Help celebrate National House Plant Week during September 16 through 22 by buying a houseplant. This week has been created to raise awareness of the value and benefits of live indoor plants. A survey done by NASA says that in the world today we spend 80 to 90 percent of our time indoors…. so why not try to improve your overall air quality inside by buying a plant. There are three basic reasons plants improve overall health indoors.

1. Plants give beautification and overall happiness! Houseplants will make you feel happy as they add feelings of well-being resulting in a calmer, more optimistic you. Now that is something that no one should turn down. As we spend more and more time indoors, bringing a plant indoors will help you feel closer to nature and the outdoors. Studies have shown that plants are effective in helping people recover from illnesses and even help speed recovery time. Plants also make you feel needed by giving you something to take care of (that does not talk back). They enrich your life!

2. Houseplants improve the overall air quality indoors. While air purifying machines can do some of the work of making the air around your home or work a little fresher, plants can do a much better job of filtering the air. Plants do this in a way that is quiet and use no energy from a power plant. Some of the worst air we breathe is inside our homes. How many times have you said to yourself, “I am going to step outside for a breath of fresh air?” So why not have your air inside fresh! Plants purify and revitalize air in homes by taking out the toxins that are commonly found such as smoke, detergent fumes, molds, small fibers and bacteria. Plants act as filters by absorbing the toxins through their leaves and releasing fresh air. Plants also take in carbon dioxide and release clean oxygen into the air. As humans, we take in oxygen and release carbon dioxide. How do plants do this? Through a process called photosynthesis. The leaves of the plants absorb CO₂ and use sunlight to breakdown and separate the carbon and oxygen molecules. Plants use the CO₂ for nutrition and then release the oxygen back out into the air through the cell walls of the plants. Plants are natural humidifiers. Plants naturally release moisture through a process called transpiration where the pores on the underside of the leaves essentially sweat and
release moisture into the air. Since many plants require high humidity themselves, it is recommended that you mist your plants on a regular basis to help them in this process.

Now that you have learned how plants help you, it is time to choose a plant. NASA recommends about fifteen 6” to 8” potted plants for homes that are approximately 1800 square feet. So, how do you choose plants for your home? There are few requirements to consider: Moisture, light, temperature, and how much time you want to put into your new investment. Your local florist or garden center should be happy to go over it with you. Just tell them the conditions of your home and they can direct you to the best high light or low light plants that will be suitable for your home.

NASA has released a top ten list of plants that best purify your air and normally do best in most homes. They are: Palms (Areca, Rhapis, Bamboo, & Phoenix Roebelenii), Ficus Elastica (Rubber plant), Dracaena, Janet Craig (Corn Plant), Philodendron (hybrids with large leaves are great), Ficus Allii (Banana leaf ficus), Boston Ferns, Spathiphyllum (Peace Lily), Pothos (Devils Ivy), English Ivy, and Sanseveria (Snake Plant or Mother-n-law tongue).

Now it is time to GO GREEN! Go out and buy a houseplant. Lets all get healthier in a natural way!

Q: Could you provide information on the care and pruning of Knockout™ roses?

Care: Knockouts are colorful shrub roses that bloom profusely with minimal care. Roses bloom best when planted in full sunlight. Soil for roses should be fertile, well drained and slightly acid (pH 5.5 to 6.5). Mulch should be placed 2 to 3 inches deep around roses to keep the roots moist and to help reduce watering. Deep watering is important – allow water to soak down in the soil around the roots. Knockouts are drought tolerant once established. Start fertilizing with rose food when the rose bush first leafs out in the spring. Roses need a higher percentage of phosphorus (P) than nitrogen (N) and potash (K). Good maintenance fertilizers (N-P-K) for roses are 5-10-5, 4-8-4 or 4-12-4. Be sure to water deeply after each fertilizer application. Continue fertilizer applications every 4 to 6 weeks through July. Stop fertilizer applications in August.

Pruning: Knockout roses are self-cleaning, so dead-heading is not required. Pruning should be done while the plant is still dormant in late winter or early spring. The first pruning cuts should remove dead or winter damaged canes. Take out some interior stems to improve air circulation. Prune to shape if necessary. Every 2 to 3 years, up to one-third of the old branches may be removed to stimulate new growth.

