

# Gulf Coast Gardening

WRITTEN BY GALVESTON COUNTY MASTER GARDENERS IN COOPERATION  
WITH THE GALVESTON COUNTY OFFICE OF TEXAS A&M AGRI LIFE EXTENSION SERVICE

Issue 197 - July-August 2015

## *Galveston County MG Demonstration Garden*

Highlights of Spring 2015 Field Trials



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*"Grass is the cheapest plant to install and the  
most expensive to maintain." - Pat Howell*



*By Camille Goodwin  
MG 2008*

**W**ord Association is a common word game involving an exchange of words that are associated together. What comes to your mind if asked to provide words and descriptions for a Galveston County Master Gardener? Several words/thoughts easily come forth in my mind. "Treasure trove" would be one term as MGs are a proven educational resource—MGs are instructive, enlightening, and informative. "Educators" would be another term as MGs provide an array of useful information or insight on horticultural matters. And, last but not least, "passion" as MGs exhibit a strong desire to help improve communities across the county. What comes to your mind? Hopefully, one thought is about our extraordinary Demonstration Garden which is the direct result of MG volunteers partnering together to make it a most effectual teaching tool for our members and for our community! This garden would not exist without GCMG volunteers.

Our amazing Demonstration Garden provides hands-on learning experiences and provides many opportunities for meaningful volunteer service. This month's newsletter features several special educational articles about our Demonstration Garden including its history on page 6, this season's orchard production and maintenance activities on page 11, read how our community beds support local food banks (page 14), the 2015 MG Interns tomato trials on page 8, and a soil solarization study to help eliminate root-knot nematodes in one of our raised beds that you can track from our weather station (page 10).

This newsletter will also kick-off a couple of new continuing educational topics. The first is on those ever popular herbs. This month we will be looking at Basil, a herb that survives the heat of summer, is showcased in the Q&A on page 5. The second will be a monthly tool primer, focusing on common and not so common tools we use in our gardens (page 18). What do you think about mulch volcanos? Read the Q&A on page 4 to find out if these are good or bad. The Best Shots feature this month identifies several plants that will bloom in shade (pages 12 & 13).

Do you like to germinate your own seeds? Learn the benefits of having your own "growth chamber" on pages 16 & 17. A continuation of last month's article on growing hops in Galveston County appears on page 15 with some interesting metrics and data on our current production findings. The Carbide Park update appears on page 19 and Dr. Johnson's Last Word appears on page 25 which talks about inviting butterflies to your backyard.

Are you a crafter? We are looking for items to sell at our craft table during the October plant sale, please see page 21 for details. As usual all volunteer, education and activity calendars have been updated.

**ABOUT OUR WOW!! COVER PHOTO**—The newsletter team would like to recognize and thank Mr. Jim Ammons of EDS Landscaping, 1420 Lawrence Rd, Kemah, TX 77565, (281) 334-9559 for helping us step into the technology of the 21<sup>st</sup> Century. Jim graciously worked us into his busy schedule to come out with his drone and GoPro camera and take a fabulous video of our Demonstration Garden from 250 feet above it! This newsletter's cover photo is from that video. Enjoy the video of our Demonstration Garden from a new view by clicking on the video button above.

Support the GCMG Association by setting up an account and shopping on-line at: smile.amazon.com. It's very easy to set up and select Galveston County Master Gardener Association Inc as your charitable organization. Amazon will donate a percentage of eligible sales to GCMGA. Check for more information on page 24. Don't forget to put the link for our weather station on your smart phone and computer: <http://www.weatherlink.com/user/gcmga>



Again, much appreciation to EDS Landscaping and Jim Ammons for making this newsletter distinctive with our very own overhead Demonstration Garden video. Any type of service you might need for your own landscape can be found at Jim's fantastic nursery. For more detailed information, please check out their website at this link: <http://www.edslandscapes.com/>



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Cover: Aerial View of the Galveston County Master Gardener Demonstration Garden  
Photo of Jim Ammons of EDS Landscaping with THE DRONE



Galveston County Master Gardeners are on Facebook with information about upcoming programs, Dr. Johnson's weekly column and more. Like us on Facebook and don't forget to opt to receive notifications. Share with others!

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By Donna J. Ward  
MG 1996

# ask a master gardener

## Q&A

### Hot Line Topics - Mulching Trees

**Q**uestion: Why should I mulch my landscape trees, and how much should I apply?



Pine Needles



Shredded Hardwood



Bark



Wood Chips



Compost

Mulching is one of the most beneficial things any homeowner can do to keep valuable landscape trees healthy. Mulch discourages weeds, insulates roots during both hot and cold temperatures, and conserves moisture; not to mention a good layer of mulch improves the aesthetics of the landscape.

There are many different types of mulch, and the organic types are the best. Common organic mulches include pine needles, shredded hardwood, bark, wood chips and compost—the latter being the most beneficial in my opinion. Natural, decomposing mulches are preferable over those that do not break down such as gravel, oyster shells, pebbles, rock, recycled rubber tires, plastic, etc.

I recommend avoiding dyed mulches (brown, red, green, black) as they are often made of old hardwood pallets, old decking, demolished buildings, or even worse (in my opinion), wood that has been pressure treated with preservative known as CCA (chromated copper arsenate). This trash is then roughly ground and sprayed for uniform color. Over time the dye and contaminants may leach into the soil where it can harm beneficial bacteria, earthworms and sometimes the plants it's supposed to be helping. (NOTE: On December 31, 2003, the production of CCA-treated wood for playground, residential and general consumer construction ceased. Since that time other wood preservatives (e.g., copper azole, cyproconazole and propiconazole) have been utilized as a treatment for wood decay.)

Most natural mulches work well in most landscaping applications. Some trees such as magnolias, holly and oaks benefit from pine needles or bark that help to acidify the soil as they decompose. Apply a 4-inch layer of mulch in a doughnut-shaped ring over well-drained soil; use a thinner layer on poorly drained areas. If possible, mulch out to the tree's drip line, as the wider the mulch ring, the greater the benefit. At the base of the trunk, the mulch should not be more than 2 inches thick. If applied too deeply or if the wrong material is used, mulch will actually harm trees and other plants.

DO NOT pile mulch against the tree's trunk. The base of the trunk should be left exposed. If you cannot see the 'flare' of the trunk at the base, the mulch is too deep. The objective is to create a doughnut, not a volcano. We often see volcano mulching and over-mulching on private landscapes and public esplanades, but this practice can cause a myriad of problems such as root rot, the result of excessive soil moisture retention. Inner bark tissue dies and insects and diseases proliferate. Rodents think you have created a habitat just for them, and while they are enjoying your hospitality, they are chewing on the tree's bark.

Volcano and other forms of over-mulching can also cause imbalances in soil pH and can lead to anaerobic conditions that produce alcohols and organic acids—all toxic to plants, especially young plants. Last but not least, volcano mulching often produces a matted barrier that can restrict the downward flow of water and exchange of gases (including oxygen)—essential for the health of your landscape trees.



Photo by MG Cheryl Armstrong



By Elayne Kouzounis  
MG 1998

## Herb of the Month . . . Sweet Basil

**Q**uestion: I love to grow basil and I have a few questions for you.



Photo by MG Elayne Kouzounis

### Recipe for Pesto

1 cup fresh basil  
1 cup Parmesan cheese  
½ cup nuts of your choice  
5 cloves garlic  
¼ cup olive oil  
Process basil, cheese, nuts, and garlic,  
while slowly adding olive oil.  
And remember, it's always nice when  
you entice with herbs.

Basil has a lot more to boast about than the burst of succulent flavor that comes from biting into its summer-fresh leaves. Originating in parts of Africa, Asia, Europe, and Australia, which makes it freeze-tender, this member of Lamiaceae (mint family) has about 64 different species, one being basil. The most common type of basil is sweet basil.

Although basil is important in American cookery today, it was unknown in the USA 20 years ago. The name derives from the Greek word "basilikon," meaning kingly.

#### ***How can basil plants be rooted?***

The plants are easily rooted from cuttings placed in water. That way, you can multiply your crop inexpensively and quickly. The best time to pick your basil is in the morning, after the dew has dried.

#### ***Why do we pinch off the blossoms?***

It helps the plant to continue producing leaves, which is the most important part of the plant. Blossoms can be used to add flavor to salads, soups, baked goods, or a beautiful garnish.

#### ***What are some good companion plants for basil?***

Basil works well with apples, asparagus, and tomatoes, parsley and summer savory.

#### ***How do you preserve basil?***

##### **Drying:**

Place a tray of bunches of herbs tied together, then put that directly into a very cool oven at 90°F/33°C and leave the oven door open. This is a very good and quick way to dry herbs in a few hours or overnight and works well for juicier leaves like basil. Leaves are ready when they become brittle, flowers when they become like tissue paper.

Once they are properly dried, store them in clean-glass, screw-top jars that are clearly labeled with the contents. It is best to keep them out of direct sunlight in a cool, dark place. They will last for a year.

##### **Freezing:**

Another cool trick you can try is gathering the fresh leaves in a loose bundle and place them in a clear plastic bag. Seal the bag securely after blowing air into it. Place the bag in the freezer of a shelf where the leaves won't be disturbed, and take them out one by one, as needed. You can also cut a full sprig from your garden and freeze it using this same technique.

#### ***What are some good uses for dried basil?***

Dried basil is best for long, simmering recipes. It keeps for 6 months in an airtight container, stored in a dry and dark place.

