Joyce Peden, a veteran exhibitor at the Monroe County Fair, was the winner of the 2007 MCMGA Fair Exhibitor Award. Joyce earned the most points based on the number of exhibits and the awards that each exhibit received in the Vegetables, Herbs, Seeds & Grains, Cut flowers, Potted Plants, and Floral Design open class divisions. Joyce was pleased to be named the winner, but she in turn wanted to encourage other Master Gardeners to exhibit at our county fair. We only had two Master Gardeners, Dot Owen and Kim Scherer, who were first time exhibitors to the Floral and Garden Projects in 2007. Dot and Kim each will be presented with a $25 cash award at the September general meeting of the MCMGA. Thanks to all Master Gardeners who exhibited items at the fair.

**Demo Garden Herb Program**
By Amy Thompson

Joanna Howe, Gold Master Gardener, organized and presented an herb program for Master Gardeners and the public on July 31 at the Master Gardener Demo Garden. Joanna gave us a relaxed but informative tour of the herb section of the demonstration garden, talked about some of the current and historical uses of herbs, and related a bit about the history of the garden itself. Those in attendance had the opportunity to ask herb questions, talk with other Master Gardeners, and sample some great food flavored with herbs and prepared by Master Gardeners. Joanna and this program she organized can be an inspiration to other Master Gardeners. If you have a passion about a particular type of plant and want to share your knowledge, why not think about volunteering to host a similar program? If you do have an interest in doing something similar, contact me at the office, and I will work with you to make it happen. (continued on page 6)

All Master Gardeners are invited to our next general meeting on Tuesday, September 25, at 6:30 p.m. at St. Marks Methodist Church located on the east Highway 46 Bypass. The driveway to the south church entrance is directly off of the Bypass, near Starbucks. Parking is available in the south church lot.

Our meeting will be held in Meeting Room A. Enter through the south door off the parking lot and follow the entry corridor to Room A, adjacent Garton Great Hall.

We will have an important business meeting followed by an education session, **Naturalizing Gardens**, presented by Linda Thompson, environmental planner for the City of Bloomington. This session is eligible for education credit for all participants, so plan to report this for an education hour on your report sheet (available on our website, www.mcmga.net). Be sure to bring along your friends and neighbors to this interesting meeting.

**Bloomington Parks & Rec Programs for Fall**
By Amy Thompson

Bloomington Parks and Recreation will be offering a few things that our members might be interested in. One, *Invite Birds and Butterflies into Your Garden*, will meet Saturday, November 11, from 2:00-4:00 p.m. ($8.00). Also, they will be offering the *Grow Organic Series* again for anyone interested in participating (September 5 through December 5, $120.00). The P&R web site will have more information.
Field Trip to Oliver Winery Garden

Our next field trip is scheduled for Monday, October 8 at 3:00 p.m. at Oliver Winery located on Highway 37 about five miles north of Bloomington. The winery horticulturalist will speak to us on her designs and flower choices for the outstanding grounds of the winery. This will be a real treat if you have never visited the winery or have wondered about the people behind the landscaping. One hour of education credit will be available to all MGs who attend. Guests are welcome, and there is ample parking on the winery grounds. If you signed up already for this trip, you will receive a reminder by email or phone. If you want to attend and have not already signed up, call or e-mail Ann McEndarfer or Nancy White.

November Holiday Party and General Meeting

Plans are being made for our November general meeting which will be a holiday-themed carry-in dinner with a speaker. Flower arranging will be the program topic, and one hour of training credit will be available for all MGs in attendance. We urge members to bring guests to this 6:00 p.m. dinner and program. Members might want to invite a friend or neighbor who is interested in taking the 2008 MG training class. Gloria Noone and her committee are in charge of arrangements for our holiday gathering. Meats, cheeses, breads, drinks, and table service will be furnished. Just bring along an appetizer, salad, vegetable, or dessert to share. Be sure to mark the date of Tuesday, November 27 on your calendar for this entertaining holiday affair.