The MU Extension offers Roses: Selecting and Planting (MU Guide G6600) and Roses: Care After Planting (MU Guide G6601) that answers questions related to cultivating roses in Missouri. Both publications may be obtained from your local extension office or online at: www.extension.missouri.edu/G6601.

Do you have a gardening question for a future column? Please email your gardening questions to: asksemomg@gmail.com.
September Gardening Calendar
By Donna Aufdenberg

Ornamentals
- Herbs such as parsley, rosemary, chives, thyme and marjoram can be dug from the garden and placed in pots now for growing indoors during winter.
- Start looking now for the best selection of spring flowering bulbs but wait for planting until the ground cools in late October into November.
- Perennials, especially spring bloomers, can be divided now. Enhance the soil with compost and peat moss before planting.
- Monitor plants for spider mites. Hose off with a forceful spray of water.
- Seasonal loss of inner needles on conifers is normal at this time.
- Fall is a great time for planting trees and shrubs.

Moving Plants Indoors
- Begin readying houseplants to bring indoors.
- Prune back excessive growth, broken or damaged parts and protruding roots.
- Check for pests and treat if necessary. Keep them separate from other house plants for several weeks.
- Save repotting for spring unless the plant greatly outgrows its pot.
- Watering habits will change after bringing plants indoors. You might only water once a week.
- If you choose to fertilize houseplants in winter, do so no more than once a month.

Lawns
- Begin fall seeding or sodding of cool season grasses. Seedbeds should be raked, dethatched, or core-aerified, fertilized and seeded. Keep newly planted lawn areas moist, but not wet.
- Cool season lawns are best fertilized in fall. Make up to 3 applications between now and December.
- Newly seeded lawns should not be cut until they are at least 2-3 inches tall.

Vegetables
- Remove old plant debris from the garden to prevent pests from over-wintering in the garden. This will help to limit populations next year.
- Sowing seeds of radish, lettuce, spinach and other greens in a cold frame or in high tunnels will prolong fall harvest.
- Pinch off any young tomatoes that are too small to ripen. This will channel energy into ripening the remaining full size fruit.

Fruits and Nuts
- Pick pears before they are fully mature, store in a cool, dark, basement to ripen.
- Bury or discard any spoiled fallen fruits.
- Walnuts should be falling soon. Hull and cure them or collect and take to your local buyer.

Miscellaneous
- Autumn is a good time to add manure, compost or leaf mold to garden soils for increasing organic matter content.

“Knowledge tells us that a tomato is a fruit; wisdom prevents us from putting it into a fruit salad.”
Ever wonder what pest is invading the kitchen? Below is a list of some common pests that cause issues in the kitchen.

Saw-toothed grain beetle (1/10 inch) feeds on grains, nuts, seeds, yeast, cereal and candy. It is found in multiple locations in packaged food. The larvae are yellowish and grub-like.

Confused flower beetle or the closely resembled red flower beetle are small (1/7 inch) reddish-brown pests that feed on grains, cereals, beans, baking powder, dried fruit and starchy products. These insects go unnoticed in products seldom disturbed and may reproduce by the hundreds before being detected.

Grain moths (1/2 inch) develop in whole grain kernels. The Angoumois grain moth is found in Missouri actively flying around the house. They develop in 5 weeks.

Cabinet beetle (1/4 inch) have fuzzy, slow-moving larvae that prefer cereal grains. Adults will be found hovering around lights.

Indian meal moths (1/4 inch) infest processed grain. The damage is done by the larval caterpillars (1/2 inch). Growth from egg to adult takes 7 weeks.

To prevent infestations make sure the home has good screening in place and caulk around windows, doorframes and gaps. Store susceptible foods in tight containers. Remove spilled food products from storage areas and replace torn or damaged storage containers immediately.

To eliminate an infestation first locate the source. Check all stored products including drugs, cosmetics and spices. Place infested items in a sealed bag and remove them from the home. Infestations may occur in a product that should be saved such as cosmetics or grain. Freeze these at zero degrees for four days. This can not be done with seeds that are used for planting. Once the source is located empty and clean the storage area and shelves thoroughly with a vacuum cleaner and hot soapy water. Discard the vacuum bag.

