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Seeds For Thought

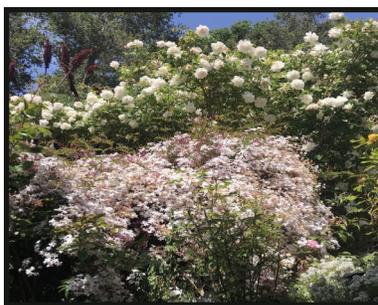
Solano County Master Gardeners

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A PLEA FOR FRAGRANCE IN THE GARDEN

Darrell g.h. Schramm, U.C. Master Gardener, Solano County

As early as 1806, nurseryman Bernard McMahon lamented the neglect by American gardeners of our indigenous plants. He mentioned such natives as asters, gentians, hibiscus, lobelia, monarda, phlox, rudbeckia, sisyrinchium, solidago, and violas. Today we find many of these coloring our



Rosa 'Mme Alfred Carriere + Jasmine'

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flowerbeds. Too often, however, we do not find much fragrance in our gardens. We tend to plant more for color, drought tolerance or sometimes for texture and form. Scent is slighted. Most of those plants named by McMahon exude only faint scent or none at all.

Some phlox, however, do offer a pleasant aroma, especially *Phlox stolonifera* 'Blue Ridge', 'Pink Ridge', and 'Lavender Lady'. A summer phlox, *Phlox peniculata*, exhales a unique aroma, and though it comes in a variety of colors, the whites give off the best fragrance, lovely on a summer night.

Monarda didyma—Bee Balm—carries a warm, spicy scent in its leaves and holds a citrus bouquet in its flowers, while *Monarda citriodora* bears a scent of lemon and mint. Bees love both of them.

Another flower to grace the evening and nighttime, like *Phlox peniculata*, is *Matthiola longipetala*, also known as stock or gillyflower. It blooms in summer and fall with a strong, sweet smell but only at night. *Matthiola incana* is a springtime perfumed stock.

Nicotiana glauca opens in the evening also and can perfume a garden on a warm summer night. In white, red, or pinks, it grows to three feet. *Nicotiana glauca* is also summer-flowering, growing even in shade to five feet. Dangling like little white bells on warm summer nights, its flowers become especially fragrant.

A different tall flower is the gladiolus, few of which transpose an aroma to the nose. But *Gladiolus callianthus* (aka *Acidanthera murielae*) is known as "The Sweet-scented Gladiolus." White in blossom, often with a crimson spot in the throat, it flowers in autumn. This variety tends to form in clumps.

Of fragrant hyacinths, flowers of spring, we find too many to mention. A few are the white 'Carnegie', 'Edelweiss', and 'L'Innocence'; the yellow 'Prince Henry'; the pink 'Gypsy Queen', 'Lady Derby', and 'Pink Pearl'; and the blue 'King of the Blues', 'Cote D'Azure', and 'Ostara'.

Most freesias today contain no scent. However, the old species *Freesia lactea*, white with a streak of yellow, retains its glorious scent of honey and ripe plums. In my garden they grow everywhere in early spring—in garden beds, in pots with other plants, from the crevices of retaining walls, from the earthen step on a slope. They begin to emerge in late January or in February, and by March they have openly perfumed the terrace and garden air.

Though I've been told recently that Sweet Alyssum has been denoted an invasive species, I grow it as a ground cover, not only to scent the air but to attract bees and hover flies which are an enemy to insect pests. While it may be considered invasive by some people, it is certainly easy to pull up if unwanted. But I want it. Mine flower mostly in white, though some come up a soft blue.



Dianthus superbus

Dianthus superbus is an ancient carnation, loosely tufted and with fringed petals in white or pink and strongly, deliciously fragrant. 'Mrs Sinkins' is another carnation, but only in pink, a fuller and more compact form of *superbus*. It is one of the most aromatic of carnations.

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Old Sweet Pea, Scented

Many sweet peas (*Lathyrus*) grow without scent. If you wish to grow those with a perfume, search for the old-fashioned kind, some of which are bi-colored, like *L. odoratus* 'Painted Lady' and, especially, 'Matucana'. Other scented sweet peas are named 'Elegance', 'Esther Ransom', 'Hampton Court', and 'Kiri Te Kanawa' (named for the famous New Zealand opera singer).

more. *J. sambac* (Arabian Jasmine) and *J. nitidum* (Angel Wing Jasmine) also bear a wonderful fragrance.

Of course, many a rose provides scent for the garden. As a rose historian, I could mention more than a hundred, but I will restrain my impulse and name but a half dozen. But, let me say first that any musk rose (a rose bred with *Rosa moschata*) will drift its fragrance through the air.



Rosa 'Christopher Stone'

You might also be interested in the easily grown nasturtiums, whose name means "nose twister." Its sharp scent combines with the peppery flavor of its leaves when added to salads.



Heliotrope

Several shrubs lend fragrance to a garden. One of the most pleasing is heliotrope with its scent of, some say vanilla, others say baby powder or even cooked cherries.

Heliotropium arborescens wafts a scent of stewed cherries or of a cherry pie from its dark blue flowers. *H. europaeum* flowers are white or pale lilac. Both varieties can sprawl in an arching mound. Pruning will prevent it from becoming leggy or twiggy.

- * 'Blush Noisette', a large shrub of pre 1816 of the palest pink flowers in clusters, offers stamens of a clove scent and petals with the fresh smell of cut grass, yet somewhat fruity as well.
- * The early hybrid tea (1891) 'Kaiserin Auguste Victoria' carries the blended scent of lemon and nasturtiums, but when cut for a bouquet indoors, the scent alters to peppermint. The very large flowers are white with a pale yellow center.
- * 'Christopher Stone', a strong red hybrid tea of 1935 sends out the fragrance of old Damask roses, i.e., the scent of your great-grandmother's old roses.
- * 'Zepherine Drouhin', a strong pink Bourbon rose, offers the hint of raspberries to the nose. It does well in open shade.
- * 'Baronne Prevost', a hybrid perpetual rose reaching five feet, gives off a strong, delicious old rose scent from its purplish-pink petals on a very full flower.
- * David Austin's 'Sharifa Asma' contains a robust honey-like scent all its own. The petals are almost translucent in their hint-of-pink coloring.



