



THE GARDEN SPADE



A monthly Gardening Publication of the University of Missouri Extension -- Southeast and East Central Regions

Fall Garden Cleanup!

by Katie Kammler

We are now officially into the fall season. Before plants go dormant for the winter, there are some things that should be done to get the garden ready for cold weather.

- All usable vegetables need to be harvested before frost. Any vegetables that are frosted or froze need to be disposed.
- Leftover debris can be tilled in the soil or put on compost piles. The exception to this is problem plants that have issues with diseases or insects. Tomatoes are an example of plants that you want to remove from the garden and get rid of them (DO NOT COMPOST THEM!).
- Clean up any weeds that can harbor disease and insects over winter.
- Add compost or organic matter to the soil.
- Plant a winter cover crop that can be tilled under in the spring as a green manure. Cover crops such as winter rye or winter wheat work well.
- Mulch can be used to prevent erosion and weeds in the winter especially on bare soils.
- Remove any weeds in perennial flower beds. Be careful not to spread any seed when pulling, raking or hoeing.
- Add mulch to flower beds to help prevent frost heaving of soil and to prevent winter annual weeds.
- New perennials can be planted in the fall.
 - Established perennials can be divided in fall.
 - Spring flowering bulbs are planted in the fall so they have a chilling period before spring blooms. However, do not plant too soon. A warm soil causes bulbs to emerge prematurely!
- Clean garden tools so they are ready for spring. After cleaning, a good oiling is in order to keep them from getting rusty.
- Store seeds, fertilizer, and garden chemicals properly. Store seeds and fertilizer in a cool, dry place. Store chemicals where they won't freeze.
- Drain and store water hoses.
- Compost garden debris and leaves. Leaves make great compost!



October 2013

In this issue:

Fall Garden Cleanup!	1
Book Review!	2
Time to Turn in Master Gardener Hours!	2
October Gardening Calendar	3
Picking the Perfect Pumpkin!	3
Organic Soils	4
Daffodils	5
Walking Sticks	6
Emerald Ash	6
What's Happening!	7
Editor's Corner	8



University of Missouri, Lincoln University, U.S. Department of Agriculture & Local University Extension Councils Cooperating
EQUAL OPPORTUNITY/ADA INSTITUTIONS

Book Review

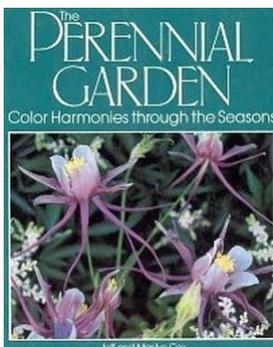
by Cindy Ahmed, Cape Co. Master Gardener

Book: The Perennial Garden: Color Harmonies through the Seasons by Jeff and Marilyn Cox

The purpose of this book is to guide the gardener in creating continuous color in the flower garden during the months from March through September using perennial plants.

Herbaceous perennials typically form the basis of the garden's flowers that return and multiply year after year. Chapters exploring topics on color, form and foliage through the use of perennials help the gardener in planning his own unique garden considering these elements.

A gardener planning a perennial flower bed is much like an artist creating a painting when expressing his choices of color, shape and planting arrangements. Other planning topics explored for the reader are how to access one's own property for perennial plantings, his property's environmental conditions, soil type, soil ph, and the planting zone one lives in.



Illustrations suggest pleasing arrangements using elements of design and color throughout the growing season, sizing of perennial beds and borders, and the creation of paths in the garden.

At the end of each month's flowering period during the growing season, chapters list suggested perennials that bloom during a specific month's blooming period grouped by color: bi-color, blue, orange, pink, purple, red, white and yellow.

Lavishly illustrated with color photographs of perennial gardens, the book brings many inspirations to the gardener with ideas of artful color combinations, designs, and textures he may choose to implement on his own property.

Further topics discussed in the book explore maintenance of the perennial garden through the use of compost, weeding, and propagation of perennials by division, and stem and root cuttings.

Time To Turn In Master Gardener Hours!

By Donna Aufdenberg

It is time to turn in your Master Gardener Volunteer Hours! If you have already completed your volunteer hours for the year, please get them turned in online or send to your local Master Gardener Coordinator. Addresses for coordinators are located on the back of this newsletter.

