

THE CONTAINER GARDEN ISSUE

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TEXAS

MASTER  GARDENER

TEXAS A&M AGRILIFE EXTENSION

Galveston County

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IN COOPERATION WITH THE GALVESTON COUNTY OFFICE
OF TEXAS A&M AGRILIFE EXTENSION SERVICE

New Ideas for Container Plants



MG Kathy Maines

“The greatest service which can be rendered any country is to add a useful plant to its culture.” Thomas Jefferson

This month our newsletter is all about container gardening. I have plants in containers that I received from my mother and from a very dear friend. I have had these for years. When I moved, my container plants moved with me. Looking at and tending to them bring back such wonderful memories. Containers can be in your home, on your roof, in your office, your yard, on your patio, balcony, door step and window sill. It seems like in every neighborhood, I see plants in containers. They can change the way your entire yard and home look. One of the best things about container plants is that anything can be a container and you can grow just about anything in a container. We even have dwarf citrus that are specifically for containers. I read that gardening reduces stress. Perhaps that container plant in your office or on your desk helps reduce stress. I’ve also learned that taking care of

house plants is the best type of gardening to do when it’s 100° with 100% humidity. That for sure reduces stress!

I’m really looking forward to new ideas. Hope you enjoy this issue as much as I know I will.

Kathy Maines



(Pexels.com)

Fill, Spill and be THRILLED



MG Karolyn Gephart

Container gardening is convenient, portable and a fun way to mix colors, heights, and varieties. Then you can watch it get bigger and better each day. I love to see huge hanging baskets placed in front of stores in small towns as you travel in quaint downtown areas. Hotels seem to understand the thriller, spiller and filler concept as they showcase distinctive pots and planters in plush lobbies or outside the entrances. The convenience of containers in patio gardening helps everyone with a small outdoor area grow vegetables, citrus and herbs. This issue will inspire you to enjoy container gardening. Get a glimpse of Irish gardens with MG John Jons giving you a tour and get information from MG Ira Gervais on micro dwarf tomatoes. This fall you can delight friends who have downsized and no longer have ground space for growing vegetables. Now a windowsill with light is all that is needed for a tomato crop.

Need a new hobby? Read all about how to make a mossarium. DIY creator and MG Donna Ward gives all the details and shares her beautiful creations. Learn more about scarecrows, dragon fruit, and hammerhead worms. It’s all in this issue. Enjoy!

Karolyn Gephart



GCMG Daabase



MG Stacey Phillips

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Contact Us

Extension Office

281-309-5065
galvcountymgs@gmail.com

Horticulture Help Line

281-309-5061

Speakers Bureau

832-289-7087 and
gcmg.speakersbureau@gmail.com

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Putting the WOW into Container Gardening



Pam Hunter
GCMG 2018

If you want to add some pizzazz to your garden, try container gardening. I call them plant towns, coined by my brother-in-law, Merlin. Add elegance to your garden by planting several different plants in one container. The container can be anything from a milk jug cut in half with holes punched in the bottom, to an elegant pot.

Here in the garden world, we have what's called *thriller*, *filler* and *spiller*. A thriller is usually a tall plant with strong form and color. Fillers are plants that fill bare spaces and hide the soil. Finally, spillers are plants that trail over the container. The options for plant choices are almost unlimited. The plants should be suitable for your intended sun and shade locations. Use at least three types of plants for a lush container that is surely to impress.

A few examples of thrillers:

Purple fountain grass (*Pennisetum setaceum*)

Cordyline (*Cordyline fruticosa*)

Dracaena (*Dracaena fragrans*)

Tropicanna® Canna series; variegated foliage (*Canna indica*)

Snapdragon (*Antirrhinum majus*)

Iris

Options for fillers could be:

Polkadot plant (*Hypoestes phyllostachya*)

Caladium

Juncus (*Juncus effusus*)

Begonia

Coleus (*Plectranthus scutellarioides*)

Abutilon (*Abutilon theophrasti*)

Spillers could consist of:

Variegated English Ivy (*Hedera helix*)

Sweet potato vine (*Ipomoea batatas*)

Nasturtium (*Tropaeolum majus*)

Moss rose (*Portulaca grandiflora*)

Alyssum (*Lobularia maritima*)

Bidens (*Bidens ferulifolia*)

Creeping Jenny (*Lysimachia nummularia*)

Thrillers work best as the tallest plant. Remember, at planting time the thriller goes in the center of a pot so that it can be viewed from all sides, or at the back of a pot that will be displayed in a corner or against a wall. Keep in mind that not all thrillers need to be plants. They could be inanimate objects like a piece of driftwood, a stone or a fountain.

Next come the fillers. Fillers are mid-size, mounding plants and fill in the space in the planter. Fillers add mass to the overall composition and can add textural contrast or colorful counterpoints. Fillers can also help by hiding the bare, lower stems of the thriller. Fillers should complement and not clash with the thriller.

The third component are spiller plants which do just what the name implies; adding lushness to the arrangement, they *spill* or *sprawl* over the side of the pot's edge. Spillers are usually smaller plants that are placed in front of the fillers. These too should have a contrasting or complementary color and texture to the arrangement without dominating or clashing.

No matter what size the arrangement may be, ensure that



Eddie Smith Ph.D. Mississippi State Extension



Eddie Smith Ph.D. Mississippi State Extension

“...thrillers, fillers, spillers, and pizzazz!”

the coordinating plants have similar needs — such as the amount of sun or shade and water required. Scale is also important. Be sure the pot is large enough to give each plant adequate space to grow. One plant should not be so large that it overpowers the others. Too much color can also be a problem. This can be resolved by using an evergreen in one of the positions, such as a beautifully shaped conifer as the thriller, fern as filler, and ivy as the spiller.

In plant placement, choose the size of a container to accommodate the desired arrangement. Check the spacing instructions on the plant label and divide that by two. For instance, if the label on a Vinca plant reads that there should be 8 to 12-inches between plants, only factor 4 to 6-inches for the container.

Go ahead...grow your own plant town with thrillers, fillers, spillers, and pizzazz!

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The Courier of Montgomery County - www.yourconroenews.com



MG Stacey Phillips



MG Karolyn Gephart



MG Michelle Thompson



MG Michelle Thompson

Creating A Patio Garden



MaryJane Fortney
GCMG 2017

Containers can add an instant and easy way to color your backyard, a bare corner, a balcony, or your patio. Each container can showcase one particular plant or certain types of flowers for a dramatic effect or a mix of plants and flora for a longer-lasting focal point. You can grow pretty much anything in a container as long as its growing needs are met, like soil requirements or if they have special feeding requirements. Containers are a solution for a small yard, terrace, or patio.

With a potted garden, each container is a garden in itself. On a patio, containers provide endless possibilities to even the most novice among us. You can garden anywhere, anytime, in large or small spaces. As you plan what plants to incorporate and how to arrange them, remember that a garden is a place to live, not just a place to work. When choosing plants, flowers, and containers, look for humor as well as history and design. Gardening is a great outlet for expressing personal taste and style. Container gardening is a great way to create a small-scale model of natural wonders. Containers are the mountain and streams of potted gardening. Rather than trying to conceal the containers in your garden, choose ones that enhance the beauty of the plants and intrigue the garden observer.

I first look at the space the potted garden will fill, and imagine the general look I want to achieve, be it formal or informal. A major consideration is what the sun exposure will be. Will it have a patio umbrella or two, or will the entire area be shaded from the strong Texas afternoon sun by a stationary covered patio? This is something you and your plants will be thankful for in our hot summers. How large of an area will you have?

Do you want a particular color combination that is pleasing to the eye? Observe patios in magazines or in person. Don't forget to try to incorporate a large or small seating area so that the patio will be comfortably enjoyed by you and your guests. Once you have imagined your dream patio container garden, the hunt for containers has many destinations.

Some basic rules are helpful for beginners, but remember rules are made to be broken. Be daring. It is important to have a reliable watering plan for any container patio garden. A personal commitment and an ordinary hose are the best watering solution for a container garden. A drip irrigation system can be easily installed with the help of your local box store, or ordered from a company such as Amazon. Watering can be a great way to relax or meditate. If you are the organized type or you don't want to end up with anything you don't need, write down all the potential plants you plan to use. Masses of orchids, bromeliads, and ferns flourish in our high humidity. This is a look that would look great if you envision a jungle setting, as long as they are shaded by the strong afternoon sun. Before you go shopping at retail stores or online, your own backyard likely holds the greatest possible container treasures of your family history and way of life. Reusing container-worthy vessels is a great start if you like that look. What makes a good planter? Just about anything, including the kitchen sink, bathroom tub, urns, and crocks. Personally, I have created gorgeous succulent garden containers, with great results, using various broken pieces of containers I have used in the past.

For most container gardens, the windowsill is the most natural first step. The pleasure of a window box can be enjoyed from both inside and outside. Most window boxes placed on



A seating area on the patio for everyone to enjoy



A succulent garden container re-using broken pot pieces

“Garden anywhere, anytime, in large or small spaces...”

an outside ledge need to be secured to prevent the container from falling. Manufactured devices for anchoring window boxes are sold in most nurseries with a lot of the required elements available at your local hardware store. Don't confine the plantings to eye level and below. Further interest and an added sense of height is created by foliage and flowers cascading from hanging baskets, and by sun-loving vines trained on trellises. In addition to the trellising available at nurseries, you could try antique iron headboards, wooden ladders, and old metal gates that are beautiful and functional. Planting vertically allows you to create gardens in an area with little ground space. Hanging baskets turn gardeners into magicians as they move gardening from the ground to mid-air. They will draw the eye to a miniature garden made up of mature plants or, more economically, grown from smaller plants early in the season. Care and maintenance should be a consideration when adding these because daily watering is a must during our summers. Taller plants like palms, plumeria trees, and banana trees will also give the area visual interest. Most plants will benefit from careful grouping, even if it is simply placing taller ones in the rear, perhaps on the floor, and positioning smaller plants towards the front. These smaller plants can be arranged on tables, ledges, or metal plant stands that can be easily found at second-hand stores.

The effect of an inviting patio garden can be created by something as simple as a few containers of plants, or it can be as spectacular, and at times costly, as adding a large range of

beautiful planters or containers filled by a jungle of plants. There is a myriad of possibilities on how to achieve your vision in your yard.

