

Seeds For Thought

Master Gardeners-Solano County

Fall 2022 Vol. 17 Issue 4



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

THE UNWANTED ARTICHOKE

Patricia Matteson, U.C. Master Gardener, Solano County



Artichoke Thistle Flower
Photo Credit: Stream Tuss; Used With Permission

No, this isn't about a sad cartoon vegetable in an uplifting children's book. There's nothing cuddly about this real-life artichoke. Artichoke thistle, that is, also called the cardoon (*Cynara cardunculus* L., family Asteraceae). Native to the western and central Mediterranean region, where it still occurs as a wild plant, artichoke thistle has become an invasive weed along the

U.S. West Coast and in Australia and the pampas of Argentina. In those places it is the target of quarantine, abatement, and eradication programs.

C. cardunculus was domesticated in ancient times. Cultivated forms have been selected by humans for greater crop yield and fewer spines, to make harvest and processing easier. They include California's commercially-grown globe artichoke (*C. cardunculus* var. *scolymus*) with its larger, edible flower buds, and other domesticated varieties that have been bred for thicker, edible leaf stems. Those, called "cardoon," are a common vegetable in Southern European and North African cuisines.

Weedy wild-type artichoke thistle remains the prickly wicked stepsister of this ancient tale. Although its flower buds are edible, they are relatively small and exceedingly spiny. It is notorious for invading disturbed open sites such as overgrazed areas. Artichoke thistle degrades pastures and native grasslands, reducing habitat for native wildlife and shading out desirable plant species, competing with them for nutrients and water. Its taproots are massive but do little to stabilize soil. This thistle can

be impossible to hike through, and its spines repel sheep and cattle, which avoid grazing near heavy infestations.



Impressive Taproots
Photo Credit: Michael Zeiss; Used With Permission

In California, invasive artichoke thistle is commonly found in coastal areas below 1,500 feet elevation and with an annual rainfall of 20-27 inches. Solano County, while not the most heavily infested part of the Bay Area, has its share. For example, they can be spotted on hillsides along Highway 80 south of Red Top Road. Seeds germinate year around in the fog belt, but most seedlings appear in the fall after the rains have started. Mature

plants may be well over five feet tall and wide, with deeply lobed and heavily-spined green to grey-green hairy leaves up to 20 in long. The flowers branch from tall central stalks.

Controlling these noxious weeds, not to mention eradicating them, is a challenge. Artichoke thistles may live for many years, and can produce thousands of seeds annually. The seeds have long, feathery hairs. They are borne on the wind, and are carried by birds, livestock, and flooding as well. Seeds may survive in the soil for up to five years. Cutting and destroying



Artichoke Thistle in Late Summer
Photo Credit: Stream Tuss; Used With Permission

(Continued on Page 2)

The Unwanted Artichoke	1
True Bulbs and Other Bulb-Like Structures	2
Preservation Pointers: Fruity Flavorites.....	4
A Dynamic Duo: Betty Victor and Daughter Toni Greer	5
Blooms for the Holidays: Not Just Poinsettia, Amaryllis or Easter Lily	6
Four Common Bare Root Tree Fables	8
You Have a Friend at the Vallejo Farmers' Market	9

Raised Beds For Drought Conditions	11
Update on Invasive Species From the University of California, Agriculture and Natural Resources.....	12
Share Your Bounty With Your Neighbors.....	13
But Wait! There's More!.....	14
Solano Master Gardener's at Work This Fall	18
Wreath Workshop	20
Fall Gardening Guide	21

(Continued from Page 1—The Unwanted Artichoke)

flowers and seedheads before seed dispersal can prevent spread.

Digging the plants out is slow and exhausting because most of the deep taproots must be removed to prevent resprouting. Artichoke thistle abatement projects usually rely on

registered herbicides. For University of California artichoke thistle control recommendations, see https://wric.ucdavis.edu/information/natural%20areas/wr_C/Cynara.pdf.

Between 2007 and 2010, several Weed Management Area grants from the California Department of Food and Agriculture supported a collaborative campaign against artichoke thistles in Cordelia and the Montezuma Hills. Ranchers, staff members of the Solano Resource Conservation District and the Solano Land Trust, and other partners received training and herbicides for



Flowers and Seedheads Collected for Disposal
Photo Credit: Michael Zeiss; Used With Permission

making targeted ground applications. A contractor applied herbicides by helicopter to about 250 acres of carefully mapped areas that were 80-90% covered with thistles. That project had a substantial impact, but since then artichoke thistles have become even more widely established. No further large-scale projects are currently planned. The Solano Land Trust continues to conduct a modest, volunteer-aided effort to reduce thistle populations on its properties, chiefly in Lynch Canyon Open Space. Otherwise, control is up to ranchers and other landowners—including you! ✕

References

Agriculture Victoria, *Artichoke thistle*, <https://agriculture.vic.gov.au/biosecurity/weeds/weeds-information/artichoke-thistle>. Viewed 8/3/2022.

Contra Costa County Department of Agriculture, *Artichoke Thistle*, <https://www.contracosta.ca.gov/7558/Artichoke-Thistle>. Viewed 8/3/2022.

DiTomaso, J. M., G. B. Kyser et al. 2013. *Weed Control in Natural Areas in the Western United States*. Weed Research and Information Center, University of California, https://wric.ucdavis.edu/information/natural%20areas/wr_C/Cynara.pdf. 544 pp. Viewed 8/3/2022.

Holmes, Katherine, Deputy Executive Director, Solano Resource Conservation District. Personal communication, 8/16/2022.

King, Ed, Solano County Agricultural Commissioner. Personal communication, 8/22/2022.

Wikipedia, *Artichoke*, *Cardoon*, *Cynara*, <https://en.wikipedia.org/wiki/Artichoke>, <https://en.wikipedia.org/wiki/Cardoon>, and <https://en.wikipedia.org/wiki/Cynara>. Viewed 8/3 and 9/14/2022.

TRUE BULBS AND OTHER BULB-LIKE STRUCTURES

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

Tubers

Are you a tuber grouper? Or maybe a tuber cougar? Or maybe a tuber goober? Or maybe a tuber trooper? Whatever the case; it's fall and it's time to start planting.

Tubers are underground plant parts that form to be storage containers. They store energy and nutrients to produce daughters and sons for the next year and to sustain the winter. There are two types, root or stem. Tubers are grown as food because of their high starch and nutrient content.

Bulblike Forms

Stem Tuber – These tubers can grow in any direction. They are connected to the original stem by new stem-like off-shoots called stolons. They usually have a thin skin and produce nodes or buds, or what we know as eyes, all over their surface. Tubers can be cut up into many different pieces, with each piece bearing at least two nodes, and planted individually to create new plants that will be exact replicas of the parent plant. Examples are: Potatoes and yams.

Corm - A solid, vertical stem resembling a bulb. It has rough skin and a fibrous covering. It has a bud at the top that produces flowers, leaves and lateral buds. The lateral buds form to

produce daughter corms (cormels or small offsets). A corm is an annual. It uses its energy to produce, flowers, fruit and offsets. Examples are: Freesia, crocus, gladiolus, and trout lily.

Rhizome - Is a horizontal growing stem, and sprouts a new growth of roots along the underside of stem. The apex (topside) produces stems, leaves and flowers. It lies in the soil or just below the soil surface. Examples are: canna, German bearded iris, calla, edible ginger, banana tree, agapanthus and bird of paradise.

True Bulb - is an enlarged, modified bud containing a vertical stem surrounded by a dense of scale-like set of leaves. The leaves swell with stored food and then form flowers. Examples



Freesia
Photo Credit: All Photos in This Article by Maureen Clark, UC Master Gardener; Used with Permission

(Continued on Page 3)

(Continued From Page 2—True Bulbs and Other Bulb-Like Structures)



German Bearded Iris

are: garlic, lily, narcissus, scilla, daffodil, allium, crinum, and tulip.

Advice to Grow On

Chill Your Babies

- Some bulbs need to have a cold dormant period in order to produce flowers in warm locations. Bulbs

such as tulip, crocus, daffodil, hyacinth, muscari and snowdrop are good examples. Do not store them next to onions, apples or other fruits. Plant them right away after you remove them from the refrigerator.

Buy High Quality Bulbs - They shouldn't have soft, mushy or have rock hard areas. The bulbs should be big. The smaller the bulb, the less storage power it has and the smaller the flowers will be.

Choose Your Site - Your new bulbs will want warmth, sunlight, soil that contains a lot of organic matter or humus and good drainage is a must. Use organic compost, manure, or finely chopped, decayed vegetable matter. Some bulbs need less sun than others, it depends on the species. Protect them from North and West winds.

Planting - The ideal areas to install bulbs is the South side, at the top of a slope. Plant them in clusters, in odd numbers. Narcissus, in sets of 5; smaller bulbs, like crocus should be in higher quantity of 9 - 13. The depth of the bulbs should be two and half times deeper than their diameter. (1" diameter crocus should be at a depth of 2 ½"). I follow the instructions on the back of the bulb package.