- If you need a new copy of hour record sheet, you can find it at <http://mg.missouri.edu/mg/forms.htm> or contact your local coordinator and they will send you one.
- We are really encouraging the online reporting system this year. You can find this at <http://report.missourimastergardener.com/>

- Every year we update the Master Gardener Directory. If you have not turned in Master Gardener Hours for 3 years, you will be moved to the inactive list.
- If you have not turned in hours in previous years however, you still want to be involved, please let us know!
- If any of your information has changed (address, phone, or email), please let us know.

These hours are important to us! They help ensure the continuance of the program.

If you have problems reporting hours, let one of us know...we are here to help!

October Gardening Calendar

By Donna Aufdenberg

Outdoor Plants and Ornamentals

- Container grown and B&B trees and shrubs can be planted now.
- For best bloom later this winter, Christmas cactus, potted azaleas and kalanchoe may be left outdoors until night temperatures drop to about 40 degrees.
- Cannas and dahlias can be dug when frost nips their foliage. Allow plants to dry under cover in an airy, frost-free place before storage.
- Transplant any deciduous trees once they have dropped their leaves.
- Old fallen leaves can harbor disease pathogens, if a tree or shrub had foliar disease problems, pick the leaves up and dispose of them.
- Fall needle shed of pines is starting to occur so don't panic if your pine looks a bit yellow. It will come out of it.
- Put tree guards on young trees to protect against rabbits and deer.
- Leaves from heavily wooded gardens can be beneficial to the garden and should not be burned or discarded. Instead, put them through a shredder and use as a mulch or add to your compost pile.



Vegetable Gardening

- Finish cleaning up garden areas. Compost only non-diseased foliage and plants. Remove all cages and stakes.
- Sow cover crops such as winter rye or winter wheat after crops are harvested and plants are pulled.
- Harvest winter squash and pumpkins before frost. For best storage quality, leave an inch or two of stem on each fruit.
- Now is a good time to soil test your vegetable garden.

Fruits and Nuts

- Persimmons are starting to ripen now, especially after frost.
- Place wire guards around trunks of young fruit trees for protection against mice and rabbits.

Turfgrass

- Don't retire the lawn mower when the grass growth slows down this fall. As long as it continues to grow, it should be mowed.
- Seeding grass seed should be finished by October 15.
- Fall is the time to control certain broadleaf weeds in the lawn including chickweed, white clover, dandelion, and wild onion.
- Keep leaves raked off lawns to prevent smothering grass.

Picking the Perfect Pumpkin!

Good Color
Development

Avoid splits or
cracks

It should be solid -
no soft spots or
sunken areas.

Examine the bottom
- there should be no
damage or sunken
areas.

Pick a pumpkin with
a good stem. One
without a stem will
not last very long.

Do not use the
stem for a handle.
Carry it from the
bottom.

A good solid and
healthy pumpkin
should keep for
several months or
at least through
Thanksgiving.

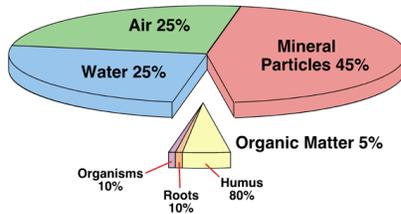


Organic Soils

by Sarah Denkler

When talking about healthy plants, soil is key. Soil should be balanced environmentally with air, water, organic matter and nutrients. When soil is balanced it will sustain microorganisms such as bacteria and fungi that are beneficial and work to fight against organisms that are detrimental to plant growth.

Soil found in nature is organic containing carbon, organisms and nutrients. Over time this organic nature can be depleted if the soil is not replenished.



When a soil is used up it may contain few nutrients and little organic matter or it may be compacted with no air space or ability to hold water. In these conditions the microbes begin to die, further changing the soil balance and preventing plant growth. It can take hundreds of years to rejuvenate this type of soil so that it is able to sustain multiple plant species.

Organic matter plays a key role in maintaining a balanced soil. Organic matter adds carbon, airspace and nutrients while also improving soil structure, drainage, water infiltration and diversity of organisms.

Many gardeners are good about adding fertilizer to their soil each season but this is not always what is required or what is needed to sustain the balance. Organic matter should be at least 5% in a healthy soil. Each addition of organic matter will add carbon which is broken down by microorganisms as they feed. Because they are constantly feeding, the organic matter should be replenished often.

As always, a soil test should be done to determine the level of organic matter and the pH of soil. This test will also provide you with phosphorus, potassium, calcium and magnesium levels. It is at this point that you will understand what should be added to improve the basic needs of the soil.

