

Seeds For Thought

Solano County Master Gardeners

Spring 2019 Vol. 14 Issue 2



THREE UNCOMMON GARDEN FLOWERS

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

You’ve heard of the three little pigs, the three bears, the three billy goats Gruff, and perhaps even the Grimms’ tale “The Three Spinners.” But I doubt most of you have heard of these three unusual, uncommon garden plants: *Bulbinella nutans*, *Dianthus superbis*, and *Stenoglottis longifolia*. These, in the words of ancient tales, are of a wonder and uniqueness “hardly to be seen” —not even in most nurseries.

Bulbinella nutans, also known as *B. floribunda* and *B. robusta*, is a bright, canary yellow flower somewhat like an asphodel. Belonging to the lily family but very unlike a lily, it originates in South Africa. Other forms can be found in New Zealand. The tiny, star-shaped flowers form a dense, conical raceme of about five or six inches on a two to three-foot tall, hollow stem with two-foot long leaves. *Bulbinella* has a sunny disposition, and though it is drought-tolerant, it gives its best in rich, moist soil and favors warm climates.

Bees love it. The flowering stalks can be cut for long-lasting bouquets. The flowers bloom from mid-February though April, but in summer the plants go dormant and, like *hostas* in winter, disappear. Be sure to mark the spot where you plant them. Because *Bulbinella* has tuberous roots, it can be divided and transplanted during active growth in winter; at the same time, it slowly reseeds itself and slowly spreads, offering a springtime color in late winter.



Bulbinella nutans

All photos in this article by Darrell g.h. Schramm

Dianthus superbis (also *D. alpestris*) belongs to the gillyflower or carnation family. But although the lance-like leaves hint at a relation to the carnation, the flowers do not. Like delicately fringed snowflakes in lavender or pale magenta, they waft a wonderful, sweet scent into the air, attracting both butterflies and bees. *Dianthus superbis* is also deer resistant.



Dianthus superbis

This branching plant grows one to three feet high with decumbent foliage at its base, as though it had just stepped out of a flared skirt at its ankles. It can serve as a ground cover, preferring a rich soil and a sunny spot, asking for only occasional water. Most of my *Dianthus* accompany my potted roses, but I do need to be vigilant because too much fertilizer around them discourages flowering. Because I have staggered the times when I sowed the seed, mine grow virtually year-round, including through the winter. Sun or bright shade are equally good. Too much moisture or poor air circulation may invite fungus but nothing that Neem oil cannot resolve. To prolong blooming, deadhead promptly when the flower has died. However, when spent, the flowers become brown capsules containing wee, black seeds. These I save and sow later.

Most uncommon of the three flowers, indeed rather rare, is *Stenoglottis longifolia*, a member of the orchid family. Native to sub-tropic South Africa, its tiny bracts of flowers 3/8” across, in rose-pink with a few purple freckles, appear as an inflorescence

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Stenoglottis longifolia

nearly two feet long on a tall, slender stalk. The petite orchid flowerets open gradually over several months, so the lovely, delicate display is long-lasting.

Once the plant has flowered, the leaves begin to die down for the winter, but new plants will appear beside and through the old leaf matter. It does its best congested in a pot. Although *Stenoglottis* can serve as a houseplant, I keep mine in a pot outdoors all year long—even during heavy rains. In February new leaves begin to form, and by April it will be blooming and remain in bloom until autumn. It's a rare treasure.

And thus ends the non-story of the three uncommon garden flowers. Long may they endure. ✕



Stenoglottis longifolia close up

UC Master Gardener Plant Exchange



April 6, 2019

9am Until 12pm

501 Texas Street, Fairfield

Plant Exchange—Bring a plant, take a plant. We will also have yard sale-type items like garden tools pots, magazines, books, etc., as part of the exchange; bring them if you have them. Please come, even if you have no plant to share.

Information: Jennifer, (707) 389-645 (texts ok) or jmbaumbach@ucanr.edu

NO invasive plants, pesticides, herbicides, fungicides, or fertilizers!



FOOD SAFETY BEGINS IN OUR OWN BACKYARDS

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

My articles are usually about preserving and using fruits and other produce, but I feel that you will find the following information useful. Growing our own produce is a very satisfying experience, and we have a choice in controlling the use of pesticides, fertilizers and other chemicals. Unfortunately, eating even organically grown produce is not necessarily safe!

Recently there have been a number of outbreaks of food poisoning. Pathogens causing outbreaks can include bacteria such as Salmonella, E.coli, and Listeria, viruses such as Hepatitis A, and parasites such as Toxoplasma. Recent contamination of lettuce was caused by unclean irrigation water. Other causes include animals, birds, compost, manure and unclean hands.

