Garden Notes

with the San Joaquin County Master Gardeners

JULY-SEPTEMBER 2015

San Joaquin County Master Gardeners

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Master Gardener Training - 2015

Marcy Sousa, Master Gardener Coordinator

Summer is here and we hope that your garden is filled with an abundance of fresh fruits and vegetables. This newsletter is filled with timely water conservation tips and articles that we hope will give you some ideas on ways to conserve water in the landscape.

Our Master Gardeners are busy teaching workshops on water conservation, answering hotline calls in the office, and staffing information booths at the local farmers' markets throughout the county. If you visit one of them, please stop by and say hello!

I'd like to congratulate the 2015 Master Gardener graduates that completed the 19-week training and passed their final exams with a 70% or better. I am excited to have this eager and hardworking group of volunteers joining our team. Our next Master Gardener training will take place in 2017, but we are always accepting applications and will notify you with all the details once it gets closer.

Mark your calendars for our 2015 Smart Gardening Conference that will be taking place September 26. More info coming soon!

Stay cool this summer and happy gardening!

2015 Master Gardener Graduates

California's Fifth Year of Drought—One Gardeners Journey to a More Water-Conserving Landscape

Tim Viall, Master Gardener

If your yard and garden is anything like ours, it came with the house 10, 20 or 40 years ago, and has only been modestly updated since. Our home was constructed in 1987, with a big front yard, mostly turf, and a smaller backyard terraced down to our dock on Meadow Lake in north Stockton. The landscaping went in when Californians thought water would be plentiful and cheap, forever. As most of us are now aware, that's not the case. After California's Governor mandated homes and businesses cut back 25 percent on water use, Stockton just passed (as many of our cities have done) an ordinance allowing assigned even numbered homes only two days a week to water, odd numbered homes two different days, no watering between 11 AM and 6 PM, and no watering within two days of appreciable rain.

Cont. pg 10.

Garden Chores Calendar

Sue Davis, Master Gardener

You can click on any of the blue underlined words in any of the articles to go to a web-page and learn more about that topic!

July, August, and September

Keeping your garden and landscape healthy and attractive during a drought and with warmer temperatures can be a challenge, but since gardeners seem to enjoy challenges, a few ideas about summer chores may help.

July Ideas

Plant -

If you are growing your own vegetables, keep your vegetable plot healthy this summer by planting flowers nearby that attract beneficial insects. Good options include coreopsis, cosmos, goldenrod, marigolds, sunflowers, and yarrow. Dill, golden marguerite, coriander and Queen Anne's lace are especially attractive to lady bugs. Plant the flowers in clusters near your vegetable plot and water with a drip line. If you haven't already set up a drip system with a controller, you'll want to do so right away to save water and still have delicious edibles.

Broccoli, cauliflower, cabbage, and Brussels sprouts should be seeded in flats around July 1st. They can be transplanted to the garden at the end of August or early September.

Maintenance -

Mulch if you haven't already done so. Spread a 2- to 4-inch layer of organic matter (such as fine or shredded bark) over garden beds now to conserve moisture, cool plant roots, and discourage weeds. To prevent rot, don't pile it against stems and trunks.

Summer watering can kill mature native California oaks. If you can't keep the entire area under the tree dry, be sure no water gets within 10 feet of the trunk. The danger of root rot is greatest when water is close to the trunk.

Every other week (14 days) deeply irrigate mature fruiting and most ornamental trees if you have clay-loam soil, more often if you are in an area with sandy or sandy-loam soil. Mature drought-tolerant trees need deep watering only once a month or so. Check container plants daily.

Apple, peach, pear, and plum trees may be laden with fruit this month. To prevent limb breakage, use wooden supports to brace sagging branches. Regularly clean up and discard fallen fruit, to discourage diseases and pests.

Prune flowering vines such as wisteria, passion vine, or Hardenbergia. Summer pruning of new growth keeps vines under control and increases flowering next spring. To extend the height or length of the vine, select some of the new streamer-like stems and tie them to a support in the direction you wish to train the plant. Then cut back the rest to within 6 inches of the main branches.

If you have any lawn area, a quick irrigation audit will be worthwhile to determine if your sprinklers are matched and working properly. There have been numerous more efficient sprinklers introduced in the last few years. Some of them only require a change of the nozzle, not the entire sprinkler head. Check with your local water provider to see if they give partial or complete rebates for changes to efficient sprinklers. Information on checking the output of your lawn sprinklers can be found here.

Lawn disease or pest problems will usually appear as spots that have a more defined edge to the damaged area. If you suspect a pest is the problem, they are most likely found along green grass just outside of the damage. Evidence of caterpillars, caterpillar scat, or grubs can be found just under the surface of the green grass right outside of the damaged area. If the damaged area is not spreading, treatment to destroy the pests is unnecessary. It won't bring back dead spots and the pest is probably gone by the time you treat the lawn. If pest problems persist, look into what cultural changes you could make to reduce susceptibility in the future.

Shocking your lawn at this time of the year with a sudden input of high nitrogen can cause all sorts of negative results. Fertilize only if needed with either a slow release or organic fertilizer.

In August

Plant -

Choice perennials for late-season color in our area include aster, chrysanthemum, coreopsis, daylily, gaillardia, sage (such as *Salvia guaranitica*), summer phlox, and verbena.

Plant saffron. This pricey spice comes from easy-to-grow saffron crocus (*Crocus sativus*). Plant corms late this month or next and then harvest the saffron about five weeks later by plucking the three orangey red stigmas from each lilac-purple flower.

Cont. pg. 16.

Urban Drool/Urban Runoff

Steve Sanguinetti, Master Gardener

Urban Drool is the water that is wasted running off of your property into gutters and storm drains. The source of this water could be a malfunctioning irrigation system, overwatering, washing down hard surfaces, or washing anything over hard surfaces that run to storm drains. The term was originally coined by Tom Scott who is a UCCE Natural Resources Specialist and Adjunct Assistant Professor at UC Riverside Dept. of Earth Sciences. For the purposes of this article, I am including Urban Runoff which adds storm water runoff. While a bit different in their origins, many of the problems either runoff causes and best management practices to eliminate either of them are similar.

Two problems are a result of Urban Drool. The most important problem is the pollution of our waterways with undesirable chemicals and soil particles which accompany this runoff. The second is the waste of a water resource which otherwise could be better used onsite.

One of the best ways to reduce urban drool is to design and construct landscapes to keep a majority of any water on individual properties. Landscapes can be graded to provide drain swales on site, provide "French Drains,",or at the very least keep grade of landscape near sidewalks and streets below the level of where water readily runs off to storm drain. This lowering of grade is especially important for older turf areas which tend to creep up as turf ages. Another easy fix is to move outlets of drains 2 to 3 ft. away from sidewalks so that water has some chance to soak in.

Poor irrigation practices also can lead to Urban Drool. Irrigation should be designed, maintained and run to prevent wasteful runoff of water. On soils with poor permeability, it may be necessary to use low precipitation rate systems or cycle irrigation runs to allow water to soak in between cycles. Most all modern irrigation controllers are built to offer multiple irrigation cycles. On landscapes sloped to streets, use of sprinkler heads with an internal check valve will keep water from draining through low heads when the station turns off.

