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The Gardening-Nurturing Connection

Sharon Schwarz, UCCE Master Gardener, Yolo County

To nurture something is to 'take care of, feed and protect something, especially young children or plants and help it to develop'. As gardeners we obviously nurture our gardens, whether they are on the patio, or spread out over acres - but an interesting perspective is the question, 'does your garden nurture you'?

There is no denying it! There is something special, perhaps magical, that happens when you spend time in a garden. Whether you spent ten minutes just sitting quietly in your garden with a cup of coffee or spent an hour 'digging in the dirt', most people will agree that they 'felt better' after doing so.

British biographer, historian, critic and publisher, Jenny Uglow once said, "We may think we are nurturing our garden, but of course it's our garden that is really nurturing us".

Over the years there has been a steady increase in the development of Horticultural Therapy, Therapeutic Horticulture, Therapeutic Gardening, Healing Gardens and even Green Exercise. Although they sound similar, some of these modalities are practiced by trained professionals, and there is a common thread on which they are based - that the interactions between people, plants and nature can help with physical and mental healing. The people/plant/nature interactions can assist in pain relief, create distractions, remove negative thoughts, reduce worries, stress and anxieties. Above all, they can help to improve a person's quality of life. According to a factsheet on the UC ANR website, Gardening And Food Growing To Reduce Stress And Stress-Related Illness, a survey done for Mental Health Awareness in 2015,

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showed that 'nearly one in three people are regularly stressed. The survey of 2000 adults showed that significant numbers of people are often feeling stressed (29%), anxious (24%) and depressed (17%)'. Bear in mind that these survey percentages are likely to be significantly higher as we say farewell to 2020 and face the New Year while we are still in the grips of the global Covid-19 pandemic.

There is growing evidence that spending time in the garden, or in nature can decrease stress. Even the view of a garden or trees from a window, can help patients heal faster after surgery.

Another interesting article from the *Annals of Horticulture* (August 24, 2020 issue), is titled "The Therapeutic Power of Gardening: Can Anxious Minds Find Solace Working With Plants?" A therapist and her husband, a garden designer, say yes.'

I recently asked my Master Gardener friends what they thought about the gardening-nurturing connection. Some of their responses appear below.

Horticultural Therapy

"Have you ever had a bad day when nothing is going right?? Of course, we all have. One day I was having one of those days. Too many to-do projects yet wanting to garden. So, my family said, "Go to the garden!" So, I did. In about 20-30 minutes I was relaxed. I got the watering done and pulled a few weeds. When I went back inside, I was relaxed and smiling. Then I went about the day getting my to do list completed. What surprised me was that it only took 20+ minutes for me to calm down and put things into perspective! Gardening is my therapy!

"Gardening helps you feel better about yourself. You can do these small jobs. And add up the small jobs and look at how much you've done! Plant some seeds and watch them germinate! You did that with a little water and look how the plant is growing! You get to handle living plants and watch them grow! You have created something that's beautiful! A gift from nature with a little help from you! You've created something to give to a friend or loved one. Or you have produced vegetables or fruits to share with others. Then the most important part of growing edibles – taste testing!! This builds self-esteem, too.

"Gardening is also an opportunity to work with others who share your love of gardening. You can teach others about gardening. You're building new friendships and community. And you can laugh and have fun together while doing it!

"Gardening is adaptable for older people with cranky joints and those who have limited mobility. A table and chair allow one to sit. Tall tables allow one to plant seeds or transplant plants without bending over. There are small seats with wheels to use in the garden. There are many ways to adapt gardening. Plants can grow inside on a table next to a window or with fluorescent light. Raised beds are a great way to enjoy plants outdoors. If there's a will, there's a way to garden. Go for it!" ~ *Cid Barcellos, UCCE Master Gardener, Yolo County - Class of 1998*

Garden Therapy

"Losing two members of my family to Covid-19 within the last year has been horrifying to me and my family. When my life seems so out of control, I can always take solace in knowing I have control of my little plot of earth in the backyard. The satisfaction of planting something so small and watching it grow over a period of months is priceless. I thank my lucky stars that I am part of the Yolo County Master Gardener program. The more classes I take, the more I have learned from you to keep my little part of life alive and thriving. Thank you!" ~ *Ruth Shimomura, UCCE Master Gardener, Yolo County - Class of 2018*

Solace in My Garden

"In the past ten months more than ever my gardens have been my sanctuary to sit, to walk, to work. The place I can feel calm, safe even serene against the backdrop of life. No matter the time of day or time of year I can find something to smell, taste, discover and of course do in the garden. I am so grateful I am a gardener and for once don't even mind the weeds." *~Treva Valentine, UCCE Master Gardener, Yolo County - Class of 1995*

A Special Garden

"Before I retired, I taught Microbiology at a California community college. The Biology faculty asked for and got permission to convert a part of the campus to a demonstration garden. We thought of it for teaching and a source of plants for Botany classes, but it turned out to be more than that for many students. It was only a small area with a little greenhouse, but we had students who came and sat on a rock or the hay bale seating and did their studying in the garden. We had students who volunteered to help care for the garden. We had students who asked about our native plants so they could plant some natives at their homes. We had students who did research projects in the garden. There was even one student who was temporarily homeless who slept several rainy nights in the greenhouse, but the students who most touched our hearts were a group of returning vets struggling with PTSD. They asked if they could have an area of the garden for them to plant and tend. Because we had a pond, we locked the gates to the garden at night. If we were slow opening in the morning, we almost always found some of the vets waiting at the fence peering into their part of the garden. They put up a flagpole and kept an American flag flying each day. They spent hours there just being in the garden. One told us he found adjusting to normal life back in the states very difficult and it helped him deal with his anxiety to be in the garden. He sometimes came just to sit there several times a day. The vets told other vets and there is now a permanent part of the garden planted, tended and used for vets or anyone else just to hang out. It is not an outcome we expected when we built the garden, but one that gave us great satisfaction". *~Priscilla Ross, UCCE Master Gardener, Yolo County - Class of 2016*

Positive Feelings

"As a restoration ecologist and long-time gardener, I have long appreciated the positive feelings that gardening gives to me and others. I've often said that in restoring nature, we restore ourselves. It's the same with gardening. I may cuss a bit when pruning our fruit trees, sometimes, but I still find it very therapeutic, meditative and rewarding to design and establish a garden, plant seeds and watch them grow, and harvest the fruits (and vegetables!) of our labor. When life throws us curveballs right and left, gardening is there to soothe us. Someone slipped an anonymous note in an old Rodale book, *The Gardener's Guide to Better Soil*, that I picked up in a freebooks box many years ago. The note says, "A man who plants a seed must have faith and if man has faith there is hope for this troubled world." I tend to be a practical optimist and simply rephrase that as, 'They who plant seeds, plant hope.' To me, that's what gardening does for my outlook every day." *~Ron Unger, UCCE Master Gardener, Yolo County Trainee, Class of 2021*

How Nurturing is Your Garden

"Each morning as I sit at my dining room table with a cup of tea and gaze out my sliding glass door into the backyard- it is so therapeutic for me. I look upon my beautiful pomegranate tree and my native garden, in particular a California buckwheat. The garden is filled with fruit trees, citrus trees, bulbs, native plants and perennials; alive with plenty of wildlife, insects and bees. Pure joy and inner peace are what I receive. I have been designing people's yards for the past 20 years. What bliss and privilege to be doing something I love; so very nurturing for me. I enjoy teaching and learning from clients how they would like to enjoy a particular type of garden that we design together. After the garden is planted and they have had time to really become one with it; I usually receive a call. They share with me their happiness and how their garden brings unexpected delights." *~Gail Jankowski, Class of 2007*

Certificate in Horticultural Therapy

"FYI: Rutger's University in New Jersey offers a Certificate in Horticultural Therapy. For more information on the Horticulture Therapy Program and the course curriculum and requirements, see links that follow.
https://plantbiology.rutgers.edu/hort-therapy/
https://plantbiology.rutgers.edu/hort-therapy/degreereq.html" *~Bonnie Berman, UCCE Master Gardener, Yolo County - Class of 2013*

