



INSIDE THIS ISSUE

Food Waste	1
Summer Garden Chores	2
Community Connections: In Season Market and Nursery	3
Pests and Plants of the Season	4-5
Herb Study	6
Growing Knowledge	7
From the Garden	10
Demo Garden	11
The Help Desk: Lawn Irrigation	12
Taste of the Season	13
Coming Events	14
Horticultural Terms	14

Coordinator Corner

Marcy Sousa, Master Gardener Coordinator

After 19 weeks of training, our 2019 Master Gardener Training is finished for the year. This class started off as a quiet group of people who didn't know each other and by the last class many new friendships and connections were made. We had a great group of trainees and excellent speakers and topics. Our new graduates have been working in the office and are eager to start volunteering in their communities. We are or busy planning our next Open Garden Day and the 2020 Smart Gardening Conference. Stay tuned for more info coming soon for both events!



Congratulations to the 2019 Master Gardener Training class

Food Waste

Susan Mora Loyko, Master Gardener

Why Does It Matter?

How was dinner last night? Did you clean your plate? If not, what happened to the food you didn't eat?

I never gave much thought to what we do with our unused and uneaten food in the world, this country, my city, or at my home. But that all changed when I had the opportunity to recently view "Wasted! The Story of Food Waste."

I am a gardener who loves to grow plants of all kinds, flowers, trees, bushes and, of course, fruits and veggies. Why should you, I, or anyone care about what happens to "used" food, produce that may look a little undesirable, or scraps, or uneaten food? Food waste isn't sexy, but there is a profound impact to us all on the choices we make about uneaten food that is less than appetizing in appearance or excess food that is never eaten, only to wind up in the garbage. And the

effects to Americans and our global neighbors goes beyond what we eat.

According to the late Anthony Bourdain, who was the producer and narrates much of the film, we (you, me, the world) need to look at the entire food system in a different way. We need to examine what food waste is about. Lots of us would balk at an apple that looked less than perfect or broccoli that may appear a bit wilted. We have come to expect our fruits and vegetables to look flawless, our meat and chicken to be the very best. But consumption of food hasn't always been that way.



A good example is bouillabaisse, a renowned meal in Europe, especially France, that actually was created by Marseille fishermen who wanted to make a quick and inexpensive meal when they returned from laboring for days at sea. Rather than use the more expensive fish, they cooked the reject fish pulled up with their nets

[Continued on pg. 8](#)

Summer Garden Chores

Sue Davis, Master Gardener

The long, lazy days of summer just beg us to come outside and play in the garden~

July Ideas

Plant –

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

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

Maintenance –

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

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

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

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

Mophead Hydrangeas (those with the big, round blooms) produce flowers on the previous year's growth – the "old wood."

To shape and control the size of a mature plant (5 years or more) and to avoid cutting off next year's flower buds, prune stems back to 12 inches right after the blooms fade this month. Fewer, but larger flowers will grow next spring if you cut some of the stems back to the base of the plant.



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

A quick irrigation audit of your lawn area will be worthwhile to determine if your sprinklers are matched and working properly. There have been numerous efficient sprinklers introduced in the last few years. Some only require a change of the nozzle, not the entire sprinkler head when repairs are needed. Check with your local water provider to see if they are offering partial or complete rebates for changes to efficient sprinklers. Information on checking the output of your lawn sprinklers can be [found here](#).

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

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



In August

Plant –

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

Sow root vegetable seeds for fall and winter harvest. Beets, carrots, turnips,

[Continued on pg. 15](#)

Community Connections

Corinne Bachle, Master Gardener

In Season Market and Nursery

Several years ago, two avid gardeners and friends, Julie Morehouse and Eric Firpo, decided to open a retail establishment featuring beautiful flowers for the garden and farm fresh vegetables. The result of this dream is In Season Market and Nursery located in the old Alpine Nursery and Tank House building at 215 E. Alpine Avenue in Stockton.



Julie has developed the nursery into so much more than just a nursery!

They carry many seasonal bedding plants, perennials, native plants, and succulents. A small gift shop sells many hand-crafted items from members of the local and surrounding community, unique garden tools, and a line of organic fertilizers. If you're looking for some bat guano for the garden or a unique item for yourself or as a gift, this is definitely the place to shop. And they are always looking for more quality hand-crafted items to add to their inventory, so if this is your niche, give them a call, or better yet, stop by.



The main store now has a coffee bar and iced drinks, local goodies from Denise Wellenbrock's Blue Door Kitchen and Sara Gabbard of Sarabakes. I've tried some of them and they are delicious! The store also carries flavored extra virgin olive oils and balsamic vinegars from Marianne's Pantry, fresh eggs, local honey, and many other unique items. If you love to bake, have a kitchen which has been certified by San Joaquin County, and are looking for a retail outlet for your wares, Julie and Eric would love to hear from you. Also available are local honey, unique teas, garden art made of natural materials, and many other goodies worth exploring.

In Season has been given a grant by the City of Stockton to improve their refrigeration so they may have a wider variety of food for sale including frozen grass-fed meats, cheeses, dairy products, and other healthy foods for neighborhood shopping.

Eric has developed an empty field behind the nursery and gift shop into an urban farm extraordinary where he grows a wide variety of items which he harvests and takes directly into the store for sale to their many devoted customers. These are some of the freshest fruits and vegetables you will find. Looking for tomatoes, onions, citrus, cauliflower, broccoli, you name it... this is the place to shop. The garden is maturing and will soon have even more crops.



Another feature of this area is the Healing Garden which is a serene place open to anyone who needs a quiet, peaceful place to meditate, contemplate, or just sort things out.



As if all this weren't enough to keep them busy, Julie and Eric host free workshops every weekend covering many topics. They recently hosted one on fruit trees and had many for sale. They have also featured Tomatoes, Fall Veggies, Dehydrating and Preserving Your Harvest, Hypertufa Pots, and the list goes on and on. If you follow them on Facebook, you will learn of their many wonderful events.

