



# Master Gardener Gazette

## Nueces County, Tx

The mission of the association shall be to organize and promote volunteer efforts that support the AgriLife Extension programs that are advancing sound horticultural practices in Nueces County (nueces.agrilife.org).

## Master Gardener Plant Sale

# FANTASTIC

Edition 35 – Nov. 2018  
IN THIS ISSUE

After all of the great things the Nueces Master Gardeners accomplished and contributed for the Plant Show in the September Fall Home and Garden Show at the American Bank Center it would be hard to believe you could do better. But you did. What NMGs did for our first plant sale was simply fantastic and that resulted in the premier Nueces Master Gardener Plant Sale raising \$3,000.



Well over 1,200 plants of an awesome variety and quality were propagated by the NMGs for the plant sale, a marvelous performance, and solid proof that you all are indeed MASTER GARDENERS.

As the NMGs were dropping off plants for the sale at the Garden Senior Center on a hot and humid Friday, October 12 in just over four hours, 26 hard working Master Gardeners, and a few friends and relatives, unloaded, sorted, categorized, priced and staged for display all of those 1,200+ plants.



Then, at the plant sale on Saturday, October 13, there were 38 Nueces Master



Gardeners that were on hand and assisted, advised, collected payment, and carried out plants for more than 250 customers that came to purchase our plants. During the sale MGs were continually restocking the table displays from the over-



flow plants on the floor and reorganizing the plants displays as they were taken to be sold. After the sale was over the NMGs cleaned the display room and moved all of the remaining unsold plants into the courtyard for later recovery by NMGs.

The volunteer contributions and the efforts offered by so many Nueces Master Gardeners is impressive and reflective of the quality of our members. Thank you.



Plant sale pictures - [CLICK THIS](#). Videos of the set up almost complete - [CLICK THIS](#) and [CLICK THIS](#) and at the sale opening - [CLICK THIS](#)

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### LEADERSHIP

- President  
John Slusarz
- Vice President  
Beth Spirko  
Carlos Valdez - Elect
- Secretary  
Brenda Bishop  
Jessica Latimer
- Treasurer  
Norma Hernandez
- Members at Large  
Linda Lamprecht  
Huxley Smith  
Theresa Stelzig
- State Directors  
Nina Dawson  
Mary Lambert
- Alt - Carlos Valdez
- Gazette Editor  
John Slusarz
- Associate Editor  
Barbra Moses
- [LEADERSHIP CONTACTS](#)  
[CLICK THIS](#)

**MASTER GARDENERS MEETING  
Tuesday, November 20**

- 11:00am - Board of Directors Meeting**
- 11:30am - Meet & Greet Lunch**
- 12:00pm - Presentation**
- 12:30pm - General Meeting**

*Thanks go out to the benevolent volunteers for luncheon this month and they are Betty Whitt, Deb Holliday and Ola Mae Batteau.*

[5325 Greely Dr, Corpus Christi, TX](#) [CLICK FOR MAP](#)



**From Betty Rogers**  
TIPS ON REPORTING YOUR HOURS

Hours should be entered in the Volunteer Management System (VMS) by the last day of each month. The Master Gardener hours in VMS are needed for the Extension Agent's reports which are due on the first of each month. Please make every effort to enter your hours on time. Continuing Education (CE) time received at our monthly meetings should be reported under "CE MG Meeting Programs."

**Happy birthday!**

Nueces Master Gardeners with a birthday this month include the following. When you see one of them, be sure that you take time to tell and wish they have a

**HAPPY BIRTHDAY!**

Nov-08	Gina Sanchez	28
Nov-15	Sofia Flores	28
Nov-17	Jessica Latimer	4
Nov-20	Paula Silva	27
Nov-22	Melanie Mora	28
Nov-23	John McElroy	14

**Get well soon**



We were really sorry to hear that Theresa Stelzig recently broke her hip. We just hope that her recovery is quick and we all are looking forward to seeing her soon!