Restoring Myself

"When my husband and I purchased our first home in the early '80s, that is when my love of gardening began. I didn't realize it at the time, but I would find myself in the garden most weekends, or after a stressful crazy shift at work. Whether I was pulling weeds, tending perennials or planting flats of annuals – it didn't matter what I was doing, I was in the garden! I always noticed the connection to nature, plants and the soil just 'made me feel better'. No matter how bad or chaotic life had been, there was something soothing my soul when I was in the garden. The saying 'An hour in the garden puts life's problems in perspective', became my mantra. Even now – just sitting in the garden with a morning cup of coffee or an evening glass of wine, the plants and pollinators help restore my inner sense of calm and balance. I just have to remember before I 'stop to smell the roses', to check that the bees are not frolicking in them first!" ~Sharon Schwarz, UCCE Master Gardener, Yolo County - Class of 2018

Building a Community Treasure How UCCE Master Gardeners-Yolo Helped Create an All-Volunteer Public Garden

Ann Daniel and Peg Smith, UCCE Master Gardeners, Yolo County

During much of 2020 we all observed how people sought out green spaces to find a connection to nature for restoration and respite. The value of having an accessible outdoor space that offers beauty and opportunities for learning has always been important, but not all communities can offer such a public space to its residents. Starting in 2006 a team of volunteers in Davis, California, had the vision and foresight to build a coalition of talented partners to transform an almost half-acre area of Davis Central Park into a thriving demonstration garden. It was our vision that this garden would encourage the use of sustainable gardening practices and the use of regionally appropriate plants. We accomplished much more over the course of the next fourteen years.

Central Park Gardens' Rose and Flower Garden features an iconic, custom mosaic artwork by Mark Rivera that incorporates plants and pollinators from the garden.

We are very pleased that this UCCE Master Gardeners-Yolo project—Central Park Gardens—was featured by the Pacific Horticulture Society on their website (https://www.pacifichorticulture.org/articles/building-a-sustainable-city-garden/). We shared our story and offered a roadmap for how other communities might launch something similar. Ours is a story of volunteer leadership, team building, public engagement, and municipal-private partnership—not to mention lots of hard, but satisfying, work. We are proud to share our experiences of creating a public green space and to share the beauty and education value of Central Park Gardens with the more than eleven thousand people who visit the Pacific Horticulture Society website.

Central Park Gardens is located in Davis Central Park, an award-winning park that has served as a model of community-centered design and is home to the ever-popular Davis Farmers Market. The park is considered by many to be the social center of the city, and thousands from Davis and

surrounding communities gather there weekly on Saturday morning and Wednesday evening market days. The park is centrally located and near the campus of UC Davis with its almost 40,000 students. This is a high visibility location that is enjoyed year-round.

Central Park has had an area designated as an ornamental garden since it underwent a major renovation and expansion in the early 1990s, but there was no organized plan for ongoing maintenance or volunteer involvement. As city budgets experienced difficulties, maintenance by stretched parks staff was cut and the gardens fell into neglect. This neglected appearance frustrated many, but it sparked the interest of Emily Griswold, community member and professional horticulturalist, who recognized the potential of the garden. In her work at the UC Davis Arboretum and Public Garden she had learned how impactful teams of trained, motivated volunteers can be for the creation of gardens and for providing ongoing maintenance.

Assembling a Team of Partners

UC Cooperative Extension Master Gardener program in Yolo County had just the team of knowledgeable volunteers to take on the reimaging of the gardens and, equally important, to develop the area as a demonstration site to fulfill their public education mission. Several UCCE Master Gardeners responded enthusiastically to that initial call, in 2006, and many of those original volunteers, along with other Master Gardeners who have joined in later years, continue to serve in leadership roles supporting the garden.

Since the garden site is located in a public park, partnership with the City of Davis Parks and Community Services Department was essential. City representatives were enthusiastic about plans to improve the gardens, which would beautify the park, support sustainability goals, and build community through volunteer engagement. Ultimately, a formal Memorandum of Understanding was adopted to clarify the terms of the partnership and the roles and responsibilities of the City and our volunteer team in the care and development of the gardens.

Initial partners also included: Davis Farm to School Connection, UC Davis Arboretum and Public Garden, and the Davis Garden Club. By creating meaningful partnerships, we gave the gardens a chance of long-term success.

Developing a Shared Vision

Our first major task was to develop a plan for renovating the garden site. We wanted to make sure we captured the interests and feedback of Central Park users. A key step in informing the development of our vision for the gardens was the creation of a park user survey. With help from a UC Davis graduate student, Missy Borel (now Missy Gable, the Director of the Statewide UC Master Gardener program), we surveyed 119 park users on what kind of plantings they would like to see and how they would envision using the garden.

UCCE Master Gardeners, Yolo County, provide free seasonal workshops to encourage and guide local

We gathered ideas and, with the pro-bono help of garden designer Laurie Gates and landscape architect Cheryl Sullivan, developed a plan. The long, narrow garden site lent itself well to the creation of a series of garden "rooms" with different thematic plantings linked together by a decomposed granite pathway. The master plan for the garden featured seven themed gardens:

- Rose and Flower Garden, with a mix of roses and flowers that attract hummingbirds and butterflies
- Sensory Garden, with herbs and fruit trees that stimulate the senses
- Native Plant Borders, with California natives that are proven to perform well in area home gardens
- Meadow, with ornamental grasses, wildflowers, and bulbs that show an alternative to lawn
- Vegetable Garden, with an assortment of seasonal vegetables that are donated to the local community meals program
- Beneficial Insect Borders, with plants to attract a variety of pollinators and beneficial insects for natural pest control in the Vegetable Garden

- Waterwise Garden, with succulents and drought-tolerant plants

Involving many stakeholders, including city staff, in the design process led to the creation of a robust plan with universal support. This master plan for the renovation of the garden allowed us to secure approval from the Davis City Council for a whole package of garden improvements that would take several years to fully implement.

Community volunteers provide the people power needed to renovate, transform, and maintain the garden.

Making it Happen

It is always challenging to find the funds to bring a plan to life but leveraging the networks and the resources of our partners was key to our fundraising success. Initial funding was assembled through a mixture of small community grants, grants through the university, private donations, service club donations, and allocations from various city departments and programs. In-kind donations also helped quite a bit, for example, an irrigation supply company donated all the supplies for retrofitting and upgrading the irrigation system. Community service clubs and on-campus student service groups generously donated their time and expertise to take on path renovation and fence construction projects.

A garden is a living, dynamic entity that requires, if not demands, regular care and maintenance. As was learned earlier, it was important to have a program to ensure that there is a reliable team of garden volunteers. We initiated a regular schedule of biweekly volunteer gardening sessions led by Steering Committee members, many of whom are Master Gardeners, on Saturday mornings to coincide with the Farmers Market. The sessions are open to anyone, regardless of their level of gardening knowledge. Currently our Saturday gardening sessions are on hold due to the pandemic, but we look forward once again to bring community volunteers back into the gardens to work and learn about the plants and the maintenance requirements of this diverse garden. We were pleased to discover that many of the volunteers were UC Davis students who wanted to spend time in a garden, relax from the challenges of their college studies, and engage in community service.

Securing our Future

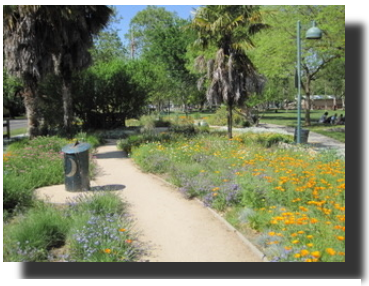
As Steering Committee members retired, we realized that we needed a more robust way to welcome, mentor, and train new volunteer leaders. In 2015, we created—Central Park Garden Stewards. Garden Stewards receive twelve hours of training in science-based horticulture and volunteer management led by Steering Committee members and Master Gardeners. The training includes background reading as well as hands-on work.