In any case, some runoff is likely to occur, so other measures are recommended to reduce the harm this runoff may cause. Minimize use of persistent pesticides and do not apply them to any hard surfaces. Professional pesticide applicators either cannot apply pesticides to draining hardscapes or are required to follow strict limitations, i.e.,good management practices, when applying pesticides to any hard surfaces which may be washed off to storm water system. Another good practice is to sweep or blow any lawn clippings, stray fertilizer pellets, or eroded soil back on to any areas where it won't readily wash into storm drains. The soil particles themselves can cause harm to aquatic life and can have significant amounts of harmful chemicals bound to their surface.

Rain water harvesting, while not usually providing a significant amount of irrigation water in the California Central Valley, does prevent that water from otherwise being completely wasted and carrying undesirables into waterways. Other good practices include not washing automobiles where soapy water will run off to storm drains. Wash your cars on the lawn or take it to a professional car wash which will treat and recycle wash water. Also avoid applying anything to your landscape prior to a significant amount of rain. Clean up any spillage or oil leaks from hard surfaces, remove pet waste and of course lastly, **Don't Dispose of Anything besides clean water down Storm Drains!**

Please consult the below sites for more discussion of "Urban Drool/Urban Runoff."

Pesticide Pollutantnts from Pesticide Runoff
Residential Pesticide Use in California
UC CCUH Run-off Water Education Outreach
Apply Responsibly

Pests of the Season

Christeen Ferree, Master Gardener

Pests and Plants of the Season

UC IPM website
Integrated pest management, or "IPM," is a process you can use to solve pest problems while minimizing risks to people and the environment. IPM can be used to manage all kinds of pests anywhere.

You can click on any of the blue underlined words in any of the articles to go to a webpage and learn more about that topic!

INSECT: Cedar and Cypress Bark Beetle

Centipede-like damage caused by Cedar and Cypress Bark Beetle

Few pests affect coast redwood or redwood (*Sequoia sempervirens*) trees, a fast growing, frequently seen landscape tree in our area. However, these trees, along with arborvitae, cypress and junipers, can be common hosts of the cedar and cypress bark beetle (*Phloeosinus* spp). Trees weakened by drought, disease, injuries, or improper cultural care are susceptible to attacks by this pest. Noticeable signs of the cedar and cypress bark beetle's damage are dead hanging twig tips or "flags." While twig damage does not destroy the tree, bark beetles can also infest an already stressed tree's branches and trunk, leading to the death of the tree. Further identification of the cedar and cypress bark beetle is made by peeling back the outer bark of the redwood tree and noting the centipede-like pattern that the small, reddish brown adult and its larvae "engrave" on both the inner bark's surface and on the wood. Keeping a redwood tree vigorous with the right amount of irrigation is key to keeping it safe from bark beetle damage. If infestation occurs, affected limbs should be pruned off during November through February. Dying trees should be removed and disposed of to avoid infestation of nearby trees. Click for more info.

WEED: Bamboo

Phyllostachys aurea (Golden Bamboo)

Bamboos are giant evergreen grasses that grow as woody perennials. There are many varieties and two growth types: running and clumping. Both types are frequently planted, but the running type can become invasive weeds, spreading uncontrollably via horizontal, underground shoots that form roots to produce new plants. These shallow, underground shoots are called rhizomes. Some running species (e.g., *Pleioblastus* and *Phyllostachys* species) of bamboo spread well beyond where they were intended unless they are confined. Confinement of the spreading rhizomes includes providing a barrier in the form of concrete, wood, metal or fencing that extend 18 inches or more beneath the soil surface. Another option is to surround existing plants with foot-deep, foot-wide trenches filled with loose mulch or sand and digging out the easily severed rhizomes several times a year. Unwanted portions of bamboo can be eliminated by: 1) regularly cutting back aboveground parts to ground level, 2) digging up and removing underground parts, 3) applying an appropriate herbicide to foliage or freshly cut stumps, or 4) a combination of these methods. Generally, good control of bamboo is obtained by persistent effort and repeated action against any regrowth. Due to the invasive nature of the running type of bamboo, only the clumping type (e.g., *Bambusa* and *Fargesia* species) should be considered in home landscapes. For more info, click here.

DISEASE: Fairy Ring

Nearly all lawn diseases are caused by fungi. Fairy Ring (*Agrocybe* spp., *Marasmius oreades*, *Leprota* spp.) is a fungus that affects all types of turf grass species. It appears in lawns that are heavy with undecomposed organic matter. Fairy Ring presents as circular patches of dark green grass surrounding lighter green grass. Mushrooms may or may not be present in the ring. To treat fairy ring and improve water penetration, aerate the lawn and water heavily in the holes for several days. Apply adequate nitrogen to mask symptoms and increase activity of beneficial soil organisms. Dethatch the lawn if the thatch layer is more than 1/2 inch thick. The fungus survives as a white, cottony mass of mycelia in the soil or thatch layer. Dig out the turf and root zone that contains the mycelia to a depth of 12 inches and 2 feet beyond the outer edge of the ring. Refill the area with clean soil and reseed or re-sod. Fungicides are available but they have had sporadic results and have not been observed to reliably control fairy ring. For additional information, click here.

Plants of the Season

Adrian Anthony, Master Gardener

This season, we are featuring the super-star plants of the drought: succulents. Succulents are especially well-adapted to hot, dry desert conditions, and require little water to thrive. As such, they are ideal plants to reduce landscape water use. There are numerous varieties of succulents that can provide a wide array of color, form and texture. In this issue, we will focus on three varieties: Echeveria, Sedum and Crassula. These varieties are all from the Crassulaceae family, and can successfully be grown in either containers or in the ground.

ECHEVERIA:
PLANT IDENTIFICATION:
Echeverias range in size from and an inch to 2 feet across, and have thick, stiff leaves that are straight to wavy edged. They form basal rosettes, with smaller new rosettes forming around older ones. Hundreds of varieties exist, both hybrids and naturally occurring. Leaves can range in color, from many shades of green and blue, to gray & copper, and hues of pink to burgundy. They are often multi-toned. They produce tall curving flower stalks in colors from yellow, orange, red & pink. The flowers are bell-shaped, waxy and long-lasting.


Echeveria 'Violet Queen'

OPTIMUM CONDITIONS FOR GROWTH:
Echeverias grow moderately fast. They prefer good draining soil that is somewhat moist, but allowed to dry out slightly between waterings. Over-watering can lead to rot. They can be grown in full sun, as well as partial sun, as long as some of the exposure is bright light. However, avoid the intense afternoon sun, as it can burn the leaves. Echeverias will grow in search of light. In low light conditions, the rosettes stretch out resulting in a less compact form. They require minimal fertilizer. If desired, water with a quarter strength fertilizer monthly during the growing season. Reduce watering in winter. Echeverias are easily propagated from the new pup rosettes, from stem cuttings, or from seeds. Protect from frost.

