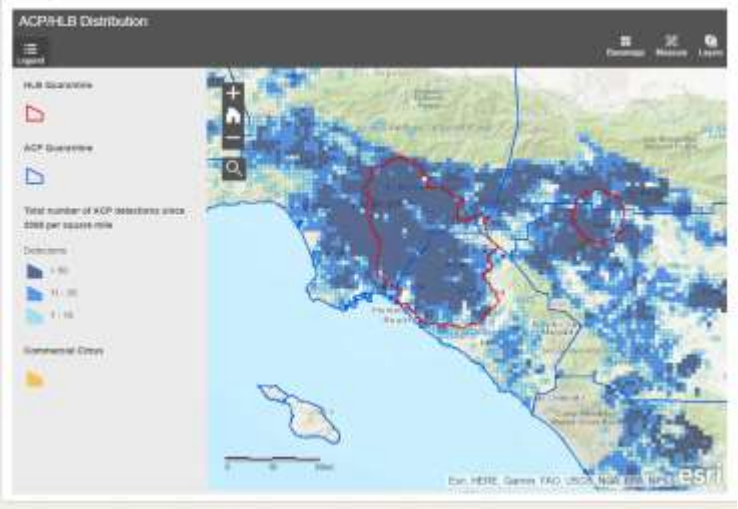
Keep the ground free of other plant growth such as lawns at least one foot in all directions from the trunk also prevents mechanical damage from mowers, edgers, and weeders. Such damage can kill or severely dwarf young trees.

To provide extra protection, drive three stakes that are two inches by two inches thick and about three feet long at equidistant positions around the root ball. Drive the stakes into the undisturbed soil until about one foot remains above ground level.

Even on newly planted trees whose trunks do not need support, trunk movement could break new roots growing out of the root ball into the parent soil if the root system is not well anchored. Two or three short stakes placed as suggested above provide protection from mechanical damage and enough anchorage for the roots. Ties from each of the stakes to the trunk will usually be sufficient to keep the roots firmly in the ground. The top may need thinning to decrease wind resistance and weight. Ties can be removed after the first growing season and the stakes left for trunk protection.

Do you grow citrus?

By Sandra Zwaal, UCCE Master Gardener of Orange County and ACP HLB Grower Liaison and co-authored by Dr. Beth Grafton Cardwell, Director of Lindcove REC and Research Entomologist UC Riverside



Investigate the current quarantine zone and detections at http://ucanr.edu/sites/ACP/Distribution_of_ACP_in_California/

Surprisingly, many who grow citrus trees in Orange County are unaware of the deadly incurable citrus disease known as Huanglongbing (HLB) threatening both backyard citrus and the citrus industry. This disease is so serious, the California Department of Food and Agriculture (CDFA) has placed more than 750 square miles of Orange, Los Angeles, and Riverside counties in an HLB quarantine. This means that infected citrus trees within the quarantine are being destroyed and citrus plants and fruit can't be moved out of that area without special treatment. As of August 2018, about 800 confirmed HLB positive backyard citrus trees had to be removed and the disease continues to spread

throughout Orange County. That is a staggering number of tree removals since the first diseased tree was found in 2012 in Los Angeles County.

Once a tree has the disease, it can take about two years to see disease symptoms (if you see symptoms at all) and because there is no cure, the tree usually dies within five years. Symptoms that can be seen are asymmetrical blotchy yellowing of the leaves (though citrus leaves can turn yellow for many reasons), thickening of the leaf veins, and eventually bitter tasting small fruit. Many of these symptoms mimic other common citrus diseases.


ucanr.edu

HLB is a bacterial disease transmitted to citrus or citrus-related ornamental plants (Rutaceae family) by a pest known as the Asian citrus psyllid (ACP), *Diaphorina citri*. Until researchers find a cure for the disease, the best protection from HLB is to reduce psyllid populations so they can't spread the disease and remove and destroy HLB-infected trees. Also, avoid grafting citrus as you may unknowingly be grafting with HLB infected budwood. The first HLB positive tree had been grafted numerous times. Finally, and most importantly, if CDFA determines your citrus tree is infected with HLB, by law they will need to remove and destroy it. You should be supportive of these efforts to protect other trees in your community. If you are in a region where CDFA is finding many HLB-infected trees, consider proactively having your citrus trees removed so that they do not become a source of the disease.

