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Hot and humid or rainy days that keep us inside are good days to take advantage of online learning. There is so much available! State Extension websites are always good sources.

**Iowa State University Agriculture and Natural Resources**

**Illinois Extension Gardening and Horticulture**
- LIVE with the Horticulturists: Rain Gardens, June 3, 12 PM
- Four Seasons Gardening: Tomato Problems, June 9, 1:30 PM
- Container Gardening at Home, June 9, 2 PM

Here are some Facebook links with opportunities:

**Nahant Marsh Education Center** - Davenport

**Indian Creek Nature Center** - Cedar Rapids

**Botany Beginners: Exploring Iowa’s Native Plants - Virtual Field Day**
Hosted by Practical Farmers of Iowa and Tallgrass Prairie Center
Five Part Webinar begins Monday, June 8
This course is designed for anyone who wants to improve their ability to identify native plants of the tallgrass prairie region, with a special focus on common farm-land prairie plants. The course will emphasize the process of learning how to identify the plants and will help attendees become more self-sufficient at plant identification through guided practice. To learn more about this course, or to register, please visit tallgrassprairiecenter.org/botany-beginners.

Some plants like to wait a bit, here's Cindy's list of late-emerging perennials: [link to list] Iowa State Horticulture News ISU Extension and Outreach - Agriculture and Natural Resources
News from the Chair
By Mary Wildermuth, Master Gardener

“As we head into the sunny hot days of summer, I hope you take some time to sit on your porch and enjoy a refreshing summertime drink. The recipes I have included are all from Pinterest and sounded and looked like a fun relaxing way to enjoy a summer day or evening. As we enjoy our time at home I am sure you are enjoying your beautiful or work in progress flower bed or garden!! I hope everyone is staying healthy! Cheers to a lovely June day!!”

Thanks!
Mary

BUMBLEBEE POLLINATION

BY Jodi Henke from Successful Farming Magazine

There aren’t many insects as captivating as the hefty, fuzzy bumblebee. Honeybees get all the pollinator attention, but bumblebees are an excellent alternative or a supplemental pollination source of many crops.

Elaine Evans is an Extension educator at the University of Minnesota. She says on a bee-to-bee basis, bumblebees are more efficient than honeybees and aren’t as picky about their foraging conditions.

"They’re bigger and fuzzier, they can collect more pollen on their bodies, so more pollen gets moved to other flowers. Bumblebees also are more tolerant of bad weather, whereas honeybees are a little bit more picky about when they’ll go out. They also have a really long foraging day," says Evans. "So pretty much from the time that the sun comes up till after the sun sets they’re still out until it gets too dark."

Evans says bumblebees have evolved alongside flowering plants and have developed interdependent relationships with many of these plants. They especially excel at pollinating tomatoes, blueberries, squash and pumpkins because of a behavior called “buzz pollination.”

"There’s some flowers where the pollen is kind of stuck in the anthers. Some bees will go in and grab that anther and shake the pollen off, and that’s what those flowers need to get better pollination," she says. "Honeybees don’t do that, bumblebees do."

Bumblebees get all their nutrition from flowers, so plant flowers, trees, and shrubs to provide a constant source of blooms from early spring to fall. Encourage nesting potential by leaving some areas of un-mown grass and untilled areas. Bumblebees prefer to nest in clumps of grass above ground or in holes below ground.
Some fun drink recipes to kick off the month of June!

By Mary Wildermuth, Master Gardener

Sparkling Mint Limeade—4 ingredients
1/4 cup Mint, fresh packed  
3/4 cup Lime Juice, fresh  
5/8 cup White Sugar  
2 1/2 cups Club Soda

White Strawberry-Lemon Sangria
1 Apple  
4 cups Lemon-lime soda  
2 lemons  
1 cup strawberries

Summer Sangria with watermelon and Pineapple
2 cup Del Monte gold extra sweet pineapple  
2 cup Del Monte watermelon  
1 lemon lime soda  
1 line  
1/2 cup brandy  
1 bottle Moscato wine

1/2 cup Rum, light  
1 (750ml) bottle white wine
TREASURER REPORT...
Muscatine Master Gardeners Association
By Heather Harroun, Master Gardener

Treasurer report for the newsletter is brief!!
Balance is unchanged and is $4,952.90.

Garden Walk news...
Heather Harroun, Master Gardener

- Heather will be hosting garden walks during the weekends of July 4th & 5th and the 11th & 12th. More information will be available closer to that time.

From Lynn Pruitt posted on Facebook some GEORGOUS pictures of flowers at his home. He stated the following: “This week is the peak time for our iris. They are very beautiful this year just in case anyone wants to drive by for a look.”
Muscatine County Extension and Outreach

Now Hiring: County Extension Director
Muscatine County Extension and Outreach is currently seeking candidates for the County Director position. If you know of someone who may be interested in this exciting opportunity to serve the people of Muscatine County, we encourage you to share this announcement.