Photo captions

A succulent garden container re-using broken pot pieces

Bromeliads flourish in our high humidity

Various containers and a variety of plants

A dish garden made of a variety of small plants and reused container and contents around the house

A seating area on the patio for everyone to enjoy



Bromeliads flourish in our high humidity



A dish garden made of a variety of small plants and reused container and contents around the house



Various containers and a variety of plants

Photos by MG MaryJane Fortney

Growing Edibles in Containers



Briana Etie
GCMG 2017

Growing vegetables and fruit in containers can be an answer to space constraints, ease of care, protection from freezes, and accessibility. Containers can provide a beautiful display and be strategically placed to welcome insect helpers as well as protect plants from critter destroyers. I have successfully grown tomatoes, blueberries, and dragon fruit in contain-

ers.

When we first moved to Dickinson, spring season for tomatoes was quickly approaching. I could not wait for my husband to construct a garden. I bought three of the biggest pots I could find, then filled them with a mixture of compost, topsoil, and peat moss.

I chose for the first time bush-type, determinate tomato varieties. Previously in San Leon, our indeterminate tomato plants would grow taller than I am. I didn't think I could keep a pot upright at those heights. I first placed the pots on my porch cement. Then when summer started to heat up the concrete, I put them on the grass. When a windy night toppled my pots, I stomped camping stakes into the ground and attached them to the drainage holes to prevent this from happening again. I was very impressed with these determinate bush varieties. They have sturdy, stocky stems and did not need a cage like

indeterminate varieties. I used a four-foot fiberglass pole in the center of the pot, six inches away from the main stem to prevent root damage. I used a green Velcro tie to attach the plant to the pole. I then scalped the grass with a weed trimmer and mounded some compost on the ground about 50-feet away from where my potted tomato plants were located. I planted Mammoth sunflowers. The Leaf-footed bug loves these big, beautiful sunflowers, thankfully more than my tomatoes. I had created a trap crop for the bugs. With the activity of my kids and pets, the plants were not bothered with the birds as much. I grew Patio, Bush Goliath, and Bush Early Girl varieties. All the plants produced a medium slicer type tomato. I had fruit for sandwiches, salads, pasta dishes and a neighbor.

The advantage of growing blueberries in a container is maintaining an acidic soil. Blueberries need an acidic soil pH of 4.0 to 5.5. While you can be successful cultivating blueberries in raised beds, they are more cost effective and easier to maintain in a big container. You can reduce the use of elements like sulfur or fertilizers to acidify your soil. I use a mixture of peat moss, compost and sand. The sand helps your soil mixture with drainage. Many suitable types of soilless peat-based mixes are commercially available and are suitable for growing blueberry in containers. Be sure to incorporate a slow-release fertilizer into the potting mix. Avoid rapid-release, nitrate fertilizers. Alternatively, use an acid-based, water-soluble fertilizer once



Blueberry Pot



Dragonfruit



Dragonfruit

“Containers can provide a beautiful display...”

a month during the growing season after the plants are established. Blueberry plants also like moisture. Monitoring the soil is the best practice with hot summers. Pine bark mulch or pine needles in containers are great to keep the moisture in and weeds out. It is important to stimulate new growth and open the plants to better sun exposure. Blueberry plants can produce new growth each year when pruned correctly. Fruit is produced on growth on one year-old wood. Older, woody stems produce smaller fruit and younger canes larger fruit. It is best to have a different variety bush for cross-compatible pollen that can improve fruit size and production.

My two favorites are early season producers Biloxi and Misty Southern High Bush. They grow to about five feet tall, blooming around the same time. Most Southern High Bush varieties require at least 250 chill hours. Protect your potted bushes if the temperatures are forecasted to be below 28-degrees and there is a wind event.

Dragon fruit (*Selenicereus* sp.) is another edible that is best grown in a container. They do not require much room for roots, but they require a heavy sturdy pot. Metal rolling pots with wagon wheel trellises are available, as well as sturdy pots that are more affordable. Dragon fruit plants prefer a slightly acidic soil with a pH level between 6 and 7. I used a 50/50 soil mixture of topsoil and peat moss. Topsoil is a well-draining soil. Dragon fruit is a tropical climbing cactus, not a desert

cactus. When it reaches 12 inches, it's very important to support the plant. As the plants begin creeping and climbing, use a wood stake or a trellis to support the entire plant. Most simple supports are a central pole or stake, and the cactus is tied to the support. They require plenty of moisture as well as a period of dryness. However, never let the soil completely dry out.

They bloom at night, and the blooms only last one evening. Dragon fruit do not self-pollinate and require a pollinizer to set fruit. While they are pollinated by moths and bats in their native range (tropical regions of Mexico and Central America), they will require hand-pollination for successful production. The fruit will start forming in 30 to 50 days. Regularly trim any dead or damaged growth. The plant will focus its energy on producing blooms instead of growing unnecessary stems or healing damaged stems.

Containers for edibles benefit from pot/planter “feet.” Most feet can improve drainage and airflow; some sturdy versions can help stabilize the container. Creative attachments are available if a whimsical container is desired.

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Southern High Bush blueberries GCMG database



Tomatoes in container GCMG database

Enjoy Plants in Hanging Baskets



Elayne Kouzounis
GCMG 1998

Plants displayed in hanging baskets add an extra dimension to the interior or exterior of your home. Many gardeners use hanging baskets due to inadequate growing space. Through the magic of depth and scale, plants displayed in these versatile “mobile homes” can fulfill their needs. A specimen basket can also be precisely that focal point required to make any garden, pool, patio, or deck setting truly outstanding.

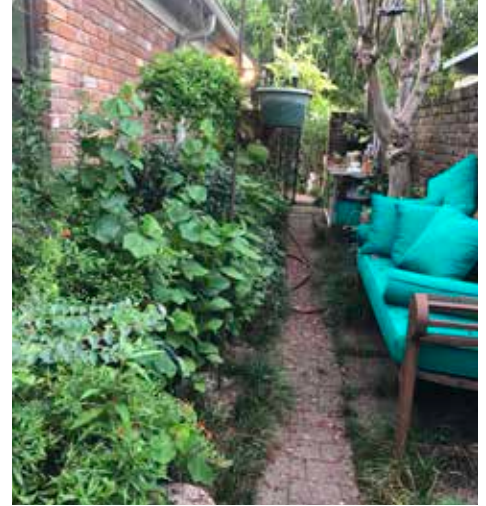
Almost any kind of plant that grows well in this Gulf Coast area will grow in some type of container, but certain plant forms adapt more readily to culture in hanging baskets. The latter types of plants usually occur in nature as ground covers, vines, or low-growing plants. However, almost any type of plant, short of those with large taproots, can be grown in a basket or container.

Unwilling to limit themselves to just one plant per basket, many enthusiasts combine several plants very effectively. Semi-upright growing plants can be combined with ground covers or trailing plants to create interesting contrasts of color, shape and texture. Such plants should always be compatible in their requirements for sun and water. Plant combinations can also greatly extend the flowering season and therefore the overall effectiveness of a basket. For example, petunias are outstanding color plants for spring and fall, but as night temperatures become hot, they may fade and may eventually die. But adding a heat-tolerant plant (such as lantana) to the center portion of the basket at planting time, the life of the basket can be extended to nine months. As the petunias begin to fade, they can be cut back, enabling the heat-loving plant to cover the container for maximum effect. Regardless of your preference, hanging baskets can be incorporated into indoor surroundings. True, they do require attention, but their potential advantages far outweigh the extra care they demand.

To plant a solid hanging basket, relatively little effort is required. Select the desired plants, being very generous with quantities, and have on hand a good supply of your favorite potting soil. For a 12-inch basket, six 3-inch pots should be sufficient, one for the center and five around the edges. You may find it advantageous to add vermiculite. This will increase the moisture retention of the soil and reduce the weight of your mix. Place your soil in the basket and then set in the plants. The final soil level in the basket should be about 1/4-inch below the rim, then put the solid hanging basket in the desired location.

Making a wire basket hanging is more of an undertaking, but the results are worth the effort. The first step is to assemble all the components. They are the wire basket frame and hanger wire, sphagnum moss, and potting soil. Secondly, soak the sphagnum moss in water. While it is soaking, you can attach the wire and prepare the hanger at the last. The hanger wire is easier to put on before planting, but it will be harder to work on the basket with the hanger attached, so when to perform this step is strictly a matter of personal choice. Regardless of when the hanger wire is attached, it must be attached to a vertical wire in addition to the top wire rim of the basket to prevent slipping in the wind.

When the moss is thoroughly saturated, you can begin lining the wire frame. Do not be conservative with the moss for a basket of this type. Begin at the bottom of



Baskets raise the level of a seated area.



Mosaic plant (*Fittonia albivenis*) looks great in a basket.



Texas Superstar® geranium baskets. (tamu.edu)

“Plants displayed in versatile ‘mobile homes’...”

the basket with about a 3-inch layer and work your way up to the top by overlapping the layers and maintaining the same thickness.

When you get to the top wire, apply enough moss over and around it so that you cannot feel the wire when you squeeze the moss. This step is very important, because the rim is where the maturing plants will be cascading over the side of the basket, and it is necessary to create a cushion for the plant stems so that their weight or the movement of the wind will not cause them to be rubbed or pinched.

After being satisfied that you have adequately lined the basket with moss, you can fill the cavity with your favorite soil mix. As a rule, about twelve 3-inch pots should be used in a 16-inch basket. About fifteen 3-inch pots will be sufficient in a 20-inch basket.



Splashes of color MG Karolyn Gephart

Thoroughly water the basket and observe any settling in the soil. The final soil level should be just below the top wire of the basket so that a reservoir is formed for sufficient and uniform watering. You are now ready to display the arrangement.

Watering and fertilizing procedures are the most important considerations for maintenance to maintain the quality of the plants.



Succulents do well in baskets. MG Elayne Kouzounis

Plants for sunny locations for hanging baskets are many. Some examples are

Allamanda (*Allamanda cathartica*)

Asparagus ‘Meyers’ or ‘Sprengeri’ (*Asparagus densiflorus*)

Bougainvillea

Dwarf crape myrtle (*Lagerstroemia indica*)

Donkey’s or Burro’s tail (*Sedum morganianum*)

Creeping fig (*Ficus pumila*)

Firecracker plant (*Russelia equisetiformis*)

Hoya

Ice plant (*Delosperma cooperi*)

Lantana (*Lantana camara*)

Periwinkle or vinca (*Catharanthus roseus*)

Plumbago (*Plumbago auriculata*)

Purslane (*Portulaca oleracea*)

Trailing jade (*Kleinia petraea*)

Verbena (*Verbena officinalis*)

Upright plants for hanging baskets.