SEDUM:
PLANT IDENTIFICATION:
There are many types of sedums, from 2 inches to 2 feet high, including low-growing ground covers, tiny-leaved rock garden varieties, and taller border plants. They all have thick, fleshy leaves. The foliage can be green, blue, chartreuse, gray, burgundy or even variegated. Clusters of star-shaped flowers in white, pink and shades of red are formed in late summer to fall. Many varieties go dormant in winter, with attractive dried seed heads, and re-emerge from the basal crown in spring. Others have evergreen foliage that changes colors when tinged with winter's cooler temperatures.


Sedum x 'Autumn Joy'

OPTIMUM CONDITIONS FOR GROWTH:
Sedums prefer similar growing conditions to Echeveria: well-draining soil, which is slightly dry between waterings, and bright light (they are from the same family). Some sedums thrive in full sun, while others (such as those with lighter colored foliage) prefer protection from afternoon sun. Propagate from crown divisions or stem cuttings.

CRASSULA:
PLANT IDENTIFICATION:
Crassula also come in a wide range of varieties, from diminutive ground covers, to large plants up to 6 feet tall. The Jade plant (C. ovata) is one of the most well-known varieties of Crassula, often given as a housewarming gift.


Crassula rupestris

OPTIMUM CONDITIONS FOR GROWTH:
The require the same conditions as Echeveria & Sedum. Crassula are slower growing and prefer little to no fertilizer. Cut back older leggy specimens to encourage neat new growth. Propagate by stem or leaf cuttings. Protect from frost.

Remember, there are many other wonderful varieties of succulents! Senecio, Aeonium, Agave, Sempervivum, Kalanchoe, Portulaca or Aloe are some other commonly available succulents--all of which offer a stunning array of hybrids.

From the Garden—Cutting Gardens for Water Conserving Landscapes

Sandy Larson, Master Gardener

Well it's summertime and I'm sure you're wondering with this incessant talk about drought conditions just how am I going to still maintain a cutting garden? For most of us we're thinking it's no longer possible to have plants that can satisfy the cottage gardener in you or the gardener who would like an occasional fresh arrangement to take inside. Fragrance and longevity might be tops on your list. Or maybe you're more concerned with plants that have vibrant colors to brighten up your indoor spaces. Are there plants that I can harvest year after year that will provide lasting floral arrangements during drought years?
I'm here to tell you there are plants that can have great appeal in your garden AND even require minimal water *once established. Here are some of the wonderful options available.*

- **'Hidcote' Lavender (Lavandula)** - There are many varieties out there, but for a small compact plant, Hidcote is a favorite. It hates too much water. Make sure when you plant it that the crown of the plant is above the soil. You can cut them and put them in small bouquets, dry them for sachets, or just enjoy them as they grow in your garden. They do require well-drained soil which may be an issue if your soil is very clay-like. For best results, plant in full sun. Hidcote will grow about 18-24" high in the Central Valley.
- **Coneflower (Echinacea)** – This sun-loving perennial, with flowers 2-4" across, attracts birds and butterflies. Many parts of this plant can be used for medicinal purposes. It takes full sun to part shade. Water approximately 1" a week once established. Trim spent flowers during the growing season but leave seed heads if you want to attract birds. Divide every 3-4 years and mulch heavily.
- **'Goodwin Creek Grey' Lavender (Lavandula)** - This fragrant, gray-leafed, low and wide lavender (approximately 24-30") does very well in dry conditions and can handle the heat of our Central Valley, preferring at least 5 hours of full sun daily. Cut spent blossoms to encourage new flowers.
- **'Island Pink', 'Coronation Gold' and 'Moonshine' Yarrow (Achillea)** - These California natives are another easy-care plant that is good as a cut flower. They are drought tolerant, requiring about an inch of rain or irrigation a week in the summer. Yarrow prefers full sun and well-drained soil. It may need support when flowering. These plants can also be divided every 3-4 years. Flowers are long-lived and attract butterflies and other beneficials.
- **Shasta Daisy (Leucanthemum)** – This plant blooms summer through fall and comes in many varieties. It requires full sun and is not fussy about soil type. Deadhead flowers to ensure a continuous bloom. It has excellent cut fresh and dried flowers and attracts butterflies. Divide every 2-3 years.
- **Butterfly Bush (Buddleia davidii)** - This plant comes in blue, white and pink flowers and may grow from 3-12' tall. It prefers full sun and is drought tolerant after the first year. The plant attracts butterflies, bees and hummingbirds. Apply mulch to conserve moisture. New dwarf varieties have recently been introduced for planting in smaller spaces.
- **Heavenly Bamboo (Nandina domestica)** - The greens of this plant are great for flower arrangements and, in the summer, they have white flowers that will become red berries in the fall. It is a very drought tolerant plant. In the fall, colors will be more vibrant if it's had lots of sun. Grows 2-6'. It can be invasive.
- **Statice or Sea Lavender (Limonium)** – Statice enjoys dry and well-drained soil conditions. It grows best in full sun and does not like its roots wet. Plants have very few pests. They can be divided in spring. They can also benefit from a light application of fertilizer in spring. Statice makes excellent dried flowers.
- **Russian Sage (Perovskia atriplicifolia)** – This fragrant plant has spikey blue/purple flowers atop gray foliage. It is very drought tolerant. Plant about 2-3' apart. It is susceptible to aphids. Propagate by dividing clumps every 2-3 years. Trim off new growth every 4-5 years to revitalize plant. Plant tends to reseed easily.
- **Blanket Flower (Gaillardia x grandiflora)** – This is a perennial that in some cases is treated as an annual. It is drought tolerant and comes in many colors, as well as single or double flowers. This plant attracts birds and butterflies, grows approximately 18-24" tall and prefers rich soil. Cut back in late summer to encourage new flowers in the fall.
- **Zinnias** - This is an annual flower that offers nonstop flowers in the summer. It is drought tolerant once established. Blooms best with high temperatures. Zinnias come in a rainbow of bright sherbet colors. They attract hummingbirds and butterflies. Plant in full sun, about 14" apart. For continuous blooms, deadhead frequently and feed with water-soluble fertilizer every other week.
- **Black-Eyed Susan (Rudbeckia Hirta)** – This is a perennial flower that is best planted in masses. It is drought tolerant and disease-resistant. This plant comes in variations of the golds and yellows. Plants grow from 2-6' tall and attract butterflies. Space plants 2-3' apart. They easily multiply. Divide plants into clumps in spring every 3-4 years when spring growth arrives.

Beneficial Insects—Pirate bug

Kathy Ikeda, Master Gardener

If you're a fan of "Talk Like a Pirate Day" (September 19) or the Pirates of the Caribbean, ye might be pleased to know that our landscapes can provide a home for pirates: pirate bugs, that is! As their name implies, they are powerful natural predators, sending many a garden pest to "Davey Jones' locker."

Pirate bug attacking an aphid

Pirate bugs prefer to prey upon the larvae of thrips, but they also feed upon insect eggs, whitefly pupae, and small insects such as aphids, scales, leafhoppers, and tiny caterpillars. Pirate bugs are commercially raised for biological pest control use in greenhouses, where they control thrips and spider mites, and they are also important in reducing pest levels in many agricultural crops. Two specific examples are the Minute Pirate Bug *(Orius tristicolor),* which is most common in the western states, and the Insidious Flower Bug *(Orius insidiosus),* a Midwestern species that preys upon the corn earworm.

