



Seeds For Thought

SUCCULENT PROPAGATION: WHY AEONIUMS PLUMP UP IN THE WINTER AND ECHEVERIA DON'T

Launa Herrmann, U.C. Master Gardener, Solano County



Summer dormant aeonium during winter

All photos in this article by Launa Herrmann

Fall is signaling winter's approach. Reptiles, amphibians and mammals, along with bees and one bird species know the signs of this season. Temperatures fluctuate. Light levels lower. Ambient humidity changes. Box turtles, garter snakes and wood frogs along with chipmunks, skunks, badgers, deer mice, the

common poorwill bird --- and, of course, bears --- prepare to hibernate by building up body fat to keep them alive during months of inactivity.

But do you know that succulents also enter into a period of inactivity? It's a season more about slow growth than true dormancy. Most succulents come from an arid environment. In their native habitat, dormancy is part of a normal life cycle where physical functions appear suspended. This period of inactivity is most observable in a succulent when leaves curl up into a ball or the stem hardens.

What's most intriguing is that not all succulents are dormant at the same time. Some succulents are summer-dormant. Others are winter-dormant. Unfortunately for succulents, few gardeners know the difference. Until recently, I didn't.

My excuse was I had simply purchased a defective plant. Never did it dawn on me that the lush succulents sitting in rows at the local box store were propagated in a heated, humid, well-lit greenhouse where they never experienced dormancy. No wonder my purchases looked picture-perfect on the nursery

shelf but rather petulant on my patio a month later. Not only were they in shock, but I was killing them with my ignorance of succulent dormancy. I didn't recognize the seasonal signs for successful succulent propagation.

Here are a few things to consider when growing and propagating succulents that I learned the hard way:

1-Succulents that perk up in the fall, enjoy a growth spurt during cooler weather and appear plump or lush through May are called Summer-Dormant Winter-Growers. These include but are not limited to:

- Aeoniums, Aloe, Cotyledon, Crassula, Gasteria, Graptopetalum, Haworthia, Kalanchoe, Pachyphytum, Sansevieria, Sedum, Senecio

2- Succulents that prefer warmer temperatures and enter a period of slower growth in late October through mid February are called Winter-Dormant Summer-Growers. These include but are not limited to:

- Adenium, Agave, Ceropegia, Echeveria, Echinocactus, Euphorbia, Ferocactus, Mammillaria, Notocactus, Opuntia, Pachypodium, Stapellanthus

3-Succulents that bolt up and become leggy do not need fertilizer or more water. Thin elongated stems mean the plant is not receiving enough light. Leaves point downward or appear pale. The stem is bent, twisted or stretched in a certain direction until it breaks. This condition is called etiolation. Don't toss out the plant. Instead, simply behead it. Then, replant the crown —

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Echeveria

and the stem. The crown will root and new growth will sprout along the side of the stem. Since growth usually accompanies a beheading, do the deed in the winter months for summer-dormant winter-growers and in the summer months for winter-dormant summer-growers.

4-Successful propagation from a succulent's offsets and leaf cuttings also depends upon you knowing its growth season. Is it a summer-dormant winter grower? Or winter-dormant summer grower? Offsets, also called pups, can encircle the base of the

mother plant. Agave is an example. Or, offsets can sprout from leaf axials such as along the stem of an Aeonium. Like other garden plants, succulents often drop their leaves to produce offspring. If you notice your succulent is dying and you are able to rescue a leaf or two, wait a week before laying the leaf on top of the soil with its face curled upward. A callous needs to form where the leaf detached from the plant. In time, the leaf cutting will sprout roots. Echeveria easily propagates through leaf cuttings.



Offsets on stem of aeonium (Arboreum zwartkop)

For additional information on propagation along with an opportunity to purchase a wide array of "healthy, happy, potted, labeled and ready for your patio" succulents grown locally by UC Master Gardeners-Solano Co., stay tuned for the second annual Succulent Extravaganza in spring of 2020! ☘

KAISER REHABILITATION

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

The first time I did a workshop at the Kaiser Rehabilitation Center I was a little anxious because the hospital staff had requested a "hands-on" aspect to the program. Something where attendees in wheelchairs who were recovering from anything as traumatic as car accidents to strokes could participate. A project which would be sustainable meant planting something for them to take back to their room, which wouldn't be practical.

The first idea was inspired by my own yard where I grow lavender, and supported by a recent Master Gardener class in pollination I had just completed. I could give a short talk on pollination, and the patients could make lavender sachets. An email was sent to the Master Gardener community and they began contributing their dried lavender stalks. When I separated the dried flowers from the stems, my house turned into an aromatherapy sanctuary, and sewing the thirty sachets was fast and easy.