Chenille (*Acalypha hispida*)

Copper plant (*Acalypha wilkesiana*)

Croton (*Codiaeum variegatum*)

Hibiscus (*Hibiscus rosa-sinensis*)

In GCMG Patricia Martin’s presentation on Succulents (*Gulf Coast Gardening*, July 2023), one of her succulent gardens inspired this author to try small palms in a hanging basket. Also a large basket will be created soon using small plumeria.

The flowers are nature’s jewels with whose wealth she decks her summer beauty.

-George Croly

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Choosing the Perfect Container



Patty McElhany
GCMG 2022

Growing flowers, plants, vegetables and/or fruit trees in containers is a growing trend in America. We are a more mobile society than in past generations. We are also an aging population requiring a different growing environment than in previous years. Many are downsizing into smaller homes with smaller yards or just have balconies and patios.

A perfect container for one person is not the same as for another. Many factors go into determining what is best to be successful. The right container is as important to the success of the plant as the plant is.

Why choose container gardening?

Use when space is limited

Use when soil conditions are poor

Use when you want more control over your growing conditions (better sunlight, more shade)

What depth and size should a container be?

Depth:

Shallower Containers:

Most vegetables need at least 8 to 10-inches of soil; the shallower the container the faster the soil dries out

Deeper Containers:

Crops with long roots or large growing crops such as tomatoes, carrots and peppers need deeper containers

Size:

Large Containers:

Provide a more efficient use of space and serves as a heat reservoir in winter and prevents overheating on warmer days

Smaller Containers:

Easier to move and can be used to start plants or seeds indoors, and then move outdoors when ready or when needing to move plants to protected areas

Challenges in Container Gardening:

Watering the correct amount

Keeping the soil from drying out on hot days

Choosing the correct soil for best drainage

TYPES OF CONTAINERS:

TERRACOTTA/CLAY

Advantages: Readily available for purchase, classic, looks good with most everything, relatively inexpensive and heavier so it doesn't move around in strong winds

Disadvantages: Breaks easily, needs to be brought in when temps drop below freezing, porous, requiring more frequent watering

PLASTIC

Advantages: Cheap, lightweight, widely available, many colors, sizes, and shapes available, long-lasting

Disadvantages: Soil temps increase in full sun, can become brittle and break after exposure to extreme cold or heat

CONCRETE

Advantages: Rugged, doesn't topple easily in high winds, extremely durable and long-lasting, offers a classic look

Disadvantages: Very heavy, difficult to move, limited color choice, expensive

METAL

Advantages: Popular because they can give a modern, contemporary look when using copper, galvanized zinc or cast iron; virtually indestructible

Disadvantages: Soil temps increase in full sun, although some newer metal raised beds have been developed recently with superior heat reflection; fertilizer solutions can interact with some metals causing discoloration; can be expensive

WOOD OR HALF BARRELS

Advantages: Attractive, comes in all sizes, durable, widely available, affordable, roots of plants stay cooler, excellent choice for growing most vegetables as vegetables grown in wooden containers are most often healthier than in pots of same depth, gives off a warm appearance, paintable or sealable, can be left outdoors in all temperatures

Disadvantages: Unless you use a rot-resistant wood you will need to paint or seal the wood to prevent decay. Wooden planter boxes and half barrels are bulky and heavy. They take up a lot of space on balconies and decks, and can weigh up to 250 lbs. or more when filled with potting soil and plants

WIRE FRAME WITH MOSS OR COCONUT COIR LINER

Advantages: Natural look, easy to use, lightweight, relatively inexpensive

“The right container is important...”

Disadvantages: Moisture evaporates quickly, liners must be replaced each year or two

FABRIC

Advantages: Cylindrical pots made of fabric are lightweight and collapsible, making them the perfect container for people on the move. They come in multiple sizes, dissipate heat instead of collecting it and maximize the moist soil volume to reduce the need for watering. Since the pot is porous, a fibrous root structure forms rather than a coiled one and thus, creates a healthier plant root structure.

Disadvantages: Porous nature of fabric requires more watering to keep plants from drying out, they are heavy to move; lifespan is about 2 to 3 years

GLAZED CERAMIC

Advantages: More expensive than its unglazed terracotta counterparts, many choices of colors and patterns, beautiful, perfect accents to patio or landscape, not porous like terracotta so they don't lose moisture as fast

Disadvantages: Heavy, breaks as easily as terracotta, need to move in when freezing temperatures arrive if they are unglazed on the inside. A 5-gallon ceramic pot can weigh 30 pounds without potting mix and plants, and as much as 70 to 80 pounds with wet potting mix and plants

POLYSTYRENE FOAM

Advantages: Lightweight, realistic, sturdy, wide variety of sizes, shapes and finishes, more durable than plastic pots, holds up well in all weather and can be left outdoors year-round. They are lighter than stone, wood or terracotta

Disadvantages: Can be as expensive as its counterparts. Lightweight, so easily moved by high winds

REPURPOSED ITEMS USED AS PLANTERS: Repurposing urban and suburban waste is a wonderful option and adds variety, texture and color to your garden. Old wheelbarrows, wooden wine boxes, old metal wash bins ... almost anything can be used as a container for growing vegetables

CAUTION: Rust is not harmful to the plants, but make sure no toxic substances were stored in the pot and there is no peeling paint. Drill holes if necessary for drainage

Did you know.... square, rectangular, or cylindrical containers need less frequent watering than tapered pots?

vegetables grown in straight-sided containers generally have healthier root systems?

color affects heat and moisture in container vegetable gardens? Generally, lighter colors keep the media more moist and cooler. Darker colors absorb and hold heat, drying out the plants more quickly.

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Flowers in glazed ceramic



Tomato in terracotta



Wash tub with flowers



Flowers in wine

All photos by M/C Patty McElhany

Introducing the Micro-Dwarf Tomato



Ira Gervais
GCMG 2011

From my experience, everyone loves a fresh, homegrown tomato. Chowing down on that first ripe, homegrown tomato of the year is a major event—to be remembered all year. Let's face it, once you've had one, you can't enjoy the hard tasteless tomatoes sold in supermarkets!

But not everyone has the space for tomato plants, especially large ones. What about people living in apartments or those who are physically unable to handle them? And think of small children who would enjoy growing smaller plants that produce smaller, sweet-tasting tomatoes. Micro-dwarf tomatoes can fill this void.

Micro-dwarf tomatoes are varieties of tomatoes genetically developed for their compact size. To be considered a micro-dwarf tomato, the full size of the plant must be no taller than 12-inches. Because of this, they are becoming very popular with tomato growers. One thing I learned is that they have been grown on the International Space Station. (<https://gpnmag.com/news/nasa-will-grow-tomatoes-in-space-aboard-iss/>). That really got my attention. Being the "Tomato Guy," I just had to try them.

I grew the following three different types of micro-dwarfs from seed in 2023:

Micro-Tom: Determinate, 53 days to first tomato, total plant height 6 to 8-inches.

Little Birdy Red Robin: Determinate, 55 days to first tomato, total plant height 8 to 12-inches.

Red Robin Dwarf: Determinate, 55 days to first tomato, total plant height 8 to 12-inches.

I grew enough so that I was able to give plants to several of our own Galveston County Master Gardeners interested in trying them. Overall, results and comments were very positive, and we agreed that micro-dwarf varieties are excellent choices to grow. Everyone commented on what a good taste they had and was surprised at the production from such small plants. After a good discussion on the advantages of growing these varieties, we listed some main points.

Year-round Growing—They can be grown indoors or outdoors, all year long. If you start seeds every three months, you can have continual production. You can plant them outdoors and bring them in when it gets too buggy or too cold. Since they require 6 to 8-hours of good light, they are small and easy to put under a small grow light inside if enough natural light is not available.

Easy care and maintenance—are easy to care for because of their small size. No cage or staking is needed. Once planted, they require minimum fertilization with a slow-release fertilizer. Moving them is easy; many will grow in an 8-inch pot.

Small space gardening—Since they can be grown in the ground or in containers, they are ideal for tiny yards, patios, balconies, table tops, hanging baskets and even in front of large windows.

High Yield—are very productive for such small plants. One plant normally produces about four cups of tomatoes.

Flavorful—The fruit is full of flavor, like a cherry tomato, and is on the sweet side. They are perfect for salads and can be used like regular tomatoes.

Fun to grow—Children and adults can enjoy watching the plants grow and have the pleasure of that homegrown flavor.

Fun, easy and tasty. Yes, I plan to grow some again.



Little Birdie Red Robin



Micro Tom



Red Robin



Productive

Tree Story: American Beautyberry



Margaret Canavan
GCMG 2003

What defines a tree? Height? Trunk thickness? Number of leaves? A botanical textbook? There are varying definitions from biology and etymology. Today, with definition drawn from various sources, I hereby proclaim that a tree is: a perennial plant with an elongated stem or trunk that supports branches and leaves. Let us consider American Beautyberry (*Callicarpa americana*) to be a tree when allowed or trained to develop to its full stature. While others may consider it a bush, it is a tough small tree of over 10 feet in my home landscape and one of my favorites.

Beautyberry is a member of the Verbenaceae family (Verbenaceae), typically reaching five to nine-plus feet in height, depending on local environmental conditions. It is a visual delight and attracts wildlife year-round. This Texas native grows best in slightly to fully shaded environments in home landscapes, even as an understory plant beneath the canopy of another tree. Its long, arching branches sport aromatic velvety-green leaves, clusters of pinkish-white flowers in the spring, and distinct magenta-purple (sometimes white) berry-like fruit clusters in the fall that remain even after leaf drop. The native form of the plant bears fruit clusters surrounding the branch. It is generally more upright than the imported Asian cultivar, on which fruits hang from short stems and away from the branch.

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Found in nature in moist woods, thickets, and bottomlands, Beautyberry will also feel right at home in your landscape. Typical local rainfall is such that little additional irrigation is required once it is established. The plant is cold tolerant, proved by its survival through two hard freezes in our area with minimal damage. It is not troubled by our summer heat but might temporarily defoliate and lose developing fruit if not irrigated during prolonged drought.

The versatile Beautyberry can be allowed to mature naturally into a tall woody form with graceful branches. It can also be severely pruned each winter to encourage more compact growth, flowers, and fruit. Minimal maintenance is required and in ideal conditions a Beautyberry can live for decades.

