Balanced Fertilizer N - P - K

10 –10 –10

August 2009
Vol. 1, Issue 1

publication of the Warren County Master Gardener Program

Welcome Letter

Welcome to the inaugural issue of 10 – 10 - 10. We hope to use this Newsletter to increase the awareness of upcoming Master Gardener events and convey interesting horticultural tidbits.

Interested in contributing to the Newsletter? Please contact Christine Jarzab at (814) 726-2924 or cmjarzab@yahoo.com or Dan Sorensen at (814) 706-1787 or dan@phantomlake.net if you want your upcoming events mentioned, have suggestions for education pieces, or would like to write an article for the Newsletter.

Pollinator Garden is Abuzz

The pollinator garden is underway, but in need of some plants. The Master Gardeners would appreciate donations of *native perennials that tolerate full sun*, particularly the following plants:

Thyme
Oregano
Aster
Helianthus
Echinacea (cone flower)
Monarda (bee balm)
Asclepias (orange butterfly weed)
Agastache (giant hyssop)

Contact Pam Stoleson if you would like to donate plants or other items to the garden.

Annual Picnic

The next Master Gardener meeting will actually be a picnic. The picnic will be held on **Thursday, August 13, 2009, from 5:30 – 9:30** at the Conservation District Pavilion on Hatch Run Road. There will be a picnic and an informal meeting. Please bring a dish to share. Beverages, plates, and utensils will be provided. Don't forget your insect repellant.

Interested in Native Plants?

The ***Lady Bird Johnson Wildflower Center*** (http://www.wildflower.org) is an excellent resource for information about native plants. This website, operated by the University of Texas at Austin, includes a native plant database, links to vendors of native plants, and articles about sustainable planting and conservation. From this site, you can also attend *Go Native U* and take online classes about native plant gardening.

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Potato Leafhoppers – Unwelcome Tourists

There is a tourist that visits Pennsylvania every year, flying in on the warm spring breezes we all look forward to in May and June. This tourist arrives by the millions, yet is barely noticed by most local residents, at least until the effects of its presence manifest themselves in alteration of the growth of a wide variety of our plants. It spends the winter in pine forests in the southeastern states and travels north when weather conditions produce sustained south winds. Over 200 plants have been identified as hosts to the potato leafhopper, *Empoasca fabae,* the visitor to which I refer.

The tiny lime green adult insect is only one-eighth of an inch long and spends its time feeding on the undersides of leaves usually accompanied by wingless nymphs of various ages and ranging in size from 1/32 inch up to adult size. All stages feed and cause the damage by puncturing the leaf's lower surface and injecting toxic compounds. Consequently the first sign of leafhoppers is likely to be seen on the leaves as they turn yellow around the edges, a phenomenon known as “hopper-burn”. As the damage progresses, further discoloration and browning, and twisted, distorted leaves and stems result. To someone unfamiliar with the insect, it is easy to assume some disease has affected the plant, since the culprit can easily go unseen unless one is looking for it.

Plants Affected By Leafhoppers

Alfalfa
Apple
Beans
Birch
Cherry
Chestnut
Clover
Cucumber
Dahlia
Eggplant
Elm
Grape
Hackberry
Hickory
Jerusalem Artichoke
Lilac
Locust
Maple
Oak
Peanut
Potato
Redbud
Rhubarb
Raspberry
Squash
Strawberry
Sweet Potato
Tomato
Walnut

Adult females each lay three to seven eggs a day for at 30 days or more, inserting the eggs inside the leaf tissue, causing further damage. This means the population can double about every nine days. The eggs hatch into wingless nymphs that otherwise look much like the adults. They live and feed as they grow on the underside of the leaves. When disturbed the adults often fly, but the nymphs make a characteristic evasive move with a rapid crab-like sideways walk.

If the infestation is small, no real control is necessary as natural controls may work. Besides gardeners, leafhoppers have a few enemies including ladybugs, damsel bugs,a parasitic wasp and a fungal pathogen, but they are slow to respond to the rapid population growth of the leafhoppers, so reliance on such natural enemies is not dependable.