The Garden Stewards serve as team leaders during Saturday volunteer gardening sessions and mentor small groups of novice volunteers. They build their horticultural knowledge and leadership skills as well as their investment in our organization. Designed to improve the quality of the volunteer experience, the Garden Steward program has also strengthened our organization by creating scaffolding for increasing levels of volunteer involvement and leadership. We hope to offer this training again in Spring, 2022.

In 2016, to secure our financial future, we established Central Park Gardens of Davis as a legal 501 (C) (3) non-profit. We now have a formal “Friends” program that supports our annual operating budget. Thanks to our location on city property and our long collaboration with the City of Davis, we are currently provided with water, mulch, and green waste removal, so our financial needs are relatively modest, but plants do need to be replaced and elements of our infrastructure—decomposed granite paths, wooden fencing, irrigation—need maintenance, so we regularly seek task-specific support from community service groups and donations from the public. We very much appreciate all who help us as volunteers and financial contributors.

Sharing the Wealth

Central Park Gardens is not only a valued community asset, but also an important resource for the home gardener. By watching the work done by our team of volunteers, reading our many plant labels and informational signs, and participating in monthly free educational workshops presented within Central Park Gardens, home gardeners in our community are kept well informed about the best sustainable gardening practices. Master Gardener volunteers play a primary role in making the garden a valued site for sharing gardening information.



Wildflowers, milkweeds, grasses, and seasonal bulbs create an attractive year-round garden in the Central Park Gardens Meadow.

The transformation of the garden attracted great community support and interest which continues to this day. Expressions of gratitude from garden visitors buoyed the spirits of our volunteers, which was especially helpful when we faced the inevitable challenges with vandalism, weeds, and irrigation issues that accompany any public garden project.

Many public parks suffer from underfunded maintenance, and yet their potential to serve as diverse, beautiful, and engaging public spaces is tremendous. We encourage you to reflect on the power you hold as a gardener and engaged community member and join with others to transform a neglected public space in your community or join us at Central Park Gardens. You can make a difference.

If you are thinking about creating a public garden in your community or if you are interested in getting involved at Central Park Gardens, please reach out to us at centralparkgardens@gmail.com.

Resources

Central Park Gardens of Davis website: https://centralparkgardens.org/

Doggone It! Common Landscape Plants Toxic to Dogs

Michelle Haunold Lorenz, UCCE Master Gardener, Yolo County

It was a bright spring day and the time had come to introduce the puppies to the yard. My dog Twix had given birth to seven little fur balls four weeks earlier and they were toddling around exploring everything. I set up a hound-surround on the patio to keep them from roaming too far on this first adventure, but it was plenty of space with different surfaces for their initial introduction to the outside world.

As the little wiggly creatures started to excitedly explore their new surroundings, they discovered the begonias on the edge of the patio. I hadn't closed that part of the patio off, thinking it would be good for them to get the feel of soil and bark mulch on their paws. However, just like human babies, puppies explore their world with their mouths, biting, chewing, and tasting. I noticed several of the puppies that were playing in the begonias start to hack and gag and shake their heads, clearly in distress. I grabbed all the puppies up and rushed them back inside to their safe indoor enclosure where they continued to shake their little heads trying to rid their mouths of a painful sensation. I called the vet and left a message and then jumped on the computer while I waited for a callback.

Frantically I googled "Are begonias toxic to dogs" and was horrified to realize that I had inadvertently poisoned the litter of puppies. Thankfully, the painful sensation in their little mouths would pass with time, but until then, there was nothing I could do to ease their distress. I ran around my garden ripping out that huge,

beautiful display of begonias. Thus, began my great garden renovation as I ripped out, dug up, and moved plants at a fiendish rate. I felt terrible I had never considered the question of plant toxicity to dogs.

If you have dogs it is worthwhile to familiarize yourself with the plants in your garden for this very reason.

Many plants and flowers commonly used in spring landscaping are toxic (such as daffodils, tulips, and hyacinths) but if you've never had a dog you may be unaware of how dangerous the plants might be. I was lucky with the begonias; the effect of ingesting any part of this plant is a painful burning sensation, uncomfortable, but not deadly. Within time, the sensation passed, and the puppies were fine. But other plants could kill your dog. If you suspect your dog has ingested any plant known to be toxic call your vet immediately.

According to the UCANR website the following twelve plants, compiled by Director of Pharmacy Dr. Valerie Wiebe, are responsible for the majority of calls to the UC Davis Veterinary Medical Teaching Hospital. For a complete list of the toxic plant parts and their toxicity effects, please go to the full article at https://ucanr.edu/sites/cetrinityucdavisedu/files/234729.pdf

- All species of Lilies (*Lilium spp*.): ingesting any parts of these plants can cause liver and kidney failure within 36-72 hours.
- Lily of the Valley (*Convallaria majalis*): Ingesting any part of the plant can cause cardiac dysrhythmias, vomiting, diarrhea, confusion, weakness, and even death.
- Anemone (Anenome and Pulsatilla, family Ranunculaceae): Irritating to the mucus membranes, and can cause blisters, hemorrhagic gastritis, shock, convulsions, and death.
- Aloe Vera (family Liliaceae): Vomiting, depression, diarrhea, anorexia, tremors, and change in urine color.
- Amaryllis (family Amaryllidaceaea, incl. *Hippeastrum* spp.) All species, including Belladonna Lily, are toxic. The "Amaryllis" commonly seen during the December holidays is Hippeastrum species. Symptoms include vomiting, depression, diarrhea, abdominal pain, hyper-salivation, anorexia, and tremors.
- Asparagus Fern (*Asparagus aethiopicus*, family Liliaceae): Allergic dermatitis, gastric upset, vomiting, and diarrhea.
- Daffodil (*Narcissus pseudonarcissus):* Vomiting, diarrhea. Large ingestions cause convulsions, low blood pressure, tremors, and cardiac arrhythmias.
- Philodendrons *(Philodendron* spp*)*: Irritation, intense burning, and irritation of the mouth, lips, tongue, excessive drooling, vomiting, difficulty swallowing.
- Jade Plants (*Crassula argentea*): Vomiting, depressions, ataxia, and slow heart rate.
- Chrysanthemums (*Chrysanthemum* spp): Vomiting, diarrhea, hypersalivation, incoordination, and dermatitis.
- Cyclamen (*Cyclamen persicum*): Ingestion can cause excess salivation, vomiting, diarrhea, heart rhythm abnormalities, seizures, or even death in rare cases.
- Cycads (including Sago palm (*Cycas revoluta*): All parts of the plant are poisonous. Symptoms include vomiting, lethargy, melena (black "tarry" feces), icterus (jaundice), increased thirst, hemorrhagic gastritis, bruising, coagulopathy, liver failure, and death.

There are many more plants not included in Dr. Wiebe's list so please consult the additional resources listed below. For example, begonias are not on this UC Davis list but are known to cause a burning sensation, drooling, and vomiting due to the calcium oxalate found in the leaves.

Something to keep in mind as you are evaluating your garden: not all dogs will eat plants in the garden. I have daffodils, tulips, cyclamen, and aloes in my garden and my dogs have never tasted or eaten them. My dogs ignore all the plants in my garden except the peas and zucchini in the vegetable garden (while these are not bad

for the dogs, I've built a fence to keep them out of there once I discovered their snacking)! I would never have known about the begonias if it hadn't had been for those curious little puppies.

As I mentioned previously there is a very long list of plants and flowers commonly used in our gardens that can be toxic to your pet. But just to be safe, if you have a dog that roams freely in your garden, double-check each plant before planting it to make sure it is not toxic to your pet.

Additional References and Resources for Plants Toxic to Dogs

https://ucanr.edu/sites/cetrinityucdavisedu/files/234729.pdf

https://www.ucdavis.edu/one-health/garden-plants-toxic-to-pets/

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It's Easy to Grow Citrus in Containers

Michael Kluk, UCCE Master Gardener, Yolo County

In the Winter 2020 edition of the *Yolo Gardener,* we described general citrus care. At the time, we realized that growing citrus in containers warranted its own article. So now we can delve more deeply into that topic. Look back at the Winter edition article for general care suggestions.