When selecting a garden site, avoid areas close to animal pens where blowing dust or water runoff can cause contamination. Keep domestic animals and pets out of the edible garden area during the growing and harvest seasons, especially if the produce to be harvested is close to the ground. Weed-eating geese or pest-eating chickens or ducks can introduce pathogens and may not be wise additions to your garden. Don't use manure teas on edible plants unless the liquid has been heated to 135°F. Composts must get up to at least 135°F. to kill most harmful pathogens. If manure has not been actively composted, age it for at least six months prior to use. If applying unprocessed manure, spread the manure at least 2 weeks before planting, and do not harvest those fruits and vegetables until 120 days after manure application. Manure that is composted non-commercially may not be thoroughly processed. No compost material is guaranteed to be 100% free from bacteria such as E. coli. Also, be aware that walking or transferring tools from one area to another can transfer pathogens. An excellent source for more detailed information is available at <http://ucfoodsafety.ucdavis.edu>.

When walking through an orchard or garden it is common to reach up for a ripe fruit or to reach down for a juicy ripe tomato, and we might try wiping off the smooth surfaces with our shirt tail before sampling them. When picking wild blackberries or strawberries in the woods we probably do not wait until we get home to enjoy some. We need to realize that this might be risky behavior.



National Center for Home Food Preservation

When we bring in foods from the garden and place them on our kitchen counter, we are probably bringing in contaminants from the garden soil. Washing individual produce items

under running water will help in sanitizing, but rough surfaces such as cantaloupes also need scrubbing with a brush. After removing any loose soil and packaging the produce, the counters need to be sanitized. For this you can use a solution of 1 tsp. plain chlorine bleach mixed in a quart of water.

In recent years a number of dried foods have been associated with outbreaks of salmonellosis. This has included raw almonds. Refrigeration and freezing do not destroy this bacteria. Calif. almonds sold in retail stores must be treated in some way to eliminate Salmonella. When harvesting nuts from your own home orchard it would be ideal to knock the nuts onto tarps to avoid contact with the ground. Crack nuts in a clean area and into clean containers. For long term storage I place them in re-closeable bags in the freezer. Most of my almonds are used in assorted recipes which use some type of heat process, but just plain raw almonds would be safest if they were toasted in a hot oven before serving.

Research continues regarding food safety issues and I urge you to use up-to-date information and approved recipes and processes as recommended by the USDA or the National Center for Home Food Preservation: <http://nchfp.uga.edu/>. For instance, a notice was sent out recently about not canning white peaches using the same water bath procedure used for yellow peaches. We need to wait for more information about canning white peaches, but for now they can be safely frozen or dehydrated.

Fresh produce is available from many local sources as well as our own gardens, and if we are aware of the many causes of food poisoning, we can safely enjoy the abundance and diversity of the fruits and vegetables available in our area. ☘

A PROFILE OF GOLD-BADGE VOLUNTEER TERESA LAVELL

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



Teresa Lavell

Gold Badge Master Gardener volunteers are individuals who have volunteered over 1,000 hours in the program. One Gold Badge Master Gardener is Teresa Lavell, a self admitted private person who is generous in not only her volunteer time, but in letting me interview her for this profile.

Teresa spent most of her childhood and life in Fairfield. When she got married, her husband was in the military so they moved across the country a lot, having moved twelve times in fourteen years. But, having young children, they wanted to provide them a stable location to grow up in. So her husband transitioned out of the military and they moved back to Fairfield to be close to family.

Teresa has a long history of volunteerism in the county, for a variety of county agencies. I asked her what led her to become a Master Gardener volunteer. She replied that, when she first moved into her current home, everyone else was working and she was the stay-at-home mom. She decided the best way she could contribute to the household was to do the yard. She always loved gardening, so becoming a Master Gardener enabled her to create and maintain the yard and garden in their home. She became a Master Gardener in 2003. (Note: Her yard and garden was one of several showcased in the 2018 MG Home Garden Tour.)

If you've ever spent some time with Teresa, you can feel her enthusiasm for being a Master Gardener. I asked her what she enjoyed about being a Master Gardener. Her answer was multifaceted. She said Master Gardeners are a great group of people to spend time with. Gardening is fun and she likes to share that fun with the community. She enjoys reconnecting people to nature and encouraging them to get out into their yards to garden and have fun.

It's no wonder her favorite Master Gardener volunteer activities are those special events where she has an opportunity to teach people, especially children, about nature, like worm composting.

She loves the opportunity to share her love of being outdoors in the yard.

Teresa was an instrumental member of a group of library staff who envisioned and made the sensory garden at the Fairfield Civic Center Library a reality. With children as the initial target audience, they decided to propose installing a sensory garden on a neglected piece of library property as a springboard to nature education. The proposal was funded. Teresa initiated a partnership with the Master Gardener program and the garden became a reality. This spring that partnership will result in the initiation of monthly Saturday public programs in the sensory garden on gardening related topics.

I couldn't help but ask her if she could have her "dream garden" what it would look like and what would be growing in it. Her answer was a low water, low maintenance garden. She's a big fan of California native plants; there's such a wide variety of them.