Philadelphus

Philadelphus lewisii v. *californicus*, an indigenous narrow shrub, can grow three feet or taller. Because it bears the lovely scent of orange blossoms, it is often called Mock Orange.

Another shrub of strong perfume is the buddleja. A few varieties are white, cream, pale orange, or lilac, but most are various shade

of purple or blue. *Buddleja davidii* is, for obvious reasons, also known as the butterfly bush. Generally, buddleja grow from eight to twelve feet high.

A few azaleas produce a pleasant aroma.: *Rhododendron flavum*, *R. canescens*, and—especially spicy—*R. austrium*.

A powerfully fragrant *Jasminum officinale* (Poet's Jasmine or Common Jasmine) is used for creating perfume and food flavoring. The scent wafts outward twelve or twenty feet or

Of course many other plants lend fragrance to a garden: lilacs, lavender, certain lilies, oregano, rosemary, mignonette, marjoram, mint, and more. With a nod to Emily Dickinson, I urge you to Be as the bee—exuberantly—seek garden plants—of perfumed pedigree. ♪



Rosa 'Kaiserin Auguste Victoria'



FIGS—A FANTASTIC FRUIT

Pearl Eddy, U.C. Master Gardener and U.C. Master Food Preserver, Solano County

The edible fig, *Ficus carica*, is native to western Asia and eastern Mediterranean. The trees can grow fairly quickly to 15-30 feet tall, spreading as wide as high. They can also be held to 10 feet in a large container, or be trained as espalier along a fence or wall.



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In our area they are frost tolerant, need little or no fertilizing and are drought tolerant once established. The only pests are gophers which love the roots of newly planted trees. The trees normally have a very long life. For example, the Mission fig trees on our property are more than 90 years old and have produced very well with absolutely no care for all these years. The Mission variety is very common here, but you can read about other varieties in the [Sunset Western Garden Book](#). An excellent fig care sheet is available on the web by typing in "Fig Tree Care Sheet—Alameda Backyard Growers": <https://alamedabackyardgrowers.org/wp-content/uploads/2019/02/Fig-Tree-Care-Sheet.pdf>.

If you desire to prune fig trees, it is important to realize that there are usually two crops each summer, the first in June and the second in late summer. The fruit of the first crop is usually larger and juicier and is grown on last year's growth, and the second crop is usually smaller, sweeter and dryer, and is grown on this year's growth. The time to pick them is when the stem is no longer juicy and the fig is bending at the neck. Simply bend the stem upwards against the twig it is growing on and it should snap off easily. Figs do not ripen after being picked, so must be allowed to ripen fully on the tree. Fresh figs can be stored in the refrigerator for a few days. Excellent information on growing and harvesting can be found on the website of the California Rare Fruit Growers Association at <https://crfg.org/?s=figs>.

Before processing figs I give them a quick rinse under cool water to remove dust and then drain them well. To freeze whole, simply spread out on a cookie sheet to freeze and then package in freezer bags. Whole figs can be dried in the sun or a dehydrator. To freeze as pulp, remove the hard tip of the stem and then grind or chop them and place in freezer bags after removing as much

air as possible. For various recipes, I like to measure the needed amount of pulp ahead of time and label the container with the quantity enclosed. Ground figs make great fruit leather with no added ingredients, but sometimes I have added a little honey and lemon juice for a different flavor. Chopped nuts add a nice crunch to the leather.

I use fig pulp most often for jam or fig leather, but it is delicious mixed with balsamic vinegar for a great dressing on fresh greens with goat feta cheese. A great source of recipes is the California Fresh Fig Growers Association at <https://californiafigs.com/recipes/>. This site has recipes for both fresh and dried figs as well as nutritional information. Figs are very high in potassium, calcium, iron, fiber and disease-fighting antioxidants.

In recent years, the USDA has made changes in recipe processing times and instructions, so you might like to look up canning instructions in the [Ball Blue Book of Preserving](#) and the [USDA Complete Guide to Home Canning](#), 2015 edition. An excellent web site is the National Center for Home Preservation at <http://nchfp.uga.edu>. I have several recipes for fig pickles, one of which calls for boiling water bath canning which makes it shelf-stable and another which calls for storing in the refrigerator. It's important to read through our recipes before starting them. ☺

LOW SUGAR FIG JAM

2 ½ cups prepared pulp
 1 cup water
 ¼ cup bottled lemon juice
 3 ½ cups sugar, divided
 1 box Sure-Jell for Less or No Sugar Needed Pectin
 ½ tsp. butter or margarine

Place fruit pulp, lemon juice and water in a large pot. Mix ¼ cup sugar and pectin in a small bowl and add to the fruit in pot, mix well. Add butter to reduce foaming. Bring mixture to a full rolling boil on high heat, stirring constantly. Stir in remaining 3 ¼ cups sugar. Return to full rolling boil and boil one full minute, stirring constantly. Remove from heat. Skim off any foam. Ladle immediately into prepared canning jars, filling to within ¼ inch of tops. Cover with 2-piece lids and process for 10 minutes in a boiling water bath. Makes approximately 5 half-pint jars.

NORTH BAY ROSE SHOW

Spring Tseng, U.C. Master Gardener, Solano County

Roses may be the most admired flowers in the world. Once a year, the North Bay Rose Society (NBRSS), like many other local rose societies, hosts a Rose Show event. The event is usually carried out in late April or early May when many roses showcase their first blooms of the year. The purpose of this show is for rose growers and artists to share their work of beauty, and promote rose appreciation and growing. In the meantime, a friendly competition is conducted.