Regardless of your maintenance style, you will provide a valuable plant for wildlife. Flowers are excellent nectar sources for bees and butterflies. Beautyberries are host plants for native moth species and make an overwintering habitat for other insects. It is a bird magnet in the fall through winter, as dozens of species enjoy the fruits and seeds that persist.

Human populations have found medicinal value in its leaves

and berries. Early Native Americans used root and leaf tea in sweat baths and teas for various disorders. Recipes for berry teas, jellies, and wine are available.

You can easily include this beautiful and valuable tree in a home garden. Propagate your own using seeds or cuttings, obtain one from the nursery trade, or phone a friend for a seedling. Happy gardening.

Margaret Canavan is a Galveston resident, a Galveston County Master Gardener, and a member of the Galveston Island Tree Conservancy Board.

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Beautyberry Blooms. Photo MG Margaret Canavan



Beautyberry All Photo by MG Margaret Canavan

DIY: Building a Mossarium: A Landscaped Terrarium for Moss



Donna J. Ward
GCMG 1996

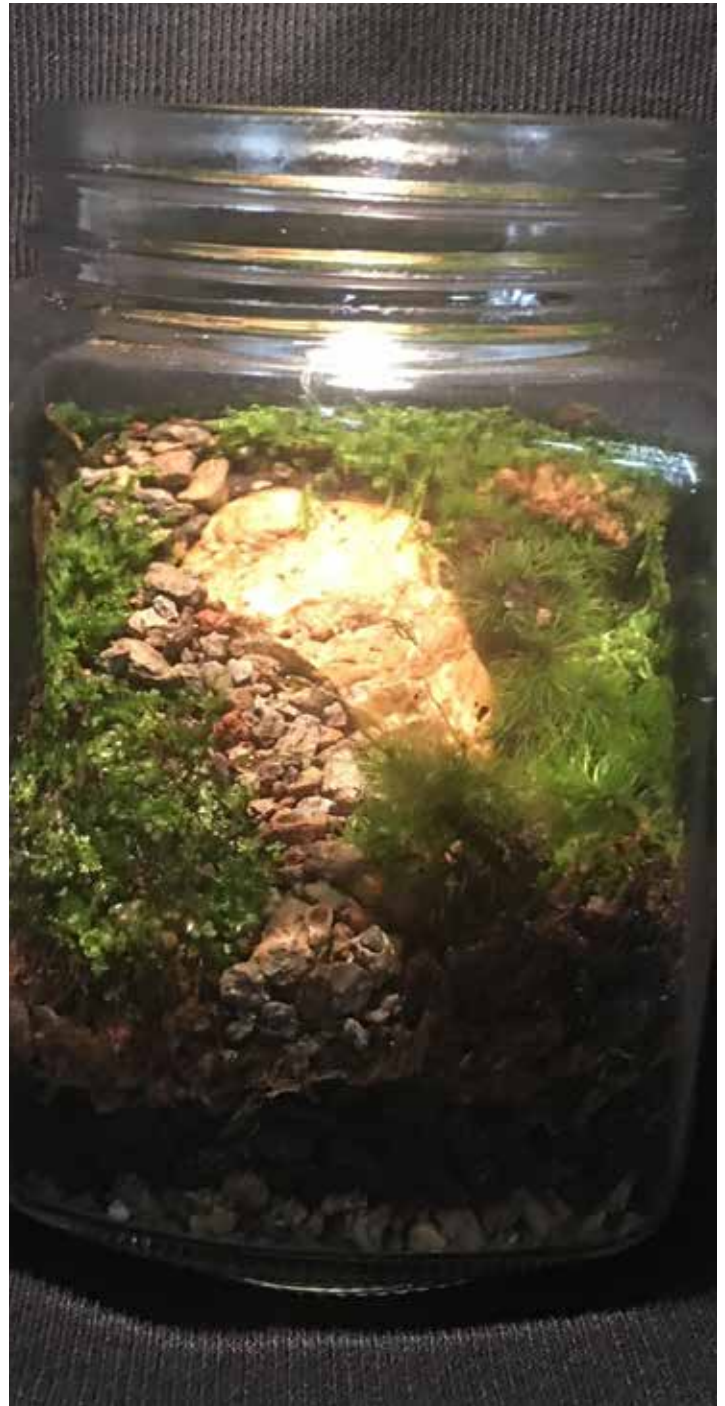
I think it can safely be said that serious gardeners are always open to attempting something new. Who hasn't scratched a patch of soil and sprinkled on a few seeds that miraculously turned into a flower garden? And who hasn't filled a clay pot with potting soil to host those gorgeous red geraniums (*Pelargonium hortorum*) that called out your name while visiting your favorite plant nursery? Surely you or a gardening friend have created a tropical terrarium in a glass jar and placed it on the coffee table to add some ambiance to the room. Did you know in the beginning that it would require more care than you had anticipated? Probably not, but there is a relatively easy way to make a practically care-free enclosed garden that you can grow indoors. Once planted, it requires little more than an occasional spritz of water — it's called a mossarium. As the name implies, moss is the focal point of this project. Mosses are non-flowering plants which produce spores, have stems and leaves, but don't have true roots; they are classified as *Bryophyta* (bryophytes) in the plant kingdom. They date back 450 million years, and have survived and thrived through a range of drastic climate changes.

A mossarium is a small self-sustaining ecological system. The requirements are pretty simple. You need a clean glass container with a narrow entry or a larger lidded vessel in order to retain moisture. Wouldn't hurt to have a pair of elongated tweezers, long-handled spoon, a long slender stick (chopsticks comes to mind) a spray bottle and a funnel. The latter's job is to direct soil when you want to create a raised area. Let's face it, a flat landscape doesn't get one's attention.

First you need to group together a substrate or base of your garden. It starts with gravel, the first layer. It doesn't need to be too deep, an inch is plenty. Any small gravel would work. A sprinkling of activated charcoal is next. It's a 'sweetener' — and binds any harmful chemicals that may pass through. It can be found at most nurseries or pet stores. Next, a thin layer of sphagnum moss helps to retain moisture plus adding visual interest. Last layer is soil. Most mosses appreciate an acidic clay-based soil. It's there to support the moss and doesn't need to be nutrient rich, an inexpensive potting soil works very well. Or you could use soil from your back yard after you have sterilized it to eliminate weeds and any critters that may be living there. Placed in your oven at 200-degrees, turning occasionally to heat it through, should do the job.

The crowning touch is the hardscape. It can be driftwood, stone, sea shells, tree bark, twigs, and any variety of natural

elements that please you. The porous nature of volcanic/lava rock gives the moss something to grab onto, as propagation is easier on a rough surface than on a smooth surface. A hardscape isn't necessary, but if you want that 'wow' factor, it's essential.



MG Donna Ward

“...a small self-sustaining ecological system”

On the bottom of your container place the gravel, activated charcoal, sphagnum and soil in that order. The soil at the back of your mossarium should be the high point, but perhaps you prefer a berm contour, the delineation is up to you. I like to place a retaining wall of driftwood, stone, tree bark, etc. toward the back and fill in with soil behind it. This is called a hardscape and those items should not just be sitting on top of the soil. In order to look natural their base needs to be embedded slightly in the ground.

Now comes the fun part — planting the moss. You can purchase moss online, but I started with moss that was naturally growing on the brick floor of my courtyard. A bit of research causes me to think it may be Hypnum moss (*Hypnum cupressiforme*), a type of sheet moss with a carpet-like appearance. Moss doesn't have a root system like the plants we normally use in our landscapes. Instead they have rhizoids, a filament that absorbs nourishment similar to the method used by roots. I harvested my moss with a metal kitchen spatula. It peeled the moss from the brick surface as easily as turning a pancake on Sunday morning! Spray the substrate lightly with water to stabilize it, and then using the tweezers put the moss in place. I exclusively spray with distilled water as the water from our faucets contains minerals which will leave deposits on the glass. Tamp the moss down lightly to help it adhere to the soil and give it a light spray. There — your mossarium is complete. Mine live on a north facing windowsill receiving plenty of indirect light but definitely no direct sunlight. They may emerge on occasion to be a centerpiece on a buffet table, dining table, or may sit under lights on my kitchen counter to be enjoyed by me while I cook dinner.

However you use them, building them will surely bring out your horticultural creativity. But be careful, there is a tendency to overdo. Eventually you may end up with so many that you've run out of space to accommodate them. But that's a good thing. They can become birthday, housewarming, holiday and special occasion gifts. Your friends and family will think you're amazing, that's also a good thing!

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How to Make a Moss Terrarium

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The Mossarium Master Class – How to Build a Moss Terrarium

<https://bloomingbiomes.com/mossarium/>

7 Interesting Things About Moss

<http://kew.org/read-and-watch/moss>



MG Donna Ward

Plant of the Month: Staghorn Fern



Vickie Hall
GCMG 2023

Beautiful, stately, and ever changing, the fronds of staghorn ferns make for stunning statement pieces in both interior and outdoor spaces, especially when mounted. They grow to truly massive proportions, jutting dramatically off tree trunks or rocks of tropical forests. Some believe they are not of this world – an alien perhaps? No, just an amazing plant with unusual foliage originating naturally in areas of Australia, New Guinea, Asia, and Polynesia.

A member of the Polypodiaceae family, the Staghorn fern has 18 known species. The most common being the *Platycerium bifurcatum* which has been cultivated as an ornamental plant for gardens. The name comes from the frond's appearance, as it resembles a male deer or elk's antlers.

As an epiphyte, the staghorn fern gets its moisture and nutrients from the air. With a minimum temperature of 41 degrees, it flourishes in warm, humid climates and thrives in shade or filtered light. This fern produces two distinct types of fronds: basal and foliar. The basal fronds are sterile, small cup-shaped leaves. They collect water and plant debris to feed the plant and act as anchors to secure the plant to the tree. The attractive foliar fronds are fertile and have a leathery texture. They can grow to three or four feet in length; can be erect, spreading, or pendent; and occasionally are branched or forked. The staghorn fern propagates by releasing spores that attach to the bark of neighboring trees.

Staghorn ferns are an easy-care plant and mostly pest free. From spring to autumn, the fern is in a growth phase and will need regular watering and monthly fertilizer with a ratio of 1-1-1 NPK. The fern can be displayed in a hanging basket or mounted to a board.

Regardless of how you decide to display your beautiful and exotic staghorn fern, it is an interesting and low maintenance addition to any garden, although it does require a bit of patience before you truly see the image of that majestic stag.