That theme is reflected in one of Teresa's favorite books. She has three favorite gardening books. The first is *Plants and Landscapes for Summer-Dry Climates* by the East Bay Municipal Utility District. She said it's a well written book with great examples of what works in this area. Another favorite is *Attracting Native Pollinators* by the Xerces Society, because it's not only a fun book, but it's a reminder of the diversity of insects. And last but not least, is *Teaming with Microbes*, by Jeff Lowenfels and Wayne Lewis. It's a book about soil, and explores all the activity going on in the soil. It's an easy and interesting read.

When asked if she had other hobbies than gardening she'd like to share, she said she is a big reader. She loved reading books by P.G. Woodhouse. Right now she's reading *Jeeves and the King of Clubs*, by Ben Schott which has many of the characters introduced by Woodhouse and is written in his style.

As I concluded my interview with her, I questioned whether there was anything else she'd like to share with readers. She replied she really loves the Master Gardener program and has learned so much about gardening. And she loves sharing her passion for gardening and nature whenever there's an opportunity. With her enthusiasm and dedication, I have no doubt that she will eventually join the elite group of the two existing Solano Platinum Badge Master Gardeners (those who have volunteered 2,500 hours)! ☺

CHICKENS IN THE GARDEN: BENEFITS AND CHALLENGES

Tina Saravia, U.C. Master Gardener, Solano County

The popularity of backyard chickens continues, according to Maurice Pitesky, a Cooperative Extension poultry specialist with the UC Davis School of Veterinary Medicine. In 2016, there were approximately 100,000 backyard chicken owners in California, alone. Incidentally, that was the year I became a first time backyard chicken owner/keeper.



All photos in this article by Tina Saravia

Everyone has multiple reasons for keeping backyard chickens. One reason we all have in common is for food - eggs, and in most cases, chicken meat. Eggs from backyard chickens are healthier than store-bought eggs.

My top reason for keeping chickens is to get free fertilizer. One hen will produce 130 pounds of manure in one year. On the dry basis as sold (approximately 30% water), this amounts to about 51 pounds per hen. That's a lot of fertilizer, coming from just one chicken.

I'm not the only chicken owner/keeper who thinks of chickens in this way. A 2014 online survey of chicken flock owners by The University of California, Davis, shows that 63% of chicken owners keep their chickens as gardening partners.

Let's take a look at the benefits of chickens in the garden:

- As I've already mentioned, free bountiful fertilizer. It's also interesting to note that chicken manure contains 13 of the essential nutrients that plant use
- Pest control - chickens love to scratch for bugs. Entomologists from Oregon State University (Extension and Department of Horticulture) conducted a pilot study on using chickens for pest control at an organic orchard. They planted bugs in the leaf litter inside the chicken pen. They checked for presence of the bugs after 24 hours and found none were left.
- Garden maintenance - Weeding, lawn mowing and lawn removal from scratching and searching for bugs, as well as eating the grass and the weeds. They also spread manure and mulch as they scratch and also help with mixing in compost and other amendments into the soil.

The Vermont Compost Company, in the state of Vermont, along with turning the composting material mix, let chickens tumble and agitate the mix searching for bugs, grubs, and bits of food to feed on—all the while depositing their protein rich manure.

Other benefits of having chickens in the garden are that they are beautiful moving garden ornaments, entertaining, good company, good conversation starters and party pleasers. They are also the perfect pets. They're the pets that feed me and I don't mind cleaning-up after them because I know that the more I pick-up, the more fertilizer I get for my garden.

Having chickens in the garden is not without challenges:

- Chickens do not respect property lines. They don't know that the next tasty bug is beyond your property line. Here in California we generally have backyard fencing between neighbors. Keep your chickens enclosed and confined to your property.
- There is more exposure to predators if you free-range your chickens. Unless your garden has a lot of shrubberies or structures for them to hide, they are vulnerable to aerial predators, as well as land predators.
- They are not potty-trained. They will "manure" everywhere. This could become a health hazard.
- Chickens scratch everywhere to look for bugs, especially around the base of the plants where it's moist. Some form of protection is necessary, like putting a cage around the plants or rocks around the base of the plant.

Most chicken owners keep chickens in a protected run/pen or inside a chicken tractor that can be moved around the yard. These two methods can help with some of these challenges.

There will be a talk on "Chickens in the Garden" this Spring at the Dunnell Nature Park on Saturday, May 11, at 10 am. We will be talking more in depth on the benefits and challenges of keeping chickens in the garden, as well as possible solutions to the challenges.

The park is located on the corner of Hilborn Road at 3351 Hillridge Drive in the Rolling Hills subdivision. The Dunnell Property is known by several names including the Peacock Ranch and Dunnell-Burton Ranch.