In Season Market and Nursery is truly a unique gem in the heart of Stockton. Eric and Julie can be very proud of what they have accomplished, and Stockton can be very proud to call them friends and neighbors.

Pests of the Season

Julia Schardt, Master Gardener

Sunburn

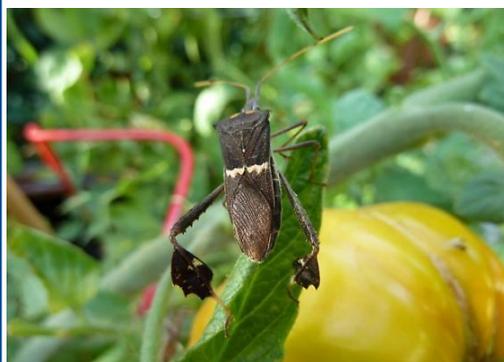
Not all of us would consider sunburn a garden pest, but the recent spate of very hot temperatures in our area puts this underreported problem in the garden spotlight. Sunburn is damage to above-ground parts of plants - foliage, bark, fruit, flowers - that occurs when they are exposed to excessive solar radiation. When plants are heated beyond a critical limit, dehydration results. Bark becomes discolored then dries out and cracks, allowing wood-boring insects and decay to compromise the plant. Sunburn causes leaf discoloration and necrosis; flower petals turn brown and shrivel; fruit appears rotten. Although plants are most likely to suffer sunburn during summer, this problem can occur during other seasons - even winter - when plant parts are exposed to the sun. (Bark is especially susceptible when exposure occurs on the south and southwest sides.) Sunburn damage can be minimized by reducing temperatures in the plant environment. When possible, provide partial shade to affected plants. Irrigate when soil moisture levels are low. (Sunscald, High Light Injury, and High Temperature Injury are separate heat-related issues. For more information, [click here](#).)



[Abiotic Disorders of Landscape Plants, p.](#)

Leaffooted Bugs (Leptoglossus spp.)

Leaffooted bugs are medium to large (0.39-0.86 in) insects that use their piercing-sucking mouthparts to feed on fruits, fruiting vegetables, nuts, and ornamentals. In urban landscapes, they can be a real problem for tomatoes and pomegranates. What distinguishes adult leaffooted bugs from other sucking insects are the small leaf-like enlargements on their hind legs. The three most common species found in our area are *Leptoglossus zonatus*, which has two yellow spots just behind the head; *L. clypealis*, which has a thorn-like projections that extends from the top of the head; and *L. occidentalis*, which has neither of these features. All three have a distinctive zigzag pattern across the wings. These pests probe leaves, shoots and fruit to get at the plant juices. For most ornamentals and many garden plants, there is no visible damage and the presence of these pests is of little concern. Young tomatoes preyed upon by *L.zonatus* will drop off; more mature tomatoes will become discolored or indented where feeding occurs; the effect on fully mature tomatoes is of little concern to the home gardener. Late-season feeding on ripening pomegranates usually causes no external damage, but it can allow fungal spores to enter the fruit causing discoloration on the surface or rotten areas within the fruit.



Leptoglossus zonatus on tomato
Photo Courtesy Bug Guide

Normally, leaffooted bug populations are low enough that there is little damage to gardens and landscape plants. The occasional outbreak of these pests in a home garden can be managed by removing overwintering sites (woodpiles, palm fronds, peeling bark, barns or outbuildings) and by physically removing bugs from affected plants. For additional information, [click here](#).

Redroot pigweed (Amaranthus retroflexus)

This summer annual broadleaf weed inhabits gardens and agricultural land, anywhere there is open sunny space. New establishments and compost piles are especially susceptible. Redroot pigweed thrives in warm weather and can withstand drought, making it a real problem in Central Valley gardens. Because it seeds prolifically, it is associated with late summer allergies.

Mature pigweed usually grows to be about 3 feet tall but can grow as tall as 10 feet. The leaves are heavily veined and shiny. Upper leaves are lance-shaped and up to 7 inches long; lower leaves are more ovate or diamond-shaped. Pigweed forms stiff flower spikes that resemble bottle brushes; each flower spike is packed tightly with small green flowers. Tiny capsules (1/17 in.) each house a single, glossy dark brown seed which is released when a caplike lid opens. (It should be noted that these insidious culprits can bloom and produce seeds late in the season when they're only a few inches high.) The best way to eliminate them is to remove them with a hoe when they're young. Preventing their invasion can be done by using ground cover mulch whenever possible. For additional information, [click here](#).



Amaranthus retroflexus, UC IPM

Plants of the Season

Lee Miller, Master Gardener

PERENNIAL: *Agapanthus africanus* is commonly referred to as the Lily-of-the-Nile or the African lily plant. It is a native of South Africa that is widely adapted and hardy in USDA Zones 7-11. The name Agapanthus derives from the Greek *agape*=love and *anthus*=flower and what is there not to love about this long-blooming, easy-to-grow perennial. Several hybrids are available. It is an herbaceous perennial from the Amaryllidaceae family and flowers in various shades of blue and white. Agapanthus plants reach up to 4 feet at maturity and bloom from June through August and do best in full sun or part shade. To maintain performance, divide the plant every few years. Be sure to get as much of the root as possible when dividing and only divide after the plant has bloomed. A potted Agapanthus does best when it is mildly root-bound.



They tolerate a variety of soils and are very adaptable. When I visited New Zealand I saw it naturalized along roadsides and I thought it must be the national flower as it was everywhere, though not a native. I discovered it was not the national flower, but considered somewhat invasive. When handling the Agapanthus plant, be careful as it is poisonous if ingested and is a skin irritant. Those with sensitive skin should wear gloves when handling the plant.