At the hospital, the patients loved the project. The healing aspect of working with something raw and natural was therapeutic with the lovely scent of lavender permeating the space. One patient mentioned that this project was the first thing she had managed to do her own, since the accident. She said it gave her hope. The sense of being independently capable for that moment was a gift, the camaraderie that formed between patients during

workshop was therapeutic, and just being outside in fresh air was enough.

Such simple aspects left us all so inspired that I am no longer anxious about running these workshops. Kaiser has found us an outdoor place to keep plants until the patients go home, so now we have added a vegetable growing workshop. The partnership of Master Gardener's and the hospital is cooperative and



Photo by Sheila Clyatt



POMEGRANATES: THE JEWELS OF WINTER

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

This beautiful, bright colored fruit is available here in the late fall and early winter. It grows on a large shrub or small tree (*Punica granatum*) in our area and makes a very attractive addition to your yard. It is very easy to grow and rarely has any pests. (A few years ago a particular whitefly infested many local trees once but did no significant harm.) The trees can tolerate partial shade but do best in full sun in well-drained soil, and do well in a wide variety of soils from acid loam to alkaline soil. New shrubs should be watered every 2 to 4 weeks during the dry season when establishing them. During the first two years they can be fertilized in November and March, but once established very little fertilizer is needed. During the first three years keep shortening the branches to encourage shoot development because fruit only develops where there is new growth. After three years just prune away dead, damaged or diseased branches. The orange-red trumpet shaped flowers attract hummingbirds.

Pomegranates are a popular “health food” now as they are moderate in calories and a rich source of soluble and insoluble dietary fibers, antioxidants, vitamins C and K, B-complex vitamins, and minerals such as calcium, copper, potassium and manganese

At a pomegranate tasting I sampled more than 40 different varieties and was surprised at the differences in color, intensity of flavor and the difference in hardness of the seeds. One of the most popular is still the “Wonderful,” with its large, plump bright red, juicy seed sacks (arils). The bright-colored fruit should be allowed to hang onto the branches as long as possible, even into December. If any fruit begins to split, pick those and place in the refrigerator. Intact whole fruit can be stored in the refrigerator for up to several months.

The tricky part is extracting the “arils” (seeds) from the leathery, round fruit. One method is to first cut open the



Photo by Vadim Jermakov (www.flickr.com)

whole fruit with a knife just through the husk in several places from blossom end to stem, and pull apart. Soak sections of opened fruit in a container of cold water for a few moments, then break sections apart under water and separate the seeds from the white pith and the husk. The seeds sink to the bottom and the pith and husk float. There are excellent videos on the internet showing several methods, which may be accessed by typing in “de-

seeding pomegranates.” The juicy arils may be eaten as is, or may be used in fruit salads or other recipes. These may be frozen for later use.

To extract the juice for various recipes, blenders or food processors may be used with the separated arils. To use electric or manual reamer-type juicers, cut the fruit into halves, like an orange, but be careful because the juice can stain. This method may impart a somewhat unfavorable taste of tannin (from the pith), but this disappears when the juice is made up into jellies and other recipes. Another way to extract the juice is to crush the separated arils and strain the juice through a cloth bag hung to allow juice to drip. Juice may be frozen for many months.

Juice can be used in jelly, to make syrup such as grenadine, in assorted desserts, or even as a marinade for chicken or pork. To make syrup, combine 1 cup juice with ½ cup sugar and boil just 1 minute. The juice or syrup makes delicious beverages; also, try it in frozen granita. For vinegar, combine ½ cup juice with 2 cups of white wine vinegar, which is delicious in salad dressings and marinades. It’s easy to make your own grenadine syrup by combining equal amounts of pomegranate juice and sugar. Simmer for 10 to 15 minutes. Cool to room temperature. Add a little red food coloring if desired. (Make extra for gifts.) Have fun experimenting with this lovely and useful “jewel of winter.” ❧

A CLOSER LOOK AT WHICH BEES ARE IN YOUR GARDEN

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

Recently my husband brought home a “bee barn” to aid in our quest for attracting pollinators to our garden. We were hoping that some bees would take up residency in this barn, but were not sure which ones to expect, or how long they would stay. I had already learned so much about bees in the Master Gardener program, and wanted to continue to learn more about what types of bees I would encounter locally in my own yard in Solano County.