**ACTIVITIES THIS MONTH**

- Thur, Nov. 1 - Orchidology: 7pm BG 852-2100
- Sat, Nov 3 - Xeriscape Garden Work Day 8:00am to 12:00 noon Contact Joanne Salge 834-1590C joannes@cctexas.com
- Sat, Nov 3 - NEC's Annual Arbor Day Tree Give-away 9 a.m. to noon - location to be announced
- Wed, Nov. 7 - Coastal Bend Cacti & Succulent Society Meeting, 7pm, GC, 687-6474
- Wed, Nov. 21 - Plumeria Society Meeting, 6:30pm BG, 991-4376
- Thur, Nov. 26 - Bonsai Society Meeting, 7pm, GC, 992-0009
- Thur, Nov. 26 - Bromeliad Society Meeting 658-8650 GC 7pm

GC - Garden Senior Center  
[5325 Greely Dr, CC, TX](#) [CLICK FOR MAP](#)

For complete information on this months South Texas Botanical Garden Events see page 8

**ONGOING PROJECTS**

[CLICK THIS - COMMITTEE/PROJECT CONTACTS PDF](#)

- BOTANICAL GARDENS, Wednesday, 7:30 am
- EARTH-KIND BEDS AT BOTANICAL GARDENS - Times and days vary by each team - Contact Paul Parr for information at email paulnorman4910@aol.com
- FOOD BANK PROJECT Tuesdays 7:30am (Except MG meeting day then Wednesday) Contact: Mary Lambert 813-7596 or cwlmel@yahoo.com
- GREELY SENIOR CENTER COURTYARD, 1st Monday of the month 8am Jessica Latimer 563-6008 or 429paloma@att.net
- RAY HIGH SCHOOL GREENHOUSE Student activity time in the garden is on Tuesday and Thursday. For class times or to otherwise help contact Alene Burch Lenahope9@yahoo.com



**Texas A&M AgriLife Extension Service**  
**Agents Notes - Kevin O. Gibbs, CEA - Horticulture**



**It may be cooler, but we're Hot! Hot! Hot!**

So thankful for Fall temperatures! Yes, I know our Fall temperatures are many other places summer temperatures. It's so nice to be able to be back out in the yard puttering around without dripping from head to toe. Sunday, I mowed the yard and only took a shower afterwards because I wanted to, not because it was a necessity. I'm sure all of you took a giant sigh of relief as the first cold front rolled in as well. It's funny the way cold fronts come in to our area. Growing up in the panhandle, when we knew a cold front was coming, we had to batten down and secure everything. Fronts there often blew in with 60 mph gusts leading them. Temperatures could drop 50 to 60 degrees or more in a matter of a few minutes. It was an incredible thing to see. Here we're lucky if it drops 10 degrees by the next day. Don't get me wrong, though, I'm glad cooler temperatures are here.

The first plant sale was a huge success thanks to the hard work of Madeline Church, Thorunn Kelley, the Plant Sale Committee, and many Master Gardeners who worked diligently to make sure that things were running smoothly. It can only get easier from here. We had about 240 people that showed up to shop, that's impressive; many of them were already asking when the next sale would be, which means that they would be willing to purchase at more than one sale per year. This is good, but many of us struggled to propagate the items that we did, how would we be able to get enough stuff done for another sale? I would welcome your thoughts and ideas on this matter.

I want to thank all of you who assisted with Ag awareness days. It's always cool to see more than a thousand third graders watching attentively as MG's delight them about the nuances between good bugs and bad bugs. Deb Holliday and Beth Spirko did an outstanding job! Also, impressive, was this year's intern class. They showed up three, four and five at a time and after watching just a few presentations, jumped right in. Vince, Ronnie, Mary Helen, Elva, and Dawn took off with it and the rest of us just sat back and watched. It was pretty Cool!

More tragedy over the weekend has made me realize how thankful and blessed I am. You're an outstanding group of people! I'm very blessed to be surrounded by such a talented group. Thank you for everything that you do and enjoy your time in your gardens now that the temperatures have finally dropped!