Pirate bugs belong to the Anthocoridae family of insects, a name derived from the Greek words "anthos" (flower) and "koris" (bug). This name reflects the fact that pirate bugs feed upon flower pollen when insect prey is scarce or unavailable. It might also refer to the egg-laying habits of the females, who deposit their translucent white eggs inside plant tissue, often in the base of flower petals but also in leaf petioles and veins.

Female pirate bugs can lay 2 to 4 eggs each day, and most will lay between 80 and 100 eggs during their 3- to 4-week-long adult lifespans. The small pear-shaped nymphs that hatch from these eggs are yellow, but change color to brown in later nymphal stages. Adult pirate bugs are very small-—only 1/12 to 1/5 of an inch long—and have flattened, winged, oval-shaped black bodies with angular white markings.

The feeding habits of pirate bugs are rather gruesome: they use their long, narrow, beak-like mouthparts to pierce a hole in their victim's body, inject saliva, then suck up the digested remains. Unfortunately, pirate bugs occasionally inflict a painful bite that can swell and/or redden, so it's best to use caution around these very effective garden predators.

For more information:
UC IPM: Minute Pirate Bugs
Garden Good Guys – Minute Pirate Bugs
Virginia Tech Cooperative Extension: The Minute Pirate Bug (Orius)
Cornell University, Biological Control: Orius

Useful Garden Websites

San Joaquin County Master Gardeners:
Our site is full of information on gardening. We are continually adding information to this site. Have questions? We have answers!

Water Conservation in the Landscape
SJ Master Gardeners website dedicated t o water conservation in the home landscape.

Fruit trees, nuts, grapevines and berries
UC IPM page full of information on growing fruits as well as common pests and diseases associated with a backyard orchard.

CA Master Gardener website
Resources on drought, gardening, local master gardener programs, publications and statewide news.

Growing Knowledge

Lynne & Bill Gowdy, Master Gardeners

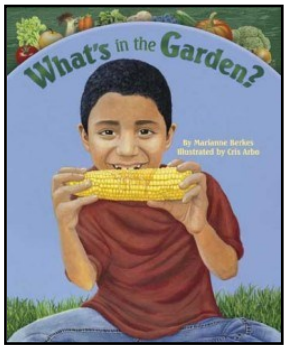
There are many ways we can ensure that the children in our lives will inherit a love and enthusiasm for gardening. Children are always ready to explore, investigate, collect, dig, grow, harvest and enjoy what they have created in their own gardens.

This article will provide links to outstanding examples of gardening books for kids. There are new releases, garden classics, links to Junior Master Gardening Programs and other sites. These books will expose kids to the latest in good children's literature and help them improve their reading, math and science skills.

Isabella's Garden is a delightful book written by Glenda Millard and illustrated by Rebecca Cool (2013). It is filled with pictures and words that celebrate the joys of gardening from planting seeds, caring for them, and enjoying the beautiful flowers through the seasons. The cycle is completed at the end of the story by planting more seeds and renewing the cycle of life once again. Vibrant illustrations, rhythm and rhyme captivate young readers. It provides a wonderful introduction to gardening. Experience the charm of *Isabella's Garden* as read by Ally by clicking this link.

Many additional outstanding gardening books for children are found on the Junior Master Gardener website. Each year "The **Junior Master Gardener Program** and the **American Horticultural Society** honor engaging, inspiring works of plant, garden and ecology-themed children's literature through the "**Growing Good Kids – Excellence in Children's Literature Awards**" Program." Click this link to investigate the award winning books from 2005 to 2014.

Two recent award winners are *What's in the Garden* by Marianne Berkes (2014) and *Our Shadow Garden* by Cherie Foster Colburn (2010). *What's in the Garden* explains that good food doesn't come from a store shelf but begins in a garden "bursting with life, color, sounds, smells, sunshine, moisture, birds, and bees!" Food becomes exciting for children when they discover where it really comes from. Children will find facts on fruits, vegetables and then discover tasty, "kid-friendly" recipes to start them on a lifetime of good eating.



Next, *Our Shadow Garden* tells the story of a cherished grandmother who becomes sick. Her illness prevents her from being in the sun where she loves to garden. Her family tries to make her feel better with cards and fresh flowers but nothing works until they transform her garden into a "Moon Garden" filled with plants that bring her joy and have the power to heal. *Our Shadow Garden* is a gift of love.

Interested in more resources? Try these 3 additional links.

10 Children's Books About Gardening
Through the Lens of Science: Children's Gardening Books
Resource List of available "Best Selling Children's Nonfiction Gardening Books -- Alibris

Anytime you use the Internet links with children, you should preview the sites and make sure they are appropriate and safe. Watch for potential links that can take children away from the original site. Internet needs to be a guided experience.

Dig in and explore these delightful gardening books for children and Internet links that will provide young gardeners with hours of enjoyment. It's contagious!

The Garden Gate—Farmers' Markets in San Joaquin County

Tim Viall, Master Gardener

With summer upon us, it's time to set sail for the various farmers' markets that are open from summer and early fall throughout San Joaquin County.

As an example, we spent three hours at the Lodi Thursday farmers' market this past week, running from 5 to 8 PM on School Street in Lodi's downtown. Shoppers had a huge choice of fresh produce, from squash, onions, Brussels sprouts, cherries, strawberries, blueberries, almonds, walnuts, specialty agricultural products, and more with scores of arts and craft vendors, food purveyors and music (as well as the businesses open along School Street) made for a festive atmosphere, with something for almost everyone!

Farmers' market produce has generally been picked the same day, prices are inexpensive, and you help support local agriculture! Shop with an eye to good nutrition (if you have kids let them help) and buy produce that you can turn into healthy family meals!

And, if you are wondering just what is a certified farmers' market, here is the definition from the California Federation of Certified Farmers' Markets: California Certified Farmers' Markets are the "real thing," places where the farmers sell their crops directly to the public. Before a farmer can sell at a "Certified" farmers' market, the government checks to make sure that the farmer grows the produce the farmer is selling. Elimination of packing, shipping and wholesale costs means that both the farmer and consumer can save money.

We're heading into peak farmers' market season! Here's a list of the markets throughout San Joaquin County. Click on the link for the times and locations of each of the markets. Grab your spouse, kids or grandkids, and plan to take in many of these varied farmers' markets this summer.

Lodi

Downtown Farmers' Market - Thursday
Samuel D. Salas Park—Sunday

Manteca
Library Park—Tuesday

Ripon
Mavis Stouffer Park Thursday

Stockton
Downtown Certified Farmers' Market—Friday
Downtown Farmers' Market—Saturday
Weberstown Mall Market Locations, Thursday & Sunday
Park West Place Farmers' Market—Sunday
Stone Creek Village Farmers' Market—Tuesday

Tracy Saturday Farmers' Market Location

California's Fifth Year of Drought—One Gardeners Journey to a More Water-Conserving Landscape

So how do we cut back on water use in our yard and garden areas? It seems we have a variety of choices, from fairly simple to those involving major changes and more than a bit of expense. Here is a short outline.