TRUMPET VINES: Lavender Trumpet Vine (*Clytostoma callistegioides*) is blooming at our new home as I am writing this in May and it is awesomely colorful with dark evergreen foliage as a backdrop for the large colorful blossoms with darker contrasting venation. It blooms from spring through early summer and needs regular watering. It grows in USDA zones 9-11, so basically a warm zone plant and one that can be grown in full sun or partial shade. It is easy to grow and attaches readily to fences or trellis with clinging tendrils. It can grow to 25 ft. so give it some room and/or do some training and pruning to keep it in bounds. A more familiar trumpet vine is the Trumpet Creeper

(*Campsis radicans*) which is a deciduous vine that can climb to 40 feet and blooms in summer. It is a good addition to the hummingbird garden if you have room. It can handle full sun or part shade and is drought tolerant once established. At my former homestead there was an ancient one that climbed to the top of a large walnut tree and showered spent orange blossoms on our patio all summer. I also trained one to a 12 foot pole and enjoyed watching hummingbirds visit it while enjoying our dinners on the patio. I pruned the shoots on the vine each year back to 2-bud spurs to keep it in bounds.



TREE: Mostly referred to as the Tea Tree (*Leptospermum scoparium*), there are many common names for this tree; New Zealand, tea tree, Manuka, Manuka myrtle, broom tea tree. When Captain Cook was exploring Australia and New Zealand he made tea from the leaves on this plant to ward off scurvy, which is the inspiration for these common names. It is well suited to the residential landscape being a small evergreen tree 16 feet by 9 ft wide with profuse blooms in the spring. It is drought tolerant, likes full sun and is low maintenance. It does well in USDA zones 8 to 11 in full sun. It attracts bees, butterflies and birds. It is evergreen and flowers in spring or summer. Smaller plants are available. If you like the look of the New Zealand tea tree but need a smaller shrub, look for the 'Nanum', 'Horizontalis', 'Kiwi', and 'Snow White' cultivars.

Herb Study - So Much Thyme!

Pegi Palmes, Master Gardener

Have you tried any of the wonderfully flavorful thyme varieties? Of the over 300 thyme varieties in the mint family — Lamiaceae — thyme is a member. All have been prized for centuries for their fragrance, flavor, and ornamental habitat. In this article, I'll give you a little information about some of my favorite varieties as well as the basics for successfully growing and harvesting thyme.

Thyme is an essential addition to an herb garden. For a small plant, the leaves of this evergreen perennial have a curiously strong flavor. Pollinators are attracted to thyme's tiny, white to lilac flowers.

Thyme can be grown from either seed or softwood cuttings. It likes well-drained sandy soil and it doesn't require a lot of water. In very hot climates like ours, plant thyme in semi-shade or in sunny locations with afternoon shade. Once established, clumps can be divided in early spring to share with other gardeners.

Harvest thyme by clipping the stems; this helps to keep the plant from becoming too woody and sparse. You can dry the stems or use them fresh. Dried herbs lose a little of their flavor, so keep this in mind when cooking with them. Add thyme to any savory dish, or add it to stuffing, vegetables, or butter for a tasty spread.

You can also use thyme to make bouquet garni to flavor poultry, pork, or fish dishes. A bouquet garni is a bunch of herbs, typically encased in a cheesecloth bag or tied together with kitchen string, and is used for flavoring a stew or soup. There is no generic recipe for bouquet garni; however, most French recipes include thyme, bay leaves, and parsley. Depending on the recipe, the bouquet garni might also include one or more of the following: basil, burnet, chervil, rosemary, peppercorns, savory, and tarragon.



Lemon Thyme



Common Thyme

A few excellent thyme varieties are:

Lemon thyme (*Thymus x citriodorus*) is an all-time favorite herb and is available at most garden centers. It can be solid golden green or variegated pale yellow and green, growing about 12 inches tall and 24 inches wide. This is a good thyme for cooking as the leaves have a strong citrus aroma, making it a perfect partner for chicken and fish dishes.

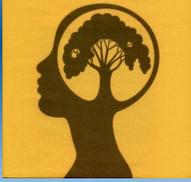
Orange-scented thyme (*Thymus x citriodorus* 'Fragrantissimus') has spicy orange-scented leaves, and can be used in recipes as a substitute for orange peel. It has green leaves with pale purple flowers, and an upright growth habit, reaching about 12 inches tall and 8 inches wide.

Common or English thyme (*Thymus vulgaris*) is the best known thyme and the one most often used in cooking, especially in stews and casseroles. This is a compact, bushy plant, averaging 18 inches high and wide.

French thyme (*Thymus vulgaris*) is also called "summer thyme" and it offers a flavor that is noticeably subtler than that of English thyme, growing 6 to 12 inches high and wide.

English thyme vs. French thyme. Both considered 'common' thyme (*vulgaris*). Aside from French recipes, most of the recipes that specify thyme without also naming a particular variety typically require English thyme. French thyme is usually reserved for French recipes. The leaves of English thyme are larger and rounder than those of the French variety.

Caraway thyme (*Thymus herba-barona*) has dark green leaves with a distinctive caraway scent. It's a mat-forming plant, 2 to 4 inches high and up to 24 inches wide, and it can handle light foot traffic which releases its spicy scent. The trailing and wiry habit of caraway thyme makes it an interesting addition to mixed pots. Caraway thyme is particularly good with stir-fry dishes, breads, and meat recipes.



Growing Knowledge

Sue Davis & Sondra Kuykendall, Master Gardener

A Book Review by Sue Davis and Sondra Kuykendall, Master Gardeners

Amy Stewart has had many televised appearances, is a spirited public speaker, and most importantly is a New York Times best-selling author of both a mystery series that is being developed into a television series, and five non-fiction books titled to entice readers while being filled with information about the natural world. *Wicked Bugs* is an excellent example of Ms. Stewart's use of an attention-grabbing title to introduce readers to a fascinating, factual, funny-at-times, relevant, and sometimes even revolting book about insects, bugs, worms, slugs, centipedes, and scorpions - all of which she refers to as "bugs." The illustrator, Briony Morrow-Cribbs, does a beautiful job of rendering realistic likenesses of the bugs throughout the pages by using a copper etching technique that dates back to Rembrandt.