Organic matter can be added in the form of fresh green tissue such as lawn clippings, fresh vegetables and leaves or green plant debris. This fresh tissue will contain nitrogen that may be added to soil or be used by the microorganisms.

Organic matter may be added as dry, brown tissue which is high in carbon such as wood mulch, straw, sawdust or paper. If these are added to annuals or herbaceous perennials directly they can cause nitrogen deficiency in the plant as the microorganisms use up the nitrogen. For this reason these materials are usually composted before being added to the soil.

Composting organic matter is done by layering different types of brown, dry matter with nitrogen or fresh nutrients. Time is provided that allows microorganisms to break down the material into what becomes humus. Humus is organic matter that has broken down as far as possible. When used as an amendment it still adds the beneficial properties to soil that compost or fresh organic matter might add without the danger.

When building a soil organically the idea is to work on the upper most portion of soil that contains the majority of roots. This may be from 6 inches in herbaceous plants to at least 2 feet for trees. It is not an instant fix but takes time, maybe 10 years or more. It requires a commitment to continue each year, even after the soil has become rich in organic matter and developed an acceptable structure.

Amendments that are considered organic that can be used to add nutrients to soil include but are not limited to: fish emulsion (nitrogen and potassium), green sand (potassium), bone meal (calcium and potassium), blood meal (nitrogen), gypsum (calcium and sulfur), and wood ash (potassium and calcium). Manure is also a good source of carbon, nitrogen and organic matter but must be used carefully. It is usually used as a composted product to protect against nitrogen burn and harmful microorganisms.

Daffodils

by Katie Kammler

Daffodils are one of the easiest flowering bulbs to grow and give a lot of color for little effort. They thrive in most soils so long as there is good drainage to prevent bulb rot. Now is the time to order and plant bulbs as they need a chilling period before the spring bloom and time to develop a strong root system. Daffodils need sunlight to continue to bloom year after year. But since most of their growth is completed before trees leaf out, they can be planted under deciduous trees. They are suitable for shrub borders, perennial beds, and groundcovers. They should be planted in groups of three to a dozen bulbs of one variety for the best effect. Space bulbs 6 to 12 inches apart, 6 inches deep. They are planted with this spacing to allow room for the bulb to divide and spread. Mulching is always a good idea to keep soil temperature uniform, reduce weed problems, and prevent soil from splashing on the flowers. Like many of our garden plants, they need good moisture to flower. If rainfall is deficient, like this fall, be sure to water the bulbs well after planting and continue if there is no rain so the bulbs can develop a good root system.

After planting and getting the bulbs established, little care is needed. They can be lightly fertilized each spring with garden or bulb fertilizer. After flowering, do not cut off or tie the leaves in a bundle. The leaves manufacture the food that is stored in the bulb and helps produce the next year's flowers. Foliage should remain on the plant



for eight weeks after bloom. After that period, it can be removed by hand picking because using a knife or scissors can spread virus diseases.

Daffodils can be mixed in with other plants such as daylilies or ferns to hide the foliage but still allow it to produce food for the bulb.

Digging and dividing bulbs is only required every five to ten years if they are not planted too close

together. Usually when flowering is reduced or flower size is smaller, it is time to divide the bulbs. Dig the bulbs when the foliage is dying and can still be seen so bulbs can be located. A fork spade is best for digging to prevent bruising. Remove loose soil and spread out to

dry but not in direct hot sun. After the bulbs are dry, the offsets may be removed from the mother bulb. Also remove old, dried skins and roots. Store in a cool, dry, well-ventilated area until planting time in the fall.

And finally, is it a daffodil, narcissus, or jonquil? All of these terms are used in referring to these spring flowering bulbs. Actually, both daffodil and narcissus are correct. Narcissus is the generic botanical name given to these plants in 1753. In England, however, the plants were commonly known as daffodils and that term spread to other countries. Jonquil refers to a specific kind of narcissus and is not correct for the group in general. True jonquils have reed-like leaves and sweet smelling flowers. So narcissus in the botanical name, daffodil the common name, and jonquil is a particular division of the genus.