After a thorough cleaning, you may choose to apply a mild insecticide to cracks and crevices in the storage area where pests could be hiding. Check the chemical label to ensure the product can be used indoors for the pest you have. Pyrethroids are commonly used for this purpose. Seal any cracks to prevent further infestation.
This month’s first selection is from Alice Long, Madison County Master Gardener. Alice said her favorite plant is **Musa Ensete Maurelii (Banana Tree)**. “I love the big bold foliage deep red color and uniqueness it adds to your landscape....”

Sally Triplett, Cape Girardeau County Master Gardener, has several favorites. She states, “If it blooms, I love it. Right now, I would have to say my favorite flowers are the **lilies and roses**. Especially the **yellow rose** from my grandmother’s garden I transplanted when she died. It always reminds me of her along with the **mock orange** and its heavenly aroma that I also transferred. How wonderful it is to see a flower in bloom and it brings back so many memories. And speaking of aroma, I’m in heaven when the **lilacs** bloom.”

The third selection is from Fran Haupt, Cape County Master Gardener. She wrote, “My favorite—big surprise—is **Hostas** as a group and **Beauty Substance** in particular. It is a sport of Sum and Substance with variegated leaves. I have it in a large washtub, and have divided it several times. It doesn’t tend to burn in hot summer like some others do. Its only drawback is no fragrance.” She adds a second favorite, “I love bellflowers. They tend to spread and be invasive, but if you put them in a pot, or have room to let run they are just great. They are a perennial, and come in several colors and shapes.” Then she adds a third—“I love my **Bamboo**. Seriously, some of it is over 30 feet tall. It is green all winter, and sways lovingly in the breeze. We use it for so many things, and it lasts years after being cut and cured. WARNING: This plant gets up and runs—so aggressive that maintenance is necessary.

Susan Pfoertner, Madison County Master Gardener, said this about her favorite, “My favorite plant is a tree -- **Mimosa (Albizia julibrissin)**. Why? The tree’s fragrant fluffy pink puff flowerheads attract butterflies and hummingbirds. The tree’s fern-like foliage closes when touched and at night. The scent reminds me of childhood -carefree summer days playing under the shade of a large mimosa tree in my parent’s backyard.”

The last selection for this month is from Teresa Jansen, Scott County Master Gardener. She offers this about her favorite, **“My favorite plant is the Double Knock Out Rose.”** My son bought me 3 of them about 3 years ago and I haven’t even pruned them once. They are so, so beautiful and dense and dark green. I absolutely think they are the best blooming rose for the entire summer. When I give a special gift, I try to give one of those roses. I don’t spray it or do anything for it. And it just looks lovely with no care involved.”
You may not realize how precious a resource like water can be until you experience a year of weather like the one we are having.

In Missouri, we were losing approx. 2 to 3 inches of water every 10 days resulting in dormancy of our lawns. We were just not able to keep up with standard recommendations of applying 1 to 1.5 inches of irrigation per week. We generally have no concerns about lawns remaining dormant for four to five weeks; however this year lawns have remained dormant now for eight or more weeks. Many homeowners can expect to have severe thinning or total loss of their lawns. Many will be very surprised on how much will come back once sufficient rainfall occurs. Now, we are facing the time of year when lawns need to be renovated/over-seeded. The questions have been: When should we start? Should we aerate? What about the continued drought and warm weather? What about all the weeds?

As you look across your lawn, you can quickly decide just how much damage has occurred. Individual plants can be pulled from the soil and inspected to see if any green plant tissue remains in the center or crown of the plant. Any amount of green tissue means that plant has the potential to regrow with sufficient water or rainfall. Some areas of the lawn will look totally brown and crispy and dead but there is always potential for regrowth if viable plants remain.

After inspection of the lawn, homeowners can get a feel for how much work lies ahead. Determine the square footage that needs to be renovated. This number then determines the amount of seed and fertilizer needed to do the job. Recommendations are being made to purchase seed as soon as possible due to shortages and higher prices.

**When should we start:** Traditionally, cool-season lawn renovations should occur in the first two weeks of September. Seeding in the fall is usually best when we have some soil moisture in place; however this year soil moisture in the top ¼ to ½ inch of soil is very scarce. If irrigation is an option, then this time frame is still excellent timing for renovation and over-seeding. Just keep in mind that seed requires light and frequent watering for germination and growth.

If the fall continues to be dry, then watering will become hard work to keep that lawn alive. If irrigation is not an option, then seeding may need to be delayed two to three weeks in hopes of receiving some regular rainfalls. Seeding lawns can occur up to October 10 for Missouri.