Of all the fruit trees, citrus is the easiest to grow in containers with the possible exception of figs. Many varieties of citrus adapt well to container culture and, in fact, may do better than when planted in the soil. They will be smaller but often still large enough to give you a healthy amount of fruit along with beautiful glossy leaves and wonderful smelling blossoms.

Choose the right varieties

Not all varieties of citrus will do equally well in a container. A full-size grapefruit tree may not be the best choice. The varieties most likely to be happy in a container are those that tend to be smaller in size when mature. Here are a few suggestions:

- Mandarins- Satsuma, Clementine, or Honey
- Lemons- Improved Meyer, Sungold, Variegated Pink, or Ponderosa
- Limes- Bearss, Thornless Mexican Lime, Palestine Sweet Lime, or Mausambi
- Kumquats- Fukushu, Meiwa, or Tavares Limequat (a cross between a kumquat and a lime)
- Oranges-Washington (a naval orange), Tarocco (a blood orange), or Trovita (a non-naval with thinner skin)
- Kaffir Lime- the leaves are used in Thai cooking

- Buddha's Hand Citron- unique fruit for zesting

Choose the right container

Choose a container a little bigger than the container your tree comes in from the nursery. Eventually you will want to move up to an even larger container but not initially because it is hard to control the water in a pot that is too big. Bad container choices include unglazed ceramic, black, or metal pots. Citrus like consistent moisture. Unglazed ceramic makes it harder to maintain moisture. The roots prefer to be cool; black or metal pots tend to heat up more. Light colored plastic is a good choice as is glazed ceramic and wood containers. In any case, start by drilling extra holes in the bottom to promote good drainage; at least three or four half-inch diameter holes is a good start. You may need to place fiberglass window screening over the holes to keep the potting soil from running out. And it is a good idea to put the pot up on bricks so that water drains out freely and the pot does not sit in a puddle. As the tree grows, you will need to move it to a larger pot. Plan on doing that every three years or so. Eventually, your tree should be in a pot that is twenty-four to twenty-eight inches in diameter. A half whiskey barrel or half poly barrel can be good options.

Choose the right soil

Citrus prefers acidic soil (pH 5.8-6.5) that drains well. Garden soil is too heavy. Many potting soils are neutral pH and also will compact too much. Start with an acid planting mix but then add twenty-five percent pathway bark or perlite. If you start with a regular planting mix, combine it with equal parts of peat, sand and perlite or pathway bark. Do not use a potting soil that has a chemical wetting agent to help it retain water. Do not add gravel to the bottom of the container, this will not aid drainage.

Planting and Transplanting

When planting the tree out of the nursery pot, make sure it sits at the same level in the new container as it did in the old or possibly a little higher. It is often a good idea to gently firm up the soil in the bottom before placing the tree to minimize the chance it will settle. Leave a couple of inches between the soil level and the top of the container so that you can easily water the tree.

Avoid disturbing the roots when planting and transplanting as much as you can. Do not intentionally spread the roots or break up the root ball unless the tree has become badly rootbound. In that case, gently spread two or three roots so that they are pointed out into new soil. Prune off any roots that seem broken or otherwise damaged.

Location, Location, Location

One of the benefits of growing citrus in a container is that it can give you a better selection of locations for your tree. Select a spot that will get at least eight hours of sun, more if possible. Ideally, place your citrus in a location that will get morning sun but some shade on a summer afternoon. The morning sun will help to dry the leaves, limiting fungal diseases. In the winter, it will help to warm the tree earlier and reduce the likelihood of frost damage. Afternoon shade will help maintain soil moisture in the summer. A full day of sun is ideal in the winter, however. One benefit of growing citrus in a container is that you may be able to offer it different summer and winter abodes, the best of both worlds.

Generally, citrus can be left outside here through most winter nights. However, if the temperature is predicted to fall below 37 deg. F, which can allow frost to form, moving your plant into a protected area or even inside is preferrable. Some people put their container grown citrus on a wheeled dolly. Otherwise, a hand truck is a useful tool.

Water and Fertilizer

Citrus grown in containers will require more frequent watering than those grown in the ground. Citrus soil should stay evenly moist although not soggy. You may need to water every other day in the heat of the summer but be sure to check the soil moisture a few inches down to judge. A layer of mulch such as dried leaves or straw

is a good idea in your container tree as well as the rest of your yard. Keep the mulch a few inches from the trunk of the tree. A plant fertilizer for acid loving plants, such as azaleas and camelias, seems to work best for citrus in containers. Apply as directed on the container.

Growing citrus in containers can be rewarding. For some, with small yards or consistent shade in most parts of the yard, it can present the best option for enjoying the year-round foliage, fragrant blossoms and delicious fruit that citrus provides.

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https://www.kellogggarden.com/blog/gardening/tips-for-growing-citrus-trees-in-pots/

https://cals.arizona.edu/yavapai/anr/hort/byg/archive/growingcitrusincontainers.html

https://balconygardenweb.com/citrus-trees-for-containers-growing-citrus-in-pots/

Invite Songbirds to Your Yard with Native Plants

Tanya Kucak, UCCE Master Gardener, Yolo County

Like humans, birds are healthier when they can eat primarily from the garden, not from a "fast food" stand. Delightful as it is to observe birds at feeders and baths, the "unnatural commingling of different species...can contribute to disease transmission at bird feeders," according to the Wildlife Investigations Lab (WIL) at the California Department of Fish and Wildlife (DFW). In fact, "based on years of investigations into disease events, the WIL recommends NOT providing artificial food or water to wild birds, including hummingbirds."

Cedar Waxwing on Toyon

Diseases that occur "almost exclusively at bird feeders" include Salmonellosis, Mycoplasmosis, Avian Trichomonosis, and Pigeon Paramyxovirus-1. Since December, the DFW and wildlife rehabilitation centers have been "inundated with calls from residents who are finding sick or dead finches at bird feeders." The birds, mostly pine siskins and goldfinches, were found to have Salmonellosis. "Frequent, close contact between individual birds at bird feeders or birdbaths increases the opportunities for disease transmission and makes large outbreaks more likely....[and] even the most rigorous cleaning may not be enough to stop disease transmission," according to the WIL.

To sustain wild birds, the WIL says, "A healthier option would be to provide natural sources of food by landscaping with native plants."

Providing a variety of food sources can attract a wider range of birds. An added bonus is that it's more interesting to watch birds' natural feeding behaviors when you create a habitat garden. For instance:

- Finches and juncos like seed-producing plants such as native oaks, grasses, and buck wheats.

- Cedar waxwings, orioles, and robins like berry-producing plants such as toyon, elderberry, and coffeeberry.
- Towhees like to forage for insects in leaf litter.
- Black Phoebes like to perch at a high point and catch flying insects, especially near water.
- Nuthatches like to creep headfirst down a tree trunk, looking for insects under the bark.
- Hummingbirds like nectar-producing plants such as California fuchsia, fuchsia-flowered gooseberry, and hummingbird sage.

To find out who might be attracted to locally native plants, enter your zip code at https://www.audubon.org/native-plants. Fifteen categories of birds (finches, chickadees and titmice, sparrows, cardinals & grosbeaks, woodpeckers, orioles, crows & jays, thrushes, hummingbirds, wood warblers, nuthatches, mockingbirds & thrashers, wrens, vireos, and waxwings) are matched to native plants with six types of resources (nectar, fruit, butterflies, caterpillars, nuts, seeds). Virtually all birds rely on insects, and caterpillars are crucial for raising most baby birds.

Another resource is https://calscape.org/ which lists host plants for specific moths and butterflies but, since nectar and fruit are loved by many birds, singles out only hummingbirds. You can look up any California native plant or find locally native species by entering your zip code.