There's no guarantee that there will be chickens present, but there is a strong chance of sighting beautiful wild peafowls in the neighborhood! ✂

AMAZING AFRICAN VIOLETS

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

So...have I told you how much I like African violets (*Saintpaulia sp.*)? What other houseplant comes in so many flower colors... and leaf variations? And they seem to thrive on neglect...well, for a while anyway. As I was watering my small collection (six plants), I noticed a few were not looking as nice and lush as they should be. It made me think....how often do these plants need repotting? Should I be fertilizing? What could I do to make my plants as happy as they should be? Enter YouTube!

Be careful what you watch on YouTube. One video leads to another and another...and pretty soon you are watching "how to propagate African Violets". I became so intrigued that I knew I had to give it a try.

I started out with a few leaves taken from my six plants. The video showed how the stem should be cut at a very severe angle and placed into the soil at an angle with the cut on the stem facing upward (that's where the babies would start from). I placed each of these leaves in a small plastic cup (from the Dollar



Inserting a wick

All photos in this article by Kathy Gunther

Store), with a few drainage holes in the bottom. The videos also explained that violets really do not like to be too wet. It seems the secret is 'wick watering'. I fed a wick up through the bottom of the cup, held it at the top, and proceeded to fill the cup with soil.



Wick and water reservoir

The wick hangs down at the bottom and you keep it submerged in water...which 'wicks' up through the soil. How easy is that! I then placed them inside a small plastic container with their water reservoirs, and a few holes in the top so air would keep the soil from becoming too moist and possibly having a mold issue. How Simple!

But then...the guy in the video states that he buys leaves for propagating! I

went to that website and was simply amazed at the variety of violets. I knew that I HAD to have some. So I ordered seven leaves! They were all about \$2.00 apiece. Not bad if you get them to turn into lovely lush violets!

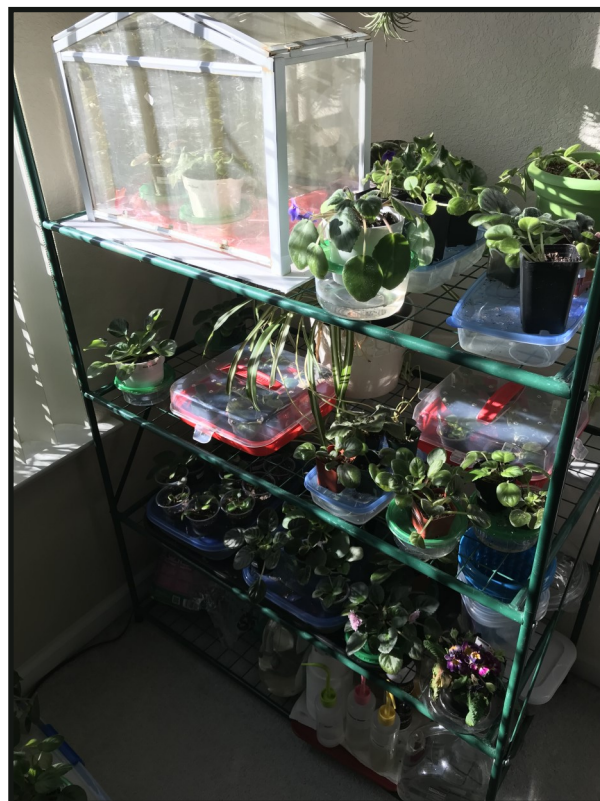
OK...fast forward. I started my original leaves on June 1st. My new leaves arrived around June 6th. By the end of July... finally...I HAD BABIES!!!



African violets with wicks in plastic container

Now, to go back to the videos and see how and when I need to separate the babies from their mommas. Wish me luck!

P.S. I am also learning how to repot and regrow my original plants...but that's info for my next article...☺



My current African violet crop...and counting...

PRESIDENTS GARDENS: A BOOK REVIEW

Dottie Deems, U.C. Master Gardener, Solano County

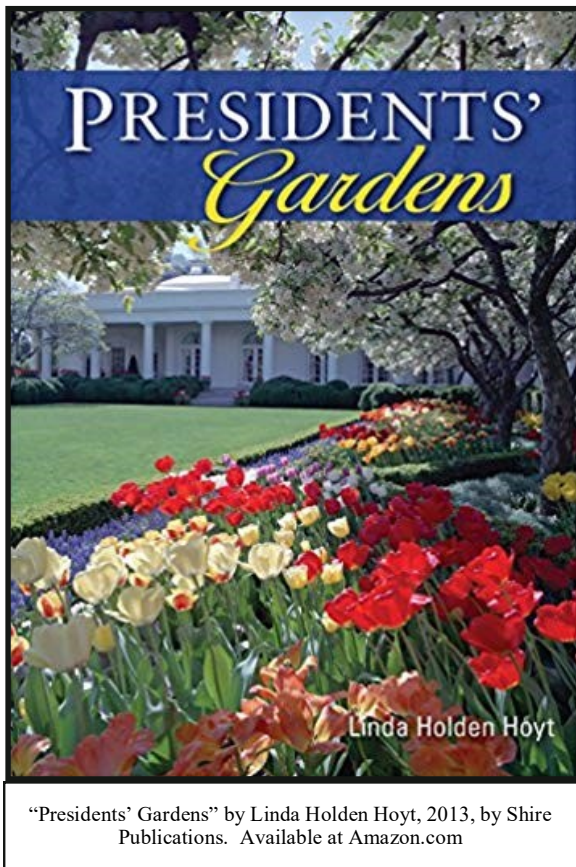
I don't recall if I fell in love with gardening before I fell in love with history or vice versa. The gardening part gave me something to do with my hands. The history part increased my knowledge of what preceded me. "Presidents' Gardens", published in 2013 combines gardening and history in a brief book of under seventy pages. Incredibly informative, it provides a glimpse at a hobby that I am proud to share with the presidents of the United States and their families. The diagrams of the earliest gardens designed and created at the Presidential Mansion are interesting, and there are beautiful color photos on almost every page of the book.