Common Name(s):

Genus: *Platycerium*

Species: *bifurcatum*

Family: Polypodiaceae

Life Cycle: Perennial

Propagation Strategy: Rhizome Division

Dimensions: Height and Width: 2-3 ft.

Plant Type: Epiphyte/Fern

Climbing Method: Clinging

Habit: Mounding, Cascading

Leaves: Dimorphic, Shield-like, Antler-like

Growth Rate: Slow

Maintenance: Low

Sun Requirements: Filtered/Dappled Sunlight to Partial Shade

Water Preference: Consistent watering with good drainage

Flowers: None

Landscape Location: Container/Hanging Baskets /Mounted

USDA Plant Hardiness Zone(s): 9a-13b to 41⁰

Design Feature: Accent /Specimen/Showy

References:

San Diego Zoo - <https://animals.sandiegozoo.org/plants/staghorn-fern>

University of Florida/IFAS - <https://gardeningolutions.ifas.ufl.edu/plants/ornamentals/staghorn-fern.html>

UCCE Master Gardeners of San Diego County - <https://www.mastergardenersd.org/>

Los Angeles County Arboretum and Botanic Garden - <https://www.arboretum.org/>



Erin Alvarez, University of Florida IFAS Extension



GCMG Database



MG Intern Sven Bors-Koefoed



Pixabay.com

Photo Gallery: Container Plants

Great containers inspire gardeners to mix and mingle in a colorful pattern, whimsical way, or creative design mixing size and shape of inhabitants of the receptacle. Enjoy the photos shared by Master Gardeners of different plants living their best lives in containers.



MG Barbara Lyons



MG Bettye Vogler



MG Marilyn Hakim



MG Marilyn Hakim



MG Stacey Phillips



MG Stacey Phillips

The Scarecrow-Your Garden Companion



Jan Brick
GCMG 2001

A scarecrow or hay man is a decoy or mannequin in the shape of a human, usually dressed in old clothes and placed in open fields. A quintessential symbol of Fall, it is one of the most familiar figures of our rural landscape.

Thought to have been used more than three thousand years ago by Egyptians to protect the wheat fields along the Nile River, scarecrows were created to do exactly what the name implies...to frighten off crows and other foraging birds. In medieval times, young boys and men wandered the fields or stood on platforms to throw rocks and stones at the birds. As farms grew larger, there were never enough “bird-scarers.” Consequently, the human-like effigy became a common replacement. Farmers stuffed sacks with straw and used gourds to shape heads and faces, then leaned these creatures against poles to create straw men.

In the United States, human-like scarecrows dressed in old clothes with a red bandana tied around their necks became known as bogeymen. In Germany, they were built to resemble witches. The Dutch would often create a female companion dressed in a long dress and a bonnet. It was believed that these comrades would stroll the fields at night, keeping company. In Thailand, they were used as a protection of the home to scare away ghosts and other unwanted spirits. Greek farmers devised wooden scarecrows ugly enough to scare birds away from their vineyards, while the Japanese shaped scarecrows to protect the rice fields and dressed them in raincoats and straw hats, even giving them swords so they may be seen more

intimidating in appearance and becoming known as Kuebiko, the Shinto deity of agriculture.

Apparently, more than the figure itself was repellent to the birds; the smell of humans that emanated from the costumes was repugnant as well. Japanese farmers draped old rags, meat or fish bones on their constructions to repel any creatures and birds that may approach. In an apparent style of recycling, the scarecrows bearing rotting produce were burned after the harvest, a kind of celebration to return the nutrients of potassium and nitrogen to the earth.

The scarecrow has hung on in some parts of the world particularly in Japan and in rural parts of Europe where agriculture is still a common industry. But what would the fall season be without the iconic hay man surrounded by pumpkins and cornstalks? Sometimes still used in small garden patches, we mostly enjoy spotting them around the landscape as decoration, whether scary-looking or amusing, used as symbols of Fall and the harvest season or as part of Halloween décor.

Since they have evolved into a kinder gentler form, usually comical, jovial or childlike in appearance made from straw and newspaper wearing old clothes, the hay man is charged with protecting your flowerbeds, and potted plants. Should you decide to fashion your own scarecrow, according to folklore, there are some guiding principles and theories on the supervision and treatment of your humanoid.

Treat him or her with respect, if possible, shade him in extreme heat.

Offer shelter when there are storms. Visit often keeping him



Pixabay.com



Contest winner - Stephanie Ddughdhneminnier, Chappell Hill 2022 Scarecrow Contest

“No rule...says your scarecrow must be standing”

company so he will not get lonely and sense that he is not appreciated.

If he is to be used again in the next gardening season, keep him in a safe place and thank him for his service (otherwise he may become unhappy or disgruntled and wander off on his own in search of other heartbroken and depressed straw persons).

Hints for Building a Scarecrow

The materials should be simple but sturdy enough to withstand exposure to sun, wind and rain. Create a frame using wood pieces or PVC pipe; a garden trellis might work well. An old shirt and pants stuffed with straw, hay or even plastic bags will make a fine body, arms and legs; for a lady, use an old colorful dress. The head may be fashioned from a plastic pumpkin with a wig or mop for hair and a floppy hat. Give the face some personality with painted eyes, nose and mouth. Firmly attach the figure to the frame using staples, nails or twine. If you decide not to build a frame, you can use an old chair; there is no rule that says your scarecrow must be standing. Lastly, make sure that the figure and frame are securely fastened and affixed so it does not fly away with the wind.

The effectiveness of scarecrows depends on the species of birds. For example, crows and blackbirds are undoubtedly scared off by scarecrows, but pigeons and seagulls are not as easily frightened. In general, scarecrows work best when used in combination with other bird deterrents. Other birds are attracted to cultivated foodstuffs, including doves, blackbirds, grackles, sparrows, turkeys and quail, and are drawn to the fresh seeds as well as the nutrients used to fertilize the young plants. As the fowl scavenge in the garden, they will seek the nuts, worms, baby moths or beetles that subsist in the top layers of soil. Crows are particularly harmful though as they hunt in flocks effecting great damage and destruction of crops.

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Neal, A. *Scarecrows*. Crown Publishing: New York. 1978.

Rotenberk, L. *Hay, Man: The Curious Life and Times of Scarecrows*. May 28, 2014, *Modern Farmer*, <https://modernfarmer.com/2014/05/scarecrow-history-effigy>; 7/26/2023.

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Resident Canada Goose Management: Environmental Impact Statement, Dept. of Agriculture Animal & Plant Inspection Service, Wildlife Services



Pixabay.com



Stephanie Ddughdhnemimnier, Chappell Hill 2022 Scarecrow Contest

Container Trial Open House



Stacey Phillips
GCMG 2017

A Texas Superstar Container Trial Open House was held on July 28, 2023, at the Houston Community College Campus in Katy. The event was hosted by Texas A&M AgriLife Extension Commercial Horticulture Specialist, Paul Winski. The open house offered an opportunity to check on introduced varieties researched for introduction in commercial production. Notable attendees included Smith County Extension Agent Greg Grant, Galveston County Extension Agent Stephen Brueggerhoff and Brazos County Extension Agent and Garden Line radio host, Skip Richter.

The trial included 50 entries with three replications/entry for a total of 150 pots. There were 26 combinations of 24 cultivars. The entries were planted on April 25, 2023, and every pot was evaluated every two weeks beginning June 13, 2023. Each pot was planted using EverGro planting mix for color production, with Nelson's Plant Food slow-release fertilizer. Occasional liquid fertilizer was applied, but specific data regarding which entries it was applied to, or frequency of application was unavailable.

The trial setting was on a large concrete slab with no sources of shade. Each of the pots had irrigation run to it via plastic tubing and timed to water for 20 minutes every day at 7 am and again at 9 am. According to Winski, he added a third 20-minute cycle of irrigation that was set to water between 2 to 3 pm, which was implemented towards the end of June. In my opinion, this is quite a bit more water than most gardeners would generally be applying, however, the results are hard to ignore.

The cultivars were comprised of annuals (with some that perform like perennials in USDA Zone 9A). Cultivars that I observed included coleus, pentas, lantana, verbena, calibrachoa, petunia, angelonia, vinca and begonia. Cultivars were sourced from PanAmerican Seed, Syngenta Flowers and Ball FloraPlant.

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The average high and low temperatures for each month of the trial were as follows:

Month	Average High Temperature	Average Low Temperature
May	85.6	67.7
June	94.9	75.2
July	96.6	78.7



Exploring the samples



Host Commercial Horticulture Specialist Paul Winski.

“Many cultivars could survive extreme heat.”

From what I observed, the peak performers were the various coleus, lantana, and calibrachoa. The cultivars also were not deadheaded or pinched back, and these specific varieties of coleus stayed very compact and full. Not surprisingly, the begonia (albeit “sun begonia”), did not survive the extreme heat, but Paul and I surmised that the excessive water was also a poor environment for successful growth.

Visitors to the open house were asked to vote for their favorite two pots, using either blue flags for male voting, or pink flags for female voting. Paul mentioned that men have traditionally guided the aesthetics of industry cultivars, but females are predominately the consumers who make plant purchases. He believes that by collecting the separate data, that it can be beneficial to cultivar growing/production choices for development.

Overall, it was encouraging to see that there were many cultivars that could survive our extreme heat, with necessary and consistent water delivery. My favorites were Syngenta’s Coleus Moondust and PanAmerican Seed’s Plug & Play Ink’d.

Contributors to the event included HCC, Texas Master Gardeners, Texas A&M AgriLife Extension, EverGro, Pam American Seed, Syngenta Flowers, Ball FloraPlant and Nelson Plant Food.

Enjoy the rest of this long hot summer!

Brand names appearing in this article are for product identification purposes only. No endorsement is intended nor criticism implied of similar products not mentioned.



Stacey and Smith County Extension Agent Greg Smith



Talavera Moondust



Plug and Play Ink'd



Kwik Kombo Blueberry Blast

Discovery Garden Update



Tom Fountain
GCMG 2008

This has been a long hot summer but cooler weather will be here soon. Many locations in our area and across the country are reporting all-time record highs day after day. Temperatures here are averaging between three and four degrees above normal and have set a new record more days than not. Even though we have had some spotty showers, this season

has been very dry. We are between four to five inches below normal for the year and have slipped into extreme drought conditions from the lack of rain and the extreme hot weather. NOAA indicates El Niño will persist through the fall. So, their extended forecast indicates temperatures will likely be warmer than normal, and rainfall is expected to be lower than normal. Even though it is hurricane season and we are near the peak of the season, high pressure persists over our area. It has kept tropical activity quiet so far, but it only takes one. So, please stay alert and stay safe. Also, continue to take frequent water breaks for personal hydration.