Thank you!
Application deadline: 5 pm June 4, 2020

Job Purpose: Under the direction of the Muscatine County Extension Council, the County Extension Director will work to carry out the Land Grant Mission of Iowa State University Extension and Outreach. This includes the implementation of educational programming; supervision, training and coordination of county staff; preparation and interpretation of reports; oversight of budget and fiscal activities including the development of new resources; interpretation and communication of policy; development of new community partnerships; evaluation and reporting on program areas. The Muscatine County Extension Director is an employee of the Muscatine County Agricultural Extension District.

This is a full time, salary position. View the job description for responsibilities and benefits. To apply submit application, resume, and cover letter to Jeff Macomber, jmacombe@iastate.edu.

Learn more about Muscatine County Extension and Outreach
Learn more about Iowa State University Extension and Outreach
Diagnosing a Plant Problem 101
By Gretchen Nollman, Master Gardener,
and William Koellner, Lifetime Master Gardener

Use this step-by-step method to narrow down the possibilities of your plant problem. There can be numerous causes for plant symptoms. Not all symptoms are related to insects or plant diseases. Plant health may be affected by soil fertility and texture, weather conditions, quantity of light, and other environmental and cultural conditions, as well as animals, including humans. It will take your observational skills and deductive logic to help solve the mystery. Keep in mind that this is a skill that takes time to develop and that it is always best to verify your conclusions by bringing a sample to your local extension office.

Know the Plant's Normal Appearance
You have to know what the plant is supposed to look like before you can know that something is wrong. For example, some plants have variegated foliage or are yellow green. They are not diseased; they are supposed to look that way.

Consult Literature Resources for Possible Diseases and Disorders
Many resources may list common pathogens and disorders for different types of plants. Review a resource that is specific to your geographic area.

Investigate Symptom Progression
You want to know if the problem is a result of a living (biotic) or nonliving (abiotic) factor. Usually biotic diseases spread throughout the plant and from plant to plant as the pathogen reproduces and attacks new tissue. Abiotic problems tend not to spread this way.

Ask questions (similar to those a doctor would ask you):
1. When was the problem noticed?
2. Was the damage sudden or gradual?
3. How old are the affected plants?
4. What percentage of the plant is affected?
5. How severe is the injury?

Observe Patterns
Is a large area affected or just scattered plants? Check to see whether the distribution pattern is uniform or random. Are the symptoms first observed in one field corner or along a field edge or are they associated with the lowest or highest areas of the field? Uniform distribution, especially across different plant types, usually suggests an abiotic problem, but it could also indicate seedborne or transplant problems.

Review your Cultural Practices
Sometimes what we think is a disease is really a problem related to irrigation or fertility practices. Overfertilization or over watering causes problems as often as under fertilization or underwatering. Also consider the soil conditions and field cropping and/or pesticide application history.

Consider Possible Environmental Causes
- Temperature extremes
- Drought or excess rain
- Soil types and conditions

Review your Cultural Practices
Sometimes what we think is a disease is really a problem related to irrigation or fertility practices. Overfertilization or over watering causes problems as often as under fertilization or underwatering. Also consider the soil conditions and field cropping and/or pesticide application history.

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- Temperature extremes
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- Soil types and conditions
Rhododendron in Crossville, Tennessee - There is no shortage of plants in the UT Gardens newsletter! ...iris, peonies, clematis, hosta, heuchera, and more! Bill Koellner chose to have this specific planted featured which is a beautiful combination, since 'Sun King' Aralia is 2020 Perennial Plant of the Year. It is especially eye-catching with the vivid blooms of Rhododendron 'Violetta'. This Glen Dale hybrid is known for its cold hardiness, making it perfect for the plateau.
How Long Should I Expect My Tree to Last?

By Brian Wolyniak, Penn State Extension

The life expectancy of a tree is influenced by a number of factors. I was asked the other day how long we should expect our landscape tree to remain viable? My answer was, “it depends.” Many things go into deciding how long we may have a particular tree to serve in a space. We might think of this as its service life. Trees growing singly in a 2-foot sidewalk pit in a commercial area may survive 10 years or less. The same trees planted in landscape systems of five or more, resembling a grove, may survive 50 years and longer.

Our other facilities, such as our roof or our air conditioner have a finite service life. They are inanimate, and never get better nor perform more strongly than the first day they were installed. We don't expect them to last forever. Trees, and tree landscapes, on the other hand are alive, and they improve in providing benefits for a time as they thrive, grow larger, and function well.