This year was the 41st Annual Rose Show of the NBRSS. The show was held on Saturday, May 13th, at Community Presbyterian Church in Vallejo. The show was open to the public from 1:00 to 4:00 pm, with an awards ceremony commencing after the public showing.



Figure 1
Photo Credit: All Photos in This Article by Spring Tseng, UC Master Gardener; Used With Permission

As in the past, the show included three disciplines of exhibitions: Rose Horticulture, Rose Arrangement, and Rose Photography. All roses entered in the show must be outdoor grown.

Rose Horticulture

Roses entered in the Horticulture discipline must have been grown in the exhibitor's garden. The Horticulture show is divided into two main categories: General Horticulture Classes (GHC) and Challenges Classes (CC). The GHC includes a single specimen (single bloom or a spray of roses, etc.) of roses in a plain vase. (See Figure 1) The CC usually include specimens of multiple items but can be a single rose in a more elaborated form of display. For example, "English Style Box" is a display of six roses in a 2x3" box (See Figure 2), "Trailing Rose" is one spray of roses wrapped in a dinner napkin (See Figure 3), and "Open Bowl Miniature" is a miniature rose floating in a glass bowl of water. You might wonder: "Wow! Who created all these categories?" The answer is that the American Rose Society (ARS) drafted all the guidelines about rose shows and all local rose societies are expected to apply these guidelines. The positive side of more categories is the increased opportunities for one to win a prize.



Figure 2

Most of the roses have their registered names, or "variety"; for example, 'Peace', 'Mister Lincoln', 'Iceberg', etc. Knowing the variety of the roses is a must in order to enter the show and competition. There are about 40,000 varieties of roses in the

world, with each belonging to one of the three groups: Species (wild), Old Garden Roses (OGR, roses which existed before 1867), and Modern Roses (roses that did not exist before 1867). Under these three main groups are a total of 37 classes of roses, for example, the Hybrid Tea class is a Modern Rose.



Figure 3

Many people are familiar with hybrid tea roses because hybrid teas have showy tea roses. Other desirable qualities of hybrid teas include repeat blooming and many colors to choose from. Hybrid teas have long stems and the flowers are more 3-D, with a higher center. They are often used in cuttings or making bouquets. One famous hybrid tea is 'Peace'. This yellow rose with pink trim has been available commercially since 1935 and it is still going strong. Other very popular classes of roses in the Modern Roses group include 'Grandiflora', 'Floribunda', and 'Shrub'. I love floribunda because they bring a sea of color to the garden, which is so enjoyable. I have 'Mardi Gras' and 'Candy Cane Cocktail' in my garden now and my neighbors often make stops to check them out.

Rose Arrangement

Roses used in these arrangements do not need to be "Arranger Grown" (AG). However, arrangements using AG roses shall receive higher merit.

There are many styles of flower arrangements. For example: Traditional, Modern, and East Asian. Within each style, there may be multiple sub-styles. A rose arrangement is judged within each sub-style. All arrangements must use roses as the focus point.

What is the scoring system used by the judges? Each arrangement is evaluated by the following five items: Conformance (15 points), Design (30 points), Perfection of the Roses (30 points), Creativity (15 points), and Distinction (10 points). A perfect score is 100 points.

Of these five items listed above, I found "Perfection of the Roses" may be the most challenging one. To maintain the quality of the roses during the show, the competitors who chose to use AG roses must scout their gardens for those promising ones, groom them, pick them the day before the show, and properly store them in a fridge, etc.

For experienced flower arrangement artists, it may be easy to select materials for a specific design he or she had in mind.

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However, for enthusiastic beginners, it can be very confusing. No need to worry! If you are not sure which style your design is, you can always enter the work into the “Anything Goes” category! (See Figure 4) In addition, if you have not earned any awards in the past, then you may enter your work into the “Novices” section. This ought to increase your chance to win a blue ribbon! Oh, did I mention you can enter multiple arrangements?



Figure 4

Each entry must include the correct name of the variety of the roses. In addition, the correct class must be indicated. Any small mistakes made will disqualify the work.

Are you ready to dust off your fancy camera? I know I am.

After Show

Rose hips are often used to make tea and the petals can be used to make perfume. But roses cannot really feed hungry stomachs. So why roses? Roses, with their beauty and fragrance make us happy and hopeful. Red roses represent love and yellow roses are for friendship. Like music and art, life needs more than food so there comes roses.

Rose Photography

Like those rules applied to the Horticulture and Arrangement categories, the photos of roses are also evaluated within each group called a Class. There are a total of seven “Classes”; for example, “One Bloom”, “One Spray”, “Macro Photography”, and “Rose Potpourri”, etc. The “Macro Photography” class is an interesting one because the photos will show some part of a rose or rose plant, in a magnified manner. The “Rose Potpourri” class includes images of rose hips, stem, part of a rose blossom, etc. (See Figure 5).



Figure 5

This was my first time attending a rose show. The event was well-organized and the volunteers were very dedicated. All roses on display were of the highest quality and they looked amazing. The color, the fragrance, the art, are all very impressive.

One of the benefits of attending this type of show is to find roses that are so beautiful and that you never knew existed. I was excited to see the stunning ‘Play Boy’, a floribunda, and the delicate ‘Maroon Eight’, a miniature. I will be so proud of myself if they are in my garden!

You do not need to be a member of the NBRS to enter the show. However, being a member helps you to gain access to training opportunities and fun activities. So why wait? ☺

GUACAMOLE AND MARGARITAS

Sherry Richards, U.C. Master Gardener, Solano County



Photo Credit: “LP”; Used With Permission

It was time for research when I was asked these questions: “Is this a picture of a male or female flower on my avocado tree?” “Will I get avocados?”