Late summer is usually a time of great harvest. Usually there is a bumper crop of beans, cucumbers, peppers, cantaloupe and many other vegetables. Again, this year because of our hot and dry weather pattern there was short harvest. Any of the tender plants that needed moisture gave up early despite some watering as the sun was just too hot and overnight lows

so very warm. In (Fig 1) Donna Merritt and Briana Etie were at the hoop house watering and taking care of plants being readied for our fall plant sale.

Despite all the hot weather there are always projects and maintenance to do in the garden. Activities include anything from reworking the orchard to mulching and weeding beds. Steve Holliday and Hazel Lampton in (Fig. 2) were headed out to weed and mulch in the low water garden area. I found Vicki Blythe, Sven Bors-Koefoed and Nancy Heifner pulling weeds in the Butterfly Garden (Fig.3). In other areas some of the beds have been emptied and are awaiting a fall planting.

Working during all these hot days we need to continue to take frequent breaks, find some shade, and drink plenty of water. Always stay hydrated! Take a hint from these gardeners pictured in (Fig. 4) Charlotte Avant, Debbie Espinoza and David Eskins are taking a break in a shady area of the garden and visiting. Sometimes it is just time to call it a day like Judy Anderson and Steve Holliday in (Fig. 5).

We have continued to have a few visitors in the garden this summer despite the heat. David Cooper (Fig. 6) was giving a couple of visitors a garden tour. Fall planting time is not far away and also cooler weather. So, I am looking forward to seeing you back in the garden soon.



All photos by MG Tom Fountain

2023 Master Gardener Recertification Hours

Date	Name of Program	Speaker	MG CEUs
1/5/2023	Lunch & Learn - Tree Update to Garden North End	Ira Gervais	0.25
1/7/2023	Wedge Grafting	Herman Auer, Hazel Lampton, Debbie Espinosa	2.50
1/7/2023	Growing Pecans at Home	Stephen Brueggerhoff	2.00
1/10/2023	MGA Jan. Meeting - Looking Ahead in 2023	Kathy Maines, Stephen B.	1.00
1/11/2023	League City Garden Club Speaker	Rosarian Baxter Williams	1.00
1/12/2023	Lunch & Learn - Plant Freeze Damage	Ira Gervais	0.25
1/21/2023	Growing Great Tomatoes, Pt. 2	Ira Gervais	3.00
1/21/2023	Propagating Fig Trees	Barbara Canetti	1.50
1/26/2023	Lunch & Learn - Cantaloupe Trials	David Eskins	0.25
2/7/2023	Seed Potato Cutting Workshop	Kevin Lancon	1.00
2/11/2023	Growing Peaches in Galveston County	Herman Auer	2.50
2/14/2023	MGA Feb. Meeting - Aliens vs Invasives (TEAMS)	Laurie Lomas Gonzales, USFWS	1.50
2/18/2023	Growing Avocados	Hazel Lampton	1.00
2/23/2023	Pruning Pear Trees	Robert Marshall, Herman Auer	1.75
3/11/2023	Tomato Stress Mgmt., Pt. 3	Ira Gervais	2.50
3/14/2023	MGA Mar. Meeting - Tool Time	Tim Jahnke	1.00
3/18/2023	Earth-Kind Landscaping for Garden Success	Stephen Brueggerhoff, Judy Anderson	2.00
3/18/2023	Cucumbers, Squash and Melons	Kevin Lancon	2.00
3/30/2023	Texas Superstars (Rosenberg Library)	Stephen Brueggerhoff	1.00
4/1/2023	Louisiana Iris for the Gulf Coast Garden	Monica Martens	2.00
4/6/2023	Lunch & Learn - March Madness Sale wrap-up presentation	Kathy Maines	0.25
4/11/2023	MGA Apr. Meeting - Seeding Galveston	Cheryl Watson	1.00
4/15/2023	Peppers	Gene Speller	2.00
4/15/2023	Grafting Pecans	Stephen B, Herman Auer	2.00
4/22/2023	Open Garden Day at Discovery Garden	Stephen Brueggerhoff, Monica Martens	2.00
4/29/2023	Heritage Gardener's Spring Market - Tips for Growing Better Tomatoes	Ira Gervais	1.50
4/29/2023	Heritage Gardener's Spring Market - Successful Citrus in Your Own Backyard	Herman Auer	1.00
5/11/2023	Lunch & Learn - Intern Tomato Trial update & upcoming tasting information	Donna Merritt	0.25
5/18/2023	Fruit Tree Pruning @ Discovery Garden Orchard	Herman Auer	1.00
5/20/2023	Home Fruit Growers Tour @ Discovery Garden	Stephen Brueggerhoff	2.50
5/20/2023	Home Fruit Growers Tour @ Fruit 'N Such	Herman Auer	3.00
5/20/2023	Beautiful Blooms: Plumeria	Loretta Osteen	2.00
5/25/2023	Tomato Tasting event in the Garden	2023 Interns	2.00
6/10/2023	Bramble On: Blackberries	Stephen B, Monica Martens	2.00
6/17/2023	Plumeria Propagation	Loretta Osteen	2.00
6/28/2023	AgriLife Healthy Lawns & Healthy Waters	John Smith	4.00
7/5/2023	AgriLife SE ANR Gulf Coast Gardening seminar	District 9 & 11 Aggie Hort CEAs	1.00
7/8/2023	Amazing Succulents	Patricia Martins, Stephen B	2.00
7/11/2023	MGA July Meeting - Composting Chat & DG Tour	Jim Waligora	1.00
7/27/2023	Lunch & Learn - Greenhouse Update	Pat Saenz	0.25
7/29/2023	Beautiful Blooming Ginger	Stephen Brueggerhoff	2.00
8/8/2023	MGA August Meeting - Trees for Houston	Barry Ward, ED of Trees for Houston	1.00
8/17/2023	Lunch & Learn - All About Basil	Briana Etie	0.25
8/26/2023	Hardy Hibiscus for the Gulf Coast	Briana Etie	1.00

Hammerhead Worms (*Bipalium kewense*)



Marilyn Haupt
GCMG 2019

Over the last few months, Hammerhead worms (*Bipalium kewense*) have been mentioned in the news and on the internet. Curiosity led me to learn more about them. These worms are a terrestrial flatworm that possesses very distinct features. Their bodies are snake-like and can reach a length of 15-inches. Typically honey colored, they have one to five stripes along their dorsal area. An incomplete dark stripe can be seen around the neck of these annelids. The shape of the head is the giveaway feature —shaped as that of a Hammerhead shark.

Are these worms a new invasive species to the United States? The answer is no. Hammerhead worms have actually been found in the United States since 1901. They were brought inadvertently to the states in plants from Viet Nam. Since that time, they have been located along the gulf coast, in hill country areas, and as far north as Dallas. It is thought that they are transported via plants and bags of soil or mulch. Currently, they are typically found in gardens and greenhouses. The potential effect on agriculture and forests, if populations increase, is very troublesome.

Hammerhead worms are a leading predator of earthworms. They are very efficient in killing the very worms we rely on for a balanced ecosystem and soil health. Hammerhead worms kill by secreting a noxious chemical that assists with subduing and digesting earthworms. This chemical substance is a neurotoxin called tetrodotoxin. There is a potential for the destruction of large populations of earthworms due to the Hammerhead worm's ability to kill so efficiently as well as their unusual reproduction properties. Hammerhead worms have been observed quickly replicating themselves in bizarre fashion; they separate from the bottom portion of their body and crawl away while the remaining piece of worm regenerates itself into a whole new Hammerhead worm. This replication

process takes approximately ten days to occur.

Hammerhead worms prefer hot and humid environments. So greenhouses are an ideal area for them to congregate. During the daylight hours, they hide in damp and shaded areas such as under rocks and piles of leaves. They can also be found in water puddles.

There are several important steps that should be followed if you encounter one of these worms. The worm must be destroyed. Do not cut it up as it will regenerate into new worms. While wearing gloves and using a tool, carefully place it into a plastic bag. Never touch these worms with bare hands. The substance secreted by the Hammerhead worm can be harmful to both humans and pets. After placing the worm in the bag, spray a combination of citrus oil and vinegar or straight vinegar on it. It can also be sprinkled well with salt. These substances should effectively kill the worm. Secure the bag well, making sure the worm cannot get away, and dispose of the bag properly. Always wash your hands well after handling these creatures. Finally, notify your local extension agent of your finding and report it to the Texas Invasive Species Institute, sharing with them the location and a photo of the worm. This information will help to track the progression of the Hammerhead worm population.

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Arun T.P., Bugwood.org



Whitney Cranshaw, Colorado State University, Bugwood.org

Book Review: *The Seed Keeper*



Lisa Belcher
GCMG 2014

First time published author Diane Wilson has written a book filled with compelling characters, a rich storyline of women who have learned, loved, lost and struggled to keep their Dakotan culture, and the seeds that bring four generations together.

Wilson's great-great grandmother was a Dakotan woman who married a French-Canadian trader. Whilst researching her family history and the history of the indigenous Dakota, the author participated in the first annual Commemorative Dakota March which

honors those who were forced to walk 150 miles from the Lower Sioux Reservation to a concentration camp in Minnesota, having followed the U.S. Dakota War of 1862. It was during the march that Wilson heard stories of women who sewed seeds into pouches and hid them in the hems of their skirts and clothes. Those stories were the inspiration of *The Seed Keeper*.

The story tells of the upbringing of protagonist Rosalie Iron Wing, from her childhood to adulthood and the struggles of being of Dakotan descent, trying to live and preserve her heritage. The reader is first introduced to Rosalie as she is meeting with her great-aunt Darlene Kills Deer, whom she has not had any contact with for nearly thirty years. Although it is a tense meeting, Darlene explains she had been waiting all these years to plant the seeds her family had saved with Rosalie. "All those seeds in my closet, all that's left of my family — they had to be planted..." By growing a garden with these seeds Darlene hopes Rosalie will not only learn about herself, but her family as well.