You can even reduce the numbers of "invasive" birds such as European starlings and European house sparrows in your yard by planting more native plants. These avian bullies actually prefer nonnative plants and don't come to yards with mostly native plants, according to Toby Goldberg, who was the Education Director of the Santa Clara Valley Audubon Society for a decade.

A multilayered habitat garden provides good shelter and places for raising young as well as food. If you have enough space for a large tree, native oaks and willows can provide the overstory layer. Large shrubs such as ceanothus or holly leaf cherry, underplanted with low shrubs and perennials, can support a diversity of pollinators as well as foraging birds.

To add habitat to a smaller garden, plant a mixed hedgerow or thicket that includes twiggy and thorny fruiting plants, interplanted with flowering perennials. Add open areas with seasonal wildflowers and grasses to accommodate a variety of species.

Maintaining a habitat garden calls for some restraint. Needless to say, pesticides have no place in a habitat garden. Maintain a layer of fallen leaves to help overwintering insects and to allow birds to forage. Leave seed heads on perennials for birds to snack on through the winter. Always keep leaf blowers away from planted areas.

An element of nurturing birds often ignored is supporting the insects crucial to their survival. Half of all insects are nocturnal, and disruptions in nighttime darkness can be disorienting or fatal. Studies have shown that artificial light causes significant declines in insect populations. Moths, for instance, can exhaust themselves flying toward lights at night, or become easy prey. Use motion detectors instead of all-night flood lights and consider adding blackout curtains to your windows.

Change in Leadership at Grace Garden

Cid Barcellos, UCCE Master Gardener, Yolo County

Grace Garden is beginning to change leadership. Cid Barcellos and Gwen Oliver are ready to re-retire. We are ready to hand over the leadership and just be gardeners. Ann Liu has agreed to help us find people interested in gardening for our purpose of feeding the hungry.

The new leadership will be fully committed to growing organic fruits and vegetables to give away to those in need. The enhanced effort will be to increase participation of people from all faith traditions and cultural backgrounds, abilities, ages, and interests. By working side by side, new friendships and community resilience can grow. What would you like to add to this new vision? As membership grows, so will the possibilities.

Grace Garden started in 2009 as a 10' x 10' plot. It has grown and now fills the entire 5/8-acre garden tucked behind Davis United Methodist Church, at 1620 Anderson. Since 2010, we have been contributing fruit and produce to Davis Community Meals, Yolo Food Bank, Davis Meals on Wheels at the Davis Senior Center, and other groups. The year 2019 had a stellar bounty of *more than* 2700 pounds! We couldn't have done it without the hard work of the *many* volunteers from UCD students, Master Gardeners and others.

Today, there are more vegetable beds and even some that are handicapped accessible! There is a fruit tree orchard with twelve trees. We are willing to show how we have completed projects, what worked and what didn't. It is a starting place for new leadership. During this year of transition, we hope to slowly step aside as others help to assume tasks. Volunteer hours are Monday, Thursday, and Saturday 9:00 a.m.-11:00 a.m. Volunteers can just show up masked and ready to work.

An easy initiation into helping at Grace Garden is to volunteer for the annual Spring Plant Sale scheduled tentatively for Saturday, April 10. Plants will be set on tables in the parking lot and distanced apart by types, i.e., cucumbers, tomatoes, peppers, etc. Volunteers will be needed to stand by those plant groups to answer questions as well as volunteers to collect payment. Let Cid or Gwen know if you are interested in helping.

Adapt Your Garden to Climate Change

Deborah Sorrill, UCCE Master Gardener, Yolo County

Since the beginning of the Industrial Revolution, we have increased the amount of carbon dioxide ($C0_2$) from 300.0 ppm to 409.8 ppm. This is 121 billion Gigatons of carbon dioxide emitted into the Earth's atmosphere by using fossil fuels in transport, manufacturing, and agriculture. More important is the increasing rate of emissions and temperature rise. Doubling $C0_2$ in the Earth's atmosphere from the last ice age raised our global temperature enough to intensify the frequency and severity of weather events. The global temperature has risen by 1.5 ℃. Climate modeling indicates reaching 2 ℃ would move us from climate change to climate disruption. Climate disruption implies reaching tipping points from which all species including humans, would face mass extinctions.

NASA - Climate Change Data and Research Conclusions

Effect One - Global Warming

Accelerated $C0_2$ emissions starting in 1950 coincide with an increase in global average surface temperature rise.

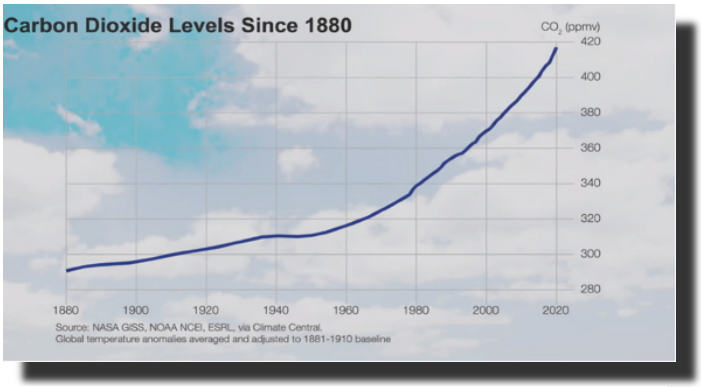

Figure 1.0 – Increasing Atmospheric Carbon from 1950

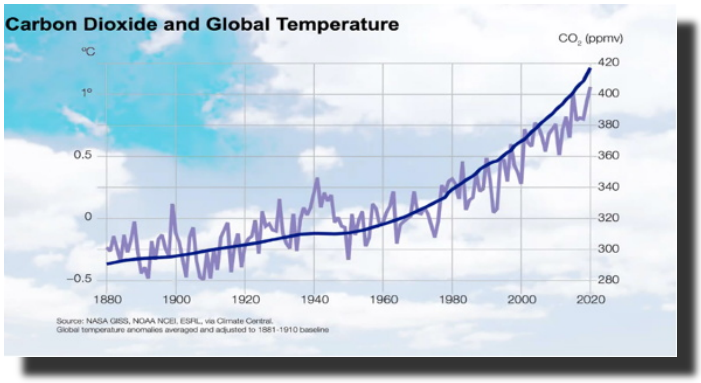

Figure 2.0 – Increasing $C0_2$ and Global Surface Temperature

Effect Two - Loss of Biodiversity

Increased global warming hastens the loss of biodiversity. The term biodiversity refers to life on Earth from genes to ecosystems. It encompasses the evolutionary, ecological, and cultural processes that sustain life. The most severe losses have been identified as biodiversity hotspots. The criterion to identify geographical hotspots are:

1. The biome must have at least 1500 endemic plants (vascular plants found nowhere else in the world).
2. The biome must have 30% or less of its original natural vegetation.

The International Union for Conservation of Nature (ICUN) has identified thirty-four hotspots around the world. If left unchecked, the combination of global warming and species extinction will result in massive desertification, food scarcity, and mass migration from uninhabitable areas in the world. California is a designated biodiversity hotspot.

NASA Climate Change - Mitigation, Restoration, Adaption

Currently, three main strategies are being developed to prevent climate disruption.

1. Mitigation by reducing global carbon emissions to zero within the next twenty to thirty years.
2. Draw Down of $C0_2$ which persists for hundreds of thousands of years in the atmosphere without intervention.
3. Adaption through conservation and restoration of species habitats based on temperature changes within regional biomes.

U. C. Davis - California Climate Predictions and Adaptive Strategies

The university's research on climate change is specific to the Sacramento Valley. U.C. Davis has this mission: "Sustainability". While many processes are global, solutions can be applied in local communities and scaled up to the state and national level. UCD is researching ways to adapt to impending climate changes through mitigation and conservation practices specific to the Sacramento Valley. Two degrees Celsius may seem like a few degrees we could tolerate. But global warming is not local weather. UCD has a website devoted to the topic of sustainability and climate change. This website discusses future changes and solutions to global warming that apply to the Sacramento area: https://climatechange.ucdavis.edu/news/becoming-arizona/. U.C. Davis researchers know our future temperature profile will be like Arizona's climate today. The university is in touch with Phoenix and Tucson to research adaptability in terms of plants and animals. UCD's website lists solutions any citizen can utilize: https://climatechange.ucdavis.edu/solutions/.