***Persea americana* Mill.:**

Avocado trees are tropical members of the Laurel family (*Lauraceae*) - native to Mexico, Central and South America. California is a large producer of

avocados. Ok so far! As I discovered, avocados trees have a remarkable flower unlike other plants. I needed a refresher on pollination which I hope will be helpful to you!

Plants are a food source for all living things – humans, insects, and other animals. They provide water, medicine, shelter, even

the air we breathe, and many things like the simple enjoyment of a bouquet of flowers from a garden.

Plant Flowers: Most flowering plants have perfect flowers – having both male and female structures within a flower. Other plants have imperfect flowers – either male or female. See diagram on Page 6.

Pollinators: Bees, wasps, butterflies, birds, bats; moths, beetles, and flies move pollen needed for fertilization of flowers. Wind, water, and sometimes gardeners or animals in a garden move pollen. Most plants need help from pollinators to complete fertilization.

Without or Poor Pollination: Lack of pollination may produce no fruit, poor quality or quantity, or strange looking fruit, or underdeveloped flowers. Factors such as rain, low light, too cold or too hot temperatures can affect how many pollinators are

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flying around moving pollen.

Self-Fruitful, Self-Pollinating, Self-Fertile: – These terms all mean the same: Transfer of pollen from male anther to female stigma in the same flower in a plant.

Cross Pollinate: Transfer of pollen from male anther of one plant to the female stigma of another plant.

Open Pollinated: Pollination by unknown male pollen source - occurs naturally i.e., wind or insects.

Nectar: Provides energy to pollinators. Not all plants make nectar. Plants use nectar to attract pollinators.

Pollen: Pollen provides protein and nutrients to pollinators. The male structure flowers have pollen grains. To complete fertilization, the pollen grains must get to the female structure within perfect flowers; or from a male flower to a female flower in imperfect flowers.

Bumblebees – “Sonification”: Bumblebees will visit certain agricultural crops (such as tomatoes and eggplants) vibrating to shake pollen from flower anthers. There’s a buzzing sound when they do this as the flight muscles separate from their wings so they can shake the anthers.

Plant Reproduction:

- Sexual (seed propagation) - Occurs in most flowering plants - fertilization in the flower female structure with pollen grains from male structure resulting in a seed(s) – these seeds may not produce plants, fruit, flowers etc., looking like the original.
- Asexual: (vegetative propagation) - Occurs through division, cutting, layering, and grafting of plant pieces to make a new plant – a clone of the original.

Now back to the avocado flower question: Avocado tree flowers are self-pollinating - remarkable in this way: The same flower opens either male or female and reopens the as the opposite for fertilization.

There are two types of avocado trees. Here’s some basic information:

- Type “A” variety avocado trees - flowers are usually female in the morning until about noon and male in the afternoon i.e., ‘Hass’, ‘Gwen’, ‘Pinkerton’.
- Type “B” variety avocado tree - flowers are usually female

in the afternoon and male in the morning. i.e., ‘Fuerte’, ‘Bacon’, ‘Zutano’.

- Flower openings operate like clockwork only when the average temperature (night minimum day maximum) is above 70 degrees. Below 60°F will likely result in no fruit.
- If temperatures fall, daily flower opening may be irregular so a tree may have both male and female flowers at the same time possibly setting a heavy avocado crop.

The avocado flower picture I was shown (taken late morning) appears to be a male flower. Will it produce avocados? Not sure, as temperature, tree age and other factors affect fruiting. The tree was grown from an avocado pit, and the tree is about 12 to 15 years old. It has produced only six avocados during that time.

The University of California, Riverside “Avocado Information” website “Frequently Asked Questions” section says trees grown from pits may take 5 to 13 years to produce blooms or fruit.: <https://avocado.ucr.edu/avocado-faqs>.

Questions about avocado trees, how to make a pollinator garden, or any gardening questions - please contact UCCE Master Gardeners-Solano: Email: mgsolano@ucanr.edu Telephone: 707-784-1322.

Margaritas to go with your guacamole? Thank a bat, as tequila comes from the blue *Agave tequilana* – pollinated by bats during the night! ☘

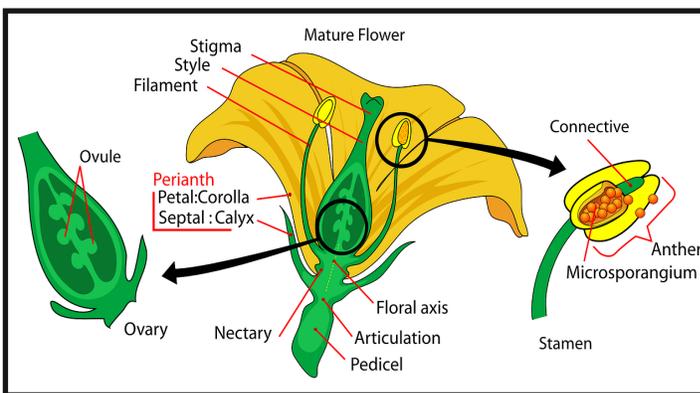


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NINE THINGS YOU CAN DO TO KEEP YOUR SUMMER TOMATO GARDEN HEALTHIER

Nanelle Jones-Sullivan, U.C. Master Gardener, Solano County

Tomatoes (*Solanum lycopersicum*) are one of the most popular garden vegetables (okay, fruit), and it is easy to see why! They can produce lots of fruit within a small footprint, they come in wonderful colors, shapes, and sizes, and they are used in many dishes. On the other hand, they are not exactly trouble free, and growing them in the hot and dry climate some of us live in comes with its own challenges.