We have already made the easier changes to conserve water:

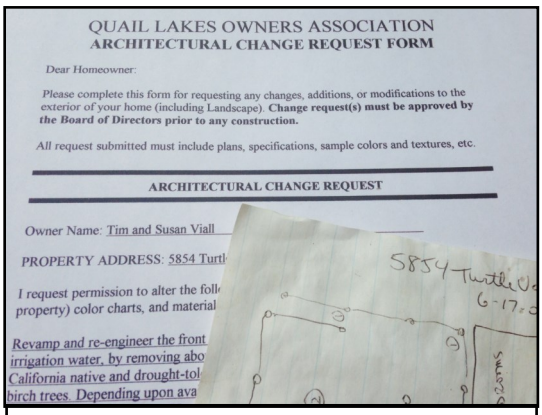
- •Adjusted sprinkler heads (so we are watering our plants and not concrete),
- •Changed to drip irrigation in perennial and vegetable garden plantings,
- •Moved to less frequent but deeper watering schedule, and
- •Moved to less water-intensive plants in our tiered beds and front shrub area.

With a front yard of hardy Bermuda grass (fairly typical in this part of the state), I've cut back to watering once a week for about 10-14 minutes. That's probably half the water we used just a few years ago; while the overall result is less green than in the past, it's somewhat of a "badge of honor" to have a more yellowed/less green look!
Many of our neighbors currently water their yards every other day--some, even daily. But I learned in our Master Gardeners class that turf is better watered deeply, once or twice a week, encouraging the turf to grow deeper, hardier roots, and, ultimately, use less water.

With our front yard birch trees and ivy near the house, we water just 2-3 times a month, about eight minutes each time; these plantings seem to be doing well enough that I may experiment with even less water in the future.
We are moving to more thoughtful changes involving re-engineering our landscaping plan, greatly reducing turf and adding more drought-tolerant plantings. Doing this requires a certain amount of planning, and in some neighborhoods, approvals. Here is an outline of what we have in progress:

1. Designing a revamped yard/garden plan (requires architectural approval from our homeowner's association),
2. Redesigning the water system for such modifications,
3. Choosing the type of plants, trees, and turf – including removal of/replacement of most of our front yard turf (about 75% of all the turf we have), and
4. Installation and planting.

Even more dramatic would be to eliminate all turf, moving to a xeriscape landscape like you might find in Phoenix, or Yuma, AZ, with only native plants, drought-tolerant trees, and little or no turf. My spouse and I don't think we're quite ready for that; but, if our regional drought continues, we may have to get ever-more creative.


QUAIL LAKES OWNERS ASSOCIATION
ARCHITECTURAL CHANGE REQUEST FORM

Dear Homeowner:

Please complete this form for requesting any changes, additions, or modifications to the exterior of your home (including Landscape). **Change request(s) must be approved by the Board of Directors prior to any construction.**

All request submitted must include plans, specifications, sample colors and textures, etc.

ARCHITECTURAL CHANGE REQUEST

Owner Name: Tim and Susan Viall

PROPERTY ADDRESS: 5854 Turtl

I request permission to alter the foll
property) color charts, and material

Revamp and re-engineer the front
irrigation water, by removing abo
California native and drought-tol
birch trees. Depending upon ava

A landscaping plan and architectural change form (if you live in a homeowner's association)

Our front yard also is irrigated by seven pop-up, impulse sprinkler heads, which put out a lot of water. When I have done a simple "can-test", placing a bunch of tuna or coffee cans throughout the yard, I found greatly uneven watering – and worked to adjust heads accordingly. Updating all of these heads to more modern low-flow rotor heads will result in more even watering and less waste. That would only cost about $10 per head.

We will also need to update our sprinkler irrigation timer to a "Smart Irrigation" timer that makes sense today. This generation of irrigation controllers utilizes prevailing weather conditions, current and historic evapotranspiration, soil moisture levels, and other relevant factors to adapt water applications to meet the actual needs of plants. Click here for recommendations.

Our front lawn currently uses about 65-70% of our total outdoor irrigation. Our plan is to remove about 75% of our front turf and replace it with California native and water-tolerant plants and trees. Doing this will eliminate the water-wasting impulse sprinklers, though to accomplish that, we'll have to re-engineer the sprinkler lines that currently take water to our trees and ivy area.

We will have to dig about 60 feet of trench for new waterlines, run 60 feet of new PVC pipe, adding drip irrigation to handle those California native plants and trees. Since I can do much of the work myself, out-of-pocket costs will probably be about $250. At this point, I have not priced cost of new California native plants and soil amendments, but guessing another $250 or so.

California's Fifth Year of Drought—One Gardeners Journey to a More Water-Conserving Landscape

Since we live in the Quail Lakes area, we are part of the homeowner's association. Hence, we need to get architectural approval, which should be fairly simple since associations themselves are working to reduce water consumption. I will soon submit a sketch of the new design, with pictures and names of the California native plants we are targeting.

We will eliminate much of our thirsty front yard turf, using the practices of either sheet mulching (placing cardboard on top of grass and covering with bark or gravel) or soil solarization (where clear sheets of plastic are placed over turf in full sunlight). As a last resort, we will consider chemical removal (using a glyphosate, e.g., Round-up, applied according to directions) to kill the turf.

Our front yard has way too much water-wasting turf

In place of the turf, we will plant (and heavily mulch) a variety of hardy California natives: Yarrow, offering pretty yellow flowers, California fuschia (Epilobium canum), good for humming birds, wild lilac (Ceanothus spp.), sage (Salvia spp.), honeysuckle (Lonicera spp.) and Iris Douglasiana. You'll find details on these and other drought-tolerant and bird-friendly plants California native plants and Yerba Buena Nursery and Sunset Magazine is just out with a great feature on drought-tolerant landscapes and plants/trees.

Our backyard, much smaller, has five separate sprinkler lines and we have already fine-tuned the water to our small turf area. Plus, we added drip irrigation to our terraced gardens and our small vegetable garden. We've also greatly expanded our back patio area in recent years, increasing our hardscape to planting ration. We plan to further enlarge both the patio and adjacent planters, adding more native, drought-tolerant plants and eliminating more turf.

I'd urge readers to visit the Master Gardener's Demonstration Garden where you can see many of these California native plants, at the Robert Cabral Agricultural Center, 2101 E. Earhart Avenue, Stockton, CA 95206. At the Garden, you can gain insight into water-smart irrigation and see a variety of California native and water-tolerant plants up close! A word to the future, however: Keep your eyes on both the skies and the State Water Board – if the drought continues, further water use reductions could even endanger a new yard planted with California native and water-tolerant plants!

With water consumption greatly reduced in the front, and already reduced in back, we hope to reduce irrigation water consumption by at least 50%, while maintaining an attractive landscape, both front yard and lakeside! By taking steps inside the home with shorter showers, reduced dishwashing loads and the like, a 25% reduction in interior water use should be easy!