The narrative jumps forward with a much older Rosalie's transition moving from the farm she has lived for over twenty years. Recently widowed and mourning her white husband, she embarks on a new life for herself. Her journey, the real heart of the story, is set forth in Minnesota, a locale that her Dakota people call *Mni Sota Makhóche*, named for water so clear one could see the clouds reflected in it. Rosalie was raised by her Dakota father who taught her about nature, foraging, living off and respecting the land and its animals. When she was 12 years old her father passed away and her

life is forever changed; she was placed in the foster system. Always feeling out of place and desperate to escape her foster family, seventeen-year-old Rosalie begins to work for John, a local corn farmer, on his multi-generational farm. They marry. Although saved from her abusive foster family, Rosalie is weary of John and has full expectations of racial, verbal, and physical assaults, as she recounts in her mind the stories her family told her of how indigenous people were treated. Every so slowly both John and Rosalie begin to warm to one another, and soon a son is born. Here the true conflict of who Rosalie is, versus was, begins when she names the child Wakpá, or River, while John insists his name be Thomas.

The reader sees through both her husband who is a farmer and Rosalie's eyes their struggles to live with each other with their significant differences in backgrounds. As Rosalie desperately tries to teach their son Wakpá all the things her father taught her about the land and animals and being thankful, the disinterested son wants to live and learn by the ways of his white father. A chasm soon grows between son and mother. Soon Rosalie sees their farm not

being as productive as it was when she first married and lived there. It is at this point in Rosalie's life she begins to understand the full weight of responsibility the heirloom seeds saved by Darlene Kills Deer are, and what they truly mean to Rosalie and future generations.

Wilson, D. (2021) *The Seed Keeper*. Milkweed Editions: Minneapolis.



Seasonal Bites: Using Your Vegetables in Recipes



Sandra Gervais
GCMG 2011

fear of heatstroke.

The worst of our incredibly hot summer is finally over and are we thankful! Now we can start thinking, planning and moving around again. The urge to create, or to actually do something is coming back. For some it's traveling and for others trying out new recipes and ideas. And of course, gardeners like their hands nice and dirty out in the garden without

Here are three recipes that may get you in the kitchen to use some of the vegetables that grow so well in our area. The first is the salsa from MG John Mitchiner that won this year's intern salsa competition.

Next is a light coleslaw from MG Mary Leonard that is suitable for hot weather and begs to go alongside barbecue. It's easy and very adaptable. Finally intern Sven Bors-Koefoed has a no-cook recipe for amazing gazpacho that is great on hot days.



Salsa Ranchera

3 pounds plum tomatoes, cored
1/4-pound jalapeño peppers
4 garlic cloves, peeled
1 medium white onion, peeled and cut into 1/4 inch slices
2 teaspoons salt
1/2 cup fresh cilantro, chopped
1/2 cup fresh lime juice

Preheat oven to 425 degrees.

Arrange tomatoes, jalapeños, garlic and sliced onion on a large, lightly oiled foil covered baking sheet with a rim. (John likes to char the tomatoes and peppers on the grill.)

Bake 20 minutes, remove garlic and bake another 20 minutes or until vegetables are soft and beginning to have a good char.

Transfer jalapeños to a bowl and cover with plastic wrap for 15 minutes.

Coarsely chop onions and cooked tomatoes with skin removed.

Place tomatoes, onions and salt in a saucepan on medium.

Peel jalapeños (discard seeds for less heat) and finely chop along with garlic.

Add to tomato mixture in saucepan. Bring to a boil, stirring often.

Reduce heat and simmer for 2 minutes.

Stir in chopped cilantro and lime juice.

When fully cooled, serve with corn chips.

Makes about four pints.

Note: Salsa will stay fresh in refrigerator for 4-6 days or can be canned for future use.



Light Coleslaw

3 cups of red or green cabbage, shredded
1 large or 2 small carrots, peeled and grated (julienned if preferred)
1/2 cup of chopped either fresh parsley or cilantro
1 large apple, peeled/unpeeled, cored and grated (Granny Smith or Pink Lady varieties do well)
2 pounds shallots or red onion, finely minced
Toss all in a large bowl, cover and refrigerate for at least one hour.

Dressing:

1/2 cup vinegar, either apple cider vinegar or rice vinegar

1/2 cup white sugar (to taste)

3 tablespoons olive oil

1 tablespoon Dijon mustard

1/4 teaspoon red pepper flakes

Mix and simmer over medium heat until sugar is dissolved.

Pour over slaw just before serving.

Note: I like to add 1/4 teaspoon paprika, 1/2 teaspoon salt and 1/4 teaspoon black pepper.

Adjust all seasonings to your taste.



Gazpacho

1/2 large onion, finely chopped
2 small yellow bell peppers, finely chopped
5 large ripe tomatoes, chopped
3 large cucumbers, seeded and chopped
juice of 3 limes, strained
1/8 cup oil
1/2 cup red wine vinegar
1 teaspoon garlic powder with parsley (can also use plain garlic powder with cilantro)
1 teaspoon salt
1 teaspoon pepper
1 teaspoon original salt substitute seasoning blend
1-46 oz. can of vegetable juice, chilled

Mix together all ingredients and refrigerate overnight.

Note: Can be doubled. Adjust seasonings to taste.

Meet a Master Gardener - Kevin Lancon



Barbara Canetti
GCMG 2016

When Galveston County Master Gardeners need to get something done or repaired, the go-to guy is Kevin Lancon. With a positive attitude and a can-do spirit, Kevin rolls up his sleeves and gets involved in dozens of projects in the organization. It is no surprise, therefore, that he was selected as the Galveston County Master Gardener of the Year.

“I’m more than flattered,” said Kevin. “Recognition is always more meaningful when your peer group recognizes you for contributions.”

Kevin joined in 2018 to advance his gardening skills, but it became so much more to him, with opportunities to work on some great projects. He notes the expansion and re-design of the Discovery House, the development of the online store/sale during COVID-19 and the creation of several educational presentations are some of his high points as a Texas Master Gardener.

“But the most impactful thing for me has been the new friendships that I have developed with some talented and wonderful people,” he said.

Reflecting on the past year, where he had more than 900 volunteer hours, he reported his favorite activities have been working on merchandising and execution for plants sales.

“I have learned so much from these activities and enjoyed the challenges of both, which have been very energizing to me,” he said.

Additionally, he says he enjoys the educational presentations he conducted for the general public on diverse topics such as vertical gardening, growing onions and garlic, growing Irish potatoes, and an overview of the cucurbit family (squash and cucumbers).

But it is his presence in the garden that most members notice. He tends to his own plot but always has time to discuss and consult on other people’s parcels. As the Discovery Garden coordinator, he has helped organize the orchard team and worked with watering, fertilizing, propagating, and mowing. His culinary skills are also appreciated by the GCMGs from his grilled chicken to his Cajun Pastalaya.

“I enjoy my days at the garden, and really enjoy assisting others and contributing to improve and evolve the entire garden experience,” he said. “So much has changed since I became a MG in 2018. It’s been so rewarding being a part of all the positive changes that have taken place during this time.”

He was nominated for the Texas Master Gardener of the Year, citing his participation with the Galveston County Jail Trustees Partnership, as well as his help planning the first annual Fall Festival, and supporting the Veggie Team in preparing, maintaining, and planting eight dedicated food pantry garden beds, which harvested almost 1,500 pounds of fresh produce for the community food pantries.

He also serves as the Executive Vice President of the organization, as well as co-chair of the plant sale. He volunteers his time on the intern interviews, Five-year Planning Committee, plant sale steering committee, and landscape architecture committee.

He has some thoughts about where improvements can be made and he funnels those ideas through the Strategic Planning Committee.

“The objective of this group is to develop and create the longer term vision for the future of the organization,” he said. “As exciting as the past has been for the GCMG organization, the future has so much potential to be so much more, and I am looking forward to being a part of making our longer-term vision a reality one day at a time.”



Kevin Lancon, Master gardener of the Year with MG Kaithy Maines

A Visit to Irish Public Gardens in May



John Jons
GCMG 2003

As your airplane flies low over Ireland, the lush, rich green landscape helps you quickly realize why Ireland is often called the Emerald Isle. The moment you leave the airport, you cannot help but notice the greenery in the residential and public gardens and the pockets of plant greenery, often with wildflowers, along the side of the road. The emerald plant greenery is attributable to the mild Irish climate, characterized by rain and many overcast days.

Our visit to Ireland was in late May, and we were lucky as many of the flowers in the gardens and along the side of the road were in full bloom. We were on a guided bus tour that circled around Ireland following the coast. We stopped along the way at all the typical tourist scenic and historical sites. The tour began in Shannon on the west coast of Ireland and finished in Shannon.

Typical of these types of tours, you visit castles and mansions. It quickly becomes apparent that many of the Irish historical sites now have well-manicured and often historically and horticulturally significant gardens. You may also learn that, in the past, many of the castles and mansions used to contain large, extensive estates with both walled and open gardens. You may also learn that many of the castles and mansions seemed to have gone through a period of abandonment and neglect with

the estates' acreage being sold off along with the castle's and mansion's contents. Then the local city councils and the few remaining castle and mansion owners discovered the tourist and historical value of these properties. The properties underwent significant restoration efforts that resulted in what we see today.

We first visited Kylemore Abbey and the Abby's six-acre Victorian Walled Garden. This garden was created around 1871. It is unique as it was built on a bog and was so advanced at the time that it was created that it was compared to Kew Gardens in London. Initially, it had 21 heated greenhouses, and it displayed and grew a considerable number of exotic plants. In later years, it was abandoned. The garden was re-opened in 1999 and now only grows vegetables and flowers that grew in Victorian times.

Next, we visited Malahide Castle and Gardens. The gardens cover 20 acres with over 5,000 plant varieties. It has manicured grass lawns and well-tended woodlands that contain rare trees from all over the world, butterfly houses, and a walled garden. The walled garden contains a Victorian conservatory, a pond, a rose garden, a grass parterre, and many winding stone paths that are lined with flowers and flowering shrub garden beds. The walled garden was built over 200 years ago and was created as a kitchen garden to grow fruit and vegetables for residents and employees of the castle.



Kylemore. All photos by MG John Jons



Kilkenny

“castles and mansions ...with horticulturally significant gardens...”

Then we visited Kilkenny Castle. Like so many of these Irish castles and mansions, they were surrounded by parklands, enclosed gardens, and generous tree plantings. Typically, the castle and its grounds had been neglected. In the 1960s, the castle and the remaining 15 acres of grounds were given to the people of Kilkenny. The garden was restored to what it was thought to look like in the 17th century. It contains axial paths radiating from the fountain that is located in the center of the garden with terraces and flower beds. The grounds were replanted with trees, shrubs, and flowers with an emphasis to provide year-round color.