**Coastal Bend Area Youth Plant Show**

It may be gone , but not forgotten. Finally got the pictures from the Coastal Bend Area Youth Plant Show uploaded to the internet. If you would like to view them; Pictures - [CLICK THIS](#), and to view the KILL news broadcast - [CLICK THIS](#)

**NMG Officer Election for 2019**

During the November General Meeting the NMG Officers for 2019 will be elected by the Master Gardener member that are present at the meeting. Below are the current nominees:

President	John Slusarz*	At-large member	Paul Par
Vice President	Beth Spirko*	State Director	Nina Dawson
Secretary	Ana Arbaca	State Director	Carlos Valdez
Treasurer	Norma Hernandez**	State Director Alternate	Deb Holliday
At-large member	Theresa Stelzig	State Director Alternate	Open
At-large member	Madeline Church		

\* = Current board position \*\* = Two year term

# Encouraging Kids to Garden

Submitted by Nueces Master Gardeners Brian Carter and Marsha Clodfelter

Master Gardener Brian Carter recently realized his two children, ages 10 and 12, didn't know how to use a shovel. And he was surprised to find that neither did his neighbors' children. Because of his love of gardening, he determined to foster an interest in his own children and others. Thus, he researched ideas and created a program on the subject to present at the recent Home and Garden Show. Many of us grew up in generations where gardening was more of a necessity and consequently, intuitively taught to the next generation. Even if your family didn't grow food or ornamentals, your grandparents may have passed a love of plants on to you.



Master Gardener Marsha Clodfelter remembers her grandmother, up early every morning, gardening outdoors in the spring, summer, and fall. She always had a sweet potato vine as an ornamental setting in the living room window sill, winding up her is a hobby and skill that needs to be consciously passed down. Otherwise, the next generation may think that all foods originate on grocery store shelves.

Adults and children may well be on different gardening pages though. Adults may think of gardening as an enjoyable hobby, opposed to children who may think of it as yardwork with the emphasis on the work. You may need to issue an invitation to your children, grandchildren, nieces, or nephews to join you in the garden. It will likely require effort to get children from "voluntold" to "volunteered." Emphasize that you are a team, mommy's or daddy's big helper.



Your invitation to participate should include helping them look the part. Kids love to dress up. A great hat, maybe decorated with flowers, fruits or veggies, an appropriate apron, a watering can, or a spade or hand rake will be helpful.

Initial gardening efforts should be age appropriate. Gardening is reasonably safe for children. If they can brush their own teeth, they can garden. Attention spans will vary. Your child probably will do better with jobs that initially require a shorter time in the garden. Think about age-related restrictions, things like pesticides, herbicides, and pruning shears. Kids can do most jobs though. Gardening is a great way to expose your children to nature and how it works.

Offer your child their own spot in the garden or provide them a special pot for their own plants. Discarded sand boxes make great gardening spaces for children. Give them a goal or mission, a light at the end of the tunnel. Work side-by-side with them. Misery loves company. Share some knowledge, a little at a time, while you're working together. Show them what to do, share your enthusiasm, and then let them have at it. Fun, not perfection is the goal.



Let your child experience many gardening-related activities. They can start seeds in pots, grow plants from kitchen wastes, give you a hand at composting, and help construct garden beds, learning to use tools, paint, and measure. Encourage them to experiment and try new things. What's the worst that can happen?

*Continued on next page*

# Encouraging Kids to Garden

*Continued from previous page*

Rewarding their interest is important. Hard work may be its own reward, but that probably won't motivate young children. After a stint in the garden, sit down with them and enjoy a nice, cool beverage or ice cream, a special treat as positive reinforcement for a job well done.

When their gardening efforts wind up on your family's table, be sure to emphasize your pride and joy at their achievements. Make sure they get to experience the joy of harvesting the tomatoes, or carrots, lettuce or whatever they grew. Putting food on the table or flowers in a vase is a great accomplishment.



An orchid takes 3 to 12 months to grow (VERY carefully) from a seed to a plant and up to 10 years before it flowers. As seeds are planted (in the ground and in your children), some will show life right away like a carrot or spinach and grow quickly and strong like a tomato. Some, if not most, will be more like the orchid seed, and take a long time to grow the plant from a seed and years before you get to see it flower. Hopefully, with some gentle guidance the next generation will learn the joy of gardening, create many fond memories, and want to pass those on to their own children.