All stages of ACP are usually found inside the tender new leaf growth known as the flush of the leaves. This is where the adult psyllids feed and lay their eggs. ACP is about the size of a grain of rice and unique to this pest, it has a brown border along its wing edge and when it feeds its body tilts down at a 45-degree angle. Also unique to this psyllid, are waxy white tubules produced by the nymphs. One of the problems with this pest is it can spread the disease within weeks, but it is difficult to determine which trees are infected for more than a year.


Citrusgreening.org

You can do your part to help save citrus. Keep citrus local—do not move unwashed fruit, citrus yard waste or citrus trees across the county because psyllids and/or disease could be riding on them. Two great UC resources for identification, monitoring methods, treatment options and quarantine information, are the University of California ACP Distribution and Management website www.ucanr.edu/acp and the UC IPM Asian Citrus Psyllid Pest Note http://ipm.ucanr.edu/PMG/PESTNOTES/pn74155.html. The UC ANR website has information for homeowners, commercial citrus, and a tab for Master Gardener resources including an online course. If your residence is located near an HLB-infected tree and you are interested in removing your citrus trees, programs such as the California Citrus Mutual ACT Now program can help with tree removal www.citrusmatters.cropscience.bayer.us/home.

Newcastle in Chickens

Attention backyard chicken owners!

Virulent Newcastle Disease (VND) has been found in Southern California. The disease is spread between birds by coughing, sneezing, and exposure to droppings. Some types of birds may not show signs of sickness but can spread the disease to chickens and other pet birds. In most cases, VND will kill chickens.

Symptoms in chickens include swelling around the eyes, a purplish swelling of the wattle and comb, a large amount of fluid coming from beak and nasal areas, a twisting of the neck and head, loss of appetite, and sometimes sudden death.

If you suspect your bird is showing symptoms, immediately call the Sick/Dead Bird Hotline at: 866-922-2473.

Symptoms of Virulent Newcastle Disease include twisting of neck, eye swelling, and large amounts of fluid coming from beak.

Image source: www.cdfa.ca.gov

There are several things you can do to protect your flock and prevent spread of the disease.

- Keep your birds away from other birds. 30-day quarantine any birds who have been exposed to unknown birds (i.e. at shows, integrating new birds into existing flock, etc.) before adding them to a healthy flock.
- Avoid cross contamination through equipment. Avoid sharing equipment. Clean and disinfect equipment and vehicle tires before moving them between properties.
- Avoid cross contamination through caretakers. Wash your own clothes and shoes before and after entering an area with birds. Encourage visitors with birds to follow the same protocol before handling your birds.
- Share information about VND with your network. For more information, see: https://www.cdfa.ca.gov/ahfss/Animal_Health/Newcastle_Disease_Info.html
- Report potentially impacted birds through the Sick Bird Hotline: 866-922-2473

It is rare for VND to infect people; those with extremely close contact to infected birds may get a mild fever and redness and swelling around the eyes. These symptoms usually resolve without medical treatment. Properly cooked meat and eggs are safe to eat.

El Día de Muertos Marigolds

Did you know Day of the Dead (*Día de [los] Muertos*) used to be held at the beginning of summer? After Spanish colonization of Mexico, the celebration was moved to October 31-November 2nd to coincide with Christian holidays honoring the dead. The marigold (*Flor de Muerto)* is believed to attract spirits to their surviving family's altar (*ofrenda*). Fortunately, marigolds bloom from early summer through winter and would be available for celebrants to honor their loved ones at either date.