She warns her readers that people are seriously outnumbered by "bugs," telling them "if all living creatures on earth were formed into a pyramid, almost all of it would be made up of insects, spiders and the like. People and animals would only comprise the smallest section in one corner." Ms. Stewart then takes her readers on an adventure detailing the worst of our foes, entomologically speaking, from A to Z. Each entry details the size, family, habitat and distribution of the bug and notes whether it is painful, deadly, dangerous, horrible, or destructive. At the end of each passage, she also notes the "relatives" of each entry which can range from the most common to the more exotic types.

Each entry contains a short, sometimes humorous, sometimes unsettling, description of the reason the bug is included as one of the selections. The

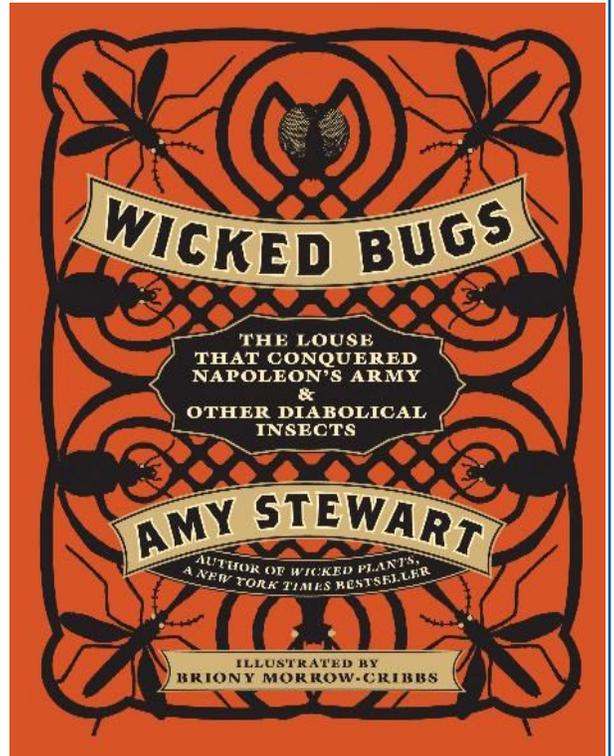
entry for the book worm lists it as a destructive pest and begins with a quote from Robert Burns titled "The Bookworms."

*"Through and through th' inspir'd leaves,
Ye maggots, make your windings;
But O respect his lordship's taste,
And spare his golden bindings."*

Stewart informs her readers that libraries, even moldy and damp libraries, do not provide enough moisture for a worm to survive – thus the idea of a bookworm is a myth. The insects most responsible for damaging books include various species of scavengers such as roaches, beetles, lice, and moths who find the pulped wood, cotton, rice, or hemp used to make the paper a tasty treat. Rare, old books are threatened by corpse-eating insects due to the parchment upon which they are printed being made from animal skins. Various potions and noxious substances have been used over time to try to rid books of bugs; however, a modern-day method is to deep-freeze the collection to destroy the insects and leave the books residue free.

Perhaps of most interest to gardeners is the chapter on "The Gardener's Dirty Dozen." Here Ms. Stewart offers insight on aphids, whitefly, slugs and snails, cutworms, earwigs, the Japanese beetle, the cucumber beetle, tomato hornworms, flea beetles, codling moths, scale, and tent caterpillars. She explains what each bug does to frustrate gardeners, talks about the ideal conditions that attract them, what diseases they may spread and how that happens, and how to deter explosions in their number or evict them without overuse of pesticides. Interestingly, gardens may flourish with a few of the bugs as long as their population doesn't get out of control. For example, although earwigs look dangerous, they generally are not aggressive and even though they can munch through a strawberry patch and hang out in artichokes, they also eat aphids.

Wicked Bugs is just waiting to be checked out of the library by anyone interested in the smallest, dangerous, destructive and horrible creatures sharing our planet. Will that be you?



Food Waste

(cont. from page 1)

Susan Mora Loyko, Master Gardener

and lines, usually fish that were too bony to serve in restaurants. The cheap and easy fish soup was cooked in a pot of seawater and seasoned with garlic and fennel. The humble peasant soup-stew grew in stature to become one of the iconic dishes of the world.

Many of our parents and grandparents who grew up during the Great Depression wouldn't think of tossing out produce just because of a few blemishes or bruises. Today, Americans waste an unfathomable amount of food. Roughly 50 % of all produce in the United States is thrown away—some 60 million tons (or \$160 billion) worth of produce annually, an amount constituting “one third of all foodstuffs.” Wasted food is also the single biggest occupant in American landfills, according to the Environmental Protection Agency (EPA).

Because food is so cheap and plentiful in this country, too many of us toss food that is less than appealing to the eye but still healthy to eat. Fruits and vegetables, in addition to generally being healthy, have a tendency to bruise, brown, wilt, oxidize, ding, or discolor, and that is apparently something American shoppers will not abide. It's just as easy to toss food and reach for something more appealing to the eye. But according to the video, many consumers, great chefs, environmentalists, and ordinary people are beginning to recognize that food waste has a more profound impact on our world than tossing an apple into the garbage. More people are beginning to recognize there is more than meets the eye to our food supply.

The EPA has actually developed a “Food Waste Pyramid” to help us upcycle food to keep it out of landfills and get the food to people to eat or feed livestock to be turned back into food for human consumption.

●**Source reduction** - Everyone creates wasted food, but it is just as simple to not create it. Both businesses and individuals can learn to effectively reduce the volume of wasted food by being more aware of what and how they eat.

●**Feed people** - In 2017, 40 million people struggled with hunger in the United States. The USDA defines "food insecurity" as the lack of access, at times, to enough food for all household members. In 2017, an estimated 15 million households were food insecure. We all can donate our unused food to food banks, soup kitchens and shelters.