For more info into reinventing your lawn/garden plan and conserving water, click here. And, visit the Master Gardener's Demonstration Garden and office at the Robert Cabral Agricultural Center, 2101 E. Earhart Avenue, Stockton, CA 95206. There you can pick up insight into water-smart irrigation, and see a variety of California native and water-tolerant plants up close! Also see the Master Gardener web-site and, for drought-tolerant plants, visit WUCOLS.

The Help Desk—Soil Solarization

Trish Tremayne, Master Gardener

If you have a gardening question, call the Master Gardeners Tuesday-Thursday 9:00 am-12:00 pm at 209-953-6112 or by e-mail anrmgsanjoaquin@ucanr.edu

A friend of mine was talking about soil solarization to get rid of weeds. What is it?

Soil solarization uses a plastic cover over the soil and the rays of the sun to heat the top six to twelve inches of soil.

Why do it?

Soil Solarization is an effective non-chemical way to kill weed seeds, insects, and pathogens (including Verticillium wilt, Fusarium wilt, Phytophthora root rot, and damping off disease) in the soil. It is especially beneficial in the vegetable garden where pathogens can build up over time. An additional benefit is that it increases the availability of nitrogen, calcium, magnesium, and potassium due to the breakdown of organic material in the soil.

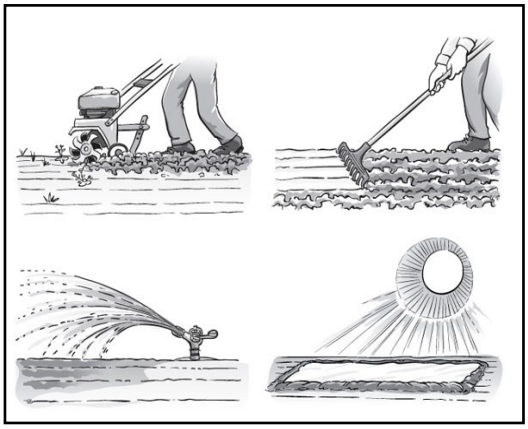
The downside is that it does take time (four to six weeks) to be effective. If you have limited space in your garden, you may not want to take it out of production for that long during the peak growing season.
In our area, the best time to solarize is June through August when the ambient temperature is high and the days are long, usually cloud free, and windless.

Soil preparation is very important

Till the area and remove any weeds, clods, large stones, and other debris. Smooth the soil surface with a bow rake. A smooth surface is important because you want the plastic to lie as close to the soil surface as possible. The soil needs to be moist down to 24 inches. This moisture helps conduct the heat through the soil.

Sheeting

Transparent plastic sheeting, 1 to 4 mil thick works best. This can be purchased at garden and hardware stores and is often referred to as painter's drop cloth. It can be purchased in sheets or squares. The thinner the plastic, the greater the heat build-up, but it also can tear easily and break down from the ultraviolet rays. The 2 mil plastic normally holds up better to wind or pets that might walk on it. Also available is plastic treated with an ultraviolet (UV) inhibitor that will not break down as quickly in the sunlight.



How to Solarize

Dig a shallow trench on each side of the area you plan to solarize. Lay the edge of the plastic in the trench and cover it with soil to hold it down. Pull the plastic tightly over the soil surface so it is touching the soil. Now cover the other edges of the plastic with soil to keep it in place. If any holes occur in the plastic repair them with tape. It is important that the heat does not escape from under the plastic. The temperature of the soil will get to between 110 to 125°. You can use a soil thermometer to check the temperature.

Removing the plastic.

Heavier plastic may be rolled up and used again if there are not any rips or tears. Thinner plastic will start to break down in the ultraviolet rays from the sun, so it is best not to try to use it a second time.

Time to plant.

Try not to disturb the soil surface any more than necessary. You do not want to bring up viable weed seeds from deeper in the soil.

Now you have another method to add to your arsenal of garden tricks! Happy Gardening!

References:Soil Solarization: A Nonpesticidal Method of Controlling Disease, Nematodes, and Weeds
Soil Solarization for Gardens & Landscape Pest Notes Pub. 74145
Soil Solarization, an Alternative to soil fumigants, Colorado State University ext.colostate.edu

Horticultural Terms Explained—Being Green

Susan Price, Master Gardener

We hear so many environmental terms these days. We aspire to be "green," "earth friendly," and "sustainable." But what do we really mean? We can get so blasé about words we hear repeated so often that they lose their potency. While "green" and "earth friendly" are broad and loose concepts, other environmental terms can be better defined and understood. The following terms are worth revisiting.

Sustainable: To sustain means to keep going or continue indefinitely without external inputs.

Environmental sustainability: The ability to carry on an activity indefinitely with minimal impact on the environment. The Financial Times Lexicon defines it as a state in which the demands placed on the environment can be met without reducing its capacity to allow all people to live well, now and in the future.

Sustainable gardening practices are those that have no negative impacts on the health of the soil, air, water and vegetation. They conserve and protect our natural resources with little intervention, avoiding toxic chemicals, recycling as many resources as possible, and encouraging a diversity of plant and animal life. Key goals of sustainable gardening practices are to: sustain water availability; reduce off-site water movement into storm drains, lakes, rivers and creeks; reduce energy use; reduce our green waste to landfill; prevent soil degradation; facilitate wildlife; and reduce the spread of invasive plant species. Find out more: River-friendly Landscape Guidelines

Biodiversity: A large number and wide range of species of animals, plants, fungi, and microorganisms. Ecologically, wide biodiversity is conducive to the development of all species (Reference: Natural Resources Defense Council). Conserving biodiversity is a primary way to sustain healthy ecosystems. When we replace wide expanses of lawn with water-conserving native and regional plants, we increase the biodiversity of our gardens many times over.

Carbon Footprint: The amount of greenhouse gases that are emitted into the atmosphere by a person, household, building, organization, company, or other entity. A person's carbon footprint includes greenhouse gas emissions from fuel that an individual burns directly, such as by heating a home or riding in a car. It also includes greenhouse gas emissions that come from producing the goods or services that the individual uses, including emissions from power plants that make electricity, factories that make products, and landfills where trash gets sent. (Reference: EPA) Get a rough estimate of your personal or family's greenhouse gas emissions and ways to reduce your impact by clicking here: EPA carbon footprint calculator.

Save the Date!
Our Smart Gardening Conference will be Saturday, September 26th, 2015

The Taste of the Season— Summer All Stars From the Garden

Julie Hyskee Master Gardener

So many choices abound for fresh fruits and vegetables during the summer season! Whether you grow them yourself, share a neighbor's bounty, or make a trip to the local farmers' market, you know fresh is best. Challenge yourself to showcase one of these recipes on your dinner table tonight. The cobbler is sinful warm out of the oven with a scoop of vanilla ice cream. If you've got the time, grab some dill, parsley and chives while whipping up some ranch dressing for the zucchini rounds. The corn salad says it all, loaded with summer veggies and a zesty dressing, just add some grilled chicken! Did anyone say dinner?