**Should we aerate:**

Aeration has always been an accepted method prior to over-seeding. Aeration in several directions helps to alleviate soil compaction and provides passages for air, water and nutrients to enter the root zone. Applications of fertilizer after aeration will move nutrients immediately into the root zone of your lawn. It also provides better seed/soil contact for over-seeding by dragging and crumbling soil plugs, spreading soil over seed.

Here’s the problem. Aeration requires soil moisture in order to pull a nice soil plug from the soil. Lack of rainfall will make aeration impossible. Dry, compacted soils will not allow the hollow tines of the aerator to penetrate the soil surface. One option is to irrigate prior to aeration and over-seeding. But once again, keep in mind that once the seed is down, irrigation will be required for germination and growth. If irrigation is not an option, then aeration will need to be delayed until later in the fall or spring. Machines that pull a ½ inch diameter plug three to four inches deep on four inch centers do an excellent job.
Power rakes or de-thatching machines are also pieces of equipment to prepare seedbeds prior to over-seeding. In extreme situations where the entire lawn needs to be renovated, tilling may be the best means of starting over and preparing a seedbed. This provides the best seed/soil contact and breaks up any compacted soils up to the tillage depth. A four-inch tillage depth is sufficient. When tilling the soil, straw will be needed to prevent erosion and mulch the soil at a rate of one bale per 1,000 square feet. Aeration and power raking do not require straw or mulch.

What about continued drought and warm weather: As already stated, once seed is down, irrigation will need to be provided on a light and frequent schedule for at least the first 7 to 10 days for seed germination. The weather will then determine if irrigation will continue to maintain grow-in. Tall fescue requires 7 to 10 days for germination, while Kentucky Bluegrass requires 10 to 14 days. These are the critical time frames for these species to germinate. Warm weather during germination is usually not a factor other than drying out soil surfaces. Therefore the light and frequent watering will keep the surface moist, but not overly wet.

What about all the weeds: Many summer annual weeds such as crabgrass, goosegrass, and spurge are not a major concern since they are annuals. Practices such as aeration and power raking will damage annual weeds sufficiently to reduce competition. With annuals, there is usually no need to spray weeds this late in the season since frost is just around the corner. Perennials, like dandelion, can be sprayed but will require a 3 to 4 week wait before grass seedlings can take place. Sometimes it is best to wait on weed control and take advantage of planting grasses during that optimum time frame.

How do we go about it: First, pull a representative soil sample and obtain a soil test for fertilizer recommendations. Knowing which the levels of the nutrients and pH will determine optimum fertilizer and lime needs. Having this information in hand prior to seeding can save you time and money when trying to establish a lawn. Fertilizer and lime can be applied prior to any seedbed preparation. Starter fertilizers (e.g. 10-24-18) have always been recommended at a rate of 1 lb of nitrogen per 1,000 square feet at time of seeding.

Seeding rates per 1000 square feet: Turf-type tall fescues - 6 to 7 pounds; Kentucky Bluegrass - 2 to 3 pounds; Mixtures - Tall fescue & Kentucky Bluegrass - 6 - 8 pounds

Seed applications following tillage or power raking should be raked in lightly to help cover the seed with soil. Use of a light roller will also improve seed/soil contact and germination.

The final step to a successful lawn renovation is proper watering. The first two weeks after seeding are the most critical. Until the seed germinates and starts to put down a root, seed can wash away very easily. You should keep the soil surface moist, not wet. Do not let seed dry out once it starts to germinate. On warm, windy days with lower humidity, it may require several light waters a day to keep the surface moist.

In a season such as this one, successful renovation and over-seeding are important to provide the competition needed against many weeds. If you can get started in early September, you should be mowing your new lawn by late fall. Additional fertilizer applications can be made one month following the application of the starter fertilizer.
Fall can be a time of year when blooming flowers occur as a happy accident because many plants are purchased in spring while they are blooming. Fall blooming plants are often gifts or plants that were already in the yard.

Nurseries will often have plant sales in the fall to clear stock creating a great opportunity to nab up some fall bloomers. Perennials will benefit from fall planting as it allows them time to root and establish themselves in the soil before winter. The plants discussed here grow in zones 5-8 or better.

Some common fall blooming plants include aster, chrysanthemum, clematis and sedum. Moving beyond those, take a look at some possibly overlooked plants that bloom in fall.