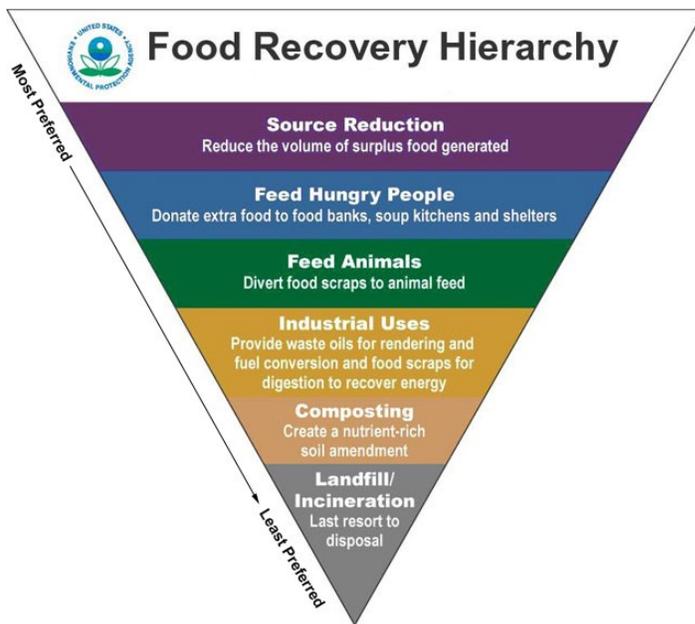
●**Feed animals** - Farmers have been doing this for centuries. With proper and safe handling, anyone can donate food scraps to animals. Food scraps for animals can save farmers and businesses money. It is often cheaper to feed food scraps to animals rather than having them hauled to a landfill.

●**Industrial uses** - Food can be used to not only feed people and animals, but also power your car or generator. There is increasing interest in finding effective means to obtain biofuel and bio-products from wasted food. These options aim to alleviate some of the environmental and economic issues associated with wasted food while increasing the use of alternative energy sources.

●**Composting**- Even when all actions have been taken to use your wasted food, certain inedible parts will remain which can be turned into compost to feed and nourish the soil. Like yard waste, food waste scraps can also be composted. Composting these wastes creates a product that can be used to help improve soils, grow the next generation of crops, improve water quality, and reduce what goes into the landfills.

●**Landfill/incineration** – There will always be a small amount of unusable waste and a landfill is the last resort to dispose of that waste. Almost two thirds of landfill waste are biodegradable. This waste rots and decomposes and produces harmful gases that are both greenhouse gases and contribute to global warming. Landfills can also pollute the surrounding local environment, including the water and the soil.

According to the film, there is wasted food occurring in every link of the supply chain. For example, oftentimes, farm fields of good, tasty, healthy food go to waste simply because the crop “doesn't look good.” Annually, about 10 million tons of edible produce is not harvested due to its appearance.



[Continued on pg. 9](#)

Food Waste

(cont. from page 8)

Susan Mora Loyko, Master Gardener

In the U.S., more than 90% of food waste goes into landfills. Food waste should never be sent to a landfill where it will generate methane gas (more powerful than greenhouse gases or carbon dioxide) as it decomposes. A head of lettuce can take up to 25 years to decompose, all the while creating methane gas. (*Note: Forward Landfill, located in San Joaquin County, successfully removes its methane gas where it is either burned off or used to generate power.*)

We need to take a more holistic approach to our entire food system in what is in our diets and how food is produced: 1) too much of the wrong food product is grown, 2) the right food is not getting to the people. In developing countries, they don't have storage or ways to transport food products from place to place, so only the food that is needed is produced, thus, less waste.

We need to learn how to use more of the produce that is grown (often we only eat a small part of the plant) and more of the animals raised for food. Bourdain suggests that we take a more "nose to tail" use for animals and utilize more of our plants. Many of the chefs in the video shared how they are now experimenting with all parts of the fruits and veggies to create tasty and nutritious meals.

Those world-renown chefs also suggested the following:

- Grow the right food
- Respect the people who grow food
- Steward the land where food is grown
- Produce good food for as many people as possible
- Utilize the wasted food to feed hungry people
- Make use of the existing global marketplace



The countries of Germany, Sweden, and South Korea have now made it a priority to keep food waste out of the landfill. In doing so, those countries created millions of dollars in profit by turning food waste into compost, bio-fertilizer, and animal feed.

One of the champions of utilizing wasted food who appears in the film is Doug Rauch, former president of Trader Joe's market chain. He said that our nation's supermarkets are the apex of power in our food system and control the grocery sales in most countries. He added markets hide lots of wasted food so we don't see what's thrown away. He said markets "encourage our impulse to buy food by creating the illusion of an abundance of food" and added the average American spends \$1,500 a year on wasted food.

Rauch said there is lots of confusion for consumers by the "use by," "best used by," "best used before" dates which is marked on food products and created by food providers. These terms can be confusing and be misunderstood by the public as not being safe to eat after the date listed. Actually, these dates are suggestions by food producers and not backed by facts. These labels are often bewildering and cause a large part of food waste.

There is not a lot of food waste in the rest of the world, just in the U.S. Other countries are learning to make better use of wasted food supplies. One example is in the United Kingdom where due to heavy consumption of sandwiches, ends and crusts of bread were being wasted each year until a local brewery discovered those portions of the bread could be successfully used to make "Toast Pale Ale." The brew not only made good use of the wasted bread parts, but created a tasty ale that has become very popular with consumers.

In the U.S., spent grain (a waste product) is used to feed livestock when it could easily be used to feed people. The United Nations has determined that if we fed food waste to pigs instead of corn, we could make enough food available to feed 3 billion people.

Pig farmers in Japan are now using eco feed (food waste) from schools to feed their livestock. Some are even being selective of the food waste they feed their livestock and are creating "food taste profiles" that make the pork tastier. In addition, the farmers are saving 50% on the cost of feed. Also, there is no need for the farmers to give their pigs costly antibiotics because the food waste they are fed provides natural bacteria to help the pigs stay healthy. Farmers reported that their customers find the pork had a better flavor.

As part of the video, world famous chefs such as Massimo Bottura and Dan Barber, along with New York Times reporter and food author Mark Bittman, shared what they are doing to elevate awareness about food waste and how to reduce or even eliminate it.