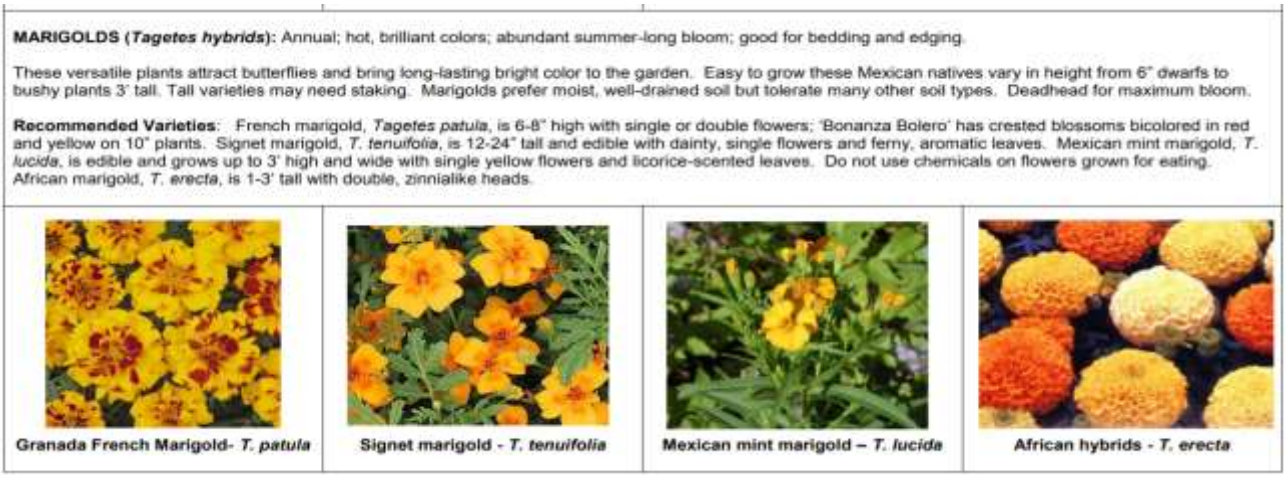


Image source: http://ucanr.edu/sites/uc_master_gardeners/files/139272.pdf

Ironically, despite being native to three states in Mexico, the traditional type of marigold with zinnia-like heads used in these ceremonies (*Tagetes erecta)* is often sold as the African Marigold. Known to the Aztecs as *cempazúchitl*, or "twenty flower," it was also prized as a yellow dye because it contains lutein, a rich carotenoid. It was also ground into a powder and fed to poultry to ensure egg yolks and poultry skin were vibrantly colored.

Two other famed properties of the marigold family are their ability to suppress some types of nematodes if tilled into the soil as a green manure while also serving double duty as a market product. However, UC research cautions not to rely exclusively on marigolds to control nematodes. Marigolds can slow down growth of desirable plants' roots, irritate the skin, and host other undesirable garden pests and viruses. If you struggle with nematodes, you should also employ other integrative pest management strategies such as soil solarization between planting seasons, selecting nematode-resistant plant varieties (i.e. tomato varieties with N after their name), and crop rotation.

Considering growing marigolds of your own? They make attractive garden borders and potted plant additions to the garden. Their size depends on variety, ranging from six-inch French marigolds to Mexican mint and African marigolds that can reach three feet high. They come in a variety of colors ranging from yellow, orange, brownish-red, maroon, and even variegated options like 1870 heirloom "Harlequin" which boasts maroon and yellow stripes. Be sure to position them in full sun, avoid overhead watering, and deadhead spent blooms to extend their life.

CALENDAR: UCCE Presentations, Workshops, and Talks

SEPTEMBER

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September is National **Fruit and Veggie, Organic Harvest**, and **Honey** Months

9/4 **Wildlife Day**

9/15 **Farm Animals Awareness Week**

9/19 **Indoor Plant Week**

9/20 **Teacher Ag Day**

9/26 **Johnny Appleseed Day**

9/26 **Fall Foliage Week**

Thursdays 8:30-9:30 88.9FM KUCI
"In the Garden" radio show

9/6 1PM-2PM: **Fall Garden Refresher**
Norman P. Murray Community and Senior Center
24932 Veterans Way, Mission Viejo, 92692

9/6 1PM-2PM: **Wildlife Habitat**
Helena Modjeska Historic House and Gardens
29042 Modjeska Canyon Rd, Silverado, 92676

9/8 9AM-10AM: **Smart Gardening 101**
http://mgorange.ucanr.edu/?calitem=421209&g=16069
Reata Park
28632 Ortega Hwy, San Juan Capistrano, 92675

9/8 10AM-11:30AM: **Master Gardener Information Day**
http://mgorange.ucanr.edu/?calitem=409420&g=16069
South Coast Research and Extension Center
7601 Irvine Blvd, Irvine, 92618

9/13 7PM-8:30PM: **Grow It Now: Propagation**
https://www.ylpl.org/events/grow-it-now-plant-propagation/
Yorba Linda Public Library
18181 Imperial Hwy, Yorba Linda, 92886

9/15 9AM-10AM: **Fall Veggie Garden/Small Spaces**
Farm + Food Lab, Orange County Great Park
6950 Marine Way, Irvine, 92618

9/15 10AM-noon: **Master Food Preserver Fermentation Demo**
http://ucanr.edu/sites/MFPOC/?calitem=419838&g=58438
South Coast Research and Extension Center
7601 Irvine Blvd, Irvine, 92618