#### ***Why do you use dried basil as opposed to fresh basil?***

The flavor in fresh basil dissipates very quickly when cooking. Fresh basil can also turn black if bruised or cut with a knife. To avoid this, tear the basil with your hands. Fresh basil should only be used in the last few minutes of cooking. However, since dried basil doesn't have as much flavor as fresh basil, mix ½ teaspoon of basil with ½ teaspoon of lemon juice, ½ teaspoon of water, ½ teaspoon of oil, and a pinch of ground cloves to make the dried basil taste more like fresh basil.

#### ***Besides culinary uses, does basil have any medicinal or medical uses?***

Basil is reported in some literature to treat and prevent acne, cancer, cholesterol problems, eye infections, type 2 diabetes, pain, heart attack, wounds, malaria, stress, and cataracts. However, herbal supplements haven't been subjected to the extensive scientific scrutiny and aren't strictly regulated like medications. So, be sure to talk with your doctor, especially if you take medications, have chronic health problems, or are pregnant or breast-feeding.





By Anna Wygrys  
MG 1993

## it began with a brush pile

# Creating our Demonstration Garden



A few years ago in a location not so far away (8.5 miles to be precise), a charming demonstration garden was growing adjacent to the former location of the Galveston County AgriLife Extension Office at 5115 Highway 3 in Dickinson. It was home to a happy and dedicated group of volunteers, the Galveston County Master Gardeners. Vegetables grew. Flowers bloomed. Fish swam in a pond. A cozy room hosted friendly discussions planning the future and building camaraderie. It was a delightful place year-round. It was even recognized by the City of Dickinson with a *Dickinson Beautiful* sign. But...It was inadequate.

The group was growing. New volunteers needed a place to learn, work, and earn certification hours. To fulfill the mission of the MG organization, additional space was needed for research and to demonstrate successful gardening for local residents. Ideas were discussed at length in the cozy room. The leaders decided a primary goal was to locate more property for projects.

County Commissioners were interested and supportive of the Master Gardener Association's plans for expansion. In 2003 a search team was dispatched to investigate alternative locations in Galveston County. MG Herman Auer suggested the group inspect available spaces within Carbide Park. They selected the "Brush Pile."

The Master Gardeners already had a presence in the Wayne Johnson Community Center at Carbide Park. Audrey Chadwick was leader of the Horticulture Therapy program for the Senior Citizens group sharing the building with the Parks Department. Getting approval from the Commissioners Court and with cooperation of the Parks Department, we took up the challenge to create a garden from what had to be the worst piece of ground in Carbide Park.

Clearing the almost three acres was the first step. A bulldozer removed undesirable trees (including Chinese Tallow, an invasive species) and thickets of underbrush. After burning piles of debris, we still had problems with abandoned pipelines, chunks of concrete, and car parts, including tires. Consequently, 2004 was spent cleaning and grooming the area. MG Bob McPherson brought his tractor, disc and rototiller, and spent days conditioning the soil. Volunteers walked every inch of the ground removing debris.

A plan for the ground was next. MG Sam House researched demonstration and community gardens and drew up a plan. The next step was to obtain a dependable water supply. The "glue crew" (MGs Wayne Elliott, Jack Vanderlip, Wes Ruzek, Jim Edwards, Sam House, Lester Wygrys, and Nelson Harbison) started the first week in March 2005 installing over 2000 feet of two-inch PVC pipe connecting the Carbide Park water system to the garden. Jim opened the water valve in the garden on March 30, 2005.

The orchard was next on the agenda. In January 2005, Dr. Johnson directed the careful sculpting of berms and ditches for the orchard. He personally walked beside the grader, directing the operator in precisely moving soil to form raised berms, thereby providing the drainage for growing fruit trees. In late spring 2005, MGs Wayne Elliott, Nelson Harbison, Jim Edwards, Terry Cuculis and Lester Wygrys planted peach, plum, pear, apple, and citrus trees. These fruit trees are still thriving in the orchard. They are a living laboratory demonstrating what varieties to select and grow on the Upper Gulf Coast of Texas.

In 2005, MG John Jons established the Earth-Kind® Rose Testing Project. Four beds were dedicated to growing several rose varieties using the standards and methods of Earth-Kind® gardening. The roses were established by January 2006, and the two-year testing for the Earth-Kind® roses began. The only supplement allowed for the plants was mulch. No chemicals were applied to the soil or plants. Data collected and documented by MGs Judy Poorman, Susan Milford, Velda and Terry Cuculis was provided to Dr. Steven George, an AgriLife Extension Horticulture Specialist directing the Earth-Kind® Rose Research Program throughout Texas.

Other two-year research projects conducted by Master Gardeners included the comparison of organic versus inorganic soil amendments by MG Sam House. I completed a study of weed identification and practical, non-chemical control methods for weeds. Field testing of bulbs, corms, rhizomes and other ornamentals for the home landscape identified successful varieties for Galveston County. A Butterfly Garden attracted several species of butterflies as soon as volunteers planted the desired caterpillar host varieties. An heirloom garden illustrated a typical Galveston Island landscape of the late 1800s.

Recently, volunteers introduced stately trees in meandering beds filled with collections of Texas Superstar perennials. Areas of lawn gracefully sweep around, leading visitors to the Serenity Garden designed and built by MGs Carine Grosjean, Camille Goodwin, and Tish Reustle. Varieties of bamboo add interesting textures to the exterior and interior of a Zen garden of plants and rocks with a stream of cascading pebbles.

2005 was the beginning of planting fruit trees, roses and vegetables. MG Wayne Elliott expanded the irrigation to all vegetable beds, orchard and ornamental gardens. Also, the work crew began tackling hardscape projects. Starting in 2006, they built an imposing pergola, arbor, storage buildings, and raised beds.

As the Thursday Work Day crew grew, a larger support building was necessary. The foundation for the two-story building was poured on June 26, 2008. An electronic weather station, rainwater harvesting units and a greenhouse have also been established to enhance the educational value of the Demonstration Garden.

Today, visitors are invited in along a brick walkway honoring volunteers and their families. Visitors are welcome to tour the Demonstration Garden on Thursday mornings, from 8:30 to 11:30 a.m. Group tours are also provided by sending an e-mail to [GALV3@wt.net](mailto:GALV3@wt.net). This is truly a world-class educational garden maintained by a world-class group of Master Gardener volunteers.



Photos by MG Anna Wygrys



# Creating our Demonstration Garden . . . continued



The "Cottage" served as our MG meeting room (with an adjoining storage unit) at the former demo garden in Dickinson.



The former demo garden contained eight raised beds.



A before view of the Serenity Garden area before the start of construction.



Our Service Center at the new demo garden in Carbide Park with a nearby greenhouse (foreground) & storage building (background).



.Our new demo garden has 56 raised beds.



A view from the same spot as that in Fig. 5 after construction was completed.





By Linda Barnett  
MG Intern 2015



By Sandy Zeek  
MG Intern 2015



By Sharon Zaal  
MG Intern 2015

## we learned three things... **Tomato Performance Field Trials**



We agreed that when we decided that we wanted to be a Master Gardener, we all thought we had an idea of what this organization had to offer. After being accepted, each of us quickly realized we had no clue what we had gotten ourselves into.

The first thing we learned was the importance to the organization of volunteers getting along with all kinds of new people, the second was musical chairs (we sat at different seats at each lecture to encourage us to become well-acquainted with each other), and the third was the hand signal for “NO.”

About three-fourths of the way through the course, we had a surprise from Dr. Johnson and Ira, our fearless leaders. The 2015 Intern class was going to be the first Intern class to conduct a tomato field study as a group. Some of us thought to ourselves, “What!?” but we all teemed with excitement. We each had a partner, and each team had two tomato plants. Every team had a different variety and their own small patch of ground.

We all met in the MG Demonstration Garden to plant all twenty-four of the tomato plants. You would think after playing musical chairs and sitting by every one of your classmates throughout our classroom instruction that we would know each other. However, we soon realized that we were a trial as well. We quickly learned that digging in the soil and sweating with your peers can really create strong bonds.

All the walls and shyness came crashing down like a ton of bricks. Every Monday, two Interns would water the tomato plants if the soil moisture level indicated, and every Thursday, four Interns would weigh, pick, trim, fertilize, and do whatever else needed to be done to ensure the plants would thrive. Needless to say, more than the required four people would always arrive to help with these precious plants. If someone couldn't come, another Intern always came to help with the plants.

When working the plants, you could always hear the chatter of various conversations unless Dr. Johnson or Ira was talking. Then, we got the “one-conversation-rule” or the “NO” hand signal, and all side conversations would cease. As our tomatoes grew, the bonds of our class grew as well. I'm sure Dr. Johnson and Ira were watching the Interns as closely as they were watching the tomato field study—maybe even closer! The tomato plants, as well as the 2015 Interns, grew by leaps and bounds: the plants because one set of Interns doubled a fertilizer dosage (by accident, of course), and the Interns because of the camaraderie and bonds that were made when we were in our tomato garden.

When the time came to pull up the plants, we were all full of excitement and felt a sense of accomplishment. The tomato trial was a success; here's a brief report of our findings. The first day of harvest was collected from the variety ‘Bush Early Girl’ on May 7, 2015. The heaviest tomato (harvested from a cultivar named ‘Steakhouse’) weighed 1.7 lbs. The last day of harvest (for all tomatoes) was June 25, 2015.