Just remember Master Gardeners, ***Semper Excolere – Always cultivating.***

Resources: <https://extension.missouri.edu/ecregion/lifetimes/Ways%20to%20help%20children%20learn%20from%20gardening.html>  
<https://www.betterhealth.vic.gov.au/health/healthyliving/gardening-for-children>  
<https://www.rasmussen.edu/degrees/education/blog/gardening-for-kids-benefits/>

## New Horticulture Assistant Maricela Guerra

Submitted by CEA Kevin Gibbs



Please join me in welcoming our new Horticulture Assistant, Maricela Guerra. Feel free come by the Robstown office anytime and visit with Mari and introduce yourself. Mari is already off and running by starting the long process to learn and get comfortable with all the many nuances associated with our organization. We know she's going to be a wonderful addition to the office. Should you need to contact Mari, her email address is Maricela Guerra [Maricela.Guerra@ag.tamu.edu](mailto:Maricela.Guerra@ag.tamu.edu)

## Tipsy Pot Plant Tower

*Submitted by Nueces Master Gardener John Balcar*

NMG John Balcar sent in this picture of a tipsy pot plant tower that he has in his garden. A very interesting approach to container gardening. Creating a tipsy pot plant tower adds attractive vertical dimension to a garden or patio and does not take a lot of space. It also seems that any excess water added to the top pots will automatically drain through to the lower pots.

Looking around the web there were sites that give general instructions on how to build a tipsy pot plant tower. It appears that a variety of poles and a means to brace them upright can be applied to this project. There are few websites I found that show how to DIY. To visit a few of the easiest to follow - [CLICK THIS](#) or [CLICK THIS](#). And for a video that covers some of the concepts - [CLICK THIS](#).



## Garden Council Pot Luck



On Tuesday, October 9 the Nueces Master Gardeners held their annual pot luck dinner for the Corpus Christi Garden Council during their monthly meeting. A rainwater collection presentation was made by NMG Carlos Valdes and NMG John Slusarz did a short presentation reviewing the recent Coastal Bend Area Youth Plant Show that was held at the American Bank Center, which was partially under the sponsorship of the Garden Council. Once again, the Nueces Master Gardeners delivered a tasty cuisine that made for an enjoyable meal with an excellent variety that was had by all.



## Ag Awareness Days

During Ag Awareness Days at the Richard M. Borchard Regional Fairgrounds in Robstown between October 23 and 25 a bunch of the Interns had fun and showed off their abilities doing the NMG presentation of Good Bugs Bad Bugs to the hundreds of area students that attended over the three day period.



To the left are Interns Ronnie Munoz and Vincent Muscarello, under the watchful eye of NMG Beth Spirko, doing a presentation that dazzled and enthralled the students while explaining who were the good guy and bad guys, bug-wise.



That was followed up the very next day by equally interesting, entertaining and educational presentations, to the

right, by Interns Mary Helen Johnston and Dawn Bissell identifying and covering the benefits associated to the Good Bugs and explaining the many reasons some of the bugs are identified as Bad Bugs.



Once again their performance was mentored by Nueces Master Gardener Beth Spirko. Actually, Beth mainly stood aside, watched and enjoyed the Intern presentations as they all were most competent and capable and did an excellent job.

## Free Gardening Seminar "Amazing Container Gardens"

Free Gardening Seminar "Amazing Container Gardens" Saturday,  
November 3, 2018 at 11 AM – 12 PM

Container gardens play a role in landscapes and outdoor spaces of any size. Whether you have a small porch or a large entertaining space, you can enjoy non-stop color all year long with container designs. Come get inspired to dress up your garden!

Bay Area Landscape Nursery is located at 5902 S Staples St and they can be contacted at (361) 826-0680 or their website - <https://www.mybayarealandscape.com/>





# Master Gardener Specialist Name Change Advanced Master Gardener



After long debate and reflection, it has become evident that a name change is best for the Master Gardener Specialist Program. This is to clarify that we are not experts in a field but have received additional training in a specific subject. The new name will be the Advanced Master Gardener Training Program.

The volunteer's title will be written as follows:

Jane Smith, Advanced Master Gardener: Greenhouse Management

Joe Jones, Advanced Master Gardener: Junior Master Gardener

When advertising it will be written as:

Advanced Greenhouse Management Training

Advanced Junior Master Gardener Training

For those who have been previously trained as a Specialist, neither the certification nor the pin will change. The training requirements and duties will also not change. Moving forward the certificates and pin will reflect the new name and there will also be a pin offered for all trainings.