Elsbury Greenhouse Holiday Open House

The owner of Elsbury Greenhouses in Hope, Indiana, who gave a presentation on poinsettias at our November dinner last year, has invited us to the Greenhouse Holiday Open House on the weekend after Thanksgiving, November 23-25. Hours are Friday and Saturday from 9:00 a.m. to 5:00 p.m. and on Sunday, noon to 5:00 p.m. If members might be interested in attending as a group on one of the days, contact Ann McEndarfer or Nancy White. Or, you may wish to go on your own. It will be a very beautiful and informative visit and worth the trip. Hundreds of poinsettias and other holiday plants are included in this show and sale.

Weed Identification

Did you know that the Master Gardener Volunteer Crew for Wondergarden recently encountered some new and exotic (for us) weed specimens? Some really stumped us as we tried to identify and remove. We agreed that this recent drought and exceptionally hot weather has encouraged some of the perennials and shrubs to hasten their fall wind down. In reverse, the weeds seem to be taking perverse pleasure in growing higher and higher and spreading faster that we can work. Thanks to the H-T Hotline for reminding us of the Indiana Native Plant and Wildflower Society website that will assist us to complete our identification. Visit www.inpaws.org/plants.html.

Yellow-banded Hornet Spotted

A yellow-banded hornet was observed this weekend in our woods. He had somehow landed on the ground on top of a much larger locust, our annual cicada. We were drawn to this sight by the high-pitched screams of the locust which appeared to be fighting for its life. Time after time the hornet jabbed the cicada and did not stop until its prey had grown silent and quiet on the ground, its wings no longer flailing against the smaller hornet. We did not remain to see if the hornet would disappear after the kill or even why the kill occurred. Are they mortal enemies or was it just a “food chain” ritual? Some instinct kept us from assisting either side in this fight. It was a reminder that nature, even in the peaceful woods, is often violent and life is truly “the survival of the fittest.”
On Saturday, August 4th, fourteen of our group braved the heat to travel to Munchkin Nursery and Gardens in Milltown, IN. Our host and the owner of the nursery, Gene Bush, led us on a very complete and interesting tour of the grounds.

First we looked through JoAn’s gardens which are filled with sun-loving plants, garden ornaments, and beautifully planted and arranged hypertufa containers. One interesting part of this garden was a collection of colored wine bottles which were "planted" upside down and the bottoms filled with water. Gene explained that these were butterfly baths because butterflies need water, but not deep water.

We next toured Gene’s gardens which are mostly shade and part-shade plantings. The landscape takes advantage of a hilly area with some rock outcroppings. Gene explained the plan of the beds that are separated by paths which wind up and down the hill. He also answered our many questions about the various plant materials and habitat areas that he has created.

Two very interesting areas in the garden are the one which he developed around a small natural cave which he says is his "hiding place" and an area which he has developed for acid loving plants.

Following the tour, Gene and JoAn joined us at the Blue River Cafe for a tasty lunch and some more conversation about gardening. Our trip gave all of us some new ideas for plantings in our own gardens and a look at the countryside of southern Indiana. We came away with memories of an number of Gene’s bad jokes, much information about plant materials, and some great new plants to try in our own settings.

Our next field trip will be in October at the Oliver Winery. We hope all of you will be able to attend.

Determining Apple Maturity
From Fancy Fruit Facts

Making the decision on when to harvest can be a very tricky and complicated issue. The longer you intend to store the fruit, the more precise your timing needs to be. For summer apples, most growers only intend to store them until their better quality fall apples come on stream, so storage times beyond a week or two are not that common. Even for fall apples, many growers aim to sell the majority of their crop immediately to the consumer, and try to be done by mid November or so. So since storage times are relatively short, harvest maturity is less important. This being the case, harvest apples when fruit are fully ripe. There are various tests for this, but taking a bite out of a few apples is just as good an indicator as any test. This also applies to apples intended for U-pick.
From the President’s Desk
By Marilyn Brinley

For once I am actually looking forward to fall and cooler weather. I hope the shift in seasons will also bring us much needed rain. With the adverse conditions this summer, I, like many others, have been forced to watch my garden wither in the hot, dry climate, while I plan for next year.

Happily, there is much to keep me busy with Master Gardeners. Since our bylaws passed, we are looking forward to having a slate of officers ready in time for our annual holiday party and general meeting in late November. We hope that the recent changes in the bylaws will allow for a better distribution of work on the board and for better efficiency within the board.