Most home gardeners would likely be surprised when they learn how much 24 tomatoes can produce. Our yield data reported that the 24 tomatoes produced 301 lbs. While that averages out to 12.54 lbs. of tomatoes per plant, the highest yielding single plant (‘Big

Beef’) produced 125 tomatoes that weighed in at 70 lbs.

In contrast, ‘Bush Early Girl’ produced 193 tomatoes that weighed in at 36 lbs. The tomato variety known as ‘Steakhouse’ produced the single largest tomato (1.7 lbs.). However, ‘Steakhouse’ only produced 54 tomatoes totaling 39 lbs. (at an average weight of 85 lbs.)

Total weight of tomato harvested from the 24 plants was 301 lbs. A total of 1,136 tomatoes was harvested from the 24 plants. Of the 1,136 count, 135 tomatoes were discarded as culls, 867 tomatoes were graded as good eating quality and 134 tomatoes were graded as green (on the last day of harvest). The green tomato harvest accounted for a lot of Fried Green Tomatoes being prepared!

High daytime temperatures (above 85 °F) and high nighttime temperatures (above 70 °F) signal the end of the spring tomato production season for Texas Upper Gulf Coast gardeners. As already noted, June 25, 2015, was the last day of harvest as daytime temperatures had started to climb into the lower nineties.

When the time came to pull up the plants, we were all full of excitement and felt a sense of accomplishment. The tomato trial was a success. Since the Intern trial was such a success, we have been given a second bed for a fall garden; hence, the bonds of the 2015 Intern class will continue to grow.

A primary mission of the Demo Garden is to provide research-based horticultural information and to provide learning opportunities to the residents of Galveston County and beyond. If you wish to get a close-up inspection of some of our field studies, be sure to visit our Demonstration Garden in Carbide Park in La Marque. It's open to the public on Thursday mornings.





# Tomato Performance Field Trials . . . continued



MG Interns from the 2015 class met in the MG Demo Garden on March 19 to plant twenty-four tomato plants as part of the performance trial.



Prez Ira teaching planting tomato basics



We quickly learned that digging in the soil and sweating with your peers can really create strong bonds.



Twelve teams (consisting of two Interns per team) got down to the business of planting tomatoes.



Every Thursday, four Interns would weigh, pick, trim, fertilize, measure plant height and collect other data.



Total weight of tomatoes harvested from the 24 plants was 301 lbs. All 24 plants produced a total of 1,136 tomatoes.



# it became clear that there was a serious problem in bed #40

## Soil Solarization Study Field Trials



By Gene Speller  
MG 1997

In November 2014, I started maintaining one of the raised beds (Bed #40) at the Master Gardener Demonstration (Demo) Garden located in Carbine Park in La Marque. My plan (Call it **Plan A**) was to set up Bed #40 (approx. 20' x 4' x 1') as a chile pepper display garden for the Spring and Summer of 2015. It would be available for observations by the general public visiting the Demo Garden on Thursdays, Master Gardener Interns during training, and other Master Gardeners. Although the chile peppers (10 different varieties) at Bed #40 were not as productive as my home garden, Plan A was at least partially successful (Fig. 1).

However, during the third week of June 2015 (Thursday, June 18<sup>th</sup>), it became immediately clear that there was a serious problem in Bed #40: root-knot nematodes in the soil. After a nice rain the previous day (Wednesday, June 17), the plants should have perked up. Instead, several were unduly withered (Fig. 2). Upon further examination of the root system of one of the plants, the tell-tale signs of the microscopic worms were there—knots/galls incorporated in the root structure (Fig. 3). A sample of one of the plant's roots was collected and submitted for analysis to the Texas A&M Plant Disease Diagnostic Lab (TPDDL) located in College Station. Root-knot nematodes were confirmed.

Root-knot nematodes (*Meloidogyne* spp.) are microscopic, parasitic worms that are approximately 400 to 1000 mm (01/64 to 3/64 inch) in length that feed on roots of various plants. They have a stylet used to penetrate the plant's root cells and inject a protein

secretion. The affected cells produce multiple nuclei and develop into structures known as "giant cells." These giant cells, in turn, become nutrient sinks from which the nematodes feed. Neighboring cells also enlarge and divide rapidly resulting in the visible gall formation.

Prior to starting the work on Bed #40, I had been informed by other Master Gardeners at the Demo Garden that there had been a nematode problem there. Plants like okra, peppers, and tomatoes are very susceptible to root damage by root-knot nematodes. As a precaution, I planted cereal rye in Bed #40 during last year's fall season and tilled it back into the soil this spring (call it **Plan B**). Cereal rye reportedly has a two-fold method of controlling the nematodes. First, the root-knot nematodes are actually trapped and killed within the roots of the cereal rye. Secondly, the decomposing cereal rye releases organic acids into the soil which elevate beneficial soil microbes and help reduce the nematode population. A good idea and recommendation, but apparently it was not good enough in this case.

On to **Plan C**. Reportedly, it is very difficult, if not impossible, to completely eliminate root-knot nematodes from the soil once they are established. However, they may be controlled or managed to an acceptable level by using a combination of recommended Integrated Pest Management (IPM) practices including: (a) soil solarization, (b) crop rotation, (c) fallowing, (d) cover crops, (e) incorporation of ample quantities of organic matter into the soil, and (e) use of varieties of plants with

nematode resistance. Chemical nematicides are no longer available to the home gardener.

So, I have now initiated **Plan C**—Soil Solarization. All pepper plants and their roots were removed and disposed of in a trash bin for waste pickup. The soil surface has been smoothed and slightly sloped. The soil has been wetted to accommodate heat transfer. The surface has been covered tightly with a 3 mil clear plastic (Fig. 4) to allow solar rays to heat the soil below. There are currently four temperature probes in Bed #40.

Temperature probes #1, #2, #3, and #4 were positioned at 8 inches, 5 inches, 2 inches, and 3 inches, respectively, below the soil surface. The highest temperature recorded thus far has been 112°F with Probe #3 located at 2 inches below the surface. Near real time temperature data (scroll down to the heading titled "Extra Sensors") can be accessed via the GCMGA weather station at:

<http://www.weatherlink.com/user/gcmga/index.php?view=summary&headers=1>

After the solarization process, I plan to till in several bags of manure and compost into Bed #40 (call it **Plan D**) followed by a cover crop of broccoli and/or French Marigolds (call it **Plan E**). Then, I plan to try chile pepper plants again in the Spring of 2015 (Call it **Plan A, Part 2!**).

A primary mission of the Demo Garden is to provide research-based horticultural information and to provide learning opportunities to the residents of Galveston County and beyond. If you wish to get a close-up inspection of our soil solarization field study, be sure to visit our Demo Garden on

any Thursday morning.

Successful home gardeners are also likely to be adept at implementing Plan A, Plan B, Plan C, etc. based on current situations and so do Master Gardeners.

So, as learned from one of John Steinbeck's books and Robert Burn's poems with similar titles, this popular idiom holds true today: "The best laid plans of mice and men often [do] go awry." Nevertheless, we gardeners keep on trying and planning—Plan D, Plan E, Plan F—et al. Stay tuned for updates and a final report in upcoming newsletter issues.



Photos by MG Gene Speller



# the results are in

## Peach and Plum Field Trials



*By Sue Jeffco  
MG 2013*



*By Herman Auer  
MG 1983*



*By Jackie Auer  
MG 2007*



*By Robert Marshall  
MG 2012*

**O**ur Demonstration Orchard has 66 trees, consisting of many varieties of peaches, plums, citrus, figs, jujube and avocados, as well as many other “exotic” fruit trees. Peaches and plums are among the most commonly grown fruit in the local landscapes. Our study this year focused on peaches and plums.

In our 2015 study, ‘Desert Gold,’ ‘Tropic Beauty’ and ‘Tropic Snow’ were the first peach varieties to come into full bloom (on February 16). The full bloom stage was reached by other varieties in rapid succession (Tex King on February 23, Florida King on March 1 and May Pride on March 1).

From mid-March to early April, we thinned the peaches to encourage the growth of larger fruit. A total of 75 pounds of juvenile peaches were thinned. While 75 pounds of juvenile peaches may not sound like a lot of peaches, this poundage represented approximately 70,000 juvenile fruit that the plants had set (peaches, plums and certain other fruit such as citrus can set an amazing overabundance of fruit).

Why thin? Look at it this way—you can have lots and lots of little fruit, or fewer, but bigger, fruit. We like the big peaches. We do hands-on demonstrations of fruit thinning in the orchard every March for all who are interested in learning the technique.

The first day we harvested peaches was May 11 and the final harvest day was May 31. Nearly 200 pounds of peaches were harvested this year. The top three producers were: 1) Florida King at 82 pounds per tree; 2) Multi-graft tree consisting of Florida Prince, Desert Gold, and Eva’s Pride at 43 pounds per tree; and 3) May Pride at 24 pounds per tree.

For plums, the top producer was Gulf Blaze at 70.5 pounds per tree. The second highest producer was Gulf Beauty at 44 pounds per tree, and Gulf Rose provided 22.8 pounds per tree for third place. The total plum harvest was 142 pounds, done between May 14 and May 28.

On the down side, we lost 158 pounds of peaches and plums, primarily due to plum curculio damage. Plum curculio is our number one pest. It is a small insect that lays its eggs on the immature peach or plum fruit. It leaves a circular, or crescent-shaped scar, which may or may not ooze sap. The larva that hatches from each egg then burrows into the fruit. Plum curculio can destroy an entire harvest.