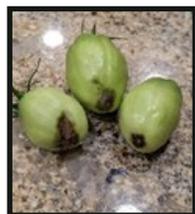
Good cultural practices go a long way toward keeping your tomato garden free of pests and disorders. These measures may be all that you need!

Monitor your plants regularly, so you can become familiar with their appearance, and catch things before they are hard to control.

Fertilize your tomato plant when they first set their fruit and about every four to six weeks thereafter, but follow directions and apply only as much fertilizer as needed.

While it is important to maintain plant vigor, and adequate leaf cover to avoid sunscald, excessive nitrogen can lead to lush, new growth, which can increase aphid populations.

Controlling weeds in areas surrounding the garden and keeping the garden patch weed free can help reduce pests such as aphids, thrips, stinkbugs, and caterpillars that might start out on weeds and then invade the garden.



Blossom End Rot

Adequate moisture balance in the soil is the single most important environmental factor in noninfectious diseases. "**Blossom end rot**," dark brown to black, leathery, sunken areas appearing on the bottom of the tomato fruit where the blossom was, is related to a calcium deficiency but is often aggravated by high salt content or low soil moisture. Keeping soil evenly moist helps prevent cracking. In addition, water-stressed plants are the most likely to be damaged by spider mites.

Staking plants keeps them off the ground, which reduces fruit rot, makes pest management and harvesting easier, and allows more plants to be grown in the same space.

Mulching is one of easiest and most efficient methods of suppressing weeds and can help maintain soil moisture and temperature and reduce fruit cracking. A three-to-four inch

layer of compost or two inches of "leaf mould" (not fresh leaves) is great in a vegetable garden.



Hornworm

Hand pick tomato **hornworms** and stink bugs. Stink bugs are shield shaped, with a large triangular plate on their back. For hornworms, named for the horn shaped feature on their rear end, look for chewed leaves and black or green droppings ("frass"). If you don't want to touch them, you could also snip them with shears. Drop

them in soapy water. You can pinch or prune out stems or leaves with heavy infestations of aphids, or spray aphids off with a blast of water.

Reduce dry, dusty conditions. Hot, dry, dusty conditions often lead to mite outbreaks. While some experts advise avoiding moisture on leaves, in my garden, occasional rinsing of tomato plants with water to remove dust has really helped prevent serious infestations of **spider mites** this year. Be sure to get good coverage, especially on the undersides of leaves. Apply water to pathways and other dusty areas at regular intervals.



Spider Mite Web



Aphids and Ladybug Eggs

Do not kill the good guys!– Avoid using broad-spectrum insecticide treatments which can cause outbreaks of pests when beneficial insects are killed in the process. Sprays of water, insecticidal oils, or soaps can be used, if necessary, but test the product on one or two plants to be sure it is not damaging to them. Ladybugs lay their eggs where there will be something for the little ones to eat!

Add plants that attract, feed, and shelter insect parasites and predators to enhance biological pest control. Use plants that provide nectar and pollen, which the adults of many natural enemy species need to consume. x

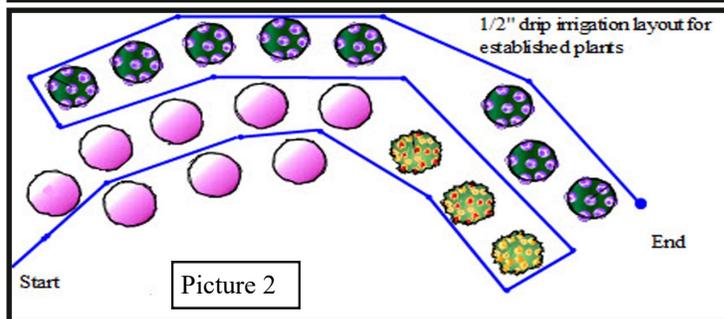
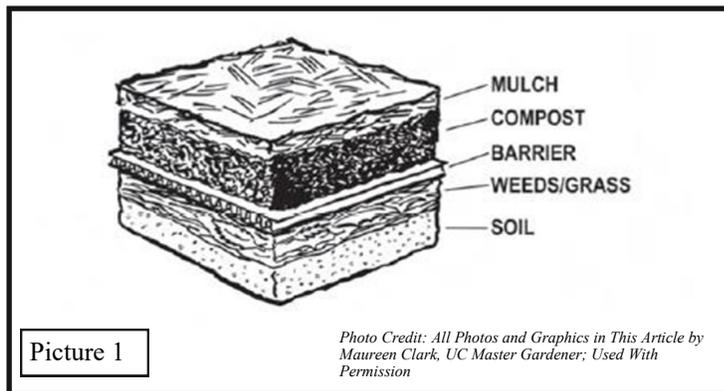


"Insectary plants" are plants that attract, feed, and shelter insect parasites and predators to enhance biological pest control.