Next, we visited the six-hundred-year-old Blarney Castle and Gardens. This is the site of the famous Blarney Stone. The castle has 60 acres of gardens. The gardens have a network of paths that connect a variety of different gardens and arboreta that feature plants that are designed to flower throughout all the seasons. There is a water garden, carnivorous plant garden, fern garden, poison plant garden, rock garden, herbaceous and tropical border garden, a Vietnamese woodland, and a Himalayan valley garden. The gardens contain many specimens and rare trees. Some of the trees are almost 300 years old, and some are the largest of their kind in Ireland.

We then visited Garnish Island and its gardens. These gar-

dens are considered “one of the most significant gardens in Europe.” They are located on a small rocky outcrop that is only accessible by boat, and were created 80 years ago by the owner of the island who was an architect and a garden designer. The garden is known for the richness of the plant forms and plant colors that change with the seasons. The gardens contain an internationally important plant collection of southern hemisphere plants that can only grow on the island due to its sheltered position and the warming effects of the Gulf Stream. The island’s garden architecture includes a garden cottage, gazebo, a formal pool, raised terraces, colonnades, steps, and multiple garden structures. There are formal gardens, a sunken Italian garden, a formal lawn garden, a fern garden, a bog garden, a shaded jungle garden, a walled garden, and many bonsai plants. There are also multiple glades throughout the island lined on either side with plantings.

I would suggest that if you visit Ireland, be prepared for the great gardens you will see that are adjoining most of the historic and public places.

The few photos with this article do not fully represent the gardens. May I suggest that to see many more photos of these gardens, you view my YouTube called “A Visit to Irish Gardens in May.” <https://youtu.be/jZ4mCsenS3E>



Blarney



Garnish



<https://txmg.org/>

Horticulture

August/September Events

Hardy Hibiscus for the Gulf Coast
8/26/23 9:00am – 11:00am
Gulf Coast Gardening Seminar
Learn benefits to growing cold tolerant varieties and tips to keep them thriving from year to year
For details, visit: <https://galveston.agrilife.org/horticulture/>



Online Plant Sale
9/8/2023 – 9/9/2023 Noon to Noon
Summer Sundown Plant Sale
Fruit and citrus trees, tomatoes, hibiscus and perennial varieties will be available..
Visit online store: <https://galvestonmg.square.site>

Wild About Wildflowers
9/16/23 9:00am – 11:00am
Gulf Coast Gardening Seminar
Explore the beauty of Texas native plants and wildflowers. Learn tips for successful cultivation.
To register, visit: <https://galveston.agrilife.org/horticulture/>



Urban Orchard Series: T-Bud Grafting
9/30/23 9:00am – 11:30am
Gulf Coast Gardening Seminar
Hands-on T-bud grafting workshop for use on various fruit trees. Limited capacity of 20 participants.
To register, visit: <https://galveston.agrilife.org/horticulture/>



Galveston County Texas A&M AgriLife Extension
4102-B Main Street (FM 519) La Marque, TX 77568
<https://galveston.agrilife.org/horticulture/> 281-309-5065



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<https://txmg.org/>

Horticulture

October Events

Patio Citrus

10/7/23 9:00am - 11:00am

Gulf Coast Gardening Seminar

Learn about growing various varieties of citrus on the patio. Discuss container cultivation and maintenance.

For details, visit: <https://galveston.agrilife.org/horticulture/>



2nd Annual Fall Festival & Plant Sale

10/21/2023 9:00am - 2:00pm

Discovery Garden in Carbide Park

Fun, food & discovery. Offering garden tours & seminars, program booths, Master Gardener grown plants & more!

For details, visit: <https://galveston.agrilife.org/horticulture/>



Becoming A Texas Master Gardener

10/28/23 9:00am - 11:00am

Gulf Coast Gardening Seminar

Learn what a Master Gardener volunteer is and how you can apply to become a Texas Master Gardener.

To register, visit: <https://galveston.agrilife.org/horticulture/>



Plumeria Care In Winter

10/28/23 1:00pm - 3:00pm

Gulf Coast Gardening Seminar

Best techniques on how to cultivate and winterize your plumeria trees for successful growth.

To register, visit: <https://galveston.agrilife.org/horticulture/>



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Citrus on Deck



Stephen Brueggerhoff
Extension Agent - Horticulture
Texas A&M Agrilife Extension
Service - Galveston County

Last December's hard freeze set back homeowners reestablishing citrus trees. A few residents that I have talked with swear they will never grow citrus again. My advice is to not give in to the vagaries of old man winter, to continue planting in-ground and consider cultivating citrus in containers. There are a number of advantages with container grown citrus: flexibility relocating plants before freeze events; great for homes with limited outdoor space; and cold sensitive varieties cultivated outside of their natural range.

You will provide basic growing requirements with 6 to 8 hours full sun exposure to maximize performance, applying consistent water and scheduled fertilizer application. We must also consider container type and size in relation to varietal growth habit. The type of container is dependent on your practical and functional situation; molded plastic is lighter for ease of movement, terracotta and ceramic are heavier and larger containers may crack when moved. Eventually the container size must be potted up to 20-gallons minimum, a size appropriate to establish a healthy root system that will support top growth and fruit production. Upsizing should be performed incrementally at 25% more pot size; too much soil volume to root ratio disrupts equal distribution of water throughout the container. An example would be repotting from a ten-gallon to a twelve-gallon container. Assess the root zone annually to determine if repotting is necessary, and expect repotting every 3 years. Replant with similar techniques used for planting in ground: wash off the old media, prune malformed roots, plant at the same depth, etc.

Consider growth habit as each type of citrus has its own form, growth rate and eventual size. The largest trees are Navel oranges, grapefruit and pomelo, and can reach 15-feet or more in-ground; lemons at close to 15-feet; mandarin, satsuma oranges and lime trees to 12-feet. Citrus can be kept smaller stature by grafting onto specific types of rootstock. Unless otherwise stated on a product label, commercial citrus varieties are grafted onto a stump (rootstock) of a compatible sour orange. Trifoliolate orange (*Poncirus trifoliata*) is generally used, is a cold tolerant sour orange species and has the potential to dwarf top growth to 10-feet. Varietal 'Flying Dragon' (*P. trifoliata* var. *monstrosa*) offers the same environmental tolerance and is known to keep species 6 to 8-feet. In conclusion of this topic, research the grafted rootstock of your desired citrus tree prior to purchase. You may have to root prune once you have reached your preferred optimum container size to maintain a balanced growth.

Commercial soil-less media blended for citrus provides good



Dwarf citrus in a pot. GCMG Database



Blooms by Stephen Brueggerhoff

“Life is a bit brighter with citrus...”



Citrus as the thriller GCMG Database



Container citrus MG Elayne Kouzounis

drainage, is lighter in weight and has adequate organic matter. Nutrient availability is managed through scheduled fertilizer applications. The primary nutrients listed on a fertilizer product are based on a percentage of nitrogen, phosphorous and potassium, represented numerically and in the order listed. Fertilizer ratio and application rates are calculated primarily for in-ground trees, and related to trunk size and identified nutrient deficiencies. For containers, it is best to use products with a 2-1-1 or 3-1-2 ratio. Fertilizer can be slow release prills or water-soluble granules, and commercial products will have recommended application information on the label. I have had success with a product developed and marketed for citrus, rated 10-2-8 as a water-soluble fertilizer, applied three times at 1 cup (.5-lbs) each application. Timing for the application is mid-February, early May and final mid-June. It is best to discontinue after late July to discourage tender growth at a time of winter dormancy. Fertilizer products are formulated from salts as mineralized elements. These salts will accumulate over time in the media; visible signs will be a thin sheen or crystallized crust on soil surface, as well as brown leaf tips, reduced growth and unusual wilting. You will have to flush accumulated salts from the soil with water every few years. Keep in mind that you will have to increase fertilizer amounts as the tree matures. Supplement with liquid fertilizers as needed and regarding identified nutrient deficiencies.

Pruning in late February or early March is performed for canopy shaping, height reduction, water sprout removal and adequate air flow through the canopy. Do not prune more than one-quarter of the canopy each year, and only as necessary. Heavy pruning can initiate extra vegetative growth that may reduce fruit production the following year. Citrus are known for prolific flower production starting in spring. You will experience up to 80-percent flower drop after this flush, as well as intermittent fruit drop during development and toward harvest. This is a normal occurrence and must be expected. Most citrus flower once in spring and take about 8 months to harvest. Limes and lemons are the exception, can have several flowering periods and have the capacity to produce up to three times annually. Depending on the size and maturity of the tree, consider thinning the fruit to conserve resources for sustained tree health and production. With a well-established tree, aim for one fruit for every 42 leaves.

Life is a bit brighter with citrus, we continue to celebrate citriculture through education efforts like Gulf Coast Gardening seminars and events. Keep up to date on our offering through Galveston County Master Gardeners website: <https://txmg.org/galveston>. Keep on the sunny side and I'll see you in the garden.

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Judy's Corner: Galveston County Monthly Meetings



Judy Anderson
GCMG 2012

October

Pam Hunter and her husband Darrell will be hosting the GCMG at their new home in Hitchcock for the October meeting. Located beside a canal with a fishpond stocked with catfish, they generously donated fish for the July Fish Fry. October should be cooler and near the end of daylight savings time. The start time will be early so we don't stay past dark.

Pam maintains a gardening area where she grows her beautiful plants. The varieties are beautifully displayed and cared for. It should be a good opportunity to talk about plants and get inspiration.

Pam serves as the MG Course Team Lead as well as the Pergola Leader. She is also a dedicated animal lover who has rescue pets.



All photos by MG Pam Hunter

November

The November meeting will be the Annual Meeting as required by the bylaws for the Galveston County Master Gardeners. This will be a joint meeting with the board and monthly meeting. It will consist of a business meeting and election of officers with expiring terms. All members are encouraged to attend the meeting. The business meeting will include reports from officers discussing financial, operations, and activities of the organization. The association is made up of all the members and everyone needs to be informed to make the right decisions when voting.

Prior to the meeting a potluck will be provided. Please bring a dish to share while enjoying the yummy desserts, salads, sides, and appetizers shared by fellow Master Gardeners. An entree will be provided by the organization.



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4102-B Main Street (FM 519) | La Marque, Texas 77568 | 281-309-5065

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