Recent California wildfires hint at a climate disruptive future if we do not accelerate plans for mitigation, drawdown, and adaption. Are you thinking that California's climate is disruptive already? Certainly, California foreshadows unpredictable weather calamities. However, climate disruption forecasts more severe ecological events. Think of climate disruption in the same way you think of COVID-19. It is a global disruptive influence, from a known biological process (influenza), that is unpredictable.

Some climate disruptions are more severe than others. Scientists who study climate disruption are modeling for temperature tipping points within biomes. The Intergovernmental Panel on Climate Change's fifth climate assessment, AR5, defines a tipping point as "an irreversible change in the climate system". A climate model at the Woodwell Climate Research Center, Northern Arizona University, identified critical temperature tipping points beyond which plant's ability to capture and store atmospheric carbon dwindles. Such a process reversal would inhibit soil carbon sequestration.

Currently, photosynthesis acts as a carbon sink, drawing off some of the $C0_2$ we place in the atmosphere. The Woodwell Climate researchers noticed, in nearly every biome across the globe, there is a temperature maximum at which carbon uptake declines while carbon dioxide released back into the atmosphere accelerates. Looking at the current rate of global warming, they believe a photosynthetic maximum temperature may be reached within twenty to thirty years.

U.C. Davis – How Do Master Gardener's Support Local Habitat Mitigation, Restoration and Adaption Strategies?

UCCE Master Gardeners in Yolo and Solano Counties are volunteer employees of the University of California. We can assist with community awareness regarding global temperature transitions affecting regional gardening. Additionally, we can offer conservation methods to support and restore biodiversity. Promoting species conservation, native plants, and regenerative gardening practices are part of the solution. Master Gardeners employ many climate-adaptive techniques that allow us to contribute insights and horticultural advice for impending climate changes.

Finally, we can follow UCD's continuing research on adaptive methods to connect our local communities to practical advice for our changing climate to deliver information to our communities. For example, the UC ANR Strategic Initiatives Group has a local research plot with native Arizona trees that fit well in the Sacramento area increasing our resilience as temperatures rise. The trees were chosen for their ability to blend with our current climate and biodiversity profile. Interspersing them with our natives will assist with food and nesting sources as some of our current natives become less resilient. Research on Northern California trees are listed at this address: https://climatereadytrees.ucdavis.edu/wp-content/uploads/2017/09/Climate-ready-urban-trees-for-Central-Valley-cities-McPherson-Berry.pdf. Continue checking in with the UCD's Sustainability website for updates on research about emerging adaption strategies.

In April 2021, our incoming Master Gardener class will train on climate change adaption techniques applied to home gardens. The class will survey useful traditional methods, along with new tools and technologies. We will emphasize gardening with biodiversity and biome conservation practices in mind.

Two classes, open to the public, will follow in the Summer – "Beginning and Advanced Adaptive Garden Design and Construction". The classes will address habitat restoration techniques for native plants and pollinators. We look forward to encouraging climate change actions to achieve resilience and sustainability in Yolo and Solano counties. Information and contact on classes will be posted on our Facebook account – Yolo County Master Gardeners.

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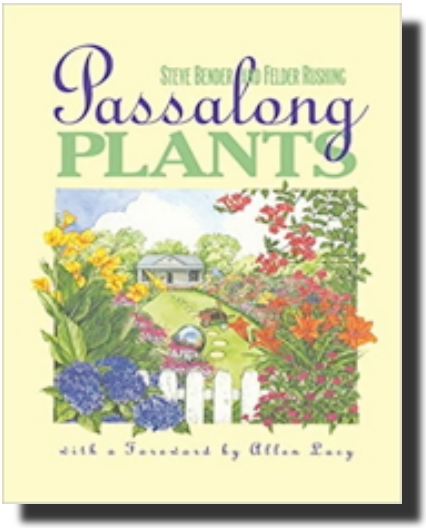
sustainability for Yolo and Solano counties. Information and contact on classes will be posted on our Facebook account – Yolo County Master Gardeners.

Passalong Plants

Sue Fitz, UCCE Master Gardener, Yolo County

When I first started selling plants to benefit the local high school agricultural education department, I found that certain plants wouldn't sell. What was wrong with Aloe vera, dusty miller, lambs ear, and jade plant? They seemed like desirable plants to me, and I was at a loss to explain it. I mentioned this to a local master gardener, she asked to hear the list, then sniffed "Those are passalong plants, nobody buys those." Intrigued, I looked up information about the term, and I realized she was right.



The term 'passalong' plants is a term for a way that plants are acquired. It's thought to have originated in the south, where the tradition had its start. Passalongs are plants that have survived for generations by being gifted from one gardener to another. Often the only way to obtain a passalong plant is to ask for it from a gardener who already has it. There is no other source. These plants all have four common characteristics.

First, and above all, they have to be easy to propagate. It can almost be guaranteed that if a plant is difficult to propagate, it will never survive and spread via the rudimentary propagation skills of the average amateur gardener, to become a passalong plant. These plants are usually vigorous, ones where other gardeners have more than they need. Passalong plants typically are given as seeds, cuttings, suckers, divisions, or bulbs. Tucked into a pot of moist potting soil and placed in a shaded spot, they send out new growth promptly.

Secondly, they are tough plants, the kind that can survive a trip on an airplane or a couple of days in a car, after the piece of plant is given. They are survivors and are hardy and easy to grow with normal care and attention. These are plants that can form the uncomplicated, lower maintenance backbone of a garden, unlike the newest untested introduction from a big box store nursery. If anything, sometimes they can be too easy and vigorous, almost invasive. It's not a bad idea to do some research before unleashing one into the garden, in case the giver wasn't too forthcoming of any faults.

Next, they have to be hard to find in garden centers. Before nurseries were common, many gardens began with shared plants, passed freely between family and friends. Such time-proven passalongs like daffodils, daylilies, crinums, and old roses have been handed down for generations. Passalong plants are often plants that gardeners grew up with, fell in love with, can't forget, but cannot find any more in nurseries. Traditionally, and even today, they have to be gotten from friends.

Lastly, they are desirable plants. Frequently they are old fashioned varieties, often fragrant. They have been chosen for their ability to resist disease and tolerate harsh weather conditions. They have proven their worth over generations, becoming heirloom plants. Often, they invoke nostalgia for certain places or people in the gardener's past.

Passalong plants vary by region. Probably the concept is most common in the south, due to a long, warm gardening climate and a large population of people of limited means. Common passalongs for the south are spider lilies, cannas, camellias, gardenias, and ginger lilies. Gardeners of the mid-west favor peonies, iris,

phlox, and asters, the northwest swaps hostas, hydrangeas, ferns. and pulmonarias. Northeastern gardeners love lily of the valley, bleeding hearts. and bee balm, and the passalongs of the southwest are all kinds of succulents, lantanas, and geraniums.

The whole idea of passalong plants has evolved over time. Plant swaps arranged by garden clubs and neighborhoods are now common ways to pick up pass-alongs. Placing plants at the end of the driveway with a free sign, and even giving plants away on-line via freecycle are all variations on the same theme.

If anyone is interested in finding out more about passalong plants, a couple of southern gardeners published a book about the topic, and it's an entertaining read. The book is out of print but can still be found used online. It's *Passalong Plants* by Steve Bender and Felder Rushing. I found the bonus chapter of gardening with tires especially amusing.

So now a days, when choosing plants to propagate for sales, I have learned to ask myself first, is this a passalong plant? Is it so easy and common that anyone who wants it can get it from a neighbor or friend? At least it's a rarer occurrence than it used to be, but I still occasionally get it wrong and find myself with a flat of something that did not sell. Um, is anyone interested in a flat of society garlic?