EASY PEACH COBBLER By: Pat Skjervheim, MG

Ingredients:

½ cup unsalted butter
1 cup all purpose flour
2 cups sugar, divided
1 tablespoon baking powder
Pinch of salt
1 cup milk
4 cups fresh peach slices
1 tablespoon lemon juice
Raw sugar and cinnamon (optional)

Melt butter in a 13 x 9-inch baking dish. Combine flour, 1 cup sugar, baking powder, and salt. Add milk, stirring just until dry ingredients are moistened. Pour batter over butter (do not mix). Bring remaining 1 cup sugar, peach slices, and lemon juice to a boil over high heat, stirring constantly. Pour over batter (do not stir). If you wish, sprinkle with raw sugar and cinnamon. Bake at 375° for 40-45 minutes or until golden brown. Serve cobbler warm or at room temperature. Yields: 12 servings

GARDEN CORN SALAD By: Julie Hyske, MG

Ingredients

4 large ears corn with kernels sliced from cob (leftover grilled corn is exceptional)
1 large tomato, diced
3 green onions, sliced
1medium green and red bell pepper, chopped
1 small can sliced olives
2 avocadoes, diced
2 tablespoons fresh lime juice
2 cloves chopped garlic
1/3 cup olive oil
1/3 cup cilantro chopped
Salt and pepper to taste

Add corn to a medium pot of boiling water. Drain after 2 minutes. In a large bowl, combine the corn, tomatoes, red and green peppers, green onions, sliced olives and avocadoes. Whisk the lime juice, garlic, salt and pepper. Whisk in the olive oil. Add the dressing to the corn mixture and toss to coat. Top with the chopped cilantro and serve chilled.

ZUCCHINI PARMESAN CRISPS
By: Leslie Warmke, MG

Ingredients:

1 lb. or 2 medium zucchini
¼ cup shredded parmesan
¼ cup dry breadcrumbs
1 tablespoon olive oil
½ tablespoon dill weed
¼ teaspoon salt
Pepper to taste

Preheat oven to 400°. Line a baking sheet with foil and spray lightly. Slice zucchini into ¼ inch rounds. Toss rounds with oil, coating well. On a plate, combine breadcrumbs, parmesan, salt, and pepper. Place rounds in parmesan-breadcrumb mixture, coating both sides of round, pressing to adhere. The mixture will not completely cover each round, but provides a light coating on each side. Place rounds in a single layer on baking sheet. Sprinkle any remaining breadcrumb mixture over the rounds. Bake for 22-27 minutes,

Coming Events

Corinne Bachle, Master Gardener

July

Saturday, July 18
San Joaquin Master Gardener Workshop: Rethinking Your Lawn
10:30 – 12 noon
Tips and tricks on removing your lawn and lawn alternatives.
Manteca Library, 320 W. Center, Manteca
Classes are free. All participants must register a week prior to the class at (209) 953-6100.

Saturday, July 25
Alden Lane Nursery's Cement Pot Making
1:30 – 3:00 p.m.
Join Sue for this fun workshop. You will make four different pots that will fit 4-5" plants. Cost is $35.00 plus tax. Sign up by July 22.

August

Saturday, August 1
Sacramento Master Gardeners' Harvest Day
8:00 a.m. – 2:00 p.m.
Join us for Sacramento's ultimate gardening event! It's a gardener's dream day featuring fabulous speakers, spectacular demonstration gardens, grape tasting, food trucks, plant- and gardening-related products from vendors, and numerous educational tables. Explore the orchard on a self-guided tour and see the new, space-saving fruit-tree espalier area. There will be composting and vermicomposting (worm composting) demonstrations. Ideas for the home gardener are unlimited at Harvest Day. Shop for unique gardening merchandise at our Marketplace (cash and checks only) and take time to visit the neighboring Fair Oaks Community Garden. There will be dozens of UCCE Master Gardeners on site, plus a Plant Clinic, to answer gardening questions. At 8:30-9:15 a.m., Fred Hoffman (Farmer Fred, host of several radio talk shows on gardening) will be speaking on "Vegetables with Less Water" and "Beautiful Plants for Dry Shade." At 10:30 – 11:15, Aimal Formoli, owner and chef of Formoli's Bistro, will be speaking on "Bringing the Garden into the Kitchen."
Fair Oaks Horticulture Center, 11549 Fair Oaks Blvd., Fair Oaks
Free admission

Saturday, August 8
San Joaquin Master Gardener Workshop: Growing Root Flowers for Beauty
10:00 – 11:30 a.m.
Learn how to successfully plant and grow tubers, corms, bulbs, and rhizomes.
City of Stockton Delta Water Supply Project, 11373 N. Lower Sacramento Road, Lodi
Class size is limited. Please RSVP by the Wednesday before the class at (209) 953-6100.
Classes are free.

Saturday, August 15
San Joaquin Master Gardener Workshop: Growing Root Flowers for Beauty
10:30 – 12 noon
Learn how to successfully plant and grow tubers, corms, bulbs, and rhizomes.
Manteca Library, 320 W. Center, Manteca
Classes are free. All participants must register a week prior to the class at (209) 953-6100.

Saturday, August 15
Alden Lane's Orchids 101
10:30 – 12 noon
Our orchid guru will teach you not only how to grow healthy orchids, but also how to "bloom" them. You're welcome to bring one of your plants for a consult.
The Doctor is in.

September

Saturday, September 12
San Joaquin Master Gardener Workshop: Creating Beauty with California Native Plants
10:00 – 11:30 a.m.
Tips and tricks in successfully planting and growing California natives.
City of Stockton Delta Water Supply Project, 11373 N. Lower Sacramento Road, Lodi
Class size is limited. Please RSVP by the Wednesday before the class at (209) 953-6100.
Classes are free.

Saturday, September 19
San Joaquin Master Gardener Workshop: Creating Beauty with California Native Plants
10:30 – 12 noon
Tips and tricks in successfully planting and growing California natives.
Manteca Library, 320 W. Center, Manteca
Classes are free. All participants must register a week prior to the class at (209) 953-6100.

Saturday and Sunday, September 19 and 20
Alden Lane's Tomato Tasting and Salsa Party
10:00 a.m. – 4:00 p.m. each day
We will have over 40 varieties of tomatoes to taste. We welcome home grown, homemade salsa entries to compete for high honors. Entries must arrive by noon on Saturday.

Saturday, September 26
SAVE THE DATE!
San Joaquin Master Gardener Smart Gardening Workshop
More info coming soon.
Robert J. Cabral Agricultural Center
2101 E Earhart Ave., Stockton 95206

Cont. pg. 19

Garden Chores (continued from page 2)

Sow root vegetable seeds for fall and winter harvest. Beets, carrots, turnips, and fast-maturing potatoes planted now should yield a crop by Christmas. Beet varieties that do well in our area are those with a short number of days from seed sowing to maturity (generally those with 60 days or less as listed on the seed packet). Carrot lovers might try growing white, yellow, orange-red, or purple varieties from seed. Lee Miller's article, *Planning and Planting a Cool Season Vegetable Garden*, in the 2013 summer issue, provides additional information.