A Word to the Wise

Most bulbs will repel deer and rodents. Narcissus produce a hallucinogenic effect when gophers eat them. One bulb that doesn't fit into this category is the tulip, gophers and deer relish tulips as a morning snack.

Remember to add 2 inches of mulch or compost in the fall to help protect and feed your bulbs throughout the winter. Divide your bulbs every 2-3 years.

Reasons for infrequent or no flowers, are due to different factors. Maybe they were planted too shallow, rodents were eating them, the soil was too wet or they were cut back when the leaves were green. Once the bulb has flowered, it goes into its 2nd growth cycle. It starts to manufacture food to develop buds for the following year's flowers. Do not cut, tie back, or braid the leaves. Let them naturally fade, turn brown and fall off, then dead head them. I know it can look unsightly, but you'll be glad you waited to cut them in subsequent years.

Whichever type of bulb you choose to plant, I hope the flowers bring you joy. ☘



Borbonica



Sparaxis—Harlequin Flower



German Bearded Iris

FRUITY FLAVORITES

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



Fruit Leather
Photo Credit: Gabriella Opaz; Creative Commons

With the abundance of local fruits in our area we have access to a wealth of nutritious snacks. Fruit leather is one example. Fruit leather is a chewy fruit product—economical, easy to make and easy to store. All you need are drying trays or baking sheets, plastic sheets or plastic wrap, and a

blender, food processor or potato masher.

The process is easy. Puree the fruit (fresh, frozen or canned); spread ¼ inch thick on prepared surface; dry in sunshine, oven or dehydrator. If using thin kitchen plastic wrap on the baking sheets, tape down the edges to make spreading the puree easier. Do not use wax paper or aluminum foil, as they tend to stick. Non-stick baking sheets lightly coated with vegetable oil or with non-stick vegetable spray also work. Parchment paper is another option.

To prepare the fruit, wash, peel if necessary, remove pits, and puree. In some blenders you might need to add a small amount of water or fruit juice to start the blending process. Plan to use about 2 ½ cups puree for a baking sheet or tray about 14" x 18." Spread evenly and leave about a one-inch border to allow for spreading. Another option is to pour smaller amounts to make 4 to 6-inch fruit leather "pancakes."

Apples can be cooked before pureeing. For best results, to prevent darkening, heat the following purees to almost boiling: apricots, cherries, peaches, nectarines and pears. Cool these before combining with other purees or flavorings. To light-colored fruits you can add 2 tsp. lemon juice or 1/8 tsp. ascorbic acid to help prevent darkening. Other fruits that dry well include bananas, berries, cranberries, pineapples, plums and strawberries. Apples combine well with all other fruits. Bananas combine well with apples, berries or plums. Pears are great when combined with apples, cranberries, pineapple or plums. If desired, you can add ¼ to ½ cup light corn syrup, honey, agave syrup or sugar for sweetening 2 cups fruit. Also, try very small amounts of spices (1/8 tsp. or more per batch) such as cinnamon, nutmeg, ginger, allspice, or flavorings such as lemon, almond, orange or vanilla, etc. Sesame and poppy seeds and chopped nuts

are tasty additions. This fall I plan to make persimmon leather out of both Hachiyas and Fuyus. Added seasonings may include lemon zest or a little lemon juice, cinnamon or grated ginger.

Dry the puree in a dehydrator at 140°F for 6 to 8 hours or in an oven at 140° to 150°F for up to 18 hours with the door open slightly to allow moisture to escape. Sun drying outside in the hot sun can take 20 to 24 hours. If drying outside, cover with cheesecloth or nylon netting above the drying tray. Secure the cover so that it doesn't touch the sticky leather. Dry the puree until it feels like soft leather and is pliable. Leather dries from the outside edge toward the center. Test for dryness by touching center of leather; no indentation should be evident. While warm, peel and roll up; allow to cool and rewrap the roll in plastic. To prevent any possible sticking you can cover the surface with plastic wrap before re-rolling for storage. Leave whole or cut them into 4 to 6-inch lengths. Store in jars for 1 month at room temperature, in the refrigerator for 4 months, or in the freezer for a year. The leather can be used in many ways. One way is to spread an unrolled roll with cream cheese (slightly sweetened with honey if desired), roll it up again and slice crosswise into little "jelly rolls." Small bits of leather can be used in baked goods such as muffins.

Making fruit leather is a wonderful way to use up even small amounts of fruits, resulting in a nutritious, economical treat which looks like a work of art when rolls are displayed in clear glass jars. Have fun and experiment with these tasty treats. ☺



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

A DYNAMIC DUO—BETTY VICTOR AND DAUGHTER TONI GREER

Kathy Low, U.C. Master Gardener, Solano County

Solano County has two sets of spouses in its volunteer Master Gardener program, but only one mother and daughter. That mother and daughter, both Gold Badge volunteers (individuals who have contributed over 1000 volunteer hours) are Betty Victor and her daughter, Toni Greer. This dynamic duo of volunteers have helped the Master Gardener program in Solano County become the program it is today. Who are Betty and Toni?



Photo Credit: Pat Greer; Used With Permission

Betty grew up in Vacaville. After marrying her husband, who worked in banking, they moved to Corning, then to South Lake Tahoe, next to Eureka, before moving to Fairfield more than thirty years ago. Betty's love for gardening came from her mother who had a small vegetable garden and lots of different plants and trees as well.

Her daughter Toni's love for gardening didn't only come from her mother, but from her Vacaville grandmother as well, and her great uncle who had a ranch in Vacaville. She fondly remembers running around her uncle's ranch with her cousin eating fresh fruits and veggies. She recalls another influence that helped grow her love of gardening came from when they moved to Eureka. She decided God lived there because of the woods and the sheer beauty of the azaleas and rhododendrons.

Their paths to becoming a Master Gardener were also different. Betty didn't know much about the Master Gardener program. It was only after she attended an event in Placerville that she learned about them. She decided to become Master Gardener in Solano County in 2003. And she's enjoyed being a Master Gardener ever since then. She loves the friendship of the Master Gardeners, the knowledge learned from Master Gardener classes and educational events, and from other Master Gardeners, and meeting the public at different MG events.

Toni already knew about the MG program from her mom's involvement in it. When she and her husband moved home to Fairfield after living several years in Saint Louis, she observed

first hand how her mother and other Master Gardeners she'd come to know over the years enjoyed being together as volunteers, and decided she wanted to become a Master Gardener. She talked her best friend from high school, Jenni, into undertaking the training program with her. They became Master Gardeners in 2014.

Like her mom, Toni loves "the learning, laughter, and encouragement from one another which is based around the love of gardening in many ways." Toni has a long history of volunteerism, having volunteered in the community since she was thirteen. But she says she's enjoyed being a UCCE Master Gardener in Solano is the best. That explains why she earned her Gold Badge in slightly over five years.

Many Master Gardeners know Toni as being the lead for the creation and assembly of the information bags given out to the community at various events, for being the lead for the information table at the annual Youth AG day, and her favorite, being the lead for the Marketplace. For the Marketplace, which occurs once or twice year, quality handcrafted items are created by and generously donated by Master Gardeners and their family members. 100% of the proceeds go to the Master Gardener program. And over the years it has raised considerable sums used to directly support Master Gardener programs and purchases.

Betty on the other hand, is known for being the lead in gathering and prepping materials for the Annual Wreath workshop and being the lead for the information table at Home Depot. Every other Saturday from April to the first Saturday in October, the Master Gardeners staff an information table at the Home Depot in Fairfield and are ready to answer any gardening questions you may have.

When I asked Betty if she had any gardening specialties, she replied no. Her garden contains a variety of different plants and trees. She said if she sees something she likes, she buys it then finds a place for it in her yard. When I asked Toni the same question, she initially replied no, but loves salvias. But then she went on to say she loves talking to her plants, "the birds, hummers, bees, butterflies and more. It's very peaceful and calming. Maybe I do have a specialty – being a plant and creature encourager. They make my heart sing."

Her general advice for everyone is "JUST START GROWING."

(Continued on Page 6)

(Continued from Page 5—A Dynamic Duo—Betty Victor and Her Daughter Toni Greer)

Find a plant, color or fragrance that makes you happy in the garden and start there.”

And Betty’s advice for anyone interested in gardening is to “sign up to become a Master Gardener. There is so much to learn even if you think you know all there is about gardening. And the friendship is part of being a Master Gardener. If you like gardening and volunteering at different garden events, then this

is the place for you!”

For more information on becoming a Master Gardener, contact Jennifer Baumbach, Program Coordinator for the UCCE Master Gardener Programs in Solano and Yolo County at jmbaumbach@ucanr.edu or by phone or text at (707) 389-0645 today! ✂

BLOOMS FOR THE HOLIDAYS: NOT JUST POINSETTIA, AMARYLLIS, OR EASTER LILY

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

Choose a Gorgeous Holiday Cacti!