Herman Auer scouted for the plum curculio and found the first adult stage on March 4. A second was found on March 10 and a third on March 12. The number peaked at 28 on March 17. For the rest of March, Herman scouted every other day and found three to ten each time. Sightings dropped off to zero throughout April, but the second generation appeared on May 21.

To manage and control plum curculio and brown rot, Herman and Robert followed a proactive program of spraying fungicide and insecticide. They started off early with a fungicide, and then added an insecticide when the plum curculio made its appearance. Herman has developed a guide called “Peach and Plum Spraying Guide,” which is available at the AgriLife Extension Office. It details what to spray and when to spray it. He also covers the topic in his seminar “How to Grow Peaches and Plums.”

With all the rainy weather this past spring, brown rot was also a problem. Brown rot is a fungal disease that causes rotten spots on the fruit that are, well, brown. There were also some minor losses due to birds, rabbits (yes, rabbits!), and squirrels. EVERYBODY loves peaches and plums.

We had a good harvest this year. Yes, we had some losses, but we anticipate next year’s harvest will be even bigger. In fact, we are already preparing for next year by pruning the peach and plum trees into that nice inverted umbrella shape that helps maximize production. Hands-on pruning demonstrations were also provided on Thursday mornings in early June for county residents as well as Master Gardeners.

Peaches and plums are well-suited for the Texas Gulf Coast gardens/home orchards. With good care, a proactive spray program, adequate fertilizer, and occasional watering if needed, they will give a remarkable harvest. Check this newsletter later this year to view the final report of our study.

See you in our orchard!



The Orchard Team



# MG Best Shots



*Abelia grandiflora* - by MG Sandra Devall



Strawberry Begonia, *Saxifraga stolonifera* - by MG Herman Auer



*Ajuga* - by MG Linda Steber



Oxblood/Schoolhouse Lilies, *Rhodophiala bifida* by MG Anna Wygrys



Confederate Jasmine, *Trachelospermum jasminoides* by MG Margie Jenke



Shrimp Plant, *Justicia Brandegeana* by MG Mary Martino



# ...and Narrative

## Shade Plants



By Sandra Devall  
MG 1998

Shade creeps slowly into our gardens and landscape as it ages. It spreads from the growth of trees, the addition of patio covers and neighbors. Suddenly, plants and grass abandons spots it has filled for years. As with life, when change occurs we must change also. In landscapes, we can slowly change by making additions that will spread and take up the blank spaces that occur because of the shade. This list of 'best plants' include bloomers from large shrubs to ground covers. Because additional shady areas grow slowly, the fact that shade plants grow slower is not significant because the speed of the change and the spread of the plants seem to match. Add them a few at a time and sit back and become delighted with each of these as your landscape gradually changes.

**Abelia grandiflora.** I love plants with delicate flowers, tiny leaves and a surprising hardiness. The leaves are small, waxy, pointed and thick. An abelia can be trimmed formally or allowed to spread but it does not spread as much as something like a bridal wreath (*Spiraea prunifolia*). The flowers are tiny, but abundant. They are mostly white but with tints of a strong pink. As one of my first plants, it survived my lack of knowledge of watering or fertilizer schedules and never has been diseased. I have one at my present home also and it lost the battle for space with a Barbados cherry and I thought it was gone. When I finally moved the Barbados, there it was. I chopped around on it so it had a decent shape and in one season, it had forgiven me and appeared in its full glory. I am grateful for its beauty and its forgiveness.

**Strawberry Begonia, *Saxifraga stolonifera*.** Begonias are a choice for yards in Galveston County because they are plants that bloom in the hot summers and especially in the shade. The stems are soft, which means that one small pot of this plant can be doubled in one season just by breaking off its stem and sticking it in the ground with a week or so of tender loving care and watering. Leaves are deep purple all the way to lighter green. As an edging to flower beds, begonias are a quick way to change the appearance of an all-green shade garden.

Another favorite begonia is an angel wing, which has an elongated heart-shape leaves. Although they will not multiply as quickly, they will cascade in a tall pot and the shape of their leaves will provide a pleasing texture to the landscape.

***Ajuga reptans*** is an evergreen, a perennial and a great groundcover. It isn't fussy about soil as long as the drainage is good. It can be grown in any type of light from full sun to full shade. Some call it quite aggressive, so it would be perfect as a groundcover in a large area separated from planting beds, possibly under a shaded tree where growing lawn might be a problem. *Ajuga* blooms from spring to mid-summer. The flower color varies but is often blue to purple. The color of the leaves also varies with coppery or purplish leaves. Most types of *Ajuga* only reach a height of 6-9 inches when in full bloom. *Ajuga* grows along the ground, spreading by runners and soon creates a thick carpet of foliage. It is propagated by digging and dividing established clumps in the fall or early in the spring.

**Oxblood/Schoolhouse Lilies, *Rhodophiala bifida*.** Oxblood lilies grow at the base of my rosemary. I don't do anything to them or think much about them until September when they sprout almost overnight, burst into bloom and remind me that life is good. Durable and undemanding, this Argentine bulb deserves to be planted more frequently than it is. Although not as large (11-14 inches tall with blooms 2-3 inches long) as its amaryllis cousins, oxblood lily produces numerous blooms per stalk in a color equal to its name. A clump of them is as festive as a Christmas bouquet and as refreshing as a glass of pomegranate juice.

Oxblood lily goes by the botanical name *Rhodophiala bifida*, although some sources list it as *Hippeastrum advenum*. It is also called "school-house lily" because it blooms at the beginning of the school year. Oxblood lilies thrive in full sun to half shade and in any soil as long as it is well-drained, and I have seen them growing in full shade. Try them in a rock garden or in front of evergreen shrubs such as boxwoods. They mix well with dianthus, thrift, antennaria and thyme. Don't combine them with red spider lilies, however. The oxblood lily undercuts the drama of the spider lily, and the spider overshadows the shorter, simpler oxblood. Keep them apart.

**Confederate Jasmine, *Trachelospermum jasminoides*.** The chain link fences favored twenty years ago are not found in newer homes and are being replaced by 'privacy' fences or wooden fences. What has been lost is the flow-through for our plants and added shade to the lot lines. My flower beds are still adjusted to the shade; many plants are getting smaller and smaller. There are a few that have handled the shade better than others. Some are native Turks cap and the confederate jasmine. They were beautiful on the chain link fence. There is a fence close to the freeway in Texas City and I try to remember to drive by because in the sun they are their best.

They do bloom in the shade of the wooden fences and will naturalize to be a ground cover in the bed in front of the fence that they climb. When blooms are gone, the small waxy dark green leaves break the monotony of the brown fence. In smaller yards, they are an excellent way to make a backyard feel not only larger, but greener and of course brighter when they are blooming.

**Shrimp Plant, *Justicia Brandegeeana*.** Shrimp plants live up to their name, their flower looks like a shrimp. These are hardy and spread to fill a 4 ft. x 4 ft. area in several years. Today, there is a large variety of shrimp plants. The flowers can be coral, red or yellow. The plant itself can be a yellow-green or even a deep green. They solve the problem of a bed that contains a tree but nothing will grow around it. They can be invasive and don't usually like to share an area with anything, but they do solve a special problem.



## it takes a community Giving Back

By Ira Gervais  
MG 2011

Anyone who has time should visit one of the food pantries located in Galveston County. Most of us are fortunate in life to have good jobs or have retired from good jobs that provided good pensions. We have good physical and mental health and most of us have never experienced food uncertainty. Visiting area food pantries has been a real eye opener in regards to the number of Galveston County residents needing food assistance. They come in all sizes, races, and ages—many having been dealt harsh blows in life but still carry on.

On any given day you might see 20 or more people lined up to get help. You might find Mary (surnames are omitted in this article but the people are real) with her three kids aged 2, 3 and 5. Her husband was injured in a construction job and hasn't been able to work for some time. Or you might find "John," an 87 year old widower with no family, who has to choose whether to spend his \$800 monthly Social Security check on rent, medicine or food... but what a character! Or you might find "Alice" who is 52, who lost her husband a year ago and is not eligible for Social Security or any benefits and is surviving on what her family can give her. Alice told me she feels ashamed for asking for help.

Each person had their unique set of circumstances that lead them to seek assistance. As I visit these pantries to deliver the produce each week, I see many faces that I have seen before and many new faces. The food they receive from these pantries is of enormous help and many can't get by without the assistance of these pantries. I have come to the realization that maybe we can't fix all the problems of these individuals but we can all do our bit to help them through their tough circumstances. Based on the many one-on-one conversations I've had with people at food pantries, I realize that each and every donation makes a difference in someone's life. As Galveston County Master Gardeners we can at least give back to our community by helping to feed some of our hungry neighbors.

### Doing Our Part in Serving Galveston County People in Need

The Galveston County Master Gardener Association was formed in June 1986 and is the longest continuously operating Master Gardener Association in the State of Texas. Our GCMG Association has 228 certified members, ages 27 to 92. We serve a county population of approximately 315,000 people today.

Dr. Johnson and I are very proud of our Galveston County Master Gardener volunteers and how they have enthusiastically given back to our Galveston County Community. Our unequaled group of Galveston County Master Gardener volunteers continue to provide exceptional educational programming for county residents on home horticulture. Many of our members have developed into local and state-recognized experts on a variety of horticultural topics. But we are especially proud of how our organization has addressed the needs of the area food pantries.