Even before there was a presidential home in Washington D.C. our forefathers were landowners, planters, and gardeners. George Washington was a landowner and sought seed and plant cuttings for his home at Mount Vernon. He

obtained some diverse plants from John Bartram, the first American botanist. John Adams planted his vegetables at his home in Massachusetts and was a connoisseur of manure. He was also the first president to live in the executive mansion although it was unfinished at the time. Thomas Jefferson was possibly the most famous presidential gardener. He designed gardens, imported seed and cuttings from Europe, and kept copious notes of his gardening experiments.

Following our founding fathers, John Quincy Adams created the first arboretum on the property. Andrew Jackson built the first orangery there. President Pierce through President McKinley added greenhouses and conservatories. President Rutherford B. Hayes is credited with starting the commemorative tree program there with a tree planted in honor of each president and one for each state.

The author provides information on almost every president from Washington through the Obama family. Each had their own interest and placed their stamp on the two acres of land that surrounds the home originally referred to as the Presidential Palace and The Presidential Mansion. The White



House wasn't known as The White House until it was named as such by President Teddy Roosevelt. That was nearly one hundred years!

President and Mrs. Wilson planted a Liberty Garden during World War I. FDR had landscape designer Frederick Law Olmstead, Jr. study the White House grounds and make recommendations for improvement that are followed to this day. Mr. Olmstead, Jr. was an American landscape architect best known for his wildlife conservation efforts. He had a lifetime commitment to national parks, and worked on projects in Acadia, Maine, the Everglades in Florida, and Yosemite National Park in California. The senior Mr. Olmstead is considered the "father of landscape design". He designed Central Park in New York City.

JFK had the famous Rose Garden designed and installed as a location

where dignitaries and guests could enjoy the beauty of the "The Peoples' House". Bills were signed into law there, speeches were made by foreign visitors, and a wedding was held there.

Michelle Obama created a community garden bringing in school children to plant and maintain the vegetables they planted.

Formal or informal, hot house or conservatory, our presidents and their families found solace in their gardening.

To quote Lady Bird Johnson:

"For the bounty of nature is also one of the deep needs of man." ❧



GOT SOIL?

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

If you want to grow healthy plants, good soil is one of the most important things your plants need in pots or in the ground.

Understanding a little about soil before you plant, add amendments or fertilizers can

help your plants get off to a good start!



Photo by Sherry Richards

Soil is a complex, dynamic, natural material where physical, chemical and biological reactions constantly occur. Soil differs in locations because it retains the chemicals and physical characteristics of its parent rocks. Climatic differences like heat and cold also affect soil differences.

Soil's four components and ideal percentages are: air 25%, water 25%, solid matter is 5% organic matter and 45% mineral matter. Mineral matter is decomposed rocks specific to the soil's location. Organic matter is plant and animal decomposing residues and includes earthworms, fungi and bacteria. In proper proportions, air, water, mineral and organic matter provide the nutrients and moisture to grow healthy plants.

Soil Types

Loamy soil is best for gardening. It has an ideal balance of sand, silt, clay and holds water, provides drainage and is nutrient rich. **Silty** soil is also nutrient rich with good drainage. **Clay** soil is old "broken-down" rock particles providing little drainage or space for plants to root. **Sandy** soil has rapid water movement and good aeration but low water-holding and nutrient storage capacities. There are 12 basic soil texture classifications, i.e., you can have sandy clay or silty clay not just "clay" soil.

Essential Plant Nutrients

There are 17 nutrients plants need. Three are from air and water and 14 absorbed by the roots from soil. The nutrients are divided into primary, secondary and micro-nutrients. The nutrients you may be most familiar with are the primary nutrients: nitrogen, phosphorus and potassium frequently referred to as "N-P-K", respectively.

Soil Structure

Structure is the "aggregate" of sand, silt and clay around

organic matter in soil. Except for sand grains, other soil particles combine into clumps of soil that can be a fraction of an inch to several inches in diameter. Plant growth is influenced by soil structure because it affects important plant needs like water, air movement, fertility and aeration.