Larger woody plants are usually able to withstand leafhopper infestations, but small herbaceous annuals may be so stunted and retarded that they never produce a usable crop or flowers so crops like potatoes and dahlias will likely need chemical control. Fortunately thus far leafhoppers have not developed significant resistance to any insecticides. For non-food crops, treatment with a systemic insecticide like Imadocloprid applied when the hoppers first appear is effective. For food crops Malathion sprayed every ten days should be successful.

Once cold weather returns in the Fall, reproduction slows and the population declines rapidly until frost kills the remaining individuals.

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Getting to know . . . *Monarda*

Family: Lamiaceae (Mint Family)
Common names: Beebalm, Oswego tea, Red bergamot
Bloom color: red, pink, white, or purple
Light: Sun / Part Shade
Soil: Wet, moist, acidic
Native Species: *Monarda didyma* and *Monarda fistulosa*

August is the time of year that brilliant scarlet and purple blooms of Monarda grace our open woods, meadows, and stream banks. This native perennial has a history of medicinal uses, including treatment for stomach ailments, gas, fever, bee stings, dental caries, and gingivitis. A close inspection reveals the aromatic leaves, square stem, and opposite leaves that are characteristic of the Lamiaceae (Mint) family.

The genus *Monarda* traces its name to Spanish physician and botanist, Nicholas Bautista Monarde (1493-1588). Nichloas Monarde investigated the medicinal uses of many of the New World's plants. His book regarding these discoveries was widely distributed and translated into several languages. Monarde's writings and a museum he established in Seville dedicated to his findings led to the inclusion of New World plants into the pharmacopoeias of Europe, many of which are still listed as efficacious for the uses Monarde described. His first description of the Indians' use of smoking tobacco helped popularize its use throughout Europe.

Come Grow With Us

The Master Gardeners plan to offer ***Come Grow With Us*** in April 2010. This is a significant undertaking, but with enough volunteers we can make this a wonderful event for the community. The last Come Grow With Us generated a lot of positive feedback.

There are many projects that can use volunteers - food, programs, decorations, speakers, etc. Contact **Diamond Geiger** or **Celia Knapp** if you are interested or have ideas for topics or speakers.

Mission Statement

The mission of the Penn State Master Gardener volunteer program is to support the Penn State Cooperative Extension by utilizing research-based information to educate the public on best practices in consumer horticulture and environmental stewardship.

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H.O. Smith Botanic Gardens Opens at Penn State

Thanks to the generous donation of the H.O. Smith family, Penn State will enjoy a Botanic Gardens and Arboretum. Located on the northwest side of University Park, this multiphasic undertaking that will ultimately create a 55 acre botanic gardens, a 370 acre arboretum, and a horticultural collection of 17,000 species.

Phase One, the H.O. Smith Botanic Gardens, opened in July 2009. The attractions include an overlook pavilion, conservatory terrace, a one-acre Event Lawn, two Pollinator Gardens, and a Esplanade of annuals and perennials. There are also a series of walled gardened, including the North Terrace, which features subtropical plants, the Oasis Garden, containing lotus and water lilies, and a Rose and Fragrance Garden. Several spaces are available for private gathering and public events. Future plans include a visitors' center, conservatory, and children's education center.

If you are in the State College area and looking for something to do, consider a visit to the arboretum. Admission is free. To learn more about the Arboretum, please visit the Arboretum's Web site (www.arboretum.psu.edu).

Horticultural Word of the Month

A cacao blossom (chocolate tree) is an example of cauliflory.

Cauliflory - Botanists have created many unique words to describe the parts of plants. Cauliflory and its noun form, caulifloriferous, is one of the more interesting terms. It literally means "cabbage (cauli) flower (flory)", but the cabbage and its relatives are poor examples of the meaning of this word. It is applied to any plant which produces flowers on old woody growth rather than new growth and is a much more common phenomenon in the tropics than it is in the temperate regions. Redbud, *Cercis canadensis*, is perhaps the most common example that you are likely to observe in Pennsylvania. It is also found in plants such as chocolate (cacao), carob, and papaya. For a more detailed article on cauliflory go to this website: http://waynesword.palomar.edu/plmay99.htm.