SHEET MULCHING YOUR GARDEN

Maureen Clark, U.C. Master Gardener, Solano County

- 1) Mow or string trim all tall weeds and/or grass to 2-3" tall.
- 2) Soak the area to start the natural process of decomposition.
- 3) Remove 12" wide by 8" deep strip of soil from the perimeter of the pre-existing lawn. See Picture 1.
- 4) Completely cover the grass with cardboard. Overlap the pieces by 6-8". If you use 1/8" thick rolls of cardboard, use two layers of cardboard.
- 5) Use 6" long, 11 gauge landscape/sod staples to secure down the cardboard.
- 6) Arrange the plants where you want to install them. Mark a "x" on the cardboard where the plants are going to be installed.
- 7) Cut the "x"s in the cardboard using a knife and pull the flaps back. Then lightly wet down all the cardboard.
- 8) Dig the holes twice as wide as the container size. Install the plants. Plant should be installed 2" higher than the original ground. This allows the plants to settle into the ground. Put the cardboard flaps back down. Water the plants thoroughly.
- 9) Lay out the 1/2" drip tubing at the root zone of the mature size of the plant. Use staples to secure the irrigation down. Ex: If the plant grows to be 4' wide, then place the 1/2" drip 2' away from the base of the new plant. See Picture 2.
- 10) Remove the figure 8's from the 1/2" drip tubing. Turn the water on for that zone and clear out any foreign matter from the drip irrigation. Turn the water off.
- 11) Add the 1/4" spaghetti tubing and place the emitters at the root zone of the new plants. This tubing should be readjusted to the root zone after the plants have matured. The plants will take approximately 1½-3 years after installation to become established.
- 12) Test the irrigation. Visually inspect to make sure all the emitters work.
- 13) Add 2" of organic compost on top of the cardboard and around the root ball of the plants. Wet down the compost.
- 14) Add 3" of mulch. Do not pile up the mulch at the base of the plant. Keep mulch 2-3" away from the stem/trunk, or the plants will suffocate.
- 15) Your new plants will need water and attention when they are young, even if they are drought tolerant. Be sure that your Irrigation Controller is set correctly.
- 16) Have fun and enjoy your new garden! ✕



LUTHER BURBANK

Brenda Altman, U.C. Master Gardener, Solano County

Several weeks ago, I travelled to Santa Rosa to visit and explore the Luther Burbank Home and Gardens, a registered National State and City Historic Landmark. It is also an ASHS (American Society for Horticultural Science) Landmark. The [Luther Burbank Home and Garden](#) was originally a 4-acre laboratory. Parts of it were sold after his death by his widow, Elizabeth. There is now 1.6 acre plot which visitors can explore, and become familiar with his life and background.

Luther Burbank was buried on the property in an unmarked grave under a Cedar of Lebanon tree (which became diseased in 1989 and was removed.)

His greenhouse is also on the property, which is where many of his experiments started. Burbank had a safe where he kept his valuable seeds and cuttings. One of the required “end of the day” rituals was emptying out his, and his employees’ pockets to check for seeds and return them to the safe. Other experiments, like grafting, were done at his experimental farm 8 miles west, in Sebastopol, CA.

Born March 7, 1849, in Lancaster, Massachusetts, and died in Santa Rosa, California, Luther Burbank was a self-taught horticulturalist. He developed over 800 new varieties of plants, including over 200 varieties of fruits, vegetables, grains, nuts, and ornamental flowers. Burbank had a keen eye and an inquisitive mind. Some of his techniques included: specialized seed cultivation, cross pollination, and grafting.

Burbank’s imprint is on so many important plants that we enjoy today! From the Shasta daisy, to a spineless cactus, to Burbank’s Elberta Peach, to the Idaho Russet Potato, Burbank Tomato, grafted apple trees, and hybridized plums and pluots; he worked on them all. Not bad for a self – taught horticulturalist.

Using his native curiosity, he discovered potato seeds which he cultivated and eventually grew a variety which was far superior than previous potatoes. He sold this Burbank Potato (a russet Idaho potato) and used the proceeds to move to Santa Rosa and buy a house and farmland. He was excited to be in California because of its ideal growing conditions and a longer growing season than Massachusetts.



Photo Credit: All Photos in This Article by Brenda Altman, UC Master Gardener; Used With Permission

The Idaho Potato, Russet Burbank, is a staple of the Idaho Potato Industry and it is trademark protected. It proved to be more blight resistant and resulted in larger yields than previous potatoes. This potato has brought us French fries, tater tots and garlic fries. A winner in my book!

One of the fruits he hybridized includes the pluot or pluot, an apricot-plum hybrid. It has more plum features than apricot, whereas a aprium would have more traits of an apricot. A pluot is more 50-50 plum-apricot, whereas a pluot is more 75-25 plum-apricot. Burbank spent significant time developing plum prunes and pluots. In 1945 Burbank’s ‘Santa Rosa’ plum variety accounted for 36% of that’s year harvest. He kept an enormous amount of information in his head. Some of the techniques he used in cross pollination were never written down, which sometimes proved difficult in trying to repeat the experiments.



The Author’s Pluot Tree

I have a pluot tree in my yard and it produces juicy pluots annually. It has another similar tree nearby, which is necessary for fertilization.

Another one of Burbank’s experiments was with apples. In his garden, he has an apple tree with 21 varieties of apples grafted on one root stock. Burbank knew he could improve yields by grafting fruits onto hardier root stocks. By grafting several species on to one root stock he could have a virtual apple orchard with just a few trees.

I purchased a multi-grafted apple tree two years ago and this year it will yield four different apples: a ‘Gala’, a ‘Fuji’, a ‘Honey Crisp’ and a ‘Golden Delicious’. Thank you, Luther Burbank, for your grafting experiments!



Multi-grafted apple tree in the author’s yard. You can see the differences in the bark for each graft.

We all owe a huge debt of gratitude to Luther Burbank. Indeed, Luther Burbank gave us many seeds, hybrids, and grafts, for thought. ☺

Further Reading:

- [Luther Burbank’s Plums](#), by David Karp, @American Society for Horticultural Science 2015, Vol. 50 Issue 2, pp189-194.
- <https://Idaho.edu/cals/Idaho-agricultural> Idaho Potato
- Luther Burbank Home & Gardens, tour handout, burbankhome@lutherburbank.org
- Luther Burbank’s Experimental Farm, www.wschsgf.org
- [Luther Burbank’s Tupper Street Home](#), by Dorothy Anne, Press Democrat, Dec. 22,1906

SOLANO FARMING AND LOCAL GARDENS FOR FAMILIES: A SHORT HISTORY AND ENTICEMENT FOR BUDDING NEW GARDENERS

Winona Victory, U.C. Master Gardener, Solano County

Did you know that agriculture brings significant resources to Solano County and our county food bank provides one in six households with food supplements? Fruit and fresh vegetables are a sizable portion of a healthy diet, and our local farmers need the public supporting them by buying directly from them: shopping at Farmer's Markets or subscribing to CSA boxes.