Lettuce as well as kale and Chinese cabbage planted now will mature for fall salads. Try some of the heirloom lettuces available now.

Maintenance -

Mature citrus trees in the ground can generally go about 10 days between watering in the summer heat. Potted citrus trees will need water at least once a week during the summer heat. Check soil moisture at the root level — 18 or more inches down — with a moisture meter, and keep soil on the dry side of moist (the soil surface doesn't need to be damp). Water deeply and slowly when necessary.

Hydrangeas produce flowers on the previous year's growth. To shape and control the plant's size, and to avoid cutting off next year's flower buds, prune stems back to 12 inches right after the blooms fade. Fewer, but larger flowers will grow next spring if you cut back some stems to the base of the plant.

Before fall planting, amend soil with compost and soil conditioner. Worm castings, though expensive, are worth the price. Choose pure castings or a mix of castings and compost. Now is also a good time to start a worm bin which will provide castings for spring soil amending. Information on worm composting can be found here.

Prune cane berries. Canes of single-crop blackberries and raspberries that have finished fruiting should be cut to the ground. Thin out the new growth, keeping the strongest canes - 5 to 8 per blackberry plant, 8 to 12 per raspberry plant - and removing the others. Prune ever-bearing varieties after the fall harvest.

September Notes

Plant -

Set out transplants of campanula, candytuft, catmint, coreopsis, delphinium, dianthus, foxglove, penstemon, phlox, salvia, hollyhocks and yarrow.

Plant spring flower bulbs now. Bulbs appear in nurseries right after Labor Day. They're most effective in big flower pots and in kidney-shaped drifts at the front of garden beds. Some excellent choices include bluebells, daffodils, grape hyacinth, hyacinth, and tulips. They should be fine and bloom beautifully in spring with just rain water.

Shrubs, trees, and groundcovers get a head start when planted in fall. Nature does most of the watering for you, and plants have fall (and winter in mild climates) to send out roots. Your plants will be well established by the time spring growth starts.

Plant a tree on the southwest side of your home, where it will provide the most-needed shade. Use a deciduous tree for summer shade and winter sun. Chinese hackberry, Chinese pistache, ginko, Japanese pagoda tree, 'Raywood' ash, and red oak can be good choices. Note the mature size of the tree before you purchase it to be sure there is ample room for it to grow into the beautiful specimen you expect.

Organic mulch applied in several inches around plants (don't let it touch the trunks) will keep roots moist if rainfall doesn't do it for you.

Plant lettuce every few weeks so fresh salad greens can be harvested over a longer season. Tasty blends of young leaf vegetables are easy to grow.

Maintenance -

Harvest cantaloupe when it slips off the vine easily. With other kinds of melons, a strong, pleasant aroma at the blossom (not stem) end is the best indicator of ripeness. A watermelon is a bit more difficult, but good indicators of ripeness include: The ground spot (the underside where the watermelon laid on the ground) turns from white to pale yellow; the tendril opposite the stem of the melon has dried and withered; the skin of the watermelon has turned from shiny to dull; and there is a dull "thunk" when the melon is rapped with your knuckles in the morning.

If you still have lawn, now is the time to fertilize in order to thicken top growth, crowd out weeds, and strengthen grass roots for winter. Combination lawn fertilizers are a good choice. They contain a small amount of fast-release nitrogen for a quick green-up, and a larger portion of slow-release nitrogen. By regularly using a mulching mower which chops the grass blades into fine pieces, and leaving your grass clippings on the lawn to decompose and release nitrogen into the turf, you can eliminate one lawn feeding or more per year.

Recycle your bulbs!

Did you know?

- It is illegal to put fluorescent bulbs into the trash.
- All fluorescent bulbs are considered hazardous waste when they are discarded.
- Fluorescent bulbs contain heavy metals, toxic and corrosive materials.
- Many local retailers accept used fluorescent bulbs for recycling.

Recycle them at any of these locations*:

THE HOME DEPOT

LOWE'S Home Improvement Warehouse

Batteries + Bulbs

Additional Drop-Off Locations — **For Residents Only, No Businesses**

San Joaquin County HHW Facility
7850 R.A.Bridgeford Street
Stockton, CA 95206
(209) 468-3066

North County Recycling Center & Landfill
17720 E. Harney Lane
Lodi, CA 95240
(209) 887-3868

Lovelace Materials Recovery Facility & Transfer Station
2323 E. Lovelace Road
Manteca, CA 95336
(209) 982-5770

UC Master Gardeners
2101 E Earhart Ave
Suite 200, Stockton, CA, 95206
Phone: 209-953-6112
E-mail: anrmgsanjoaquin@ucanr.edu
Web-site: http://sjmastergardeners.ucdavis.edu
Find us on Facebook!
Coordinator: Marcy Sousa 953-6100
For nondiscrimination policy, click here

San Joaquin Master Gardeners

2015 Workshop Schedule

City of Stockton
Delta Water Supply Project Building

Classes will be held at the

City of Stockton Delta Water Supply Project

11373 North Lower Sacramento Road
Lodi, CA 95242

January 10:
Yardscaping with Fruit Trees

How to plant and grow fruit trees for a productive backyard orchard.

February 14:
Big Flavor Small Spaces

Growing edibles in small spaces and containers with big results.

March 14:
Handling Garden Enemies

Dealing with common garden pests and invasives in an environmentally friendly way.

April 11:
Tips and Tricks for Drought Friendly Landscaping

Easy ways you can conserve water in your existing landscape.

May 9:
Kidding Around in the Home Garden

Turning children on early to the joy of gardening.

July 11:
Rethinking your Lawn

Turf alternatives for today's landscape.

August 8:
Growing Root Flowers for Beauty

How to successfully plant and grow tubers, corms, bulbs and rhizomes.

September 12:
Creating beauty with California Native plants

Tips and tricks in successfully planting and growing CA natives.

October 10:
Don't Toss It, Compost It!

Learn how to turn kitchen and yard waste into the ideal soil amendment for your garden.

November 14:
House Plants Made Easy

Learn how to be successful growing indoor plants.

Classes begin at 10:00 am and end at 11:30 am. Class size is limited to 30. You will need to RSVP by the Wednesday before the class to attend the workshop. Please call (209) 953-6100 to guarantee your seat.

Delta Water Supply Project
CITY OF STOCKTON

San Joaquin Master Gardeners

2015 Workshop Schedule

Manteca Library Time

10:30 am -12:00 pm

Classes will be held at the
Manteca Library
320 W. Center Manteca, CA 95336
(209) 937-8221

January 17:
Yardscaping with Fruit Trees

How to plant and grow fruit trees for a productive backyard orchard.

February 21:
Big Flavor Small Spaces

Growing edibles in small spaces and containers with big results.

March 21:
Handling Garden Enemies

Dealing with common garden pests and invasives in an environmentally friendly way.

April 18:
Tips and Tricks for Drought Friendly Landscaping

Easy ways you can conserve water in your existing landscape.

May 16:
Kidding Around in the Home Garden

Turning children on early to the joy of gardening.

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Classes are free.
All participants must register a week prior to the class at (209) 953-6100.