Thanksgiving, Christmas, and Easter Cacti (*Schlumbergera truncata*, *Schlumbergera bridgseii*, *Schlumbergera gaertner*) are often gifts, or we buy them blooming in beautiful colors around the holiday of their common plant name. As South American natives they grow in tropical jungles from 3,000 to 5,000 feet.

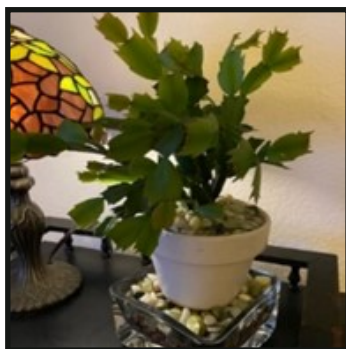


Photo Credit: Sherry Richards, Solano Master Gardener; Used With Permission

They are epiphytes using trees, other plants, root debris or stony/shady areas for physical support, getting water and nutrients from the humid air around them instead of soil. These cacti are in the *Cactaceae* category of succulents. Succulent plants store moisture in thick fleshy leaves, stems or roots. Succulents include over fifty botanical plant families including *Cactaceae* and others like *Agaveceae* and *Crassulaceae*.

Holiday cacti are often family heirlooms passed down to younger generations. They can live well over 50 years with good cultural care. Propagation of cuttings for new plants is easy - gifts for family, friends, and yourself!

General Care - (All three cacti are similar)

- Ideal temperature 50° to 70°F; freezes below 32°F. As rainforest plants they need humidity - in hot, dry weather use a “pebble tray” with gravel/pebbles, put plant pot on top not touching water, add water as needed and clean periodically. You can also just lightly mist to add humidity. Plants may drop flower buds in hot and dry weather.
- Loose fast draining potting soil mix – check with nursery for options; pH: 5.0 to 6.0

- Indoors: bright, filtered light; outdoors place in sheltered shady location when temperature allows.
- Prefers slightly pot-bound - repot if needed every 2 to 3 years – porous pot, i.e., terra cotta.
- Watering: Allow soil to dry partially - water when top half of soil is dry.
- Pests are usually not much of a problem but if you see pests (or diseases) and need help contact UCCE Master Gardeners*

Fertilizing

- Thanksgiving and Christmas cacti every 2 to 4 weeks, March to September (growing season) - **balanced half strength fertilizer**.
- Easter cacti all year with balanced half strength fertilizer but **never when in bloom**.

Check with your nursery for fertilizer options and use – water soluble, granular or slow-release.

Encouraging Blooms

Do you have a holiday cactus that is not blooming or does not have many flowers? Try moving the plant into darkness and cool temperatures for several weeks - which is needed to flower well. Master Gardeners have online articles to guide you with this easy method, referenced below, or contact UCCE Master Gardeners (see below*).

(Continued on Page 7)

(Continued from Page 6—Blooms for the Holidays: Not Just Poinsettia, Amaryllis, or Easter Lily)

Timing: Thanksgiving and Christmas cacti need to be in darkness/cool temperatures about mid-September for November/December blooms and Easter cacti in January for March bloom.

Pruning and Propagation: Please Google this excellent blog: "[Pruning Holiday Cactus](#)" – by UCCE Master Gardener-Solano, Erin Mahaney – see reference below.

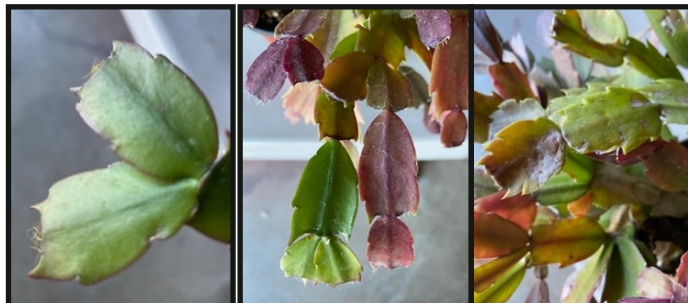
Which Holiday Cactus Do You Have?

Identification can be difficult, even for experts, as plants may look remarkably similar. With several scientific name changes plant labels may have a different name than expected (i.e., *Zygocactus*) and some only say "Holiday Cactus."

Bloom time, flower shape, pollen color and segment shape may help to identify them:

- **Thanksgiving:** *Schlumbergera truncate*, (aka crab claw cactus) former classification *Zygocactus truncate*, usually blooms around Thanksgiving, and can be in flower near Christmas; the foliage has several pointed "teeth" along segment edges. Flowers are tubular shaped with yellow pollen on anthers.
- **Christmas:** *Schlumbergera bridgesii* aka *Schlumbergera x buckleyi*, blooms closer to Christmas and into January; foliage segments have more rounded ends on "teeth." Flowers are tubular with pink/purple pollen on anthers.
- **Easter:** *Schlumbergera gaertneri* (former classifications: *Hattiora gaertneri* or *Rhipsalidopsis gaertneri*: Blooms in spring and sometimes again in the fall. Foliage segments have small notches down the edges. Flowers are star shaped.

*For help with your holiday cactus contact UCCE Master Gardeners at 707 784-1322, or by email: mgsolano@ucanr.edu. Also, visit Solano Master Gardener, Karen Metz', helpful step-by-step blog "[Which Holiday Cactus?](#)", noted in the reference section. ☘



Likely: *Schlumbergera bridgesii* 'Christmas Cactus' or...is it?

Two Stems in Pot: One Blooms Red Flowers and the Other White - Every Christmas! Spectacular!

See the multiple sharper "teeth" in the last picture and the difference between the more rounded segment edges in first two pictures. Are both a 'Thanksgiving Cactus' and 'Christmas Cactus' in this pot?

Photo Credit: Sherry Richards, Solano Master Gardener; Used with Permission

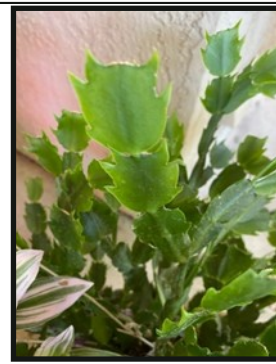
REFERENCES

- ◆ Napa Master Gardener Column, "A Tale of Two Cacti" Napa County Master Gardener Monica Finigan, December 9, 2015
- ◆ Under the Solano Sun Blogs: "[Pruning Holiday Cactus](#)" Erin Mahaney, Solano County Master Gardener, March 6, 2020; "[Cactus Versus Succulent](#)" Susan Croissant, Solano County Master Gardener, April 7, 2014; and "[Which Holiday Cactus?](#)" Karen Metz, Solano County Master Gardener, May 21, 2020
- ◆ Publication 8114 "[Holiday Cactus](#)" 2004 University of California Agriculture and Natural Resources Communications Services, Pamela M. Geisel, UC Cooperative Extension Farm Advisor and Carolyn L. Uhrh, Staff Writer, UCCE Fresno County
- ◆ The Stanislaus Sprout "[The Christmas Cactus](#)" Ed Perry Emeritus Environmental Horticulture Advisor for University of California Cooperative Extension (UCCE), Stanislaus County. December 14, 2020
- ◆ "[Cactus from the Rainforest: Christmas Cactus](#)", Grace Mahannah, Butte County Master Gardener, November 26, 2021



Likely: *Schlumbergera gaertneri* 'Easter Cactus' (Formerly *Hattiora gaertneri*, *Rhipsalidopsis gaertneri*)

Photo Credit: Erin Mahaney, Solano Master Gardener; Used With Permission



Likely: *Schlumbergera truncate* 'Thanksgiving Cactus' This was a gift - no plant tag

Photo Credit: Sherry Richards, Solano Master Gardener; Used With Permission

FOUR COMMON BARE ROOT TREE FABLES

Bob Labozetta, U.C. Master Gardener, Solano County

January into March is the time to plant bare-root fruit trees. Avoid these common misconceptions or fables...

Table 1: Plant at least 2 of the same variety within proximity of each other.

Fruit trees require either cross-pollination (with another variety of the same fruit) or self-pollination (pollinated by pollen from another flower on the same fruit tree or, in some cases, by pollen from the same flower).

Most varieties of peaches, nectarines, apricots, and sour cherries are self-pollinating. Pears are too, but cross-pollination may result in larger yields. About half of the plum varieties are self-fruitful. Although most citrus trees are self-fruitful, larger harvests are often the result of cross-pollination.

Be sure to check with your nursery source whether a particular fruit tree requires cross-pollination from another variety of that fruit. For example, many apples require cross-pollination from another variety that blooms at the same time. If so, plant the trees within a range of no more than 50 feet.

Table 2: Fill planting holes with fertilizer and compost.

Newly planted fruit trees prefer native soil, not soil enhanced with amendments or nitrogen-based fertilizer. Adapting to native soil conditions, a newly-planted tree's roots will grow beyond the planting hole within a year. Significantly enriched soil placed back in the hole while planting frequently causes the roots to circle around inside the planting hole creating a weak root system and possible root girdling leading ultimately to death.