The term “service life" implies providing satisfactory performance throughout the period. The more the growing conditions resemble the natural forest the plants grow in, the longer and better they can serve. What determines how long a tree in the landscape can be expected to perform well? In this article, we consider:

- Defects
- Growing space
- Species

Thanks Bill Koellner for sharing this article... want to read more on this article please go to the following link......
https://extension.psu.edu/how-long-should-i-expect-my-tree-to-

last?j=536773&sfmc_sub=53515249&l=159_HTML&u=10735252&mid=7234940&jb=5&utm_medium=email&utm_source=MarketingCloud&utm_campaign=URFS-2020-MAY-14-GN-EM-Community+Trees&utm_content=URFS-2020-MAY-14-GN-EM-
Sunflowers are traditional in the typical Midwestern garden, but modern hybrids have greatly expanded the palette of choices. Whether you want short, medium or tall; yellow, burgundy, bronze or brown; seed for the birds; or just pretty to look at, there’s a sunflower for you.

Gardeners will find two different types of sunflowers available from garden centers and online catalogs: Those grown for their edible seeds, and those grown primarily as ornamentals. Traditional sunflowers are generally quite tall (over 5 feet) with bright yellow blooms. Modern cultivars now offer a range of orange, gold, lemon-yellow, bronze, amber, mahogany-red and even white.

Another new development is more highly branched plants that may carry numerous smaller flower heads, rather than one large head. Some cultivars have been bred to fill the center with additional rows of ray-type flowers, giving a fuller, double-flowered appearance. And for smaller gardens and containers, you’ll find sunflowers ranging in height from dwarf types (1-2 feet). Many of the newer garden types are intermediate height (3-5 feet).

Sunflowers are also popular as a cut-flower crop, and breeders have responded by creating new hybrids that bloom without producing pollen. These new floral cultivars solve the problem of pollen stains on fabric and extend the vase life of the cut flower.

Sunflowers are easy to grow in just about any type of garden soil and climate. Choose a sunny location for best flowering. Sunflowers are generally considered to be a warm-season crop plant.

To harvest sunflower seeds for eating or for feeding the birds, cut the head when at least two-thirds seeds are mature; the outer shell of the seed will be hardened, and the back of the head will be brown and dry. You may need to protect your harvest from the birds by covering the maturing head with cheesecloth, netting or a paper bag. Cut the head from the plant, leaving 1-2 feet of stem attached. Hang the heads in a paper or cloth bag to catch the falling seeds, and place in a warm, well-ventilated area for a few weeks to cure.

Thank you Bill Koellner for sharing this to the newsletter… want to read more on this article please follow this link:

https://ag.purdue.edu/stories/podcast/sunflowers-for-midwestern-gardens/
The donation garden at the Church of Christ on N. Mulberry. We started the 2nd of April by planting potatoes and onions. Our spring seemed colder than normal. When the weather started warming up enough (end of April) we tilled and started planting. By May 21 we felt we were officially done with planting. Lynn Pruitt planted tomatoes using cages to protect and stake up. The raised boxes (12) now hold cabbages, onions, eggplant, zucchini, kale, peppers. Butternut squash was planted in ground. We planted (lots) of sweet corn ($20/pound of seeds!). We may plant pumpkin in between the corn rows. Rhubarb was harvested—12 pounds—but no food pantry to donate to due to the Covid-19 quarantine. I put it on Facebook for anyone and it was taken immediately!! Nora Dwyer said the food pantry is now open with restrictions. So hopefully when we harvest the produce will find its way into the hands of the needy.
Muscatine County Extension Office
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Muscatine, IA  52761
563-263-5701 or 800-992-0894
Iowa State University Extension programs are available to all without regard to race, color, national origin, religion, sex, age, or disability. Iowa State University and U.S. Department of Agri-

2020 Muscatine County
Master Gardener Board

Board Members
Mary Wildermuth, Chair (2021)*
Rachel Horner Brackett, Vice Chair (2020)*
Heather Harroun, Sec/Treas(2020)
Kathy Haltmeyer(2020)
Ron Jensen (2021)
Carolyn Lemaster(2021)*
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Maryrose Peterschmidt(2020)
Mary Danner (Past Chair)
Angela Weber (Intern)

( )Year term expires as of Dec. 31  
* Going off Board Dec 31, 2020 or 2021 but eligible for re-election

Current Emails and Addresses
As a reminder – keep both the Extension Office current on any changes of e-mail addresses, phone numbers, or mailing addresses. These need to be current to keep you — our members — informed.

THEME FOR THE BUCKET BIRGADE 2020 IS:
HOT SUMMER NIGHTS
COLORS TO BE USED FOR FLOWERS ARE:
PURPLE, YELLOW AND WHITE
DATE: TUESDAY JULY 14TH EVENING TIME
MORE DETAILS TO FOLLOW IN NEXT NEWSLETTER

Editorial Comments:
I enjoyed putting this together and look forward to more! If I missed anything or you don’t see something that should be in here, please let me know by emailing me at nollmanag@gmail.com or calling me 319-541-1462. Thanks! Gretchen Nollman