Farming Families: Solano County was home to Native Americans five to six thousand years ago. It was settled by Europeans in 1810 and parceled out by Robert Waterman in 1858. Rich soil promoted development of fruit orchards and ranches. The areas in the Suisun Valley were planted in fruit and walnut orchards. Fruit was shipped east in railcars. Fruit processing into canned goods was also located here. Over the last 30 years that I have lived here, several of the orchards have been cut down with only partial replanting of young prune plum trees with fruit to be sent to Asia. Most stores and bakeries have closed and there are many fields that are no longer planted with fruit trees. Wine grapes and olive trees are more valuable.

[Erickson Ranch](#) is over on the Cordelia side of I-80. After many years of farmstand and farmer's market, the Ericksons make a wide variety of jams and jellies. My current favorite is the Meyer Lemon Marmalade. See their website for online ordering.

Going north on Suisun Valley Road, there are several wineries including [Back Road Vines](#), [Village 360](#) which has a restaurant featuring local produce in season. The [Wilkinson family](#) has a farm stand there during summer months. [Cal Yee](#) is a little further north, and they have many varieties of dried fruit and vegetables and nuts and snacks that are Asian in style. [Il Fiorello](#) is nearby and the Sievers family produces award-winning olive oil and vinegars. They serve lunch on the weekends.

Along Rockville Road (2734 Rockville Rd.), there are fewer stands but one of the best is Robledo's who sell the best strawberries and other produce all summer. Again, this is a family business, and they are in a great location.

Over in Pleasants Valley, there has been catastrophic wildfire that burned out quite a few farms and killed livestock. In this area, you will find [Soul Food Farm](#) which now makes olive oil and has a small farm stand open several days a week in the warmer months. Alexis Koefoed has started a food club that sells other local farm items such as honey, bread, meat, and spring vegetables. She is also growing flowers for cutting and

arranging. [Morningsun Herb Farm](#) is across the road. Rose Loveall, owner, grew up in the house and worked with her father when she was growing up. It is a truly special place. Her knowledge of herbs comes from worldwide travel. Most everything is propagated here on site.

Nearby is [Brazelton Ranch](#) (recently put in the Solano Land Trust ownership). Fruit is their specialty: citrus in winter months, peaches, nectarines, and other stone fruit during summer months. Their apricots and apriums make wonderful jams and pies. Around the corner to Bucktown road, there is [Be Love Farm](#), who uses regenerative principles to grow organically. Their farm stand has a variety of farm-made products, including pizza and fruit cobblers. Farm tours can be prearranged.

Living in this part of California gives you opportunities to visit local farms and purchase fruit and vegetables at peak season. The fresher it is, there is more nutritional value. Our local farms are generally small in size and sell specialty crops that do not have a large commodity scale with price supports and overseas markets. Please find your way down the byways to seek out the family farms that are around. Usually, farms are only open at peak season and roadside signs or checking out City of Vacaville, Fairfield, Vallejo, Dixon, Winters, Woodland web listing is a good way to get a map with directions and even online sales of things like olive oil, jams and jellies, meat, and eggs.

Small farmers have begun adopting "regenerative soil practices" which means interspersing animals such as chickens or geese in areas that are not ready for harvesting for food. Examples are [Eatwell Farms in Dixon](#), Be Love, and Soul Food Farm in Vacaville. This process actively improves soil quality, improves overall biodiversity, and preserves clean water from chemical runoff. By reducing the use of pesticides using Integrated Pest Management, we are reducing exposure to persistent and unnecessary use of manmade chemicals. If a farm uses several of these methods, soil can be regenerated to become less dependent on the expense for costly equipment and exposure to chemicals that expose workers and consumers. Not every farm is truly organic, but understanding how important it is a key to maintaining a thriving ecosystem. ☘

UCCE MASTER GARDENERS-SOLANO THIS SUMMER

By Ruth Clawson, U.C. Master Gardener

Follow our SOCIAL MEDIA ACCOUNTS on Instagram

([ucmastergardenerssolano](https://www.instagram.com/ucmastergardenerssolano)) and Facebook ([UCCE Master Gardeners of Solano County](https://www.facebook.com/UCCE Master Gardeners of Solano County)) to see what we are up to and to get local gardening tips! This is an easy way to stay up to date on all of our events and opportunities!



The Farmer’s Market in Vallejo is every Saturday from 9 am to 2 pm. The Market is located at 400 Georgia Street. This is a year-round market. Bring your gardening questions or plant/insect samples to our experienced Master Gardener’s table.

The Farmer’s Market in Benicia has a Master Gardener’s table on July 6 and 20th, 4:30 to 6:30pm. Drop by with questions.

Dunnell Nature Park Monthly Talks are on the second Saturday of each month at 9:30am. You’ll find Master Gardeners sharing great information there—3351 Hillridge Drive, Fairfield. Upcoming talk topics include:

Come See Our Summer Blooms!
The UCCE Master Gardeners of Solano County Office is located at 501 Texas Street, Fairfield. Our pollinator pathway runs through our parking lot and is full of color and summer gardening inspiration. Stop by anytime.

- ◆ **July 8th-** Melissa Sandoval and Deborah Gallagher on “**Summer-izing**” Your Garden
- ◆ **August 12th**– no presentation at the Dunnell this date
- ◆ **September 9th-** Michelle Krespi and Cheryl Obert on **Plant Propagation**

Vacaville Library Talks:

Stop by the Vacaville Library, 1020 Ulatis Drive, on the third Thursday of each month, 6-7pm, for an interesting gardening discussion. Deb G. and Christina R. will be presenting on the following topics:

Home Depot, Fairfield

Beginning April 1st, Master Gardeners return to Home Depot at 2121 Cadenasso Drive in Fairfield. Betty V. and other Master Gardeners will be there with their knowledge and lots of helpful resources from 10-2, every other week on the following dates. Bring your questions!