Spring Garden Tips 2021

Peg Smith, UCCE Master Gardener, Yolo County

It appears that we will be facing a dry spring and summer with no March miracle to boost the snow in the Sierra or rain in the valley, very similar to last year's spring and summer. Time to consider all those good water saving practices that have seen us through dry years before.

Bathroom water savings

- Shower water – save in a bucket the colder water you run as you wait for the hot water to flow. Use this to water individual plants or pots.
- Turn off the tap while you brush your teeth.

Kitchen water savings

- Again, save in a container any water you run while waiting for the hot water flow.
- Run full dishwasher loads

Laundry water savings

- Run full washer loads
- Most importantly check for dripping taps

Make sure you turn off hoses even if they have a spray head attached with a trigger that closes off the flow of water. I watered some pots the other day and dropped the spray head onto the ground as usual but found when I came back several hours later the spray head had loosened from my callous treatment and had been dripping, wasting water.

Consider converting your sprinkler watering system to drip irrigation. There are several different brands that have simple parts for easy conversion by the home gardener.

If we save water now there will possibly be fewer restrictions to come if it continues dry.

Ornamental and fruit trees are bursting into bloom and would certainly appreciate a deep soaking as they produce their spring leaf canopy and fruit. Deep soaking for trees and ornamentals is best done around the leaf

canopy circumference as that is where the active root growth is happening. This may be a year where a monthly deep soaking throughout the summer will be particularly important to ensure the health of the larger plantings of the garden.

As always take the enthusiasm of spring gardening at a pace that preserves the best tool a gardener has – their body. Lift carefully using the knees, break larger digging projects into smaller areas, hydrate well, and take plenty of breaks.

One great benefit of this lovely spring weather is that it is easy to get out and tackle any improvement projects we might have considered, raised beds for vegetables or conversion to a more low-water landscape planting. There are many local sources to see California natives, and plants from other regions of the world, such as Australia and the Mediterranean, that have similar climates to Yolo. A walk through Central Park Gardens in Davis or the UC Davis Arboretum will show many samples of plants that thrive in Yolo County. Covid restrictions are changing, check before you go adventuring to see the wonderful gardens in our region. Filoli is open with mask requirements, the Botanical Gardens at UC Berkeley are open, but you need to have a reservation https://botanicalgarden.berkeley.edu/covid-reopen

If you are looking for new plants for your garden

The UCCE Yolo County Master Gardener Program will be having a plant sale through on-line ordering and pick up at Woodland Community College.

The UCD Arboretum is handling their spring sales by ordering on-line and then with pick up on designated days.

There is a wonderful community in gardeners, tied together by a love of plants, their beauty, usefulness and good tasting fruits and vegetables. In that community one comes across people who are inspirational in their talents and devotion to the plant world in special ways. Here's someone who fits that category of plant lovers. https://www.abc.net.au/gardening/factsheets/my-garden-path---lynne-stone/13197374

SPRING CLEANING

- Examine trees and shrubs for winter damage. Prune damaged foliage and branches.
- If you haven't pruned your roses and fruit trees, this is the last month to ready them for their spring bloom. Cut back seasonal grasses.
- Save the pruning of cherry and apricot until the summer when the fruit is finished.
- Do not prune early flowering plants such as magnolias, camellias, viburnum and forsythia. It is best to prune them after the blossoms are spent or wait until early fall.
- Apply the final application of dormant oil spray to all fruit trees before the buds swell. Roses need to be sprayed to prevent over-wintering insects and fungal spores. http://www.ipm.ucdavis.edu/PMG/GARDEN/PLANTS/rose.html *
- Apply final application of copper and dormant oil to peach and nectarine trees. http://www.ipm.ucdavis.edu/PMG/PESTNOTES/pn7426.html *
- Spray a fungicide to control anthracnose on sycamore and ash trees.
- http://www.ipm.ucdavis.edu/PMG/PESTNOTES/pn7420.html#MANAGEMENT
- Weeds are starting to sprout, so take care of them before they take over. Mulch will also help control weed growth.
- Once your spring bulbs have finished blooming, dead head (remove blossom ends), however, don't remove the leaves until they turn yellow. This will help the bulbs store energy for next spring's bloom.

*As always please carefully read and follow label instructions and properly dispose of excess materials.

FERTILIZING, COMPOSTING AND MULCHING

Your plants need nutrients. Begin to lightly cultivate your perennial garden, being careful not to dig too close to your plants. Not all of the dormant perennials will have emerged so take care. Loosen the soil as soon as it is not too wet to work.

- Add soil amendments, such as compost, peat moss and organic fertilizer.
- Roses and fruit trees need special attention now. In addition to organic rose food and soil amendments, add a cup of alfalfa pellets and to each rose plant. Alfalfa contains a natural plant growth stimulant (triaconatol) that has been shown in some studies to improve plant growth.
- Be sure to use fertilizer that is recommended for each plant type. In particular, too much nitrogen will make the plant produce an over-abundance of leaf growth which will not be as sturdy. This weaker growth is more susceptible to sucking insects. Applying more nitrogen above the product recommendation will encourage leaf growth not bloom development.
- Resume your fertilizer schedule for your lawn and fruit trees.
- Fertilize your spring blooming plants, after they bloom and repeat for the next three months.
- Fertilize your houseplants.
- Mulch your garden to a depth of 4 inches. The reward will be fewer weeds and less watering in the months ahead.
- Mulch is good for water conservation but to attract our native bees, also wonderful pollinators, you need to leave some bare soil for nesting possibilities many of the native bees are ground nesters and need bare soil that is not too firm and not too soft in which to burrow and lay their eggs. Both native and honeybees need a shallow water source. https://xerces.org/enhancing-habitat-for-native-bees/

PLANTING

The sunlight and shade exposure in a garden changes over the years e.g., trees grow, die, or neighbors may remove trees. Always be aware of the changes and replenish the garden with plants that are suitable for each particular micro-climate, sun, shade, partial shade, eastern sun exposure, or western sun exposure.

Perennial plants need attention now.

- Remove any old woody growth.
- Dig and divide crowded perennial plants.

Select early blooming annuals, e.g., plant candytuft, pansies, violas, dianthus.

Select summer blooming plants.

Bulbs, corms, tubers can be planted now. Some colorful choices are cannas, begonias, lilies, and dahlias.

Shade plants include: Columbine, coral bells, Island Alumroot, and Giant Chain Fern.

Drought tolerant and sunny location plants: Yarrow, blue gamma grass, California fuchsia, penstemon, California goldenrod, any of the native salvias (hummingbird sage grows well in Yolo).

Replace old, worn out shrubs and roses. Be sure to select these plants with care to insure they have the correct growing conditions. Plants that need 8 hours + of sun per day will not do well in the shade. Careful selection ensures healthy plants that are easy to grow and maintain. Young plants need additional water to help them through their first summer as they establish a healthy deep root system.

After you have completed your planting, be sure to lightly fertilize your plants and mulch well. Remember that plants do better if the crown of the plant (where stem meets root ball) are planted at or slightly above grade.

If you are planning to grow your vegetables from seed, begin your seedlings indoors under lights or in a greenhouse. By late April you can harden off your seedlings by moving them outside for a few hours each day. Steadily increase the time outside each couple of days so that when your seedlings are transplanted into your

vegetable area, they will be able to tolerate the outside conditions. The soil temperature needs to be about 60 degrees Fahrenheit before you set out your young summer vegetable plants.

DISEASE AND PEST CONTROL

If you have applied your dormant oil and fungicide, your plants will be off to a good start.