Bee Barn
Photo by Al Alvarado



Miss Bee Haven
Photo by Kathy Keatley Garvey

In my hunt for new bee-related information, I took a very informative and enjoyable class at the Häagen-Dazs Bee Haven in Davis, taught by Christine Casey, Ph.D., Department of Entomology and Nematology, UC Davis. The Häagen-Dazs Honey Bee Haven is an outdoor museum on the UC Davis campus where visitors can observe and learn about bees and the plants in their habitat. Visit their

website for information on their museum at <https://beegarden.ucdavis.edu/>.

Along with recommended books, to my delight, the class not only answered my primary question on what types of bees I am most likely to see in my garden, but it also provided some really useful tips on identifying these different types bees, understanding their nesting and stinging behavior, knowing which months they are most active, and keeping them around as long as possible. I also learned some fascinating facts unique to each type of bee, which I am pleased to pass on to you here.

You will probably see bees in fall! Since a part of bee activity depends on the temperature, you should expect to begin seeing them in spring with the warm weather and flowering plants, through fall, depending on how warm the weather is. Also, during the day when the temperature is high, most bees are early risers and return to their nests at night where they remain inactive until morning. During winter months, you probably will not see them unless it is very warm.

Let's take a look at some fun characteristics and pictures specific to the common types of bees we might see in our local gardens! There are quite a few different types of bees and many specifics

pertaining to each one, so this is very general; a short summary to get you started in identifying what you might see in your local garden.

European Honey Bees (Family -*Apidae* | *Apis mellifera*)

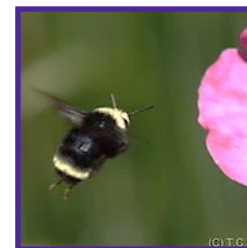
- * Non-Native to U.S.
- * Approximately 0.4" - 0.7"
- * Black stripes alternating with bands of amber to brown
- * Social - nest in large colonies in above ground hives
- * Stinging behavior: not aggressive - usually only sting when they feel threatened - sting once and lose their stinger
- * To keep the hive cool, some of the bees will fan the nest, some will leave the nest to increase air flow, and then there are the “water collector” bees, who find water, drink the water, and then return to the hive and regurgitate the liquid for hive regulation.



Honey Bee
Photo by Tom Tucker

Bumble Bees (Family—*Apidae* | *Bombus*)

- * Native to U.S.
- * Approximately .075" – 1.5"
- * Black and yellow with fuzzy abdomen
- * Social - nest above ground and underground (could use bee box/ barn)
- * Stinging behavior: not aggressive – females will sting to protect the hive
- * Queen lives through winter so important to have early blooming flowers – continuous overlapping blooming flowers work great!



Bumble Bee
Photo by Tom Tucker

Carpenter Bees (Family—*Apidae* | *Xylocopa*)

- * Native to U.S.
- * Approximately 0.5" – 1"
- * Resemble bumble bees but abdomen is shiny, not fuzzy
- * Solitary - drills nest into softwood
- * Stinging behavior: not aggressive - males sometimes look aggressive, but they do not have stingers
- * Occasionally referred to as “robber” bees because when nectar is hard to



Carpenter Bee Robbing
Photo by Tom Tucker

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Carpenter Bee
Photo by Kathy Keatley Garvey

reach, they bite a hole at the base of the flower in order to get to the nectar. Because the anthers are bypassed and the flower is not 'rewarded' by being pollinated, this is referred to as nectar robbing.

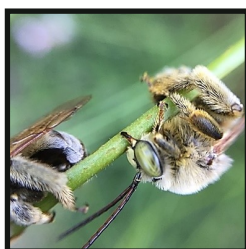
- * Stinging behavior: extremely gentle, only female will sting if aggressively provoked
- * If you see half-moon shaped holes in leaves – a leafcutter bee has been gathering leaf tissue to take back to form nest cells (like wallpaper for their nest). The holes will only be located around the edges of the leaf and will be smooth, not jagged.



Leaf Material Taken for Nest by Leafcutter Bee
Photo by Paula Pashby

Long Horned Bees (Family—Apidae | Eucerini)

- * Native to U.S.
- * Approximately 0.3" – 0.7"
- * Vary in the color of their wings, hair, eyes, legs and antennae
- * They get their name from the males' unmistakable and unusually long antennae
- * Stinging behavior: very docile – males do not have stingers and females are reluctant to sting
- * Solitary - females nest underground and males have to find a place outside the nests to sleep, sometimes forming "male sleeping aggregations" on plants.