[Continued on pg. 16](#)

From the Garden

Pegi Palmes, Master Gardener

Preserving Summer Flowers

Preserving summer flowers, foliage, seed heads, and bracts is a delightfully simple way to accumulate a collection of colorful plant materials from your garden to enjoy throughout the year. Many flowers, seed heads, and some leaves can be preserved by air-drying, often just hung in bunches in a warm, airy room. Leaves gathered when the sap is still rising in the plant, as well as some bracts, can be preserved in a desiccant solution like water and glycerin or silica crystals.

For drying, plant material should be harvested when it is completely free of moisture to avoid the development of mold. If you must gather flowers when they are wet, toss them gently on blotting paper to remove surface water, and stand the stems in a container of water in a warm, dry room until the petals are thoroughly dry. Don't be tempted to start one of the drying processes while the flowers are still damp.

Except for seed heads, it is best to gather flowers for drying early or late in the day; from noon to mid-day the plant is at its most vulnerable and more inclined to wilt than respond to the drying treatment. Gather the flowers at the mid-way stage of their development, or just before they are fully opened. An exception to this rule would be everlastings like statice and strawflowers, which can be harvested when they are in full bloom.

Air drying is the simplest method of preserving plant materials. The process is not an exact science and the actual temperature is not critical, though it should not fall below 50°F. A dry area with no direct sunlight and a small oscillating fan set on low is ideal.

Some plant types are best dried upright with the stems loosely held in tall containers and the heads fanning out wide and away from each other. Hydrangea heads and gypsophila are two of the plant materials which can be air dried with their stems standing in a little water. As the stems gradually absorb the water it evaporates and eventually, over a week or so, the plant material dries more or less naturally. Other flowers and foliage may be dried horizontally spread out on racks or shelves covered with absorbent paper. Some plant materials do well hung upside down by their stems. Tie the materials into small bunches, with larger stems tied individually.

A desiccant or drying agent expands opportunities to preserve flowers like narcissus, pansies, freesia, chrysanthemums, ranunculus, carnations, camellias, orchids, roses, and many others. These can be harvested at any stage of their cycle, including buds. With this method, any one of a number of drying agents may be used to fill every cavity and crevice of the plant material, cover every part of every surface and, in so doing, support the plant and keep it perfectly in shape.



Desiccant options available are alum powder (aluminum sulfate) and household borax, both of which are suitable for small, delicate flowers. Silica gel absorbs the moisture from the petals. The blue beads change color from blue to pink once the gel is saturated and needs to be replaced. Desiccants are available at craft and hobby stores.

For drying with a desiccant, spread a thin layer in a container, arrange the plant material by type and not touching, then cover them with the desiccant until it forms a top layer about ½ inch above the plant material. Use an airtight tin and set it aside for 2 to 5 days or speed up the process by drying the plant materials in an oven set at the lowest temperature, using an ovenproof dish without a cover, keeping the oven door slightly ajar. The fastest method is in the microwave. Layer the material in a microwave-proof container without a lid. Process on low power. Since drying times will vary according to the power of your microwave, the type of container used, and the density and moisture content of the plant material, it is best to experiment; check progress every minute or so and make notes of the processing time.

Glycerin is another preserving method. The plant material absorbs the glycerin, replacing water content with glycerin, keeping flowers supple and bright. Simply place the stems of fresh flowers in a mixture of two parts lukewarm water to one-part glycerin. Let the flowers sit in the mixture for two to three weeks. Some plant materials will undergo slight color changes with this process.

Whatever method you choose, you could have beautiful plant materials to enjoy throughout the year.

Demo Garden

Regina Brennan, Master Gardener

The California Natives Demo Garden offers an interesting dry creek bed which is lovely to look at, and requires no water to maintain. Dry creek beds can be worked into most landscapes with just a little imagination and some initial bending and lifting to place your stones of choice.



Bright, colorful lantana hybrids come in a variety of colors and growing habits. They are one of the best sources of summer color here in our region.



[UC IPM website](#)

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

[Click here for more info.](#)

The Help Desk - Lawn Irrigation

Steve Sanguinetti, Master Gardener

While every effort should be made to reduce or eliminate turf areas not specifically needed for play areas or pets, the fact remains that a great number of lawns still exist. Many of these lawns are often not irrigated to optimum efficiency.

For anyone concerned about water conservation, spring is the best time to inspect and adjust both your irrigation system and your watering habits to insure they are in good order. However, there may be some summer changes that could help in this area. Start by determining how long you will be able to water before excess runoff occurs. I consider runoff to be in excess if water in gutter, or otherwise, goes beyond front of your property*. To do this, turn on each station manually and keep track of how long it runs before runoff occurs. This will determine the maximum run time you can set for that station for each water cycle. If more water is required than this time allows, you will need to add an additional start time or two for each water day. This is referred to as “Cycle Soak” irrigation. According to the Lawn Watering Guide for California, below, the total number of minutes needed per week in our Region 5 in July and August can vary from 57 to 76 minutes. If you are allowed 3 watering days per week and have an 8-to 10-minute maximum watering time, you will need to run irrigation between 2 to 4 times per day to achieve the above weekly total. Areas with even more limited 2 day per week schedules will find the multiple start times of the “Cycle Soak” method more necessary. See <https://ucanr.edu/files/47995.pdf> for additional details regarding these recommendations.



The recommendations are based on the most common cool season turf’s water needs and the most common sprinkler application rates of 1.5 to 2 inches water per hour. As much as 50% of water applied by well intended gardeners can be wasted unknowingly. Ignoring proper maintenance and use of sub-professional materials can waste even greater amounts of water.

Other potential ways to conserve water are changing over to more efficient, lower precipitation rate sprinklers, use of “SMART Irrigation” weather-controlled timers, and possibly underground drip irrigation for small lawn areas.

*Check with your local water conservation agency; they may have other definitions and enforcement levels for excess water runoff, which days to water, and even how long to water.