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

Table 3: Newly planted trees need to be staked.

Generally, an un-staked tree will grow stronger than a staked tree as it acclimates to winds. The traditional purposes of staking a young tree are to support, anchor, and protect a tree while forcing straight growth. Your environment (prevailing heavy winds and steep land slope) may make this

mandatory but, in most cases, staking is unnecessary. Under most conditions, un-staked trees have more trunk strength and larger girth.

Table 4: Seal pruned branches to protect them from disease and insects.

Putting a "band-aid" on pruning cuts is not necessary and can be detrimental to a fruit tree. Unlike human wounds that heal by scabbing over, trees seal off damaged wood by growing healthy new wood around the impairment. The wound is effectively isolated by a barricade of tissue cells that keep any infection from being transmitted to the rest of the tree.

Sealing tree cuts can be harmful. Dangers include the impairment of healing air circulation to the cut and trapping any bacteria, fungus, or other disease-causing organisms from elsewhere on the bark inside the cut. ☞

MASTER GARDENERS ARE A RESOURCE FOR YOUR GARDENING NEEDS



UC Master Gardeners of Solano County are located at 501 Texas Street, First Floor, Fairfield, CA 94533-4498

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. Our message center will take your questions and information. Please leave your name, phone number, a description of your problem, and your address. A Master Gardener will research your problem and return your call/email. With email, you can attach pictures of the problem, which may aid in the diagnosis of your plant question.

YOU HAVE A FRIEND AT THE VALLEJO FARMERS' MARKET

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

Vallejo Farmers' Market, unlike many other farmers' markets in this area, is open year-round. Looking for fresh vegetables for dinner? Colorful flowers for your loved ones? Flavorful mouthwatering lunch items? Come to the Vallejo Farmers' Market. You will be rewarded.



L-R: Master Gardeners Betsy Buxton, Spring Tseng and Ward Stewart at the Booth.

Photo Credit: Photo Was Taken By a Passer-by on Spring Tseng's Phone: Used With Permission

The Master Gardeners' booth is located at the intersection of Georgia St. and Marin St. It is usually staffed by three Master Gardeners from Solano County.

Pamphlets about growing fruit trees and vegetables, garden pest control, unwelcomed insects in the house and more, are shared at this little booth.

"Good morning! Do you like gardening? Please take a look at the gardening information here. All is free. Free, free, free!" This is a typical greeting a curious patron will receive from Master Gardener Betsy Buxton when they approach the Master Gardeners' booth at the Vallejo Farmers' Market. Betsy hosts the booth many times a year.

A young couple stopped by, and said, "We moved to this area a couple months ago. There is a yard and we want to do something about it. Can you give us some advice?"

- ◆ Sure. No hurry for now. When you move to a new home, it is wise to take your time before you dig around in your yard. Firstly, there may be buried flower bulbs the previous owners had planted and are currently dormant, or an asparagus bed that looks dead. Wait for a season or two so you get to keep those treasures. Secondly, you need to get a feeling of the microclimate of your yard: which side is shady or sunny, how many hours of sun does a site receive, etc. The time you spend taking notes will guide you toward good choices of plants for your garden. Thirdly, walk around in the neighborhood a few times, talk to your neighbors who work in the yard about their experience and what may do well in this area.

THE YOUNG COUPLE LEFT WITH SATISFACTION AND SEEMED RELIEVED.

A sad lady stopped by. She said, "My Australian finger lime produced fruit for a couple seasons three years ago, then it completely stopped. This is a gift from my mother to my husband. It means a lot to us. Can you help?"

- ◆ Sure. Let me check my gardening bible. Ok. Australian finger lime is a native plant that grows in the rainforests of Northeast of Australia, in the Southern hemisphere. Vallejo is in the Northern hemisphere, with a Mediterranean-like dry climate. Some areas in Vallejo are cooler because wind comes from the St Pablo Bay. Is it potted or in the soil? Ok, it is in a pot. It seems the little tree is stressed. You should move it to a location in your yard that has plenty, at least 6 hours, of direct sun and is not in a wind tunnel. In the winter, consider moving the pot into your house. If you decide to leave it outside, you can protect the tree with light garden fabric. For extremely cold days, hang some incandescent Christmas lights around the tree, not touching any branches or leaves, to keep it warm. You will see the tree much happier after this treatment.

Note: The gardening bible mentioned here is Sunset Western Garden Book. There are multiple editions published over time. Older ones have their undeniable value partly because more plants were included.

THE WORRIED LADY HAD A LOT TO DIGEST AND TO-DO BUT SHE SEEMED TO BE DETERMINED.

Another lady stopped by. She approached the table cautiously. Then she said, "My flower plants were invaded by many ants. I LOVE my flowers. How can I get rid of these ants?"

- ◆ Sure. Have you checked your plants for aphids? Ok, those tiny white insects sitting on your flowers are likely aphids. Apparently, the ants are not after your flowers but are into the aphids. If you remove the aphids, the ants won't be coming anymore. The aphids produce a honey-like syrup (honeydew) that ants love to eat. One way to remove the aphids is to jet spray the plants, top down, in the morning. The aphids don't have wings. Once knocked out of their places, very few can climb back. Repeat this process every three weeks or so. And, that should solve your problem. In

(Continued on Page 10)

(Continued From Page 9—You Have a Friend at the Vallejo Farmers' Market)

addition, if the plants grow in a pot, you can soak the pot in mild detergent water. That will expel the ants out of the pot.

THE FLOWER LADY LEFT WITH A BIG SMILE.

A family of five walked by; the head of this group seemed to be a mid-aged gentleman. He hesitated a bit then decided to stop. He said, "My cucumbers have a lot of flowers but no fruit, its mid-July now. What may be the problem?"

- ◆ Yes, you should have cucumbers ready to be picked at this time. The primary reason the cucumbers do not form fruits is due to lack of pollination. Do you have flowers that attract bees, and do you see bees visiting your garden? Yes, bees do visit our garden. – It is possible the bees visit other plants but not the cucumbers? You can consider moving some bee-attracting plants, like lavenders, close to the cucumber vines. You can try hand pollination also, to be sure. It is a tedious job but what other options do you have? Also, are those seeds from the same source/package? Yes. – Then there is a possibility all seeds are not good. Oh no. – You need to get seeds from reliable sources to increase the probability of success in gardening.

Note: The male cucumber flowers usually come out first, waiting, like those of the squashes; when abundant, the female flowers will bloom.

THE GENTLEMAN LEFT THE BOOTH WITH SOME THOUGHTS.

A tall lady with long-braided hair strode down the street dragging a shopping cart. She smiled at the Master Gardeners at the booth, and said, "Remind me when is the Plant Exchange?"

- ◆ It is Saturday, September 24, 2022, and the time is from 9 to noon. The location is 501 Texas St, Fairfield. It is the office of the UCCE (University of California Cooperative Extension).

Note: Once or twice a year, the Master Gardeners propagate extra plants, and/or bring their garden surplus to the Plant Exchange event. There are plants, packed seeds and gardening publications and equipment. Folks are invited to pick up any items they want for free, and obtain gardening advice at the same time. To get on the mailing list of upcoming events, please sign up at the Farmers Market booth, phone the Master Gardeners at 707-784-1322 or email at mgsolano@ucdavis.edu.

GREAT! SEE YOU AT THE PLANT EXCHANGE (in April 2023)

A young man stopped at the booth and said, "My tomato leaves are wilting. It does not affect the fruits though. Should I worry about it?"

- ◆ Tomato leaves wilting can be due to too much water or not enough water applied. To have a feel for the soil moisture, you can stick a finger into the soil around the plant or use a screwdriver to do so. If it is difficult to push the screwdriver into the soil, then the soil is too dry, and vice versa. You can invest in a moisture meter, also. It cost about \$10, and it gives you more information about the soil. It is important to keep the soil moist but not wet, and the meter can help you with that.

THE YOUNG MAN LEFT THE BOOTH WITH A LIGHTBULB ABOVE HIS HEAD THAT SAYS: 'SCREWDRIVER'.

A man stopped at the table and browsed the pamphlets laying on the table. He said, "I have ants in my pantry, a lot, everywhere. Do you have any tips to get rid of them?"

- ◆ Oh dear! I am so sorry. There is only one way to clean this up. The first step is to throw away all the ant-contaminated food, then store the clean food in containers with tight lids. You'd then wipe the whole pantry with Windex. Years ago, my mother went away for a month-long vacation and asked me to watch her house while she was gone. Before her return, I went to the house for the last time. I opened all the windows to air. In addition, I also checked the kitchen cabinets. Oh my, ants had made the pantry their home! There were tons and tons of ants busily crawling. I spent half a day to clean the mess up.

THE MAN TOOK A PAMPHLET THAT READS "[ANTS](#)" TO GO.