9/22 10AM-11AM: **Vertical Gardens**
http://shipleynature.org/calendar/ask-master-gardener-vertical-gardens/
Shipley Nature Center
17851 Goldenwest Street, Huntington Beach, 92647

9/25 8AM-5PM: **Master Food Preserver Information Day**
http://ucanr.edu/sites/MFPOC/?calitem=407950&g=58438
South Coast Research and Extension Center
7601 Irvine Blvd, Irvine, 92618

9/25 6PM-7PM: **Cool Season Vegetables**
Anaheim Central Library
500 W Broadway, Anaheim, 92805

9/29 9AM-10AM: **Basic Gardening**
City of Buena Park Community Garden
Thelma Ave, under Edison right of way, Buena Park

9/29 9AM-2PM: **Urban Landscape and Garden Education Expo** (see next page)

Join Us at the 10th Annual Urban Landscape and Garden Education Expo

Activities for the Whole Family!

Explore the sustainable gardening practices at work at the University of California Cooperative Extension (UCCE) Demonstration Landscapes - including rainwater harvesting, low-water plantings, more efficient irrigation, composting, mulching and environmentally friendly pest control alternatives. Docent-led tours will be offered throughout this event.

Taste fresh, seasonal fruit grown at the UC ANR South Coast Research and Extension Center. Learn food preservation methods from UCCE Master Food Preservers.

Kids - visit the 4-H booth for youth activities. Play games and more.

Listen to presentations by UC experts about more efficient water use and irrigation, plant selections for our local climate and pest management practices for your home landscape, and more.

View a demonstration on garden tool care, self-watering containers, or food preservation.

Get answers to your landscape questions from UC experts, UCCE Master Gardeners, various industry vendors and local water agencies. The ever popular "Doctors Are In" will be available throughout this event to answer any of your pest management questions.

Grab a burger or hot dog, maybe a fresh-made donut hole, or two, in support of the 4-H Teen Council.

This is a **FREE** event hosted by University of California ANR South Coast Research and Extension Center, Cooperative Extension – Orange County, with support from Irvine Ranch Water District.

Directions, updates and additional details at: www.ucanr.org/sites/urbanwatermgmt

OCTOBER

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October is National **Farm to School** Month.

10/1 **Vegetarian Day**

10/3 **Kale Day**

10/3 **Butterfly and Hummingbird Day**

10/12 **Old Farmers Day**

10/31 **Halloween**

10/31-11/2 **Día de Los Muertos**

Thursdays 8:30-9:30 88.9FM KUCI
"In the Garden" radio show

10/4 1PM-2PM: **California Native Plants**
Norman P. Murray Community and Senior Center
24932 Veterans Way, Mission Viejo, 92692

10/13 9AM-10AM: **Cool Season Vegetables**
Reata Park
28632 Ortega Hwy, San Juan Capistrano, 92675

10/13 9AM-10AM: **Container Gardening**
City of Buena Park Community Garden
Thelma Ave, under Edison right of way, Buena Park

10/13 11AM-12PM: **Succulents**
Tustin Library
345 E Main St, Tustin, 92780

10/13 2PM-3PM: **Pumpkin/Succulent Centerpiece**
Foothill Ranch Library
27002 Cabriole, Foothill Ranch, 92610

10/20 9AM-11AM: **Succulent Pumpkin Centerpiece**
Farm + Food Lab, Orange County Great Park
6950 Marine Way, Irvine 92618

10/22 1PM-2PM: **Pumpkin Centerpiece**
San Juan Capistrano Community Center
25925 Camino Del Avion, San Juan Capistrano, 92675

10/23 10AM-noon: **Master Food Preserver Information Day**
http://ucanr.edu/sites/MFPOC/?calendar
South Coast Research and Extension Center
7601 Irvine Blvd, Irvine, 92618

10/27 9AM-10AM: **Kids Gardening**
City of Buena Park Community Garden
Thelma Ave, under Edison right of way, Buena Park

10/27 9AM-10AM: **Succulent Gardens**
Irvine Heritage Park Library
14361 Yale Ave, Irvine, 92604

NOVEMBER

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November is World **Vegan** Month

11/1 **Vegan Day**

11/22 **Thanksgiving**

Thursdays 8:30-9:30 88.9FM KUCI
"In the Garden" radio show

11/1 6PM-7PM: **Pumpkin Succulents**
Norman P. Murray Community and Senior Center
24932 Veterans Way, Mission Viejo, 92692