Jayla Fry, Texas Master Gardener Coordinator



## Xeriscape Garden Work Day

We have a Xeriscape Garden Work Day planned for Saturday, November 3, 2018 – 8:00am to 12:00 noon. It will involve a clean up and shape up of the plants in the garden. Be sure to have on the appropriate clothes that can take a little workout.

For info contact Joanne Salge [joannes@cctexas.com](mailto:joannes@cctexas.com). For a map - [CLICK THIS](#)



## Aluminati Scareroti.

Submitted by Nueces Master Gardener Jessica Latimer

This lady is know as Aluminati Scareroti. A Middle School's students made her. They collected cans and then cut and snipped and strung them to make her skirt and bodice. Even her jewelry was made of pop can tops. She was one of many scarecrows that was displayed in the Children's area of the Gardens in Nashville at the Cheekwood Gardens. The gardens are beautiful, and built by the family that owned Maxwell Coffee, back in the 1920's-30's. The Black Crow is made of palms



sprayed black, attached to some kind of form underneath. Each scarecrow was fun and original for the kids. This is the kind of project we can do some day in our Greely gardens. The Children's Garden also had three different train tracks with all engines doing what they do, delight children!

Cheekwood is a privately funded 55-acre estate on the western edge of [Nashville, Tennessee](#) that houses the Cheekwood Botanical Garden and Museum of Art. Formerly the residence of Nashville's Cheek family, the 30,000-square-foot (2,800 m<sup>2</sup>) [Georgian](#)-style mansion was opened as a museum in 1960. Today, it features 12 distinct gardens and a woodland sculpture trail, all showcasing the stunning natural landscape, and an 8,000-piece permanent art collection and Georgian-style Mansion with historically furnished rooms and galleries. Over 225,000 visitors come to Cheekwood annually for year-round seasonal festivals, world-class art exhibitions, breathtaking gardens and educational and public programs for all ages. A member of the American Public Gardens Association

To view the Cheekwood Estate and Garden website - [CLICK THIS](#)

## Class 29 Intern Training

Submitted by Intern Mary Helen Johnston

It was a bright and sunny day as Kevin Gibbs led the members of the MG Class #29 on a quick trip around Corpus Christi. We visited locations where the Master Gardeners have helped set up raised beds or gardens and continue to volunteer. Some of the stops included Ray High School, Mary Grett School, the Xeriscape Garden, the Food Bank of Corpus Christi, the Oso Wetlands, Second Baptist Church and Blutchter Park.

We walked around and admired the bountiful and healthy vegetables at Second Baptist Church where



the okra was so tall and picturesque against the bright blue sky. I never realized the okra blooms are so beautiful. There were peppers, rhubarb, chilis, lemon grass and much more for a great Fall harvest. The Oso Wetlands and educational exhibits were very interesting as well and set up for some exceptional interactive opportunities. All together it was a great opportunity to see some of the places that the Master Gardeners have shared their passion of gardening with the community.



### **BOTANICAL GARDENS 'BUCK' DAY Saturday, November 3, 9 am-6 pm**

Before the Plumeria are tucked away for winter, while tropicals are in top form, while butterflies are in abundance, everyone can visit the South Texas Botanical Gardens & Nature Center--enjoying the FLORA, FAUNA AND FUN--for just \$1 per person! See the Rose Garden, Orchid Conservatory, Bromeliad Conservatory, 'artful' Sensory Garden . . . meet Resident Reptiles and exotic parrots, enjoy a butterfly release in the Butterfly House, explore trails and wetlands, shop *Nature's Boutique*.

### **GETTING LANDSCAPES READY FOR WINTER Saturday, November 10, 10:30-11:30 a.m.**

Retired nurseryman, Master Gardener Star gardening teacher Frank Eicholz clues you into scheduling some Holiday time for winter landscape prep.

### **KIDS "T-A-G (TRAIL AND GARDEN) TIME!" Saturday Nov 10 2:15 pm (following Parrot Talk)**

**Children ages 5-10**, with an accompanying adult, experience FITNESS combined with TRAIL AND GARDEN activities, such as planting plants, stick stacking, wheelbarrow push, using gardening tools—plus hula hoops, ring toss, sensory and compass games. Lead by Education Coordinator/Field Biologist Brenda Ermis.