Have a gardening issue? Want to talk about your ideas? Come along. You have a friend at the Vallejo Farmers' Market. And her name is Betsy Buxton. ☺



Betsy Buxton Showing Off Her "Green Thumbs"

Photo Credit: Spring Tseng, UC Master Gardener; Used With Permission

RAISED BEDS FOR DROUGHT CONDITIONS

Sheila Clyatt, U.C. Master Gardener, Solano County

I like to grow my vegetables in a couple of raised beds. Some of the reasons I prefer this situation are because I don't strain my back, it keeps my vegetables out of reach of my pets and I can control the micro ecosystem of the raised bed. My two raised beds are approximately 2' high x 2' deep x 8' long. They sit against the sunny side of my house out of the wind.

I grow vegetables year round so I need to adjust the growing conditions in the beds during the summer and winter to accommodate the needs of the plants. Taking into account the pests, the temperature and water requirements, I provide a safe habitat for the vegetable so they won't be eaten, damaged by pests, dry out or get sunburned. I do this by creating two layers of boundary; one on the surface and one below the ground.

For controlling the environment above the plants I use PVC pipe and then cover the whole structure with ¼" hardware cloth, shade cloth or row cover depending on the time of year. "Row cover" is a thin white fabric which allows light transmission but prevents sun or frost issues, and mitigates invasive rodent and other pest damage. It can also save water, as the row cover acts as a ceiling and keeps evaporation low while increasing humidity inside the PVC dome.

Additionally, in this time of drought we all have to conserve water. But I love fresh vegetables, so I implemented an underground water saving design. I dug down 20" into my raised beds and lined the bed with pond liner, and attached the

sides at the top with staples. Then I looped perforated French drain pipe on the bottom. I filled the bed back up with coco coir, compost and soil. Coco coir is a sustainable medium which holds water and still allows drainage. This design creates a closed system, so when you water your plants the water doesn't seep out the bottom of the bed. Instead, extra water is retained at the bottom by the pond liner, and stored in the perforated French drain pipes until it is taken up by the roots of the plants. Plants don't like to have "wet feet", but will go search for water and transport it up into their leaves.

Between these two systems you can regulate a microclimate to grow vegetables using very little water. I hope you enjoy these tips to keep a healthy vegetable garden all year round. ☺



These Photos Display Two Different Styles of Covering Vegetables to Control Environments.

Photo Credit: All Photos in this Article By Sheila Clyatt, UC Master Gardener; Used With Permission

UPDATE ON INVASIVE SPECIES FROM THE UNIVERSITY OF CALIFORNIA, AGRICULTURE AND NATURAL RESOURCES

Paula Pashby, U.C. Master Gardener, Solano County

Melissa Womack, with the University of California, Agriculture and Natural Resources Master Gardener Program, recently wrote an article identifying three invasive species that could be a threat to California's natural environment and public health. In her article, she asks everyone to share information about these invasive species with the public, so I am summarizing key points on their potential impacts.

The first invasive pest is the **Emerald Ash Borer (*Agilus planipennis* Fairmaire)**. These beetles have existed in many areas throughout the United States for quite some time. However, it is only recently that this pest has reached the West Coast and has already been detected in Oregon. They have shiny emerald green



Emerald Ash Borer on a Leaf
Photo Credit: Stephan Ausmus, USDA; Used With Permission

bodies with copper-red or purple abdomens. If you see unique 'S-shaped' markings on the bark or 'D-shaped' exit holes in the outer bark that are around 3/16 of an inch, you could have these beetles present.

Do not let their small size fool you! These 3/8-5/8 inch-sized beetles feed off all ash trees species and could potentially wipe out many orchards. They also attack other woody tree varieties in the olive family (*Oleaceae*). Emerald Ash Borer beetles typically live for one to two years. You will see them come out from under the bark in late May to early June and are very active in June and July. Their flight season is usually completed by early August. These pests are generally seen during warm and sunny weather.

These beetles are extremely destructive, with the female laying up to 100 eggs during her lifespan. They set the eggs under the bark of a tree or in cracks and once they hatch, the larvae chew through the outer bark and work their way to the cambium layer (the actively growing part of a tree). Once they annihilate the cambium layer, the tree will not survive.

Currently, the United States Department of Agriculture Research Service is studying what can be done to detect, contain and control infestations. They are focusing on developing safe, sustainable, environmentally compatible biological management options.

The California Integrated Pest Management Program (UC IPM) <http://ipm.ucanr.edu/> is currently updating data and information about this beetle on their website. Additional information can be found on the California Department of Food and Agriculture website at: https://www.cdffa.ca.gov/plant/PDEP/target_pest_disease_profiles/eab_profile.html.

The second invasive species on the list is the Spotted Lanternfly (*Lycorma delicatula*). They feed on a wide variety of trees and plant species, such as grapevines, fruit trees (apple, cherry), woody ornamentals and hops. Early detection is necessary to protect California.

According to Melissa Womack, "We need to communicate with California residents about the danger of moving firewood from place to place within the state and especially across the state borders, as firewood can harbor many types of invasive pests like this one." She said that the CDFA Border Inspection Station in Truckee once inspected a truck carrying firewood that was found to be carrying an enormous number of Spotted Lanternfly eggs that were immediately destroyed.



Spotted Lanternfly Next to an Adult Ladybug
Photo Credit: Richard Gardner, Bugwood.org; Used With Permission

The Spotted Lanternfly are quite remarkable-looking up close. The adults have a solid yellow abdomen with black bands and two sets of wings. The front wings have a dark cream color with black spots and rectangles. The back wings are a strikingly black and red, with black spots appearing in the red area. The back wings are the most noticeable when they are not in flight. This pest also has sucking mouthparts to feed on sap, which can stress plants and cause them to become vulnerable to disease and attacks from other insects. They also produce honeydew, which introduces the possibility of sooty molds.

The UC IPM will soon be listing the Spotted Lanternfly. Meanwhile, here are some resources from UCCE Sonoma County for more information on this concerning pest: https://cesonoma.ucanr.edu/Integrated_Pest_Management685/Spotted_Lanternfly_187/ and Keeping the Spotted Lanternfly Out! <https://ucanr.edu/sites/SoCo/files/315819.pdf>.

(Continued on Page 13)

(Continued from Page 12—Update on Invasive Species from the University of California, Agriculture and Natural Resources)

The last invasive species on the list is the Jumping Worm (*Amyntas agrestis*). Many names are used to reference these worms, such as Alabama jumpers, Jersey wrigglers, wood eel, crazy worms, snake worms, Asian jumping worm, and crazy snake worms!

These worms do look very similar to the beneficial common earthworm, but you will know the difference by how they aggressively roll around on the ground. They can also jump up to 1 foot in the air!



Asian Jumping Worm
Photo Credit: National Park Service;
Used With Permission

See Video: <https://youtu.be/jrGnUFDXuyQ> (Video Courtesy of Wisconsin Department of Natural Resources: dnr.wisconsin.gov/topic/Invasives/fact/jumpingWorm.html).

These pests engage in beneficial behavior like earthworms, eating fallen leaves and other materials on top of the soil. Unfortunately, they take this activity one step too far since they are ravenous eaters. The Jumping Worm can feed on most of the resources that are crucial for plant survival, such as beneficial tiny organisms in the soil.

The UC IPM is collecting data on the Jumping Worm and will provide updates as necessary. Meanwhile, to learn more about this pest, please see an article published by Oregon State University: <https://seagrant.oregonstate.edu/feature/invasive-jumping-worms-leap-oregon>.

If you spot any of these invasive species, please connect with your local County Agricultural Commissioner 707-784-1310 or at <https://www.cdfa.ca.gov/exec/county/countymap/> or the CDFA Report a Pest Hotline at <https://www.cdfa.ca.gov/plant/reportapest/>.

Please keep an open eye for these invasive pests! ✕

SHARE YOUR BOUNTY WITH YOUR NEIGHBORS

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

I bought this house in Vallejo five years ago. It had a large open area in the back, which I thought could be ideal for a large garden. There were some structures in the yard had been used as living quarters, but they were so dilapidated that they would need a lot of remodeling just to make them habitable. Plus, they whole area was covered in concrete.

I hired a contractor to tear down the structures and build one nice garage. A big bonus was that a pear tree that had 3 feet of open space around its trunk now had 10' plus of open space. It also had no building crowding its growth. Three years later, with lots of pruning and love, it has produced bumper crops of pears. It is one healthy tree. Just what do I do with all the pears?

The house also had a pluot tree surrounded in concrete. It gave me some nice pluots, but once the concrete was gone it too produced a ginormous amount of fruit.

There was a combination lemon tree and grapefruit tree. Well, it was a lemon grafted on grapefruit stock and one of the suckers wasn't pruned and produced these funny looking grapefruits. They had very thick rind and very little meat. Well, I had to cut that sucker off. Now, it's a bumper crop of lemons three times a year. Okay, now that I have all this fruit what do I do with it? I tried giving it away to friends, but you can only give away so much. My solution to my bounty is

described below.