11/10 9AM-10AM: **Indoor Plants**
Reata Park
28632 Ortega Hwy, San Juan Capistrano, 92675

11/10 9AM-10AM: **Holiday Centerpiece**
Dana Point Library
33841 Niguel Rd, Dana Point, 92629

11/10 2PM-3PM: **Planting the Spring Vegetable Garden**
Foothill Ranch Library
27002 Cabriole, Foothill Ranch, 92610

11/27 10AM-noon: **Master Food Preserver Information Day**
http://ucanr.edu/sites/MFPOC/?calendar
South Coast Research and Extension Center
7601 Irvine Blvd, Irvine, 92618

Hotline FAQ

How do I find an arborist?

The website http://www.treesaregood.org maintains a list of arborists with International Society of Arboriculture (ISA) credentials that is searchable by postal code. ISA credentials indicate the arborist has received training and has access to ongoing education opportunities on topics beyond basic pruning techniques. This training covers topics such as tree biology, selection, establishment, maintenance, pest and disease identification, safe work practices, risk assessments and legal issues. The non-profit ISA membership dues fund additional peer-reviewed research which is shared with members bi-monthly.

Where can I get soil tested to determine how much to fertilize?

In some states the Ag Extension will provide soil analysis for a nominal fee but California is not one of them. That makes sense given the sheer size of the state.

ucceocmghotline@ucanr.edu
949-809-9760

There are several testing options which are presented in detail on the website http://mgorange.ucanr.edu/Soils-Fertilizers-Compost/?uid=1&ds=547. You can purchase a testing kit locally or send a sample to a testing laboratory.

There are particular methods for preparing a soil sample. The California Master Gardener Handbook explains, "Typically, about one pint of soil is needed to conduct soil tests. The sample submitted should be a subsample from a mixture of small samples taken at various depths and locations." However, be sure to follow the sampling instructions provided by the kit or laboratory you choose to work with.

Garden Tips: Fall

<table>
<tr><td>All plants</td><td colspan="2">Check and adjust irrigation settings when rainy season begins.
Begin installing perennials.
Top off mulch levels.</td></tr>
<tr><td>Seasonal Colors and Roses</td><td colspan="2">Roses—Fertilize in several light applications March-Nov with a 3-1-3 ratio.
Poinsettias—stop pinching back in early September. Create 12 hours of darkness in mid-September to initiate blooms in time for the holidays.
Christmas Cactus—Create short day treatments in mid-Sept and expose to cool night temps (55-65°) to initiate blooms after eight weeks. Water less October-March. Repot every three years.</td></tr>
<tr><td>Fruits and Veggies</td><td colspan="2">If mulching vegetable crops (two to four inches deep around plants) apply two extra pounds fertilizer/100 feet^2 to ensure adequate nitrogen is available to the plants as the mulch breaks down.
Consider fertilizing fruit and nut trees. Fertilize blackberries and raspberries late fall/early winter 50 pounds organic fertilizer/100 feet of row.
Plant citrus in fall (most protection from scorching heat), strawberries in late October-December, and blueberries in fall-early spring. Fertilize new blueberries with 10-10-10 at a rate of one ounce/plant one month after planting.</td></tr>
<tr><td rowspan="3">Turf</td><td colspan="2">Manage perennial weeds (clover, dandelion, oxalis, bermudagrass) if necessary using selective herbicides during active growth or seedling stage (early spring/late fall). Aerate compacted soil when moist.
Apply no more than one pound of nitrogen/1,000 feet^2 of turf during each application.
When mowing, remove no more than a third of the grass blade.
For more information, see UC Guide to Healthy Lawns (http://ipm.ucanr.edu/TOOLS/TURF/)</td></tr>
<tr><td>Cool season
(uses a lot of water, stresses in hot weather)</td><td>Warm season
(uses less water, goes dormant in winter)</td></tr>
<tr><td>Apply no more than six pounds of nitrogen/1,000 feet^2/year.
Cut shorter (in 1.5”-3” range) or more frequently because grass is actively growing.</td><td>Apply about four pounds of nitrogen/1,000 feet^2/year. Stop fertilizing in late fall-winter.
Cut longer (within .5”-1.5” range) or less frequently as warm season turf goes dormant in winter months.</td></tr>
</table>

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