Soil Texture

Texture is the relative "proportion" of sand, silt and clay in soil. It's one of the most important factors for healthy plants because good soil texture determines "tilth": the soil's nutrient and water-holding capacities. You can determine soil textures in your garden yourself or use one of the laboratories noted below. Directions for measurement and "feel method" tests you can do yourself can be found in this link: www.cmg.colostate.edu/Gardennotes/214.pdf.

Adding organic amendments to improve your soil tilth is generally considered essential to new plantings and to rejuvenate poorly growing areas. See the chart on Page 8 for types and the amount to add. If you would like to make your own compost at home use this link to a UC publication: <http://anrcatalog.ucdavis.edu/pdf/8367.pdf>.

Soil pH

"Soil pH is a measure of soil acidity or alkalinity. It is an important indicator of soil health. It affects crop yields, crop suitability, plant nutrient availability and micro-organism activity which influence key soil processes."¹ Most crops do best in pH levels 5.5 to 7.5. Soil in California typically ranges from pH 5 to 8.5. Near neutral or slightly alkaline is common. Usually, seed packages, plant tags and gardening books will note if a plant needs more acidic or alkaline soil and what the pH level should be. If the pH level in soil is not correct for your plant then you can adjust the pH level. Soil pH levels can be checked with inexpensive kits sold online or garden centers. Always follow the information label on packages of amendments you buy to make the adjustment. Use this link to a Penn State Extension article about adjusting pH soil levels: <http://extension.psu.edu/soil-management-in-home-gardens-and-landscapes.pdf>

It's a good idea, before adding any amendments or fertilizers to lawns and/or garden beds to test your soil's pH, nutrient balance and organic matter content to make sure you need to add anything at all and you add enough but not too much! There are do-it-yourself kits available online or in garden centers that

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Footnotes:

¹—USDA Natural Resources Conservation Service, "Soil Quality Kit - Guides for Educators"

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cost about \$10.00 to test pH, nitrogen, and potassium and potash levels. There are probes (usually under \$15) that test moisture, pH, fertilizer and sunlight penetration. Some laboratories may test for water, salinity and check pesticide residues. For a list of labs, to see what each lab offers, what the test results mean and the cost: www.ucanr.edu/LabList. ☘

References:
 -Publication 3382, UC California Master Gardener Handbook, 2nd Edition, Dennis R. Pittenger, 2015
 -Gardening Resource Guide, UC Master Gardeners of Solano County, 2nd Edition, July 2016
 -UC, The Garden Web, Vegetables & Sustainable, Questions About Soils and Fertilizer in the Garden.

ORGANIC AMENDMENTS FOR IMPROVING SOIL TILTH		
Organic Amendment	Amount to Add Per 100 sq ft	Synthetic Nitrogen to be Added in Weight of Amendment Per 100 lbs*
Leaves	75 lb (3—4 bu)	0.5-1.0 lb
Straw	60 lb (1 bale)	0.5-1.0 lb
Hay, legume	60 lb (1 bale)	None
Hay, grass	60 lb (1 bale)	0.25-0.50 lb
Corncoobs, (ground)	50 lb (2 bu)	1.0-1.5 lb
Sawdust	50 lb (2 bu)	1.25-1.50 lb
Bark or woodchips	50 lb (2 bu)	1.25-1.50 lb
Compost	10-20 cu ft	None
Peat moss	6-10 cu ft	None
Lawn clippings	4 bu	None

**Note: 1 lb nitrogen = 10lb 10-10-10 fertilizer or 3 lbs of ammonium nitrate (33.5-0-0)*

UC Master Gardener Succulent Extravaganza



May 4—9:00am to 12:00pm
501 Texas Street



- * **Educational Classes**
- * **Master Gardener Education Table**
- * **Sales of Decorative Succulents and Succulent-Themed Items**
- * **Silent Auction**

Contact Jennifer at (707) 389-0645 with questions

VIETNAM TRIP REPORT, PART 2: RICE

Jenni Dodini, U.C. Master Gardener, Solano County

I don't generally spend all that much time thinking about rice. Mostly, it is "go to the pantry and get the bag", or looking for a recipe in order to do something different. And then, of course, the conundrum that one faces at the Chinese restaurant - white, brown, or fried.

I grew up overseas, mostly in Southeast Asia, and rice was an all day, everyday occurrence. Potatoes were not the norm in our house. Like most kids, I just ate what was served. And the choice was "take it or leave it." During our trip to Vietnam, the joke that our guide told literally EVERY day, regarding meals, was that we would be sampling local food and not to worry, "there will be rice!"

We did not do the pre-trip excursion into the Red River delta area, in the far north of Vietnam, so we missed learning about the rice growing there. Those of our group who went said that the rice growing process hasn't changed in centuries, there are no machines, and that the roads are so bad the machines couldn't get where they need to be anyway. Everything is done by wagon and water buffalo and the work is done by hand.