Recently, I donated a box of pears I had grown to the Concord location of the Food Bank of Contra Costa and Solano Counties. They accept donations of food and money. They use both wisely. Over 90% of your money goes to services. It's true they get a lot of extra produce food from commercial growers who donate cosmetic defective vegetables and other surpluses. But, they can always use more fresh food donations.

I was impressed with the Food Bank's facility and operation. Did you know that they installed solar panels on their Concord warehouse, thus saving thousands of dollars on overhead? Did you know that they serve 1 in 6 residents in the two counties? Did you know that over 50% of the food is fresh produce? Did you know that they partner with 260 local nonprofits to distribute the food?

Hunger is a real problem. If you can't feed your family, you



Pears the Author Harvested For the Food Bank
Photo Credit: All Photos in This Article by
Brenda Altman, UC Master Gardener; Used
With Permission

(Continued on Page 14)

(Continued From Page 13—The Decline of the Monarch Butterfly)



Food Ready to Be Shipped

can't get ahead in life. Food costs for many are out of reach. Pay the rent or buy food...? Nobody should have to face that choice.

The Federal Government used to be the safety net for people needing food. Now, organizations like the Food Bank are the safety net.

Master Gardeners and members of the community can help by donating our extra veggies and fruits to the Food Bank. How many times have we let extra food go to waste when we went on vacation? How many times did we leave apples on the tree because they were too high to reach. We can get organized and find out who has extra crops and when they will be ripe. We can find out if someone needs help getting those hard-to-reach apples. One dozen tomatoes may not be a lot but if someone has another dozen, plus some potatoes, we could get together and deliver them to the Food Bank. Turn around on fresh food is within 48 hours so your food won't be wasted.

The Food Bank has two locations:

Fairfield 707-421-9777

2370 N. Watney Way (next to Jelly Belly) Bay 11 (marked for donations)

M-Th 9am -7 pm; Fri-Sun 9am-3pm

Concord 925-675-7543

4010 Nelson Ave. (off Hwy 4)

M-Th 9am-7pm; Fri-Sun 9am-3pm

In addition to the warehouse drop off locations, the Food Bank collects food from those barrels you see at libraries and other public places.

One of our goals as Master Gardeners is to inform people how to grow healthy food. The Food Bank delivers well-balanced healthy food to our neighbors next door. This could be an annual ongoing project of Master Gardeners, along with the community we live in. If you're interested in helping out, contact the Master Gardener office at 707-784-1322, and they will let me know.

There are other volunteer opportunities at the food bank. I recently ran into two people at the Safeway in Glenn Park collecting money and food donations. Consult the web site:

<https://www.foodbanksccs.org>. ✕

BUT WAIT! THERE'S MORE!

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



Collards

Photo Credit: All Photos in This Article by Nanelle Jones-Sullivan; Used With Permission

Don't put your vegetable garden to bed! Autumn is a great time to plant in our Mediterranean climate. The heat of our summers has passed, but the soil is still warm, and while the days are shorter, cool weather seedlings grow slow but steady. As a bonus, typically there is less watering, and it is

a pleasure to be outside.

You can start your fall/winter garden using seeds, cuttings, plants, bulbs, or tubers, for harvest or for overwintering. Depending on your gardening zone, you could use one of the vegetables growing charts following this article to decide what to plant, how and when.

While USDA zones are based primarily on frost dates, Sunset zones take highs AND lows into account. Solano County includes Sunset zones 7,8,9,14,15, and 17, with varying amounts of coastal influence.

Here are some good choices for our fall/winter gardens:

- **Brassicas** such as cauliflower (*Brassica oleracea* var. *botrys*), collards (*Brassica oleracea* var. *viridis*), cabbage (*Brassica oleracea* var. *capitata*), broccoli (*Brassica oleracea* var. *italica*) and broccoli rabe (*Brassica ruvo*), kohlrabi (*Brassica oleracea* Gongylodes Group), Asian greens such as bok choy (*Brassica rapa* subsp. *chinensis*)
- **Leafy greens** like spinach (*Spinacia oleracea*), arugula (*Eruca sativa*), radicchio (*Cichorium intybus* var. *foliosum*), and leaf and heading lettuce (*Lactuca sativa*) do well in the fall/winter garden. I prefer quick growing and attractive cut and grow butterleaf lettuce, and the interesting 'Little Gem'. I believe 'Little Gem' lettuce was developed from Romaine lettuce and a butterhead type lettuce.
- **Root vegetables** to plant now include carrots (*Daucus carota*), parsnips (*Pastinaca sativa*), Jerusalem artichokes (*Helianthus tuberosus*), beets (*Beta vulgaris* subsp. *vulgaris* Condivita Group), and radishes (*Raphanus sativus*).
- **White potatoes** (*Solanum tuberosum*) are traditionally planted in the spring but do better in cooler temperatures

(Continued on Page 15)

(Continued From Page 14—But Wait! There’s More!)

than where I live after April. They can be planted in autumn in our Mediterranean climate, but in some gardens the tops may be killed by any frost. The tubers will be fine, but you might want to choose a protected spot.



Flowering Fava Beans

- **Herbs** are a subcategory of vegetables, and the herbs parsley (*Petroselinum crispum*) and cilantro (*Coriandrum sativum*) prefer cooler temperatures to delay going to seed.
- **Alliums** are always part of my winter/fall garden including shallots (*Allium cepa* var. *aggregatum* and *allium oschaninii*) and garlic (*Allium sativum*). Softneck garlic (*Allium sativum* var. *sativum*) is easier to find and grow in warm climates, but weakly bolting hard neck garlic (*Allium sativum* var. *ophioscorodon*) like the “Creole” varieties will allow you to harvest scapes come early summer. The harder to find cippolini onions (*Allium cepa*) sometimes have to be started from seeds and can demonstrate sensitivity to daylength. Onions typically start to bulb based on the number of hours of sunlight in a day, and many cippolini seeds are listed as long day, but some, like the Boretana, are intermediate-day and will bulb at the Bay Area latitude.
- **Legumes** are another interesting group of plants in a winter garden, but for some, time to harvest and potential to freeze are important considerations. While fava beans (*Vicia faba*) tolerate frost, and can be grown as food and groundcover, I often provide a bit of frost protection for my overwintering sugar snap (*Pisum sativum*) and snow peas (*Pisum sativum* var. *saccharatum*).

Some final thoughts:

Some things described as annuals elsewhere can be perennials here, like Scotch Bonnet peppers. I always cutback and overwinter my *Capsicum chinense* peppers!

Even though our climate is changing, a fall vegetable garden can be rewarding, but consider the changes in rainfall patterns and autumn temperatures. When the soil in a vegetable bed is dry 1 to 2 inches down, it is time to water, even if it is December.

Although the first harvest will be delayed, it has been recommended that we now plant no sooner than the beginning of September, and more typically toward the middle of September, to reduce the risk that plants will be stressed by the heat, and therefore less productive and more susceptible to disease and insect pests.

Consider growing some vegetables in containers in the coolest areas of garden in early fall, and move some to protected areas in the coldest days of winter. Further, consider choosing bolt-resistant vegetables when planting early in the fall season, and the varieties with the shortest days to maturity when planting later.

Please review the planting charts on the following pages for

REFERENCES, RESOURCES, AND OTHER PLANTING GUIDES	
•	UC Davis Sacramento Vegetable Planting Schedule https://sacmg.ucanr.edu/files/117117.pdf
•	Napa County Planting Schedule https://ucanr.edu/sites/ucmgnapa/files/141547.pdf
•	East Bay Planting Schedule https://ucanr.edu/sites/MG_Alameda/files/37225.pdf
•	https://garden.org/learn/articles/view/4038/Edible-Landscaping---The-Winter-Vegetable-Garden-in-Warm-Climates/
•	https://www.permaculturenews.org/2010/10/06/winter-is-a-great-time-for-gardening-in-mediterranean-climate-areas/
•	Considering Fall Vegetables: Susanne von Rosenberg, UC Master Gardener of Napa County https://ucanr.edu/blogs/blogcore/postdetail.cfm?postnum=50630