### **STORYTIME WITH PARROTS Mondays: Oct 15, Nov 19—11 am.**

Parrots may live to be 100, but never grow up; and like children, love to be read to! **Kids of any age**, just bring a storybook with pictures, your favorite adult if under 12, and pull up the floor for *Storytime with Parrots*, with education staff and parrot trainers!

### **JOAN BATMAN'S NATURE'S BOUTIQUE MEMBERS HOLIDAY SALE!**

**Saturday, November 15, through Monday, December 31.** All your favorites, and generous selection of new merchandise and books—all 20% off for members. Beat Black Friday, avoid Holiday shopping crowds, find unique merchandise in relaxed, intimate setting with reasonable prices! NOT A MEMBER???? Purchase your membership before you shop. GIFT MEMBERSHIPS make great gifts to enjoy all year.

## This wild plant could be the next strawberry

October 1, 2018, [Howard Hughes Medical Institute](#)

Strawberries, blueberries, blackberries, raspberries, and... groundcherries? A little-known fruit about the size of a marble could become agriculture's next big berry crop. To prepare the groundcherry (*Physalis pruinosa*) for mainstream farming, Howard Hughes Medical Institute Investigator Zachary Lippman, Joyce Van Eck at the Boyce Thompson Institute, and colleagues combined genomics and gene editing to rapidly improve traits such as [fruit](#) size, plant shape, and flower production. Their results show that it's possible to take a plant that's practically wild and bring it close to domestication in a matter of years. The team describes their work, a shortcut around traditional breeding techniques, October 1, 2018, in the journal *Nature Plants*.



"I firmly believe that with the right approach, the groundcherry could become a major berry crop," says Lippman, a plant scientist at Cold Spring Harbor Laboratory. Some scientists might consider the idea a reach, he adds. "But I think we're now at a place where the technology allows us to reach."



**New tastes** - For growers, new crops mean a chance to diversify and offer more options to consumers. The next major berry has eluded food producers for years, Lippman says. Groundcherries are appealing candidates because they are drought tolerant and have an enticing flavor. You have to taste the fruit to fully grasp its complexity, says Lippman, who describes it as tropical yet sour, sometimes with hints of vanilla.

Groundcherries (also called "husk cherries" and "strawberry tomatoes") are native to Central and South America and belong to a group of plants known as orphan crops. They're grown as small-scale crops, regionally, or for subsistence. Orphan crops rarely make it into mainstream agriculture because of limitations such as poor shelf life or low productivity. Improving these [plants](#) for large-scale production through breeding is a huge investment of time and money, Lippman says. It can take anywhere from a decade to thousands of years to domesticate a crop from the wild. Researchers and growers need to figure out the plant's genetics, adaptations, and how to cultivate it.

That's why few orphan crops become household names. Quinoa, the fluffy, high-protein grain that's now standard in supermarkets, has risen through the agricultural ranks, but other orphan crops like groundnut, teff, and cowpea remain relatively unheard of outside their home regions.

Some consumers may be already be familiar with the groundcherry—like its relative, the tomatillo, the orange fruits are covered in thin, papery husks. They occasionally show up in U.S. farmers markets where "they sell like hotcakes," Lippman says. (Martha Stewart has a recipe that suggests drizzling them with olive oil). But groundcherries are not easy to grow. Now, Lippman thinks that the traits he and Van Eck have introduced may position the fruit for large-scale production.

**An unconventional approach** - The researchers' work lays out how genome editing can give orphan crops like the groundcherry an agricultural advantage. Scientists currently use genome editing to engineer desirable traits in mainstream crops like corn, soybeans, and many others. But until now, no one had used the technique to bolster desirable traits in orphan crops.

Read more at: <https://phys.org/news/2018-10-wild-strawberry.html#jCp>

Additional article: Taming the Groundcherry: With Crispr, a Fussy Fruit Inches Toward the Supermarket  
<https://www.nytimes.com/2018/10/05/science/groundcherries-crispr-gene-editing.html>

## Bagged Potting Mixes and Garden Soils for Home Gardeners

University of Massachusetts Amherst



There are many types of bagged potting mixes and garden soils available. Some are intended to be used in the ground to supplement or fill areas for gardens. Other products are intended for plants growing in containers and pots. It is important to read the label before purchasing to learn the intended use for the product.