Long Horned Bee
Photo by Jennifer Baumbach

A quick note on wasps: Wasps are not bees, but you may see wasps around during the same time as the bees. There are many species of wasps, including paper wasps, yellowjackets and hornets, and they are all an important part of the pollination process. Specifics on wasps are better left to another article, but just keep in mind that depending on type, wasps tend to have



Wasp
Photo by Tom Tucker

more aggressive stinging behavior than bees. Be very careful when gardening – check to see if there are signs of a nest, or if they may be underground dwellers. I had the unfortunate experience once of moving some wooden chimes and did not know that tiny wasps had taken up residency there until they let me know with some stings! The wasps were tiny, but their stings packed a punch!

Sweat Bees – (Family—Halictidae | Agapostemon)

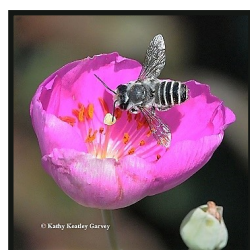
- * Native to U.S.
- * Approximately 0.12" to 0.50"
- * Wide variety of colors – many are metallic green or blue green
- * Solitary - primarily nest underground in soil - be mindful to leave some bare ground, as mulch will prevent them from nesting.
- * Stinging behavior: docile unless provoked, then female can sting
- * Can be attracted to salts in human perspiration.



Sweat Bee
Photo by Kathy Keatley Garvey

I hope that this short overview can give you a new perspective on the bees you may find in your own garden. ☺

Leafcutter Bees – (Family—Megachilidae | Megachile)



Leafcutter Bee
Photo by Kathy Keatley Garvey

- * Native to U.S.
- * Approximately 0.2" – 0.7"
- * Resemble honey bees but usually darker in color
- * Solitary - nest above ground in "premade" holes (could use bee box/ barn)

FOR MORE INFORMATION VISIT:

- ◆ UC Davis Arboretum and Public Garden: <https://arboretum.ucdavis.edu/>
- ◆ University of CA Agriculture & Natural Resources|Statewide Integrated Pest Management Program: <http://ipm.ucanr.edu/>
- ◆ Häagen-Dazs Honey Bee Haven: <https://beegarden.ucdavis.edu/>

A PROFILE OF SHERRY RICHARDS

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



*Sherry Richards
Photo by Torie Kury*

Solano County has just added its third Platinum Badge Master Gardener, Sherry Richards! Platinum badge holders are Master Gardeners who have provided over 2500 hours of volunteer service in the program.

Sherry grew up in the Bay Area, but moved to the Washington DC/ North Virginia area in

the nineties. She moved back to California upon retirement in 2002, landing in Nevada County. It was there she became a Master Gardener. When she moved to Solano County in 2010, she transferred to the UC Master Gardener Program here. Our gain, their loss!

Sherry's love of gardening grew from her family and their activities. As a child, her mom, grandmother and aunts would take her to Brentwood every summer to pick fresh vegetables and fruits to freeze or can. It gave her the fun opportunity to climb ladders and help in the kitchen. But she especially enjoyed gardening with her father as a child. She fondly recalls her dad getting home "from work about midnight and it wasn't unusual for him to mow the lawn with the porch lights on, water or prune his plants after he got home from work. My dating curfew was 12:30 am and it was pretty funny when a boyfriend would bring me home after a date and my dad would be running a gas mower or working in the garden. Hard to explain that my dad really, really, liked to garden and so did I any time of the day or night!"

Since gardening is her favorite hobby, upon retirement she underwent the training to become a Master Gardener not only because of her love of gardening, but also because it was a good way to meet new people who also love gardening and to learn more about gardening. When questioned as to any differences she observed in providing gardening advice in Nevada County opposed to Solano County, she noted several differences due to climate and geography. "Living in the Sierra Foothills meant there were lots of oak, pine trees and native plants so lots of questions about them and what plants could survive frost and snow. Plus, many more questions about deer, rabbits, ground squirrel, plant and bulb eating critters. After moving here, I had to become familiar with the kinds of plants to grow in Solano

County that can take our summer heat versus what to plant in the foothills that can take colder temperatures, frost and snow. There are similar plants that can be grown both places but definitely differences."

Sherry loves the learning opportunities the Master Gardener Program provides. She also enjoys learning from other Master Gardeners, and is constantly amazed by some of the questions the public have posed. Her advice for gardeners – "...first, have fun! Second, the right plant in the right place will make gardening easier and...do be patient sometimes plants take a couple of years to establish!"