Hardneck Garlic in Containers—Early Winter



Pretty Leafy Greens



Fingerling Potatoes in Grow Bag

WINTER/SPRING Vegetables for the Sacramento Area												
DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
cauliflower & broccoli	•••••	🌱🌱🌱			🥬🥬🥬🥬							
onion	•••••	🌱🌱🌱			🧅🧅🧅🧅🧅🧅							
cabbage	•••••	🌱🌱			🥬🥬🥬🥬							
lettuce	•••••	🌱🌱			🥬🥬🥬🥬							
lettuce		•••••			🥬🥬🥬🥬							
lettuce			•••••		🥬🥬🥬🥬							
shallots & garlic	🌱🌱🌱					🧄🧄🧄🧄						
tomato	•••••	🌱			🍅🍅		🍅🍅🍅🍅🍅🍅🍅🍅🍅🍅					
carrots	•••••	🌱				🥕🥕🥕🥕🥕🥕🥕🥕🥕🥕						
carrots			•••••				🥕🥕🥕🥕🥕🥕🥕🥕🥕🥕					
potato	•••••					🥔🥔🥔🥔						
chard	•••••		🌱			🥬🥬🥬🥬🥬🥬🥬🥬🥬🥬						
beets	•••••					🥕🥕🥕🥕						
pepper & eggplant		🌱			🌱			🍆🍆🍆🍆🍆🍆				
cucumber			•••••					🥒🥒🥒🥒				
cucumber				•••••				🥒🥒🥒🥒				
corn			•••••			🌽🌽🌽						
corn				•••••			🌽					
corn					•••••			🌽				
corn						•••••			🌽			
green bean			•••••				🌿🌿🌿🌿🌿					
green bean					•••••			🌿🌿🌿				
melon				•••••				🍈🍈🍈				
melon					•••••			🍈🍈				
squash				•••••				🍆🍆🍆🍆				
lima bean					•••••				🌿🌿🌿			

Chart Credit: Dr. Robert Norris, Emeritus UC Davis

WINTER/SPRING VEGETABLE PLANTING GUIDE FOR NAPA COUNTY

VEGETABLE	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	NOTES/COMMENTS
Broccoli	████████	████████	████████	████████	████████	████████								Harvest time depends on planting date and weather
Beets			████████	████████	████████	████████	████████	████████	████████					
Cabbage	████████	████████	████████	████████	████████	████████	████████	████████	████████					Harvest time depends on variety and weather
Cantaloupe				████████	████████	████████	████████	████████	████████	████████				
Carrots		████████	████████	████████	████████	████████	████████	████████	████████	████████	████████	████████	████████	
Cauliflower (early)	████████	████████	████████	████████	████████	████████	████████	████████	████████	████████	████████	████████	████████	
Cauliflower (late)		████████	████████	████████	████████	████████	████████	████████	████████	████████	████████	████████	████████	
Chard			████████	████████	████████	████████	████████	████████	████████	████████	████████	████████	████████	
Corn				████████	████████	████████	████████	████████	████████	████████	████████	████████	████████	
Cucumber				████████	████████	████████	████████	████████	████████	████████	████████	████████	████████	
Eggplant				████████	████████	████████	████████	████████	████████	████████	████████	████████	████████	
Lettuce	████████	████████	████████	████████	████████	████████	████████	████████	████████	████████	████████	████████	████████	Harvest time depends on variety and weather
Onions, Shallots			(plant sets)					████████						Harvest and store
Peas			████████	████████	████████	████████	████████	████████	████████	████████	████████	████████	████████	
Peppers			████████	████████	████████	████████	████████	████████	████████	████████	████████	████████	████████	
Potatoes				████████	████████	████████	████████	████████	████████	████████	████████	████████	████████	Harvest and store
Pumpkin										████████	████████	████████	████████	
Radish			████████	████████	████████	████████	████████	████████	████████	████████	████████	████████	████████	
Snap Beans				████████	████████	████████	████████	████████	████████	████████	████████	████████	████████	Plant Lima beans 1 week after earliest snap beans, and until late May
Tomatoes	████████	████████	████████	████████	████████	████████	████████	████████	████████	████████	████████	████████	████████	
Watermelon				████████	████████	████████	████████	████████	████████	████████	████████	████████	████████	
Zucchini				████████	████████	████████	████████	████████	████████	████████	████████	████████	████████	

Alameda County Master Gardeners

PLANTING RECOMMENDATIONS FOR WEST OF THE EAST BAY HILLS

There are many varieties of all these vegetables and herbs, and success will vary depending on the variety and location. There are many nurseries, seed catalogs, and books that can give you specific advice for your microclimate. Most of these recommendations are taken from Pam Pierce's book *Golden Gate Gardening*.

Cool Season	Notes	When to Plant
Artichoke	Large plant – needs space. Often gets aphids. From rootstock.	Oct – Dec
Arugula	Best in winter, but year round in cooler microclimates. From seeds.	Year Round
Asian Greens	Bok Choy, Chinese cabbage, mizuna, etc. Best in winter and spring. From seeds or seedlings.	Aug – April
Asparagus	Perennial; don't harvest 'til 3 rd spring. Lots of space. From crowns.	Jan – March
Beets	Year round, but best in winter. From seeds or seedlings.	Year Round
Broccoli	Best in winter or early spring. From seedlings.	Jul – Sept; Feb – March
Cabbage	Best in winter or early spring. From seedlings.	Jul – Sept; Feb – March
Carrots	Year round. From seeds.	Feb – Aug
Cauliflower	Best in winter or early spring. From seedlings.	Jul – Sept; Feb – March
Chard	Year round. From seeds or seedlings.	Year Round
Collards	Year round, but best in winter. From seeds or seedlings.	Year Round
Garlic	Winter. From certified bulb cloves	Oct – Feb
Kale	Year round, but best in winter. From seeds or seedlings.	Year Round
Lettuce	Year round in cooler microclimates. From seeds or seedlings.	Year Round
Mustard	Year round, but best in winter. From seeds or seedlings.	Year Round
Onions (bulb)	From seeds or sets (avail in fall), harvest late spring or summer.	Sept – March
Onions (green)	Many varieties. From seeds or sets.	Year Round
Peas (green/sugar)	Best in winter or early spring. From seedlings.	Sept – Nov; Feb – March
Potatoes	Need lots of space. Use nursery seed potatoes to prevent disease.	Feb; May; Aug
Spinach	Best in spring or winter. From seeds or seedlings.	Mar – Apr; Aug – Sept

SOLANO MASTER GARDENERS AT WORK THIS FALL

By Ruth Clawson, U.C. Master Gardener, Solano County
You Won't Want to Miss These Big Events!



For Tips and Updates, Follow [ucmastergardenerssolano](https://www.instagram.com/ucmastergardenerssolano) on Instagram

The **Holiday Succulent Cornucopia Craft Class** will be held October 15th at 510 Texas Street, Fairfield.

8:30-11am

Come learn about succulents with Tina Paris and Sherry Richards

You'll create a beautiful cornucopia full of succulents to take home and display

\$15

The **Annual Wreath Workshop** is back! Finally!

December 3rd, 1:00pm at Community United Methodist Church, 1875 Fairfield Avenue, in Fairfield

Create a gorgeous wreath and enjoy shopping at the Marketplace for unique gifts and crafts. Look for more details to come...

CONNECT WITH A MASTER GARDENER AT THE FOLLOWING LOCATIONS

UCCE Master Gardeners of Solano County Office, 501 Texas Street, Fairfield. Check out the pollinator pathway that runs through the parking lot. It's not even one year old and is looking beautiful.

Farmer's Markets! Benicia, Fairfield, and Vallejo

Fairfield's Farmers Market will have a Master Gardener's booth from 3pm-7pm every Thursday through September 29th on the 700 block of Texas Street in downtown.

The **Benicia Farmer's Market** is every Thursday through Oct 27th, 4-7pm, at the Corner of First Street and D Street.

The **Vallejo Farmer's Market** every Saturday from 9am to 2pm. The Market is located at 400 Georgia Street. This is a year-round market.

Dunnell Nature Park Monthly Talks

The Second Saturday of each month at 9:30am you'll find Master Gardeners sharing great information at the Dunnell Nature Park, 3351 Hillridge Drive, Fairfield. If you haven't checked out these talks, now's the time. Upcoming talks will be on October 8, November 12, and December 10.

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 Gordon and Christina Ruark will be presenting the following topics:

- September 15- Bulbs
- October 20- Birds, Bees, and Other Beneficial Insects You Want as Guests
- November 17-Fall clean up and planning for 2023
- December 15- Holiday plants and gifts for gardeners

Children's Garden

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

The Sensory Garden behind Fairfield Civic Center Library

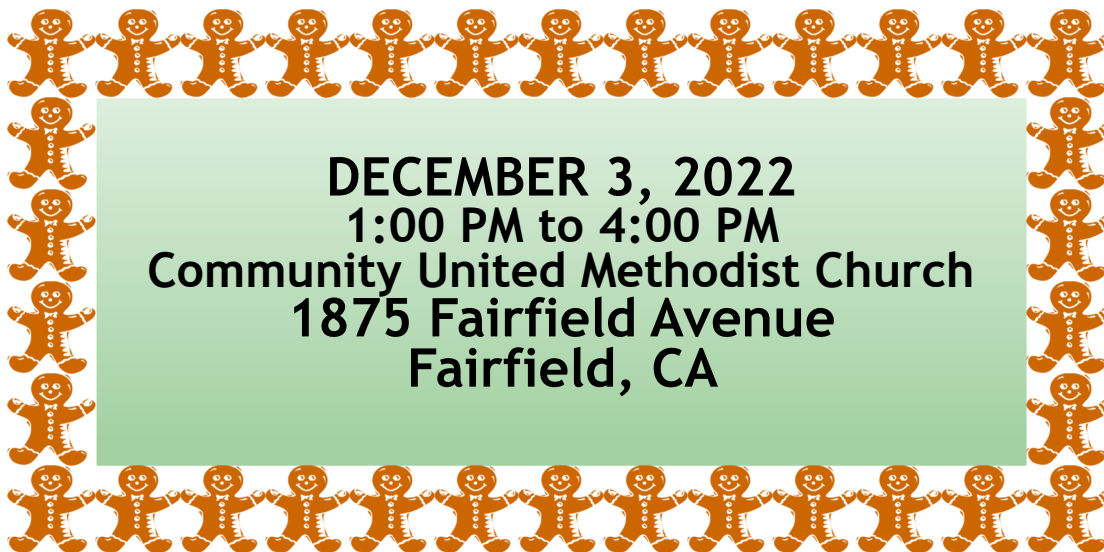
Drop by The Sensory Garden anytime at 1150 Kentucky Street near the Civic Center pond. Teresa Lavell coordinates gardening efforts here. There are an abundance of interesting plants to see, touch, and smell!