The picture at right is of a field that was just about ready for harvesting, with the water buffalo that will be helping with the work. The whole trip, I only saw one harvesting machine. Our guide said that that particular landowner must be very rich.



All photos in this article by Jenni Dodini



Throughout Vietnam, every village has a purpose, and all the members of the village participate in achieving that purpose. The picture at left is from a village we visited where they make baskets for separating the rice grain from the hulls. They also make the pallets (behind the man) which are used for drying the rice papers that spring rolls are wrapped in. We toured a village where their business is to make the rice

papers, as well as the rice crackers that we munched on. These pallets were transported to that village and a few others with the same purpose. (The picture which I chose NOT to include is

of me trying not to laugh while being unable to weave the bamboo strips correctly.

Now for a little information that I researched about rice. Since I grew up taking rice for granted, I thought that I would learn (and share) about rice and Vietnam.

Rice - *Oryza sativa* - is a member of the *Poaceae* family. The Indica variety has been adapted to the tropics and has long and slim grains. The Japonica variety is adapted to more temperate regions and the tropical uplands. This variety has shorter and rounder seeds. Both are domesticated forms of wild rice - *Oryza rufipogon* - which was first known in the Yangtze River area around 8200 to 13,500 years ago. Rice is primarily exported from Southeast Asia. Here are a few statistics that I found interesting: In 2018, India was the #1 exporter of rice to the world markets, with Thailand coming in #2, Vietnam #3, the USA #5 (Arkansas #1 and California #2), and China #7. However, China is noted to have the highest consumption of rice, and in 2012 was noted to have produced 200 million tons of rice!

So, what is the difference between Jasmine rice and Basmati rice? I like jasmine rice, but in general, I really do not have that sophisticated a palate to taste the difference. Jasmine rice is originally from Thailand and is a long grain rice but is shorter and thicker than Basmati. It has a subtle floral aroma and once cooked is soft and sticky. Our guide told us that Jasmine rice is only grown and harvested once a year, whereas the basmati is grown and harvested 2 or 3 times a year. Basmati rice is originally from the Himalayan foothills of northern India and Pakistan. Some Basmati rice is grown here in the US. It is a long grain rice and you can get either white or brown. To achieve the best taste, basmati rice needs to be soaked for at least 30 minutes before cooking. (Hmmmmm, no wonder I don't make the best rice.). Both types need to be rinsed off before cooking.

The following is the planting process that is followed in Vietnam, and in most of Southeast Asia. In the mountainous areas, the rice paddies are terraced. In the delta areas, they still looked terraced, but that was due to the extensive system of dykes to control the flooding and draining of the paddies. The fields are plowed using water buffalo, then, if spreading seed directly, it is done by hand. The field is then flooded. The pictures of rice that we have grown up seeing are of the seedlings which are started in flats then transplanted into the flooded field by hand. The water is 6 to 20 inches deep and maintained either by rainfall or irrigation for about four

(Continued on Page 11)

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months. Once flowering occurs, the fields are drained. The plants mature and grains are produced on the ends of the plants. The plants are cut by hand with sharp knives bundled together and laid out to dry in the sun. Once dry enough, the rice is separated from the husk by tossing the grains on woven baskets or trays. The grains fall back to the trays and the husks blow away in the wind. The grains are spread out again on tarps to finish drying. We drove through an area where there were literally miles of rice drying on tarps along the roadside! ☘



A field in various stages of planting outside of Ho Chi Minh City

References: ScienceDirect; Kew Science; WorldAtlas.com; kid cyber; huffintonpost.com; foodnetwork.com

UC MASTER GARDENERS WILL ANSWER QUESTIONS AND PROVIDE INFORMATION THROUGHOUT THE SEASON

<p style="text-align: center;">HOME DEPOT Fairfield 2121 Cadenasso Drive Every other Saturday Beginning March 23 April through October 9:00am to 1:00pm</p> <p style="text-align: center;">Vacaville 510 Orange Drive Third Saturday of the Month April through October 9:00am to 1:00pm</p>	<p style="text-align: center;">ACE HARDWARE Pacific Ace Hardware 627 Merchant St., Vacaville Second Saturday of the Month April 13 through October 12 9:00am to 1:00pm</p> <p style="text-align: center;">Dixon Ace Hardware 1505 N. 1st St., Dixon First Saturday of the Month April through October 9:00am to 1:00pm</p>	<p style="text-align: center;">FARMERS MARKETS VALLEJO FARMERS MARKET Saturday's 9:00am to 2:00pm Georgia and Marin Streets</p> <p style="text-align: center;">BENICIA FARMERS MARKET Thursdays 4:30pm to 7:30pm April 25th through October 24 End of 1st Street</p> <p style="text-align: center;">MORNINGSUN HERB FARM 6137 Pleasants Valley Rd. Vacaville Fourth Saturday of the Month March through September 9:00am to 1:00pm</p>
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DUNNELL NATURE PARK AND EDUCATION CENTER