When questioned what her dream garden would look like and what would be growing in it, she replied "Any garden I've had has been a dream garden to me. I am so grateful to have had gardens, no matter how small or large, my whole life. Gardens with many plants to love that bring in pollinators, birds and other of nature's creatures to watch. I have a lovely cool spot to sit on my patio where I can read and enjoy my garden. So that's my dream garden – a garden I can work tending and talking to plants and then have a cool drink in the summer or a cup of coffee in the winter, on my patio in a comfy chair with a warm blanket if needed, enjoying the view and sounds of fluttering and flying insects and birds!"

Her advice for anyone considering becoming a Master Gardener - "If you love gardening, have some time to volunteer, and want to be around other gardeners who share your passion of gardening – do come and join us! While there are some Master Gardeners who have horticulture or other garden related degrees, most of us are backyard gardeners who love to garden and willingly share the University of California scientifically-researched gardening information with the public. Most importantly, you don't have to be able to answer every gardening question that comes your way – you are taught where to find the information. Can't find the answer or not sure? You have great resources, other Master Gardeners, our Master Gardener Coordinator (Solano & Yolo Counties) and information from the University of California."

If you do decide to apply to the program and end up becoming a Master Gardener, you'll have the joy of being able to volunteer with super volunteers like Sherry! If you are interested in applying for the next training class, send your email address to Jennifer Baumbach, jmbaumbach@ucanr.edu and request to be put on the mailing list for the application when it becomes available. ✂

A FLEXIBLE PROGRAM TO MEET YOUR LIFESTYLE: THE MASTER GARDENER VOLUNTEER PROGRAM

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

During a recent get together with two friends from out of town, the conversation changed to their recent volunteer experiences. Both started new volunteer activities six months ago, one in the field of education, and the other in the justice system. One required 20 hours of volunteering per week, the other 15 hours. After their initial volunteer training, each of them was assigned specific days and hours each week for the entire year during which they were required to conduct their volunteer duties. They had no say in the days or times of their assignments. One friend subsequently dropped out as a volunteer because of the inflexibility of her volunteer schedule, especially during times and unexpected events when she needed to spend time with her family. My other friend expressed her dislike of the inflexibility of her scheduled volunteer hours and the mandatory ongoing training sessions on topics that failed to address the issues the volunteers raised as being needed to better educate the students, or assist them in their volunteer duties. Both their experiences reinforced for me how the Master Gardener volunteer program is a wonderful example of a volunteer program designed to accommodate the needs and interests of its volunteers.

If you're looking for a volunteer experience that helps your community and offers you flexibility as a volunteer, consider becoming a UCCE Master Gardener. You'll undergo a mandatory training course, and upon completion, you will be required to volunteer only a minimum of 50 hours the first year, and then only 25 hours each subsequent year, plus 12 hours of continuing education annually. But, you get to choose how,

when and where to complete those hours. You'll have access to a calendar with the times, dates, location and types of volunteer activities available to choose from. You can choose from a wide range of activities for adults or children, ranging from giving presentations to helping with kids gardening craft programs at the public library. You can choose to do all your required volunteering on your own schedule and within your interest preferences. The same goes for the required continuing education (CE) hours. You get to choose which topics, times and dates to attend from the CE opportunities on the calendar. You also get to provide regular input on upcoming continuing education topics and activities.

The Master Gardener volunteer experience is designed to meet your volunteer schedule and interests. To find out more about becoming a Master Gardener volunteer, check out http://solanomg.ucanr.edu/Become_a_Master_Gardener/. For questions, contact the Program Coordinator Jennifer Baumbach at jmbaumbach@ucanr.edu or by phone at (707) 389-0645. ✕



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

FARMERS MARKETS

VALLEJO FARMERS MARKET

Saturday's 9:00am to 2:00pm
Georgia and Marin Streets
(Rain cancels)



DUNNELL NATURE PARK AND EDUCATION CENTER



Dry Creek Installation happened on
October 19th
3357 Hillridge Drive, Fairfield
Please visit to see the new installation.



The garden features the Dry Creek, Pollinator Bed and Bulb/Seed Bed. Things are looking great.



WREATH WORKSHOP 2019



Join the UC Master Gardeners of Solano County for our 25th Annual Wreath Workshop



DECEMBER 7, 2019
1:00 PM to 4:00 PM
St. Mary's Catholic Church Outbuilding
350 Stinson Avenue
Vacaville, CA

Join the Master Gardeners for a festive afternoon of wreath-making on December 7, 2019. 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!

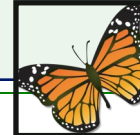
RSVP only! Contact Jennifer at (707) 389-0645 or jmbaumbach@ucanr.edu to **RSVP** today!

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 County Master Gardener Program.





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.
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**Seeds For Thought is produced by
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