In our Galveston County Master Gardener Demonstration Garden located in Carbide Park, we now have eleven raised beds, which

we call the "Community Beds." The "Community Beds are of varying sizes (up to 16 ft. x 12 ft.) and are dedicated to growing produce for the Galveston County food pantries. A number of our Galveston County Master Gardeners plant and tend these raised beds under the direction of long-time Galveston County Masters Gardeners Bobby Ivey and Clyde Holt.

We provide donations to the northern region of Galveston County (including Friendswood), the southern region of the county (including Galveston Island) as well as communities in the mid-region. Produce harvested from our weekly Thursday workday is weighed and packaged for delivery by our Master Gardeners. MG Henry Harrison and I then divide the produce at the end of the Thursday work day. I deliver to county pantries from Dickinson and northward. Henry delivers to pantries south of Dickinson to Galveston Island.

Just what type of impact has the Galveston County Master Gardeners had on the community? We donated approximately 2,900 lbs. of produce in 2014 and for 2015 we have already donated approximately 1,500 lbs. to local pantries. In addition, we have and continue to expand the public demonstration programs on growing produce and citrus and caring for fruit trees at the Demonstration Garden. These programs are well attended by the public. Indirectly, we feel this also helps to feed Galveston County residents.

Volunteering as a Galveston County Master Gardener is all about giving. It's about helping your fellow man in need and working with others to make a meaningful difference to your community. There is something unique that comes with giving back to the community.

Maybe it's the satisfaction of helping those who might not get the help they need. Maybe it is seeing people from all different walks of life smile with that same smile of appreciation and gratitude. Or maybe it's just knowing that we have compassion for others that is only gained through helping those less fortunate, or just knowing that giving back to the community has made a difference.



Photo by MG Ira Gervais

Produce on the way to the pantry.



# we now measure growth in feet not inches

## Growing Hops in Galveston County

(Editor's Note: This is a continuation of a series of articles on hops by MG John Jons.)



by John Jons  
MG 2003

In the two-month period (April to June) since my last article on hops, the hops grown in the Master Gardener Demonstration Garden in Carbine Park have grown significantly (see table below) and we have continued to learn about growing hops in the Texas Upper Gulf Coast region.

Using jute rope, the existing vine trellis and the pagoda we constructed a hop trellis for the hop bines (vines) to grow and climb along. The hop bines have microscopic hairs that enable them to easily adhere to the jute string. As the hop vines grew, we trained them to grow along the jute string trellis. In anticipation of our typically hot southern Texas summer, we also installed a drip irrigation system.

**Growth:** Initially we started to measure the growth length of each of the hop varieties' bines in inches, but now as each of the varieties has grown from between 9 and 16 feet in the last two months, we now measure the growth in feet. We also started to count the number of bines growing from each plant's rhizome. We discontinued doing this as the plants grow bines from both the rhizomes and the other bines.

**Production:** In mid-May, some of the hop varieties started producing "cones"—which are the flowers that are used in making products. We counted the cones (that were over 3/8" long) on each variety (see the photo and table). Some of the cones were over 3/4" in diameter and 1 1/2" long. We started harvesting in late June. Some of the hop varieties have not yet produced any cones.

**General Observations:** Overall, the hop varieties that we have planted appear to be growing quite healthily. We have not used any fungicides or insecticides on the plants. As soon as the hops started growing, we noticed either insect or rabbit damage to the new growth, so we installed a wire chicken-netting barrier fence around the base of the beds. We did not need to use the irrigation system due to the ample rainfall we have recently received.

Variety	Date	3/20/15	4/23/15	5/28/15	6/20/15
Cascade	Length of Bine	0	22"	11'	16'
	No. of Cones	0	0	0	5
Columbus	Length of Bine	0	36"	6'	10'
	No. of Cones	0	0	14	31
Chinook	Length of Bine	0	33"	10'	9'
	No. of Cones	0	0	5	7
Nugget	Length of Bine	0	30"	5'	9'
	No. of Cones	0	0	0	0



Photo by MG John Jons



By Bill Spenny  
MG Intern 2015

## a frugal means for home gardeners to grow vegetable plants

### Growing from Seed in a Growth Chamber

*(Editor's Note: Bill Spenny is a member of our Master Gardener Greenhouse Team. He and his spouse Gesslyn Engelhard collaborated in writing this column.)*

The summer heat here in the Texas Upper Gulf Coast region creates difficulties with seed germination in greenhouses across the county, including the Master Gardener greenhouse located in the Demonstration Garden in Carbine Park. Bill is a member of the Master Gardener Greenhouse Team and he was asked to consider utilizing growth chambers to help with the germination of vegetable seeds since growth chambers are a passion of his.

"Growth chamber" definitely sounds like a very technical term. Scientists use complex growth chambers that manipulate a range of factors, such as temperature, humidity, fertilization, water distribution, and light exposure. Needless to say, these types of growth chambers can be expensive to purchase and expensive to maintain. However, after much experimentation, Bill and I have discovered that growth chambers can be a low cost, frugal means for home gardeners to grow vegetable plants.

Developing a growth chamber has been a natural progression for both of us from childhood since growing vegetables from seed has been a tradition in both of our family histories. We watched our parents painstakingly plant seeds in mid-winter, water carefully, somehow provide enough light during those dark, short, northern days (we both grew up in the mid-West), and gently keep the tiny plants warm enough when it was frigid outside. When the seedlings were large enough and weather willing, beautiful plants were transplanted into the garden.

We've been growing our own garden plants from seed for many years. Using a growth chamber has many benefits, including: 1) We like heirloom vegetables and varieties of other vegetables that home gardeners cannot generally buy in local nurseries and other garden outlets; 2) We can time our production to fit our schedule. Because we live in the southern portion of Galveston County (in Bayou Vista which is a waterfront community near the Gulf of Mexico), we plant our summer garden as early as January. Generally, vegetable plants are not available at stores this early in the season; 3) We minimize problems with disease by growing in a controlled environment; 4) As mentioned earlier, this system is a frugal method of providing quality plants for the garden. In fact, last summer, we only had to purchase one vegetable plant for our entire garden! We have become a source of vegetable plants for our friends, family and neighborhood; 5) The growth chamber is compact and easily fits along a wall in our garage. The chamber can grow from 1,000 to 3,500 plants in a space the size of a small closet; and 6) We gain enjoyment and satisfaction from growing our own plants from seeds to harvest.

Our current growth chamber design is the result of years of trial and error and an avid desire to "build a better mousetrap." Our chamber is 6 feet tall, 4 feet deep and 5 feet wide. Bill built four shelves—4 feet deep by 5 feet wide—that slide out for easy access for watering. The slides used for the shelves are standard pullout sliders used in kitchen drawers. Each shelf holds 12 plastic shoeboxes, without the lids, that we bought at the local box store. We use growing

trays to start the seeds, which can be purchased in 9, 12, 24, or 75 packs.

Each shelf of the growth chamber has 3 utility light fixtures and each fixture holds 2 bulbs. Each fixture has a 5,000 Kelvin bulb and a 6,500 Kelvin bulb with an on/off switch. This makes it easy to use only one fixture at a time on a particular shelf. We have discovered, after using several alternate lighting systems, that this combination of 2 bulbs works best with germinating seeds and growing the plants for the first 6 weeks. Once we have plants in the growth chamber, we leave the lights on for 18 hours and off for 6 hours. The lights are positioned 4-to-5 inches from the top of the growing trays. The plants are allowed to grow right into the lights.

The lights are important for maintaining a constant temperature in the winter. We like to keep the temperature between 75°F and 80°F. Because the growth chamber is in our garage, if the outside temperature dips below 40 degrees, we will wrap the entire unit in clear plastic to maintain the temperature in the desired range.

It is important to use a sterile, soilless growing mix to start seeds. If you reuse the growing trays, then use a bleach solution to clean both the growing trays and the plastic shoeboxes. Once the seeds are planted, check each morning for the amount of water in the shoeboxes. Because watering from the top of the growing trays favors the development of plant disease (such as root rot) caused by various fungal pathogens, it is of primary importance to water from the bottom of the trays.

Leave about ¼ inch of water in the bottom of the plastic shoeboxes. If we go out of town for 2-to-3 days, we leave about ½ inch of water in the bottom of the shoebox. We have found that should moldy growths develop, first clean the shoebox, then spray with a vinegar solution of one oz. vinegar to one quart water and, finally, put the growing tray back in the plastic shoebox. Afterwards, spray the plants with the vinegar solution once a day for 2-3 days.

One difficulty we have with the plants in the growth chamber is that sometimes the seedlings will become "leggy." The stems are thin and long with only a few small leaves at the very top of the plant. To prevent this problem (botanically known as etiolation), we have discovered that a floor fan blowing over the plants helps immensely. The breeze from the fan creates a vibration on the plants that causes them to strengthen their stems.

Now our next step for the future is building a growth chamber using red and blue LEDs. We appear to have moved beyond our parent's gardening experience and yet we, just as they did, enjoy the garden for much more than just the delicious vegetables. Neither we, nor our parents, view the garden as work. To us, the garden is healing and provides solace as we plant seeds, plant vegetable transplants, observe their growth, gather produce, give away or prepare the food for our table, whether the seeds were started on our parent's kitchen table or in our modern-day growth chamber.



# Grow Chamber. . .continued

**Our current growth chamber design is the result of years of trial and error**



The chamber is 6 feet tall, 4 feet deep and 5 feet wide with 4 shelves, 4 feet deep by 5 feet wide that slide out for easy access



Each shelf holds 12 plastic shoeboxes, without the lids



We use growing trays to start the seeds, which can be purchased in 9, 12, 24, or 75 packs.