- Periodically check plants, especially roses, for signs of black spot, rust and mildew. These often appear first on the interior or lower parts of the plant. If the spring is especially rainy, you will need to be more vigilant, and either remove the affected leaves or spray more often. Don't be alarmed if your rose leaves have neatly cut out curved sections - that is just the native leaf cutter bee collecting the leaf segments to line the laying sites for their young. Tolerate a little leaf damage and be glad these native bees are populating the garden.
- While you are checking for disease, note whether slugs, snails and earwigs are munching on your plants. As the weather warms, aphids, mites, thrips and scale creep into your garden. These pests are usually kept in check by a variety of beneficial insects such as lacewings, mantises, ground beetles, tachinidae, and robber flies. Many plants attract beneficial insects including yarrow, alyssum, feverfew, dill, parsley, coriander, penstemon, and asters.
- Not all leaf damage of plants, such as spinach, is due to slugs and snails the local bird populations also like to 'eat their spinach'. Damage from birds usually has a more jagged appearance while damage from caterpillars, slugs and snails has a more even, smooth edge

If you need to use commercial pesticides, consult http://ipm.ucdavis.edu/ for excellent information on controlling pests and diseases with the least environmental damage.

Here is the link to Seasonal Landscape IPM Check:
http://www2.ipm.ucanr.edu/landscapechecklist/checklist.cfm?regionKey=2

LAWN CARE

Lawn can still have a place in the garden when managed well. Deep soaking, without having water run-off encourages deep root growth. This is the key to a healthy summer lawn. Lawn does not need to be watered every day. Even with our hot summers a deep soak once or twice a week will carry a lawn through the hottest season. Lawn does surprisingly well if given a modicum of care with deep soaking and regular feeding.

- Check your irrigation system and be sure that the lawn is getting the proper amount of water. To allow water penetration into heavier clay soils you made need to adjust your irrigation to water in cycles, one after the other, with a break in between. The cycle time depends on when the water begins to run off and be wasted. Run the sprinklers and time how long it takes before water begins to run off the lawn. Set this delivery of water time, possibly 15-20 minutes, pause to allow the water to penetrate then repeat water again for 15 – 20 minutes or until run off. Check with a trowel to see how deep the water has penetrated and repeat, if necessary, to accumulatively penetrate to around 12". This deeper penetration of water will encourage deeper, extensive root growth so that in the summer heat your lawn will be quite happy with one deep soaking a week delivered in this way except in a very hot prolonged heat wave. Raise the mower blade to a height of 3 inches, as spring gives way to summer.
- Re-seed thin spots in your lawn and begin your fertilizing and mowing schedule in March.
- While it is easier to use commercial fertilizer, applying a light topcoat of compost to your lawn will greatly benefit your lawn's growth and health. Leaving grass clippings on your lawn by using a mulching mower will add needed nutrients. If you do not mind a slightly untidy lawn as the grass clippings break down, they will make excellent compost.

FINAL SPRING TOUCHES

- Paint the lower trunks of young trees with water thinned interior white latex paint to prevent sunburn and borer problems. Stake tall growing perennials and vegetables before they begin to bend over in late spring.
- In late spring, thin the fruit on trees, leaving 6 inches between each fruit. This will help the remaining fruit to mature properly and keep the branches from being over-weighted and splitting.
- Deadhead spent flowers to assure a long blooming season in your garden.

When California poppies begin to fade trim back for a second bloom.

- Plant containers with your favorite annuals and herbs.
- Clean and re-stock bird feeders. Sharpen and maintain garden tools.
- Hang your hammock or set out your favorite garden chair. Relax with some lemonade and take time to enjoy a new gardening book or listen to a local garden radio program.

UCCE Master Gardener Events in Yolo County

Covid-19 restrictions do not allow for any of our normal gatherings for public workshops at this time. We are holding weekly public education zoom meetings so check your email for announcements for the time and day. There is still a wealth of gardening advice on our website http://www.ucanr.edu/yolomg or visit us on facebook.com. The phone line service is still being covered so please let us know what garden questions you have.

In September 2020, the UCCE Master Gardeners of Yolo County began pruning a rose garden at Woodland Community College that had been somewhat neglected over the past several years. The groundskeepers gave care here and there but were unable to give it the needed attention to a garden so large. So, the College called upon UC Master Gardeners in Yolo Co. to help them out.

The garden features more than most of the roses are modern roses: hybrid teas, floribundas, grandifloras, and a few miniatures. Over the course of the next couple of months, rootstock, deadwood, weeds and palm starts were removed and the garden gradually came alive with a multitude of blooms. When we began our garden cleanup, there were only a very few roses in bloom. As of our last visit, the garden was resplendent in blossoms.

In January, COVID permitting, we will be back to the College starting our winter pruning. Stay tuned for more "after" photographs, as this garden continues to improve.

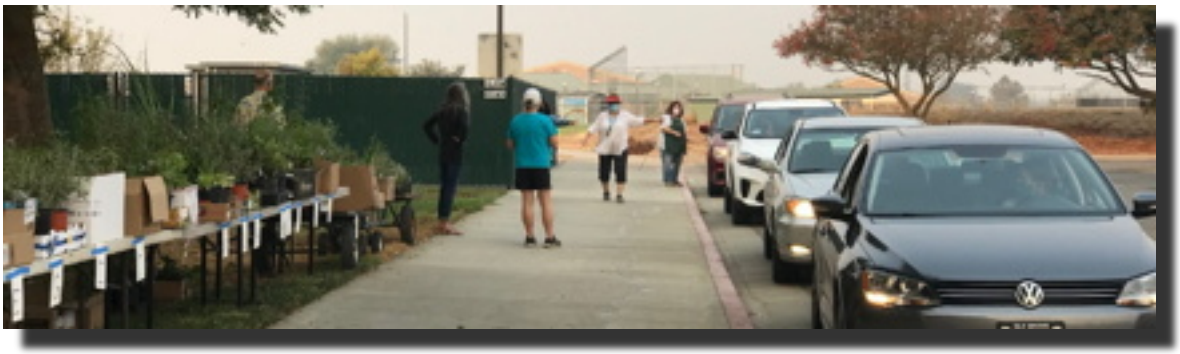
UCCE Master Gardener, Yolo County, Plant Sale

The UCCE Master Gardeners of Yolo County are hosting a COVID friendly plant sale this spring. Beginning March 15th, you will be able to go online and view our plant list at http://ucanr.edu/springplantsalelist. Then, place your order at http://ucanr.edu/springplantsale. After your order is placed, you will get an order confirmation email. Plants can then be picked up on either Saturday, April 3rd or Saturday, April 10th from 10:00 am until 1 pm. **You will need to specify** which pick-up day you prefer when you place your order, a maximum of 70 orders will be allowed picked up each day. Woodland Community College, 2300 E. Gibson Road, Woodland, will be the pick-up location. Turn into the College and follow the signs for the plant sale and your plants will be ready and waiting to be placed in your car by masked UCCE Master Gardeners of Yolo County. Please come wearing a mask while on campus.

Plants available this spring will be perennial, drought-tolerant, landscape plants, epiphyllum cacti, succulents, and an assortment of heirloom tomatoes.

All one-gallon perennials, epiphyllum cacti, and succulents are $5.00 each; the 4" tomato plants are $3 each, payable by debit or credit card online only. For pick-up on April 3rd, you must order by March 30th; for an April 10th pick-up, please order by April 6th.

Please bring your confirmation email to the pick-up location (a map of the pick-up location on Campus is available at http://ucanr.edu/springplantsale).



Master Gardeners delivering plants to cars at last fall's plant sale.

Proceeds support the UCCE Master Gardeners of Yolo County Program. Learn more about the Yolo County Master Gardeners at http://yolomg.ucanr.edu/

If you have questions, please call or email our hotline at: 530 666-8736 or mgyolo@ucdavis.edu and leave a message, someone will get back to you!

Questions about your garden?

We'd love to help!

UCCE Master Gardener, Yolo County Hotline.....(530) 666-8737

Our message centers will take your questions and information. Please leave your name, address, phone number and a description of your problem. A Master Gardener will research your problem and return your call.

E-Mail..... mgyolo@ucdavis.edu

Web Site ..... http://yolomg.ucanr.edu

Facebook.....UCCE Master Gardeners, Yolo County

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The Yolo Gardener – Spring, 2021

Send a Letter to an Editor!

email: mgyolo@ucdavis.edu

Please put: *Yolo Gardener* in the subject line

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