Lawn Watering Guide for Region 5: San Joaquin Valley, Cool-Season Turf Grasses
Minutes per Week to irrigate if your hourly sprinkler output, “Precipitation Rate”, is:**

	0.5 inch	1.0 inch	1.5 inch	2.0 inches
JAN	25	13	08	06
FEB	50	25	17	13
MAR	92	46	31	23
APR	134	67	45	34
MAY	176	88	59	44
JUN	218	109	73	55
JUL	227	113	76	57
AUG	193	97	64	48
SEP	151	76	50	38
OCT	92	46	31	23
NOV	42	21	14	11
DEC	17	08	06	04

**Above watering times are determined by overall water demand of lawns in this area and do not take into account any possible rainfall contribution. Generally, lawn irrigation should be shut off between late November and early March.

Useful References for more details:

<https://ucanr.edu/files/47995.pdf>

<http://www.bewaterwise.com/calculator.html>

<https://www.fresno.gov/publicutilities/wp-content/uploads/sites/16/2018/03/2018-watering-schedule.pdf>

<https://ucanr.edu/sites/sjcoeh/files/77439.pdf>

<https://anrcatalog.ucanr.edu/pdf/8395.pdf>

<http://ipm.ucanr.edu/TOOLS/TURF/MAINTAIN/cycle.html>

A Taste of the Season

Julie Hyske, Master Gardener

When it comes to summer cooking, there are two requirements: fill your plate with as many fresh, seasonal fruits and veggies as possible, while keeping things as quick and easy as possible. Less time in the kitchen means more time on the patio! First, a perfect salad for an outdoor bbq that combines colorful vegetables, a southwestern flavor, and couscous blended into a delicious salad. The bruschetta chicken is simple and easy. Grill chicken with seasonal tomatoes, basil, mozzarella and a balsamic glaze. Finally, pizza is great for dinner and even better for dessert. You will be hooked! Now head for the patio....

Black Bean and Couscous Salad

Ingredients

1 cup uncooked couscous
1 ¼ cups chicken broth
3 tbsp extra virgin olive oil
¼ cup fresh lime juice
1 tsp ground cumin
5 green onions, chopped
1 medium red bell pepper, seeded and chopped
½ cup sliced black olives
¼ cup chopped fresh cilantro
1 cup frozen corn kernels, thawed
1 (15 ounce) cans black beans, rinsed and drained
salt and pepper to taste
shredded cotija cheese as a garnish



Bring chicken broth to a boil in a 2-quart or larger sauce pan and stir in the couscous. Cover the pot and remove from heat. Let stand for 5 minutes. In a large bowl, whisk together the olive oil, lime juice, vinegar and cumin. Add green onions, red pepper, black olives, cilantro, corn and beans and toss to coat. Fluff the couscous well, breaking up any chunks. Add to the bowl with the vegetables and mix well. Season with salt and pepper to taste, garnish with cotija cheese and serve at once or refrigerate until ready to serve.

Serves 8

Fruit Pizza

Ingredients

For the crust:

16 ounce roll sugar cookie dough
cooking spray or parchment paper

For the frosting:

8 ounces cream cheese softened
4 tbsp unsalted butter softened
¼ tsp salt
2 cups powdered sugar
½ tsp vanilla extract
1 tsp milk

For the topping or glaze:

3 cups fresh fruit such as sliced kiwi, blueberries, raspberries, blackberries, grapes, cherries
½ cup apricot jam strained or strawberry glaze



Preheat the oven to 350°F. Coat a 12-inch pizza pan with cooking spray or cut a circle of parchment paper to fit pan. Press the cookie dough evenly into the pan. Bake for 12-14 minutes or until light golden brown. Let the crust cool completely in the pan. To make the frosting, place the butter and cream cheese in a bowl; beat with a mixer for 3 minutes or until thoroughly combined. Add the sugar, vanilla, salt and milk and beat for an additional 3-5 minutes on high until frosting is light and fluffy. Spread the frosting over the crust. If using strawberry glaze simply spread over frosting. Arrange the fruit on top. (If using the apricot jam, heat in the microwave for 10 seconds or until melted.) Brush the jam over the fruit. Cover and chill for 6 hours before serving.

Serves 12

Bruschetta Chicken

Ingredients

For the chicken:

4 thinly sliced boneless skinless chicken breasts
¼ cup olive oil
2 tbsp lemon juice
1 tsp salt
1 tsp Italian seasoning or equal parts garlic powder, dried oregano and dried basil
½ tsp pepper
4 slices mozzarella cheese
2 tbsp balsamic glaze

For the bruschetta topping:

1 ½ cups tomatoes diced
1 tsp garlic finely minced
1 tbsp olive oil
¼ cup thinly sliced basil leaves
¼ cup red onion minced
salt and pepper to taste

In a large bowl or resealable bag, mix together the olive oil, lemon juice, salt, Italian seasoning, and pepper. Add the chicken breasts and marinate for at least 30 minutes or up to 4 hours. Preheat a grill pan to medium high. Remove the chicken from the marinade and place on the pan. Cook for 4-5 minutes on each side or until done. Place the cheese slices on top of the chicken. Cover the pan and cook until cheese is melted, 2-3 minutes. While the chicken is cooking, make the bruschetta topping. In a medium bowl, combine the tomatoes, garlic, olive oil, red onion, basil, salt and pepper. Let stand for 10 minutes. Spoon the bruschetta mixture over the chicken. Drizzle with balsamic glaze and serve.

Serves 4



Coming Events—Summer 2019

Corinne Bachle, Master Gardener

JULY

Monday, July 8th, 10 - 11:30am
Growing Berries
by Master Food Preserver
Free

Lodi Library - 201 W. Locust St., Lodi, CA

Call 209-953-6100 to reserve your seat



SEPTEMBER

Monday, September 9th, 10 - 11:30am
Winter Vegetable Garden
Pickling Veggies
by Master Food Preserver
Free

Lodi Library - 201 W. Locust St., Lodi, CA

Call 209-953-6100 to reserve your seat



AUGUST

Monday, August 12th, 10 - 11:30am
Pollinator Friendly
and Cutting Gardens
Free

Lodi Library - 201 W. Locust St., Lodi, CA

Call 209-953-6100 to reserve your seat



Horticultural Terms

Corinne Bachle, Master Gardener

Horticultural Terms Explained: Soil pH

Soil pH is a measure of how soil ranges from acid through neutral to alkaline. Soil with a pH of 7 is neutral, neither acid (<7) nor alkaline (>7).