We like to keep the temperature between 75°F and 80°F.



Each shelf of the growth chamber has 3 utility light fixtures and each fixture holds 2 bulbs



We leave the lights on for 18 hours and off for 6 hours



By Barbra Markey  
MG 2013

## the language of garden tools

### Tool Primer

This is the first in a series of articles entitled "Tool Primer." We will be concentrating on tools used in gardening, which we hope will make your gardening experiences easier and allow you to glean some new information. We do not intend to reinvent the wheel, just make you aware of some things you may have forgotten, or perhaps never knew. We want you to learn something new in each article.

This first article is intended to help you "grow your green thumb" by choosing the proper attire for gardening. After all, you won't make progress if you give up because you have a sunburned neck and poison ivy or oak on your body. We hope you will gain more confidence in your abilities because you are properly attired. Success comes when you have increased your ability to complete a garden process, be it miniscule or enormous. Sarah Shaki said "I feel that as the world becomes more multicultural, it's a good tool to be able to speak another language." You will learn to speak the language of garden tools.

Garden Implements can come in all sizes, shapes and textures. Some fail to realize the right tool used for a specific job can make a task so much easier. Whether you garden in the sunshine, shadows, under dark, gloom clouds, or in chilly weather, choosing the correct piece of equipment for a particular task will make the job less frustrating.

Today, we will focus on some safety equipment: sun glasses, with UVA and UVB protection, safety glasses for spraying, ear plugs, if needed, knee pads, sun protection, along with hats, light colored long sleeve shirts and long pants and a good sun screen. Read labels before you buy a product. You want one that gives quite a bit of protection. If you are using your sprayer to apply organics or chemicals, be sure to have the proper spraying gear. Often this information is located on the back of the product bottle. If not, do some research to make sure you are aware of the manufacturer's recommendations.

Let's talk about hats used for gardening, or any other outdoor activity. The Internet displays quite a few sites that sell hats; you can pick and choose the one that best serves you. We like hats made of palm, with wide brims to shade the face and ears, with a neck strap, in addition to lattice for ventilation. If this is not to your liking, look for straw visors, canvas, or bucket hats. Spoonbill hats, with a back piece of fabric to shield your neck, are also available.

We found several hats advertising an SPF of 30+ to a UPF of 50, finished in the fabric. If you shop locally, two large national chains advertise garden hats available on site.

Next time we will focus on gloves, spades, shovels, and sharp shooters. Until then, we hope you will use some information contained in this article to make your safety gear selections.

Happy shopping!



## July-August "Things To Do" Gardening Calendar Video



by Jenifer Leonpacher  
MG 2010



by Gregory Werth  
MG 2012



Click on the "Play Video" icon (above right) to see what a "group effort" can do (by the aforementioned Master Gardeners) to prepare an exceptional "Things to Do" Calendar.



# Project: Demonstration Gardens

# Carbide Park



If you didn't know, we have been having lots of rain. Weather service graphs indicated the garden area received over 10 inches for the month of June. Some areas of Galveston County have had almost twice their usual rainfall so far this year. Amazingly, on Galveston Island rainfall was near normal. Despite the rain, temperatures have averaged near normal. This rainy weather has decreased production of some fruits and vegetables like oranges, olives and beans in the garden. Leafy vegetables and figs seem to be doing really well.

Our Master Gardener Demonstration Garden at Carbide Park is one of the best in the state of Texas. I say this because we have such a diversity of plants and activities. First, we have the vegetable garden where our Master Gardeners are growing a large variety of seasonal vegetables. In addition, there are ongoing studies on what grows best in our area, also fertilizer use and application, and even pest management. Then there is the orchard where we grow apples, peaches, plums, oranges, lemons, kumquats, jujubes, mangos, olive trees and where we teach others how to prune and propagate. Most of our produce is sent to local food banks. We also have some very interesting ornamental gardens which include, the Rose Garden, Earth-Kind Garden, Serenity Garden, and Butterfly Garden.



Construction of the greenhouse is nearing completion and a greenhouse production oversight team has been formed. Plant growth experiments are underway in the greenhouse now. The main purpose of our various experiments is to learn how to operate a greenhouse, and how to grow starter sets for planting in the garden and to even grow some plants for the spring plant sale. The people involved at this point in the greenhouse experiment and productions are; Deborah Perkins, Sharon Zaal, Stewart McAdoo, Alice Rodgers, Bill Spenny, Clarence Paul, Deborah Perkins, Ed Beazley, Glen Diket, Gloria Funderburg, Ira Gervais, Keith Reed, Ken Steblein, Lisa Belcher, Oscar Nelson, Henry Harrison, Tom Fountain, and Ginger Benson. Pictured to the left is Bill going over some new sets with Clarence and others.



Photos by MG Tom Fountain

It's always good to try something new such as this frame (left photo) built by Henry, or in the kitchen (right photo) that the crew has cooked up for delicious luncheons being served for Master Gardeners. So come on out Master Gardeners and see where you might fit in and enjoy some good company.





by Sandra Gervais  
MG 2011

it's a feast!

# Seasonal Bites

It's the middle of July and summer in Houston has truly arrived. The monsoons are over and by the end of August rain might become a distant memory. The hardy MG volunteers at Carbide Park on Thursday have brought some interesting casseroles recently, especially with vegetables. So here is a yellow squash easy-to-prepare casserole from Julie Cartmill.

## Squash Casserole

2 lb. chopped squash (can use all yellow or a mix of yellow and green)  
1 medium onion, finely chopped  
1 lb. pan or breakfast sausage  
1 cup crushed "Cheese It" crackers (not "Cheese Nips")

1/4 teaspoon sage  
Salt and pepper to taste (can use cayenne pepper if desired)  
1 cup chopped green onions  
1 cup grated cheddar cheese  
2 beaten eggs

Parboil squash until almost tender. Drain well. Brown sausage and chopped onion together. Set aside 1/4 cup of both crushed crackers and grated cheese for topping. Mix all ingredients together and put in greased 9 x 13 dish. Top with reserved crushed crackers and grated cheese. Bake at 350 degrees for 45 minutes.

Note: this is a recipe that's easy to play with for variety. If you want heat, add jalapeños or cayenne. For a different taste, use bulk Italian sausage, garlic and Italian herbs.

Since the oven is already on, why not make some of Camille Goodwin's fantastic cupcakes for a real treat? Cupcakes cook more quickly than a regular cake....always a good thing in our summer heat. Camille has brought these to various Master Gardener events and they are always a big hit. That she puts them in fancy cupcake liners adding to their visual appeal.

## Coconut Key Lime Cupcakes

2 3/4 cups all-purpose flour  
1 teaspoon baking powder  
1/2 teaspoon baking soda  
1/2 teaspoon salt  
1 1/2 cups sugar

1 cup salted butter (soft/room temperature)  
1 cup canned cream of coconut (Coco Lopez)  
5 large eggs, separated  
2 teaspoons vanilla  
1 cup buttermilk

Preheat oven to 350 degrees. Line the cupcake pan with liners for 24 cupcakes.

In a small bowl, combine flour, baking powder, baking soda and salt. Set aside. With electric mixer, beat sugar and butter until light and fluffy. Add cream of coconut and beat until fluffy. Beat in eggs, one at a time. Add vanilla. Scrape down sides of bowl and mix again. Add dry ingredients and mix until just combined. Add buttermilk and mix until combined. Fill liners 2/3 full. Bake 18-22 minutes or until toothpick comes out clean on testing.

Let's see. A nice all-in-one casserole, a green salad and good bread make for a great meal. Pull out the cupcakes for dessert, and it's a feast!

## Frosting for Key Lime Cupcakes

1/2 cup butter (soft/room temperature)  
8 oz. cream cheese (soft/room temperature)  
3 teaspoons Key Lime zest

1 tablespoon Key Lime juice  
1/4 teaspoon salt  
5 cups icing sugar

Beat butter and cream cheese together until light and fluffy. Stir in Key Lime zest and juice. Beat in icing sugar, 1 cup at a time, mixing thoroughly after each addition. Ice cupcakes and decorate as desired.

Note: Key Limes are very small and usually come in a bag at the grocery. They have a slightly different taste and are not as tart as the Persian limes which are more common.







By Cindy Croft  
MG 2009

## MINUTES - MAY & JUNE, 2015 MONTHLY MG MEETINGS

May's monthly meeting was held on May 12 in Friendswood at the home of Master Gardener Tish Reustle and her husband Jim. Food, Fun and Fellowship were on the agenda; a short business was conducted by Association President Ira Gervias. Betty Webb is a MG from Brazoria County MG program. She is transferring to our Association and was introduced and welcomed at the meeting. The rain may have kept some members at home, but there was a good turnout. Tish is a wonderful artist and her creativity extends to her backyard with water features, pathways, garden art, and bee house (not hive) for mason bees. It was a great place to sit with friends and visit.



By Mary Lou Kelso  
MG 2000

The annual June MG Graduation, Certification & Recognition Program was again held in the home of Mikey and Allen Isbell on June 9, 2015. Recognitions were given to the 2015 MG Interns, those conferring the Title of Certified Texas Master Gardener to the Class of 2014, and Master Gardener Volunteer Achievement Awards. Luke Stripling, Class of 1991 received a Lifetime Achievement Award, followed by numerous Special Awards to those who "make a difference."