- ⇒ July 1, 15, 29
- ⇒ Aug. 5, 19
- ⇒ Sept. 2, 16, 30
- ⇒ Oct 7—last one for this year

- ◆ **July 20th - Tools for the Job**
• Body coverings for gardening safely • Display, description and usage • Cleaning and sanitizing • Maintenance • Storage • Sustainability: using what you have • Assessing: tool needs • Activity – bring a tool to sharpen and clean

The UCCE Master Gardeners of Solano County Office is located at 501 Texas Street, Fairfield. Check out the Spring blooms in our pollinator pathway that runs through our parking lot. For more gardening and event information, visit our website <https://solanomg.ucanr.edu/>. UC Master Gardeners staff a Helpline serving Solano County which is available 24 hours a day, 7 days a week. Call 707-784-1322 or email: mgsolano@ucdavis.edu.

- ◆ **August 17th - Lawn Alternatives**
• How to redesign a yard space • Artificial turf • Ground cover • Ornamental grass • Shrubs • Food gardening • Other elements

- ◆ **September 21st - Bulbs**
• Bulb life cycle • Different types of bulbs • Picking healthy bulbs • Bulb layering • When to fertilize • When to dig up, divide and replant • Flowers: early Spring through Fall • Getting familiar with bulbs • Activity: demonstration

Children’s Garden
275 Beck Avenue, Fairfield, CA, 94533
Master Gardener’s work monthly at the Children’s Memorial Garden, 275 Beck Avenue, Fairfield, CA. This might be a great place to visit or to stop by for some gardening inspiration.

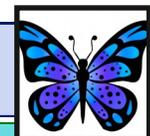
The Sensory Garden
Behind Fairfield Civic Center Library
Drop by The Sensory Garden anytime at 1150 Kentucky Street near the Civic Center pond. Teresa Lavell coordinates gardening efforts here. There are an abundance of interesting plants to see, touch, and smell!



Photo Credit: Melinda Nestlerode, UC Master Gardener. Used With Permission



SUMMER GARDENING GUIDE



	JULY	AUGUST	SEPTEMBER
P L A N T I N G	<ul style="list-style-type: none"> ◇ For summer-to-fall color, choose ageratum, celosia, coleus, marigolds, and zinnias ◇ Continue planting warm-season vegetables until midmonth: beans, corn, tomatoes ◇ Start perennials from cuttings: dianthus, geraniums, verbena ◇ Sow seeds of columbine, coreopsis, forget-me-nots and foxglove 	<ul style="list-style-type: none"> ◇ Start seeds of cool-season crops: broccoli, cabbage, lettuce—to set out in August ◇ Direct-sow edibles: carrots, onions, peas, radishes ◇ Start sowing seeds of cool-weather bedding flowers in flats now: calendula, candytuft, pansies, snapdragons, stock 	<ul style="list-style-type: none"> ◇ Seed: try a selection of colorful salad greens, which are easy to grow at home ◇ Time to start thinking of what tree to buy. Consider fall color and shop when the leaves color up ◇ Shop for bulbs now to get the best selection ◇ After midmonth, sow seeds of California poppy and clarkia
M A I N T E N A N C E	<ul style="list-style-type: none"> ◇ Control weeds—pull or hoe them as soon as they appear ◇ Deadhead (remove old flowers) from dahlia, rudbeckia, rose and other perennials ◇ Fruit trees: brace limbs that are sagging with fruit. Clean up any fallen fruit ◇ Continue to irrigate plants, especially when hot and windy weather is forecast 	<ul style="list-style-type: none"> ◇ Deep-water trees. Use a soaker hose and place at drip line of tree ◇ Fertilize warm season annuals ◇ Deadhead spent blooms ◇ Refresh hanging baskets with new transplants. Succulents work well ◇ Continue to harvest vegetables for maximum production 	<ul style="list-style-type: none"> ◇ Get flowering annuals and perennials as well as fall-planted vegetables off to a strong start by incorporating a high-nitrogen fertilizer into the soil before planting. Fertilize again in 2—4 weeks, or follow label instructions ◇ Later this month is one of the best times to rejuvenate bluegrass, fescue, and rye grass lawns. Rake and reseed. Be sure to irrigate and keep moist
P R E V E N T I O N	<ul style="list-style-type: none"> ◇ Budworms—inspect plants for holes in buds and black droppings. Use organic pesticide, such as Bt (<i>Bacillus thuringiensis</i>), to control ◇ Deep water trees. Midsummer heat can cause drought stress. Deep water citrus, fruit and flowering trees once every week or two. Water less thirsty trees once a month ◇ When foliage dries completely, dig up spring-flowering bulbs and tubers. If daffodils and Dutch iris appear crowded, dig them up too. Store bulbs in a cool, dry place until fall planting ◇ Dig and divide overcrowded bearded iris clumps. Share with friends and neighbors 	<ul style="list-style-type: none"> ◇ Continue to deep water all plants to avoid sunburn and other damage from hot weather ◇ Continue garden clean up. Remove fallen fruit and garden debris ◇ Inspect plants for signs of spider mites. Apply a blast of water spray to undersides and tops of leaves to dislodge dust mites 	<ul style="list-style-type: none"> ◇ Use a selective pre-emergent herbicide on lawn to keep winter weeds under control ◇ Clean up fallen fruit and leaves to keep diseases at bay ◇ Clean up old vegetables to prevent over-wintering of insects and disease



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<http://cesolano.ucdavis.edu/newsletterfiles/newsletter130.htm>

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**SUMMER
2023**