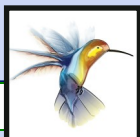
3357 Hillridge Drive, Fairfield

10:00am to 12:00pm

- CREATE AND GROW KOKODAMA:** April 13th
- CHICKENS IN THE GARDEN:** May 11th
- TILANDSIA (AIR PLANTS):** August 10th
- FERTILIZERS:** September 14th
- SUCCULENTS AND HYPERTUFA:** October 12th



<p style="text-align: center;">DIXON MAY FAIR 655 S. First Street Floriculture Bldg. May 9th—4:00pm to 8:00pm May 10th— 12:00pm to 8:00pm May 11th—12:00pm to 8:00pm May 12th— 12:00pm to 8:00pm</p>	<p style="text-align: center;">TOMATOMANIA Pacific Ace Hardware 627 Merchant St., Vacaville April 17th through 20th 10:00 to 2:00</p> <div style="display: flex; justify-content: space-around;"> </div>	<p style="text-align: center;">VACAVILLE PUBLIC LIBRARY 1020 Ulatis Drive “AEONIUM (The Giant Velvet Rose)” August 15th 7:00pm to 8:00pm</p>
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SPRING GARDENING GUIDE



	APRIL	MAY	JUNE
P L A N T I N G	<ul style="list-style-type: none"> ◇ Edibles: Loose-leaf lettuce, culinary herbs, chard, carrots, radishes, spinach, sorrel ◇ Warm-season annuals: Ageratum, alyssum, bedding dahlias, impatiens, lobelia, petunia, phlox, portulaca, salvia, sunflower, zinnia ◇ Perennials: Ceanothus, lavender, coreopsis, penstemon, rudbeckia, dwarf plumbago, scabiosa, verbena 	<ul style="list-style-type: none"> ◇ Edibles: Beans, corn, cucumbers, eggplant, melons, okra, peppers, pumpkins, squash, tomatoes, watermelon ◇ Butterfly, bee and hummingbird attractions: agastache, alstroemeria, bee balm, coneflower, coral bells, fuchsia, honeysuckle, penstemon, salvia ◇ Plant chrysanthemums for fall color ◇ Perennial shrubs, trees or vines ◇ Loose roots of pot bound nursery plants before planting in the garden 	<ul style="list-style-type: none"> ◇ Edibles: Melon, beans and corn from seed; tomato, squash and cucumber seedlings ◇ Successive plantings of basil and cilantro ◇ Summer annuals: Cosmos, marigolds, portulaca, sunflowers, zinnias ◇ Summer-blooming perennials: Daylilies, gloriosa daisy, Russian sage, salvia, yarrow
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 ◇ Fertilize and clean up around azaleas, camellias, and rhododendrons ◇ Fertilize citrus ◇ Tune up motor, and sharpen blades on lawn mower. Mow often enough that you cut no more than 1/3 the length of the grass blade in any one session ◇ Spray olives, liquidambar, and other messy trees with fruit control hormone or blast with hose to curb fruit production 	<ul style="list-style-type: none"> ◇ Aerate and fertilize lawns ◇ Fertilize citrus and established perennials and vegetables ◇ Deadhead spent flowers to encourage new bloom; pinch back petunias and fuchsia ◇ Allow spring bulb foliage to yellow and dry out before removing 	<ul style="list-style-type: none"> ◇ Roses: Cut back faded blooms to 1/4" above first five leaflet that faces outside bush ◇ Fruit trees: Thin apples, pears, peaches, and nectarines, leaving about 6" between fruit ◇ Sprinklers: Summer heat increases water needs by 2" per week. Adjust sprinklers for adequate coverage and irrigation ◇ Fertilize annual flowers, vegetables, lawns and roses ◇ Dig and divide crowded bulbs; allow to dry before replanting
P R E V E N T I O N	<ul style="list-style-type: none"> ◇ Bait for snails and slugs, following all product instructions ◇ Rid new growth of aphids with a blast from the hose every few days ◇ Dump standing water to slow mosquito breeding 	<ul style="list-style-type: none"> ◇ Tune up drip irrigation systems ◇ Build basins around the bases of shrubs and trees; mulch those and garden plants to conserve moisture and reduce weeds, leaving a mulch-free margin around plant crowns and stems ◇ Stake tomatoes and perennials ◇ Remain vigilant against snails, slugs and aphids 	<ul style="list-style-type: none"> ◇ Mulch to keep roots cool and to retain moisture ◇ Check underside of tomato leaves for hornworms ◇ Spray roses with Neem oil to help control aphids, black spot, whiteflies, and powdery mildew ◇ Inspect garden for earwigs ◇ Remain vigilant against snails and slugs



**Seeds For Thought is produced by
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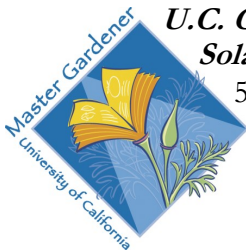
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SEEDS FOR THOUGHT



**SPRING
2019**