Garden soil contains minerals, organic matter, air and water. Mineral-based soils alone are not recommended for container plants because in containers, soil becomes very compacted and saturated with water, limiting air space, which is necessary for plant roots. Unpasteurized soil is a source for weeds, insects and disease organisms.

Potting mixes intended for plants in containers and pots retain moisture, provide air space for roots, and are free from weed seeds, insects and diseases. Potting mixes, also called soilless mixes or soilless media, usually contain combinations of peat moss, pine bark, coir, perlite and vermiculite. Some composts are also intended for container use.

### Components of potting mix for pots and containers

**Peat moss** is a plant harvested primarily from Canadian peat bogs and some bogs in the northern United States. Peat moss decomposes very slowly, retains moisture in the potting mix while providing a balance of air space and water for healthy growing roots. Peat is acidic (low pH) and limestone is usually added to the mix to neutralize the acidic reaction and balance the pH. Peat moss often makes up 30-80% of potting mixes. Peat moss by itself is difficult to wet, so wetting agents are added to the mix to make it wet easier.

**Sphagnum peat moss** is the young or live portion of the plant. It is sold as green and living, or brown and dried, and is used for plants requiring moist growing mediums while providing good aeration. It is often dried and milled in seed starting mixes.

**Bark** products are ground and/or partially composted by-products of the timber industry. This is usually a less expensive alternative to peat moss. Bark products have good aeration properties but they dry out quicker than peat moss. There are different properties associated with the specific types of bark. Barks should not be used in starting seedling because they immobilize nitrogen.

**Composts** are sold for in-ground gardens and some for potting mixes. Composts may not be consistent from batch to batch and can be unpredictable in physical and chemical properties. When used in containers, some composts have high levels of nutrients and will burn plant roots and have low air porosity. In gardens, composts are best mixed with existing garden soil.

**Perlite** is small white irregular shaped, volcanic rock that was crushed and heated. The heating causes it to expand. It is non-toxic, sterile and odorless. Perlite is used to improve drainage and aeration.

**Vermiculite** is very light, greyish puffy substance that forms when mica chips are heated. It contains some potassium, magnesium and calcium that will slowly become available. It is used to increase moisture and nutrient retention in mixes since it can also hold onto fertilizer for a period of time - helping to keep nutrients around the roots of your plants instead of washing out the bottom of the pot.

**Coir** is reddish-brown fibers that are harvested from coconut husks, a by-product of coconut fiber industry. It is used in potting mixes for containers in place of peat moss. Coir is easier to re-wet after drying than peat moss.

**Styrofoam** is sometimes used as an inexpensive substitute for perlite. Beads of Styrofoam are used to aerate potting mixes and serve as a space filler. Styrofoam is lightweight, float to the surface when watered and can blow away when pots dry out. Also, unlike perlite, styrofoam will compact over time.

**Fertilizer starter charge and continuous fertilizer** A "starter charge" of fertilizer on the label indicates that there is a minimal amount of fertilizer in the potting mix. Most starter charges are gone from the potting soil after watering two to three times.

*Continued on next page*

# Bagged Potting Mixes and Garden Soils for Home Gardeners

*Continued from previous page*

## Components of potting mix for pots and containers - continued

A continuous fertilizer (controlled-release, time-released or slow release) in the bag indicates fertilizer "prills" are incorporated with the mix. Prills are small and round and evenly distributed throughout the mix. The prills are water soluble fertilizer that is encased in a semi-permeable resin coating. When they come in contact with water, small amounts of nutrients are released into the soil for use by the plant over a period of time, usually several weeks. So, each time the soil is watered, the plants are getting "automatically" fertilized. The rate of nutrient release for most of these fertilizers is regulated by temperature. The warmer the temperature the faster nutrients are released. Look for the round fertilizer "prills" in the potting mix. Squeezing the prills can indicate if a fertilizer has been depleted. If the prills are empty, the fertilizer has been released. When the initial fertilizer has been depleted, re-apply controlled-release fertilizer or use water-soluble fertilizer to continue to fertilize plants.

Bagged potting mix containing slow release fertilizer must be stored dry. If the potting mix gets wet, the fertilizer in the potting mix can pre-release inside the bag and become concentrated which will burn plant roots when used. Dry, bagged potting mix will be light and fluffy.