ACID SOIL. Overly acid soil typically occurs in the Northwest, along California's northern coast, and in parts of Hawaii – regions with heavy rainfall, and soils high in organic matter. Most plants thrive in mildly acid soil, but highly acid soils are inhospitable.

ALKALINE SOIL. Found in regions where rainfall is light, this soil is high in calcium carbonate. Many plants grow well in moderately alkaline soil. Others, including camellias and azaleas, do not.

SALTY SOIL. Can result from overuse of fertilizers and fresh manures. Salty soil pulls water from plant roots, making it difficult for plants to take up enough moisture or nutrients. Symptoms include scorched and yellowed leaves or browned and withered leaf margins.

WHAT TO DO. Test your soil with a pH test kit from a nursery or have the test done at a lab (check online under *soil-test labs*). Adjust the pH. Acid soil: raise the pH by adding calcium carbonate (lime). Alkaline soil: lower soil pH by adding sulfur or, over time, with compost. Salty soil: add organic matter and leach the soil periodically with water to wash the salts to below the root zones.

Summer Garden Chores (cont. from page 2)

Sue Davis, Master Gardener

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

Lettuce, kale, and Chinese cabbage planted now will mature for fall salads. Try some heirloom lettuces this year to brighten both your garden and your salads.

Maintenance –

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

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

Prune cane berries. Canes of single-crop blackberries and raspberries that have finished fruiting should be cut to the ground. Thin out the new growth. Remove all but 5 to 8 of the strongest blackberry canes and 8 to 12 strong raspberry canes per plant. Wait until after the fall harvest to prune ever-bearing varieties.

September Notes

Plant –

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

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

with just rain water.

Shrubs, trees, and groundcovers get a head start when planted in fall. Plants send out roots in fall and winter while nature does most of the watering for you. Plants will be well established by the time new growth starts in spring.

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

Organic mulch applied several inches thick around plants will help keep roots moist if rainfall is sparse this year. Keep the mulch 3-5 inches from the trunks of your plants to avoid problems with rot.



Plant lettuce every few weeks to extend your harvest over a longer season. Tasty blends of leaf lettuce are easy to grow from seed.

Maintenance –

Harvest cantaloupe when it slips off the vine easily. A watermelon is a bit more difficult, but good indicators of ripeness include a pale yellow ground spot (where the melon laid on the ground), the tendril opposite the stem of the melon has dried and withered, the skin is dull rather than shiny, and, there is a dull "thunk" when you rap the melon with your knuckles in the morning.

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

Information for this article has been gathered from:

www.ucanr.org
www.ipm.ucdavis.edu
www.sunset.com/garden

Food Waste

(cont. from page 9)

Susan Mora Loyko, Master Gardener

Bottura, whose restaurant Osteria Franciscana was rated No. 1 among the world's 50 Best Restaurants, is concerned about food waste and feeding the poor. Through his nonprofit Food for Soul, he has created simple but elegant soup kitchens in Italy aimed to fight food waste by using surplus food — and the power of celebrity — to feed the hungry.

Barber is the chef and co-owner of New York's Blue Hill and Blue Hill at Stone Barns, among America's best restaurants, where he and big-name guest chefs serve dishes composed entirely of ingredients normally destined for the garbage — kale ribs, fish heads, bruised produce, and the like. The experiment proved to be successful and the meals received positive reviews.

Bittman is an American food journalist, author, and former columnist for The New York Times. He has written numerous books on food waste in America. Bittman sees the current food system as an interconnected web that is permanently entwined with land and environment. Through his books and news articles, he is educating the public about the food system and its need for change.

One of the biggest impacts of food waste is the land use change. Thirty percent of the earth is being used to grow food. As a result, there has been a loss of rain forest trees and animal species. One expert said, "humans have destroyed 10% of the Earth's wilderness in the past 20 years."

Just as destructive has been the fact that farmers are planting the same crops in the same area of land each year. Nature requires crop rotation due to the fact every crop takes something from the soil, as well as gives something back to the soil. When there is a healthy soil system, the food that grows in it tastes better, as well. **HEALTHY SOIL=HEALTHY FOOD.**

Composting facilitates the circle of life; EAT, COMPOST, REBUILD. By taking food items we eat such as fruits, veggies, coffee and adding other organic material such as sawdust, newspaper, wood shavings leaves, etc., turning the pile over and over, and adding water, the organic material breaks down and the material returns to its nutrient-filled organic state to help grow more food.



Most communities now provide not just curbside garbage collection, but recycling containers and green waste/food waste collection that will be composted. If you are unsure about what services are provided, check with your local waste hauler to find out what waste collection services are provided for your community.

According to Bourdain, food waste is something everyone can do something about individually. We need to choose more carefully what we buy and ensure to not buy more than we need. Think about what we throw away. Recycle all that we can. Compost organic material, if possible, instead of tossing items in the trash. Shop smart and make a shopping list before heading to the market.

Plan out meals and don't buy more than is needed. Buy local and seasonal foods. There is a reason we shouldn't eat a juicy, sweet peach in the dead of winter when we're not as active. Eat real food, that's the food that doesn't need a label. If you don't know how, learn how to cook. Cooks tend not to waste food. Cook more. Eat leftovers. Use ugly produce. Experiment with scraps. Freeze and eat leftovers.

All members of the cast agree we can reduce the amount of food waste and reduce our individual carbon footprint. They preached about caring for food (the more we care, the less we'll waste). Be an active citizen.

We all have the power to change the food industry for the better.

Have a gardening question? Call our hotline!

San Joaquin County Master Gardeners

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2101 E. Earhart Ave.

Suite 200, Stockton, 95206

E-mail: anrmgsanjoaquin@ucanr.edu

Web-site: <http://sjmastergardeners.ucdavis.edu>

Program Coordinator: Marcy Sousa 953-6100



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