WREATH WORKSHOP 2022



Join the Solano County Master Gardeners For Our First Wreath Workshop Since 2019!



DECEMBER 3, 2022
1:00 PM to 4:00 PM
Community United Methodist Church
1875 Fairfield Avenue
Fairfield, CA

Join the Master Gardeners for a festive afternoon of wreath-making on December 3, 2022. The **\$50 fee (per person)** includes all materials to create one wreath from fresh redwood and a selection of ornamental greens; dried hydrangeas; pinecones; dried lemons, oranges and other fruits; dried lavender; many other organic decorations; ribbon and bows; and the wreath frame and wire.

Master Gardeners provide wreath-making assistance and delicious refreshments.

This is a wonderful annual tradition for families!

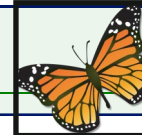
RSVP only! Contact Jennifer at (707) 389-0645 or jmbaumbach@ucanr.edu to RSVP today!

COME SHOP AT THE MARKETPLACE!
Art and gift items handcrafted by Master Gardeners and their families will be available for purchase during the Wreath Workshop. You do not have to participate in the Wreath Workshop to shop at the marketplace. Buy unique gifts at excellent prices! All proceeds support the UCCE Master Gardener Program-Solano County.





FALL GARDENING GUIDE



	OCTOBER	NOVEMBER	DECEMBER
P L A N T I N G	<ul style="list-style-type: none"> ◇ Edibles: Plant loose leaf lettuce and spinach, set out seedlings such as onion and garlic for next year's harvest. ◇ Ornamentals: Anything that's not frost-tender, including groundcovers, vines and perennials. ◇ Dig, divide and replant overgrown perennials after they finish blooming. ◇ Put tulip and hyacinth bulbs in the refrigerator for six weeks before planting. ◇ Buy and pot amaryllis or 'Paper White' narcissus bulbs for Christmas blooms. 	<ul style="list-style-type: none"> ◇ Edibles: Plant cool weather vegetable transplants such as broccoli, kale, chard and cauliflower. Plant radishes and peas from seed. Put in biennial and perennial herbs, such as chives, Greek oregano, parsley, marjoram, winter savory, lemon or common thyme. ◇ Plant spring-blooming bulbs and tubers. ◇ Winter and spring-blooming annuals available now include sweet peas, Iceland poppies, primroses, snapdragons, cyclamen, pansies and violas. ◇ Deciduous trees, shrubs and vines are often ablaze now, so shop nurseries for favorite color choices. Plant right away. 	<ul style="list-style-type: none"> ◇ Edibles: Plant bare-root berries and grapes, and dormant roots of asparagus and artichokes. Seeds of broccoli, cauliflower, cabbage and lettuce can be planted indoors. ◇ Plant for early spring color, with flowering quince, acacias, camellias, primroses and cyclamen. ◇ Decoratively pot living holiday gifts, including herbs, which grow well indoors in a sunny window. ◇ Plan spring deck, patio and porch plantings.
M A I N T E N A N C E	<ul style="list-style-type: none"> ◇ Keep deadheading shrubs and annuals. It will encourage annuals to bloom a bit longer and keep shrubs looking tidy. ◇ Fertilize roses for the last time this fall. ◇ Renovate a tired lawn by dethatching, aerating, fertilizing and over-seeding. Lower the blades of your mower to 1 inch after summers heat. ◇ Add organic matter/compost to vegetable beds after double-digging and loosening soil to a depth of 24 inches. 	<ul style="list-style-type: none"> ◇ Adjust water schedule once rain begins. If no rain yet, keep vegetables irrigated. ◇ Apply dormant fruit spray to trees after leaves drop. Use 50 percent copper or lime sulfur product for peach leaf curl on peaches and nectarines. On apricots, use fixed copper spray rather than lime sulfur. ◇ Fertilize fall-planted annuals and vegetables with a high nitrogen fertilizer. Cut back mums to six inches above ground when they are finished blooming. 	<ul style="list-style-type: none"> ◇ Continue to fertilize fall-planted annuals and vegetables to provide needed nutrients for root development. ◇ Keep poinsettias in a warm, sunny location, away from drafts. Water weekly and feed monthly through April. ◇ Put your living Christmas tree outside until a few days before December 25, lessening stress. ◇ Before storing garden tools for winter, clean, sharpen and oil garden pruners and shears, and wash mud off shovels and rakes. Oil wooden handles of all tools.
P R E V E N T I O N	<ul style="list-style-type: none"> ◇ Remove fallen fruits, vegetables, diseased leaves and weeds from garden beds to reduce next year's garden pest and disease problems. ◇ If no rain yet, or very little, continue to irrigate. Once consistent rain begins (fingers crossed), check for areas of standing water, the breeding ground for mosquitos. ◇ Apply copper or other recommended controls if you see brown rot or citrus blast on your citrus trees. 	<ul style="list-style-type: none"> ◇ Bait for snails and slugs with an iron phosphate-based bait. ◇ Fight cabbage loopers by using floating row covers to keep the adult white butterflies from laying eggs on leaves. ◇ Apply pre-emergent weed control among plantings and on your lawn. 	<ul style="list-style-type: none"> ◇ Hoe and pull weeds diligently. Mulch to keep weeds down. ◇ Apply a dormant spray to kill insect eggs and pests such as aphids, mites and scale, as well as fungi and bacteria. ◇ If a freeze warning is in effect, turn off drip irrigation and remove the end plug for drainage.
	PAGE 20		

**Seeds For Thought is produced by
the Solano County Master Gardeners**

EDITOR
Melinda Nestlerode

FEATURE WRITERS

BRENDA ALTMAN, MAUREEN CLARK, SHEILA CLYATT,
RUTH CLAWSON, PEARL EDDY, NANELLE JONES-
SULLIVAN, BOB LABOZETTA, KATHY LOW, PATRICIA
MATTESON, PAULA PASHBY, SHERRY RICHARDS, SPRING
TSENG



Have a comment or question about *Seeds For Thought*?
Contact us!

By email: mgsolano@ucdavis.edu
Please put '*Seeds For Thought*' in the email Subject line.

U.S. mail:
Solano County UCCE
501 Texas Street, 1st Floor
Fairfield, CA 94533

The University of California prohibits discrimination or harassment of any person on the basis of race, color, national origin, religion, sex, gender identity, pregnancy (including childbirth, and medical conditions related to pregnancy or childbirth), physical or mental disability, medical condition (cancer-related or genetic characteristics), ancestry, marital status, age, sexual orientation, citizenship, or status as a covered veteran (covered veterans are special disabled veterans, recently separated veterans, Vietnam era veterans, or any other veterans who served on active duty during a war or in a campaign or expedition for which a campaign badge has been authorized) in any of its programs or activities. University policy is intended to be consistent with the provisions of applicable State and Federal laws. Inquiries regarding the University's nondiscrimination policies may be directed to the Affirmative Action/Staff Personnel Services Director, University of California, Agriculture and Natural Resources, 300 Lakeside Drive, 6th Floor, Oakland, CA 94612-3550 (510) 987-0096.

References in *Seeds For Thought* to trademarked products, commercial websites, and businesses are provided as a courtesy for the reader's consideration and do not constitute the endorsement of any products or services by the U.C. Master Gardeners.

Seeds For Thought is a quarterly publication of the University of California Master Gardener Program of Solano County and is freely distributed to County residents.

It is available through the internet for free download:

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

Jennifer M. Baumbach
Master Gardener Program Coordinator



**U.C. Cooperative Extension
Solano County Master Gardeners**

501 Texas Street, 1st Floor
Fairfield, CA 94533

SEEDS FOR THOUGHT

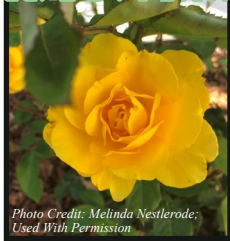


Photo Credit: Melinda Nestlerode,
Used With Permission

**FALL
2022**