Walking Sticks

by Katie Kammler

As a kid, I enjoyed playing with walking sticks. I remember people being horrified and tell me they were poisonous. This is not the case. Walking sticks are slow-moving and wingless. They are appropriately named in that they look like a stick with long, skinny legs and thread-like antennae. If they lose one of their legs, they can regenerate it, completely or partially. They can be green or brown and up to four inches long. This is the time of year that people notice them, as they are moving around, laying eggs in leaf litter. Nymphs hatch in the spring and develop through several instars before maturing. Only one generation is produced each year. Walking sticks have chewing mouth parts and feed on leaves. Host

plants include apple, basswood, birch, dogwood, hackberry, hickory, locust, oak, pecan, and wild cherry. Usually they are not bad enough of a pest to warrant control measures.



Emerald Ash Borer Update!

by Katie Kammler

September 27, 2013

Statewide Quarantine Changes for Ash Wood Products

The Director of Agriculture, upon the recommendation of the State Entomologist, announced today that the state quarantine regulating the movement of ash wood products has been expanded to include all 114 counties and the City of St. Louis. The change follows findings of Emerald Ash Borers in new, disparate locations during the annual summer survey.

Under Missouri's expanded quarantine, producers, nursery

operations and other horticulture and forestry businesses may transport ash wood and wood products throughout Missouri. Consumers may

also move ash throughout the state for their personal use. However, individuals transporting products across state lines must continue to contact USDA-APHIS Plant Protection and Quarantine to ensure compliance with existing federal quarantines.

For more information on the quarantine in Missouri, visit mda.mo.gov. For more information on the Emerald Ash Borer, visit <http://www.emeraldashborer.info>





Group News - What's Happening

October 2013

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1 Poplar Bluff MG Meeting 6:00pm @ PB Ext. Center MG Core Training 6-9p; Cape Girardeau Co. Ext.	2 MG Core Training 6-9p; North College Center,	3	4	5
6	7 Parkland MG, 6:30pm @ Memorial United Methodist Church, Farmington, MO	8 MG Core Training 6-9p; Cape Girardeau Co. Ext. MG Core Training 5-8p;	9 MG Core Training 6-9p; North College Center,	10 Ste. Genevieve MG, 6:30pm @ Ste. Gen. Co. Ext. Center	11	12
13	14	15 MG Core Training 6-9p; Cape Girardeau Co. Ext. MG Core Training 5-8p;	16 MG Core Training 6-9p; North College Center,	17 Cape Girardeau MG, 7:00pm @ Cape County Ext. Center	18	19
20	21	22 MG Core Training 6-9p; Cape Girardeau Co. Ext. MG Core Training 5-8p;	23 MG Core Training 6-9p; North College Center,	24	25	26
27	28 Perry Co. MG 6:30 pm, Perry Co. Ext. Center	29 MG Core Training 6-9p; Cape Girardeau Co. Ext.	30 MG Core Training 6-9p; North College Center,	31	Contact your local Extension Center if you have questions about any event on the calendar.	

November

- 4 - Parkland MGs 1st Monday at 6:30pm, Memorial United Methodist, Fmgtn, MO
- 5 - Poplar Bluff MGs 1st Tuesday at 6:00pm, Butler County Ext Center
- 14 - Ste. Genevieve MGs 2nd Thursday, at 6:30pm, Ste. Gen. County Ext. Center
- 14 - Delta Area MGs 2nd Thursday at 7:00pm, Medical Arts Building, Sikeston, MO
- 21 - Cape Girardeau County MGs 3rd Thursday at 7:00pm, Cape County Ext. Center
- 25 - Perry County MGs 4th Monday at 6:30pm, Perry County Ext. Center

If you have a horticultural related event for the calendar call 573-686-8064 or email it to Denklers@missouri.edu.

Upcoming Events

- November 5 to November 19 - Master Gardener Core Training Continues; 6-9pm Cape Girardeau Co. Ext. Center in Jackson, MO
- November 6 to November 20 - Master Gardener Core Training Continues; 6-9pm North College Center, MAC in Park Hills, MO
- November 6 - Grow Native Professional Member Conference, Columbia, MO
- November 7 - Master Gardener Core Training Wrap-Up; 5-8pm Butler Co. Ext. Center in Poplar Bluff, MO

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.

Editors:

*Katie Kammler, Plant Science Specialist
255 Market St., Ste. Genevieve, MO 63670
573-883-3548*

*Sarah Denkler, Horticulture Specialist
222 North Broadway Street, Poplar Bluff, MO 63901
573-686-8064*

*Donna Aufdenberg, Horticulture Specialist
304 High Street, PO Box 19, Marble Hill, MO 63764
573-238-2420*

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.



October 2013 Garden Spade