Photos by MG Tom Fountain



## THIS YEAR, WE ARE TRYING SOMETHING NEW AT THE OCTOBER PLANT SALE ON OCT. 10, 2015

We will have a craft table loaded with your creative garden related crafts. Please donate your craft to the Galveston County Master Gardener October sale and the proceeds will benefit the organization's needs. You know your crafty abilities and have enough time between now and October to come up with some clever garden related items. Making these items will get you out of the hot sun and will benefit our organization.

Ideas: Decorated pots, Bonsai trees, plant name tags, wind chimes—these are just ideas!!! Come up with something clever. Please email Connie Webb [copeclub@yahoo.com](mailto:copeclub@yahoo.com) and let her know what you are donating for the craft table. This will be a fun addition to our October Plant Sale. More information will be forthcoming.

# Upcoming Events **Tuesday Night & Saturday Seminars**

Please be sure to register for the programs you want to attend. Accurate attendance counts are needed so that program materials may be on hand for attendees. The following AgriLife Extension Programs are free to the public..

Location: Galveston County AgriLife Extension Office in Carbide Park

4102-B Main Street (FM 519), La Marque, Texas 77568

For course reservations, call 281-534-3413, ext. 12 or email GALV3@wt.net

## **BACKYARD GARDENING - STRAWBERRIES**

**Saturday, August 1, 2015**

**9:00 - 11:00 a.m.**

Presented by Galveston County Master Gardener Robert Marshall, this program will cover how to successfully grow strawberries in the Galveston County area. Topics covered will include the correct time to plant and choosing the best varieties for this area. Also covered will be how to prepare your garden beds, water and fertilizing needs, as well as disease and pest control.

## **THE GREAT PEPPER EXTRAVAGANZA - Seminar & Tasting**

**Saturday, August 8, 2015**

**9:00 a.m. - 12 Noon**

PowerPoint presentation by Master Gardener Gene Speller includes background and origin of pepper plants; heat value classification (Scoville Units); how to start from seed; culture and growing tips; recommended varieties; insect and disease control; and pepper uses & recipes. Gene will have his homegrown peppers available for tasting and comparison. His peppers come from all four 'heat' groups: mild, medium, very hot and extremely hot, to suit everyone's taster. The general public is also encouraged to bring in their own un-sliced peppers for taste comparisons.

## **THE PATIO GARDEN**

**Saturday, August 22, 2015**

**9:00 - 11:00 a.m.**

Many people find themselves with the dilemma of loving to garden but not having a place to do it. Container gardening can open the door to growing loads of delicious fruits, vegetables and herbs right there on your patio, courtyard or balcony. Learn soil management, fertility, types of containers and plant selection. Everything you need to know to become a "Patio Farmer". This program will be presented by former County Extension Agent for Montgomery County, Tom LeRoy.

## **SUCCESSFUL FALL VEGETABLE GARDENING**

**Saturday, August 29, 2015**

**9:00 - 11:30 a.m.**

Long time Galveston County Master Gardener Luke Stripling will present a program on growing cool weather vegetables in Galveston County. Topics will include soil preparation, drainage, the use of raised beds, growing up using fence or other supports, the best seed planting dates, the best varieties, planting depth, fertilizer methods, water requirements, and harvesting.



## 2015 MG Re-certification (Continuing Education) Hours Available Through the AgriLife Extension Office

Date	Name of Program	Speaker	CEUs for MGs
1/6/2015	Grafting Your Own Fruit Trees	Herman Auer	1.50
1/10/2015	Growing Avocado and Papaya	Jerry Hurlbert	2.75
1/10/2015	Successfully Growing Peaches in Galveston County	Herman Auer	2.00
1/15/2015	How to Graft Fruit Trees - a hands on workshop	Herman Auer	1.25
1/17/2015	Growing Citrus in Your Own Backyard	Chris Anastas	2.00
1/17/2015	Citrus Greening	Robert Marshall	0.75
1/20/2015	Gardening by the Square Foot	John Jons	1.50
1/24/2015	Successful Spring Vegetable Gardening	Luke Stripling	2.75
1/24/2015	The Real Dirt on Garden Soil	Bob McPherson	2.00
1/27/2015	Anyone Can Grow Roses	John Jons	1.75
1/29/2015	How to Graft Fruit Trees - a hands on workshop	Herman Auer	2.00
1/31/2015	Grow Great Tomatoes	Ira Gervais	2.50
1/31/2015	Growing Blueberries	Dr. David Cohen	1.75
2/3/2015	Fruit Trees & Spring Vegetables for the Gulf Coast	John Jons	1.00
2/17/2015	February MGA Meeting - Demonstration Garden Requirements	Bobbie Ivey	1.00
2/19/2015	Rose Pruning - a hands on workshop	John Jons	1.50
2/19/2015	How to Graft Fruit Trees - a hands on workshop	Herman Auer	1.50
2/21/2015	Texas Tuff' Landscape Plants	Sandra Devall	2.25
2/21/2015	Kitchen Gardening	Mary Demeny	2.25
2/24/2015	The ABCs of Composting	Ken Steblein	1.75
2/26/2015	How to Graft Fruit Trees - a hands on workshop	Sue Jeffco	2.00
3/3/2015	Gardening for Jewels - Hummingbirds	Deborah Repasz	1.50
3/17/2015	Honey Bees Around the Garden	Stewart McAdoo, Robert Marshall	1.50
3/19/2015	Peach Thinning - a hands on workshop	Herman Auer	2.00
3/21/2015	The Culture & Care of Palms	O.J. Miller	2.25
3/21/2015	Tomato Stress Management	Ira Gervais	2.00
3/24/2015	75 Ways to Live a Greener Life	Ken Steblein	1.50
3/26/2015	Peach Thinning - a hands on workshop	Herman Auer, Robert Marshall	1.00
3/31/2015	Tool Talk	Tim Jahnke, Henry Harrison III	1.50
5/19/2015	Beneficials in the Garden	Dr. William M. Johnson	1.50
6/4/2015	Peach & Plum Pruning - a hands on workshop	Herman Auer, Sue Jeffco	1.00
6/6/2015	The Fabulous Fragrant Frangipani (Plumeria)	Loretta Osteen	1.75
6/6/2015	The Culture & Care of Palms	O.J. Miller	2.25
6/11/2015	MG Greenhouse Team Training Videos	Online Training	1.00
2015 Recertification Hours for MGs		Total CEUs (Hours)	58.50

Last Updated: 16 June 2015

**Reminder: In order to maintain your status as a certified Texas Master Gardener, each year you must complete a minimum of 6 hours continuing education, as well as 12 service hours. Additionally, those hours must be reported through the online Volunteer Management System or other means. Contact MG Wayne Elliott at [mghours@wt.net](mailto:mghours@wt.net) for more information.**

# bulletin board

## VOLUNTEER OPPORTUNITIES

To volunteer for the **MG Phone Desk** contact Laura Bellmore by e-mail at [galv3@wt.net](mailto:galv3@wt.net) or by calling the office at 281-534-3413, ext 1.

**Libbie's Place Adult Day Care** has been designated as a Demonstration Garden for the Master Gardener Association. It is located at 5402 Avenue U in Galveston and is part of Moody Methodist Church outreach ministries (<http://www.moody.org/libbies-place-senior-day-program>). A crew is needed to maintain and upgrade the garden as needed with your time spent counting towards MG volunteer hours. MG Pam Windus is heading up the crew and will determine the day, time and frequency of the work days. If you are interested, or have any questions, please contact Pam at 409-771-5620 or by email at [DrPGilbert@aol.com](mailto:DrPGilbert@aol.com) to let her know the day/times (AM/PM) that would work best for you. Thank you for your time and consideration in this great new endeavor for the Master Gardeners.

### **Tideway is a program of the Transitional Learning Center**

Dr. Johnson has approved Tideway Transitional Learning Center (644 Central City Blvd., Galveston, Texas 77551) as a location where Master Gardener service hours may be earned. Plans to prepare the gardens at Tideway for spring planting are ready and volunteers are needed. Volunteers can contact Brack Collier at [bcollier@tlc-galveston.org](mailto:bcollier@tlc-galveston.org). The focus is on the long-term needs of individuals with an acquired brain injury. The program offers accessible horticultural experiences, through which individuals with a brain injury can improve sensory awareness, motor skills, range of motion, endurance and flexibility as well as regain confidence, and learn new skills. This provides the opportunity for our residents to develop the necessary skills to gain and maintain a productive lifestyle whether it is on site or volunteering in the community. The residents at Tideway are very much "hands on" in building the different garden beds, in fact some of the residents came up with the designs. And they have chickens.

## SPECIALIST & OTHER MG RELATED TRAINING

Please see the Texas Master Gardeners Website for details. Please note that if you go to the website you can find up-to-date information on Specialist Programs that were added in between editions of the newsletter. <http://txmg.org>. You may download the application forms from that website. Note that all applications for the Specialist Training courses must be approved and signed by Dr. William Johnson. Note that fees do not include lodging or food unless specified otherwise.

### **Texas Superstar Plant Specialist Training**

September 16 @ 8:00 a.m. - September 18 @ 12 p.m.

The State Master Gardener-Texas Superstar® Plant Specialist Training was created as an intensive multi-day training that helps empower certified Master Gardeners with knowledge and skills required to effectively support and multiply Texas A&M AgriLife Extension Service efforts in Earth-Kind® environmental educational programs in their counties.