Anemone grows up to 5 feet thriving in light to medium shade but will grow in full sun if the soil is moist. The flowers look a bit like poppy with pink, purple or white colors blooming from September to frost.

Anthemis, golden marguerite or oxeye chamomile blooms specifically from August to frost. This hardy plant is about 12 inches tall and bushy with daisy like yellow flowers. Other species of this genus bloom summer and fall.

Helenium (sneezeweed) have small red, yellow and orange daisy type flowers. They prefer cooler soils but full sun on the flower. A good choice for poorly drained areas, these grow up to 5 feet blooming August to October.

Liatris (blazing star) reaches a height of 4 feet in dry soils. It attracts butterflies and grows in full sun. Purple to almost white flowers occur August to October.

Bulbs are easy and there are some that bloom in fall. Colchicum (autumn crocus) and surprise lilies top this list. Both are commonly found in the cooler color shades but grow in full sun or part shade. Toad lily at 3 feet prefers shade and blooms summer to fall.

Other plants can be used for fall color but really begin blooming in summer. Some of these include anthemis, blanket flower, columbine, coreopsis, dianthus, gaillardia, hibiscus, lantana, monarda, common phlox, primrose, purple coneflower, Russian sage and yarrow.

Delosperma 'Kelaidis' or ice plant is a specific species that flowers summer to frost at a height of 4 inches. It produces daisy type flowers and spreads quickly in hot, dry and sunny locations. Soggy soil will kill this plant.

Scabiosa (Pincushion) blooms spring to fall, is deer resistant and prefers full sun. This low grower attracts butterflies with its double, pedaled blue or pink pincushion-like 3 inch flowers.

Limonium latifolium (Sea Lavender or Static) blooms profusely July to September. At 2 feet tall the plant is drought tolerant with lavender flowers.

Check out publications from the University of Missouri Extension, G6955 Flowering Perennials and G6629 Flowering Annuals for more ideas.
Group News - What’s Happening

September 2012

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Contact your local Extension Center if you have questions about any event on the calendar.

- Reynolds County Fair at
  - Perry Co. MG 6:30 pm, Perry Co. Ext. Center
- Parkland MG, 6:30pm @ Botkin Lumber Co. in Poplar Bluff MG, 6:00pm Butler Ext. Center
- Delta Area MG, 6 pm, St. Paul’s Episcopal Church in Sikeston
- State Master Gardener Conference; Sedalia, MO http://mg.missouri.edu/

- Cape Girardeau County MGs 3rd Thursday at Cape County Ext. Center at 7pm

- Perry Co. MG 6:30 pm, Perry Co. Ext. Center

**Upcoming Events**

**October**

1 - Parkland MGs 1st Monday at 6:30pm, Botkin Lumber CO, Frmngtn Industrial Park
2 - Poplar Bluff MGs 1st Tuesday at 6:00pm, Butler County Ext. Center
11 - Delta Area MGs 2nd Thursday at 7:00pm, Medical Arts Building, Sikeston, MO
15 - Ste. Genevieve MGs 3rd Monday, at Ste. Gen. County Ext. Center at 6:30pm
18 - Cape Girardeau County MGs 3rd Thursday at Cape County Ext. Center at 7pm
22 - Perry County MGs 4th Monday at the Perry County Ext. Center at 6:30pm

**Upcoming Fairs**

- October 3-5 - Madison County Fair; October 4-6 - Bollinger County Fair

If you have a horticultural related event for the calendar call 573-686-8064 to add it.
Editor’s Corner

The Garden Spade is published monthly by University of Missouri Extension staff for individuals and families living in Southeast and East Central Missouri. This newsletter is provided by your local extension council.

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We welcome and encourage Master Gardener groups and individuals to submit items to the newsletter. We encourage the submission of any news such as upcoming volunteer opportunities, community events related to gardening, warm wishes or congratulations to fellow gardeners. We also encourage Master Gardeners sharing experiences and writing articles on timely topics.

All entries into the group news sections must be received by 4:30 on the 15th of each month for the following months news.

Email News to: kammlerk@missouri.edu, denklers@missouri.edu, or aufdenbergd@missouri.edu

Disclaimer. No special endorsement of mentioned products is intended, nor is criticism implied of similar products not mentioned.

September 2012 Garden Spade