**Wetting agents** Wetting agents are chemical substance that increases the spreading and penetrating properties of a liquid (ie. water) by lowering its surface tension. These are used in potting mixes to enable water to thoroughly wet the mix. Tip: Moisten a potting medium with warm water before using to have uniform moisture throughout the container. Plants potted in dry medium and then watered will have inconsistent moisture levels in their root zones.

Organic mixes may contain yucca extract as a wetting agent.

**Moisture retaining treatments** Some potting mixes contain moisture retaining polymer gels, crystals or chemicals that absorbs water. These help to reduce the need for watering over the growing season. A little extra care will be necessary to avoid overwatering when the temperatures are still cool since the soil will be slow to dry out. The moisture holding ability of the soil breaks down over the season, usually by mid to late summer. When hydrated, water retaining gels look like clear chunks of glass, but are soft to touch.

**Specialty potting soils** While the all-purpose, general type potting mixes will work fine for almost all annual flowers and mixed containers, there are some crops for which specialty mixes might perform better such as orchids. Orchids require excellent drainage and most general potting soils hold too much water and lack enough air space. Components of mixes for orchids may vary, however, coarse materials are often used to allow for plenty of air movement through the medium.

Also succulents and cacti, require better drainage than annual flowers and in many cases prefer clay pots as well. Many succulent collectors use a regular potting mix and mix it with 50% sand, which makes the mix very heavy, but very fast draining.

## Summary: Rules of Thumb for Choosing a Potting Mix for Pots and Containers

- Potting mix bag should be light, fluffy and DRY. Avoid bags that are saturated with water or seem to be heavy and compact. This is especially important for potting mixes that contain fertilizer prills (often labeled as continuous feed, controlled release, timed release or slow release).
- Look for a potting mix that contains peat moss, pine bark or coir and perlite or vermiculite.
- Caution should be taken when using a compost-based mix. A soil test is advised.
- Fertilizer may be in the mix in the form of a "starter charge" or "continuous feed" formulation. Adjust your fertilization practices accordingly.
- Potting mixes also contain a wetting agent to make the soilless media wet easier. Organic potting mixes may contain yucca extract, a natural wetting agent.
- Potting mixes may contain moisture retaining amendments such as gels.

*Continued on next page*

# Bagged Potting Mixes and Garden Soils for Home Gardeners

Continued from previous page

## Components of bagged amendments for in-garden and landscapes

**Composts – See Potting Mixes** In landscapes, composts are best mixed with existing garden soil.

**Manure** products are intended for use in-ground gardens but not intended for containers. Manures contain a form of nitrogen that will burn plants in containers. Manure products are best when mixed with soil at a rate of about one part manure to two parts soil. Many manure related products contain sand, which makes them heavy for use in containers.

**Mulch** is usually a raw wood product (bark, wood chunks, shredded wood, etc.). It is intended to be used on the surface of the soil to maintain soil moisture, prevent water from evaporating and suppress weeds. Un-composted wood products, take available nitrogen from the soil as they break down (decompose). Use mulch products on top of the soil in your garden and landscape where they are intended to be.

## Quality of bagged soil and mixes

Does the bag feel heavy and compact or light and fluffy? Often, when a bag of garden soil or potting mix is very heavy, it is either water soaked or it contains too much sand.

If potting mix becomes soaked it can begin to break down in the bag, become compact, lose air space and result in poor roots and plant growth. Mixes that contain controlled fertilizer prills may pre-release fertilizer into the mix causing young plants to burn.

Coarse, horticultural grade sand provides anchorage and air space and is used as inexpensive filler. Unless growing cacti, or used to keep pots from tipping over, sand is not desirable for most plants.

## Fungal growth on potting soil

Fungi and slime molds occasionally appear on the surface of growing media. These organisms will not hurt the plants or roots. They are saprophytic fungi involved in the decay of organic matter and are more likely to occur when the growing media remains wet for prolonged periods of time. Under normal outdoor growing conditions the fungi are usually short-lived. To eliminate mold, spread the media out on clean surface to dry it and expose it to sunlight, then re-bag or put it into a clean container when it is dry.

## Resources

<https://www.provenwinners.com/learn/dirt-dirt-potting-soil>

<http://www.soiltest.uconn.edu/factsheets/purchasingpottingmedia.pdf>

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