Organizer - David Rodriguez - (210) 467-6575

[dhrodriguez@ag.tamu.edu](mailto:dhrodriguez@ag.tamu.edu)

San Antonio Botanical Garden - 555 Funston Place  
San Antonio, 78209 (210)207-3250



Don't forget to put the link for our weather station on your smart phone and computer: <http://www.weatherlink.com/user/gcmga>

## VOLUNTEERS NEEDED

### **Tour Guides for "First-Thursday-in-a-Month" Public Access & Tour of our Demonstration Garden**

Long-winded title but it says what we will be doing. Our Demonstration Garden will be open for touring by the general public on the first Thursday of each month from 9:00 to 11:00 a.m. MGs are needed to serve as tour guides for our demonstration Garden. Contact MG Robert Marshall at 281-993-5595 or e-mail at [rbrtm01@att.net](mailto:rbrtm01@att.net) or MG Bobbie Ivey at 713-748-8564 or email at [blivey@sbccglobal.net](mailto:blivey@sbccglobal.net) to volunteer.

**Volunteers are needed to help with the Saturday programs and the Tuesday evening programs.** If you can help please contact Christine Anastas (281) 468-3787 or Robert Marshall e-mail [rbrtm01@att.net](mailto:rbrtm01@att.net)

**AgriLife Extension Office Demonstration Garden needs volunteers!** The gardens around the AgriLife Extension Office are maintained by Master Gardeners under the team leadership of MG Peggy Budny. This is an opportunity to make a good impression on the many visitors to the AgriLife Extension Office. Come out and have a good time while learning more about ornamentals. Please contact Peggy at 281-334-7997 or by email at [fmbmab@verizon.net](mailto:fmbmab@verizon.net) to find out the schedule and join her team.



### **Here is a great way to support our GCMGA**

Amazon will donate 0.5% of our personal purchases to Galveston County Master Gardener Association.

### **All you have to do is:**

Go to [smile.amazon.com](http://smile.amazon.com) -Choose Galveston County Master Gardener Association as your charity. - Save smile.amazon.com to your favorites. - Always start from this site to do your amazon shopping. - You should see your chosen charity in the top bar on amazon's website. - If you have any problems, search smile on amazon's website



# the last word . . .

## INVITE BUTTERFLIES INTO YOUR YARD

(Editor's Note: This article is a reprint of Dr. Johnson's Weekly Gardening Column in The Galveston County Daily News)



By Dr. William M. Johnson  
CEA-HORT & MG  
Program Coordinator

**Y**ou can invite butterflies into your landscape if you provide the right conditions and the right plants. If you want butterflies in your yard, there are certain things to do and certain things not to do. The process is simple. The rewards are stunning. Go ahead—imagine a garden full of beautiful flowers. Now, add the fluttering movement and brilliant color of butterflies and you have one of nature's most enchanting combinations. Not satisfied with the occasional, chance appearance of butterflies, many gardeners are creating butterfly gardens with plants specially chosen to invite these creatures to the landscape. To plant a butterfly garden properly, you need to have a general understanding of the life cycle of butterflies. They pass through four distinct stages: egg, caterpillar (larvae), chrysalis (pupae) and butterfly (adult). While they may look very different at each stage, it is important to understand that a caterpillar is not a different creature—it is simply a baby (or teenage) butterfly. Although some of the butterfly caterpillars, such as Gulf fritillary larva, appear to be heavily armed with spines, none can sting. On the other hand, moths are closely related to butterflies and have a caterpillar stage, but some moth caterpillars do sting.

Butterfly caterpillars feed voraciously on the leaves of plants. Each type of butterfly caterpillar will feed only on certain plants, and the adult female butterfly will lay her eggs only on those plants that will properly nourish her off-spring. For example, Monarch butterfly caterpillars will feed only on milkweed plants (*Asclepias*). Gulf fritillary caterpillars prefer species of passion vines (*Passiflora*). The parsley worm, which grows up to be the Eastern black swallowtail, feeds on parsley, dill and fennel. Sulfur butterflies lay their eggs on cassias, and the preferred food of long-tailed skipper larvae is bean leaves (as in lima, snap and other beans grown in the vegetable garden). The orange dog caterpillar, which feeds on citrus trees and disguises itself to look like bird droppings, grows up to be the spectacular swallowtail butterfly. These plants, called larval food plants, are planted into a butterfly garden with the hope that butterflies will lay eggs on them and they will be consumed by caterpillars. This is one of the few situations I can think of where a gardener actually hopes a plant will be eaten by caterpillars. Needless to say, the use of pesticides is not permitted in areas dedicated to butterfly gardens.

But remember that the caterpillars are picky about what plants they will feed on, so they generally will feed only on the larval food plants you provide for them. That means you really do not need to be concerned they will attack and damage other types of plants in your landscape. As for adult butterflies, they feed primarily on nectar from flowers. Many common garden flowers are attractive to butterflies, and the more kinds of flowers you include in your garden the better your chances of attracting butterflies. Certain nectar plants seem to be especially irresistible to butterflies. Some of the best are butterfly weed (*Asclepias curassavica*), coneflower (*Echinacea purpurea*), wild ageratum (*Eupatorium coelestinum*), butterfly bush (*Buddleia species*), lantana (*Lantana camara*, *L. montevidensis*), pentas (*Pentas lanceolata*) and salvias (*Salvia species*).

Don't be disappointed if you don't see butterflies flocking to your yard in droves. Remember, a butterfly garden is an invitation, not a command performance. The more plants you put in, and the longer you stick with it, the more likely you are to see butterflies. After a while, spotting a butterfly will be more common. And the first time you find caterpillars on your milkweed, parsley or passion vine, you'll find the excitement makes it all worthwhile.

As insects, butterflies are coldblooded and depend on the warmth of the sun for energy to maintain proper body temperature. Locate your butterfly garden in an area that receives the morning sun and warms up early. This is important in spring and fall when nights are cool. This location also is important because most larval and nectar food plants prefer to grow in a site that gets six to eight hours of direct sun a day.

Butterfly gardens strive to attract, welcome and nurture these fascinating and lovely insects that add so much to the pleasures of gardening. With their abundance of bright, colorful flowers, these gardens also can contribute to the beauty of the overall landscape. Don't forget to include your children, grandchildren or others in the process. Kids are delighted by the stages in a butterfly's life cycle, and it is a great way for them to learn more about nature.



Photo by MG Helle Brown

You can invite butterflies into your landscape if you provide the right conditions and plants. Kids are delighted by the stages in a butterfly's life cycle, and it is a great way for them to learn more about nature.

# 2015 MGA MONTHLY MEETINGS

## February 3, 2015

John John - Pre-Fruit Tree Sale Presentation  
10:00 am - Extension Office  
Carbide Park - La Marque

## February 17, 2015

Bobbie Ivey - Vegetable Beds at Demo Gardens  
6:30 pm - Extension Office  
Carbide Park - La Marque

## March 10, 2015

Rod & Lynne Mize  
4004 Lovers Lane  
5:30 pm - Dickinson

## April 14, 2015

Karen & Tom Morris - Backyard Meeting  
5:30 pm - 2910 Bayshore  
Bacliff

## May 12, 2015

Tish Reustle - Backyard Meeting  
5:30 pm - 902 West Viejo  
Friendswood

## June 9, 2015

Graduation at Mikey and Allen Isbell's  
7:00 pm - 1715 - 35<sup>th</sup> Street  
Galveston Island

## July 14, 2015

Brock Colliers (from Tideway) & Monica Martins  
7:00 pm Extension Office  
Carbide Park - La Marque

## August 11, 2015

Mary Lou Kelso, Moody Gardens  
Galveston Island  
Venues begin at 9:15 am

## September, 2015 TBA

Fall Plant Sale Preview  
6:00 pm - Extension Office  
Carbide Park - La Marque

## October 20, 2015

Helen Bashline & Gail Ayers - Backyard Meeting  
5:30 pm - 1016 Church  
Galveston Island

## November 10, 2015

Ira Gervais - Annual Meeting, Election of Officers  
6:00 pm - Extension Office  
Carbide Park - La Marque

## December 8, 2015

Holiday Meeting - Mikey and Allen Isbell  
6:30 pm - 1715 - 35<sup>th</sup> Street  
Galveston Island



*By Judy Anderson  
MG 2012*

## GALVESTON COUNTY MASTER GARDENER ASSOCIATION

### Upcoming Master Gardener Programs

#### August

Plan on another fun-packed day at Moody Gardens for the August Master Gardener meeting. Check the August invitation for details about activities and schedule. A lavish buffet has been ordered to satisfy any diet need. Expect a few pleasant surprises. During the evening.

#### September

The Master Gardener Ornamental Plant Sale is scheduled for October; the presentation of the ornamental plant sale to the Master Gardeners will be scheduled for September. The date and time will be announced when the presentation has been scheduled.

#### October

Be sure and mark your calendar for Tuesday, October 20 for the Master Gardener Backyard Meeting. It will be held in the historic district of Galveston. This will be an excellent opportunity to visit the tree sculptures in the historic area and view a living tree sculpture at the home of the meeting. It was designed by the homeowner and is a remarkable piece of garden art in the large landscaped property. The home is of the art deco period. The tree sculpture below is located in the neighborhood. Check the invitation for parking details.



#### We Want Your Feedback

#### FEEDBACK



We would love to hear from you. Send us your comments or suggestions for future articles, or just let us know how you are using our newsletter. To make sending feedback easy, just click on the button with your response



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