Another new project has been the creation of a committee to look into the possibility of having regular, if not yearly, advanced training seminars in our county. It has long been a concern of mine that our members have to travel such distances in order to attend qualified education training sessions in other counties. If anyone has any suggestions or comments, feel free to contact me via email at MLBrinley@aol.com or call me at 824-1318. I will then pass the information onto the committee.

It is also imperative that we members do a better job of reporting our hours. Amy must turn in a yearly report to Purdue, detailing our activities and the hours we accumulate. Not only does this make Amy and our organization look good; but by reporting our hours, we are actually helping ourselves. Under the new rules set down by Purdue, all Master Gardeners must remain active and report their hours to the extension office. If hours are not reported after a three-year period, the member faces being declared inactive. Complete information can be found in the September 2006 edition of Roots and Shoots. In addition, Amy Thompson will be glad to answer any questions.

With so much to look forward to, it has been much easier to deal with the heat and the extended drought. And after all, there is always next year, as one wise gardener once reminded me.

All-American Selections:
New Flowers and Vegetables for 2008

Only three new garden plants were chosen for All-America Selections (AAS) 2008, based on superior performance in test gardens all over the country.

Osteospermum (also known as cape daisy) ‘Asti White’ is this year's bedding plant winner, selected for its outstanding bright white 2-2.5 inch daisy flowers with blue centers, which continue blooming all summer. The compact plants, reaching up to 20 inches tall and wide, are ideal for container gardens and will tolerate light frost.

Viola 'Skippy XL Plum-Gold' takes the cool-season bedding plant award. The bright gold centers, accented by radiating black lines, are surrounded by shades of plum purple. The petite 6-8 inch plants are loaded with adorable 1.5-inch blossoms, perfect for baskets, window boxes and flowerbed edging.

Eggplant 'Hansel' is the vegetable award winner, distinguished by clusters of 3-6 dark purple, glossy miniature fruits. 'Hansel' can be harvested early for baby eggplant at 2-3 inches or allowed to grow up to 10 inches, while still remaining tender and non-bitter. The compact plants reach up to only 36 inches, making them ideal for container and small space gardens.

AAS winners are selected from many new cultivars, based on performance in the garden, as well as in the greenhouse. Although no plant offers a guarantee of success in an individual garden, the AAS winners have proven themselves worthy over a broad range of growing conditions. Try these new selections alongside your old standbys, so you'll have a means of comparison. AAS winners should be available through local garden centers and mail-order catalogs next spring. For more information about these and previous years’ winners, point your Web browser to http://www.all-americaselections.org/
The Granulate Ambrosia Beetle, a native of China was first discovered in Indiana in 2002 in Jackson County. In 2007, granulate ambrosia beetle was known to occur in 41 counties in Indiana, including Monroe County. The pest was first detected in the U.S. in peach trees in Charleston, South Carolina in 1974. Since that time, it has spread to a number of areas throughout the southeast and as far west as Texas. Although our office had received a pest alert about this beetle early in the year, I had not had any personal experience until receiving a call about a problem with a dogwood tree in late August.

The adult beetle is very small, only 2.1-2.9 mm long. The mature color is dark reddish brown, darker on the posterior end of the wings. Males are much smaller, only 1.5mm long, with a reduced thorax and a “hunchbacked” appearance.

The beetle is capable of breeding in a wide variety of hosts, including; azalea, dogwood, golden rain tree, magnolia, ornamental cherry, persimmon, redbud, red maple, sweetgum and sweet potato.

Females bore into twigs, branches or small trunks of susceptible woody plants, and push frass out. The frass looks like small toothpicks or miniature cigarettes hanging from infested trees.

Pyrethroids have been found to provide control of attacking adults if applied prior to the closing of the galleries with frass. Once the beetles are in the tree and have frass packed in the entry holes, they are isolated from the outside. If infestations occur, affected plants should be removed and burned and trunks of remaining plants should be treated with an insecticide labeled for this pest and site and kept under observation.

More information on this pest can be found at http://www.ppdl.purdue.edu/PPDL/pubs/Granulate_ambrosia_beetle.pdf
http://www.ces.ncsu.edu/depts/ent/notes/O&T/trees/note111/note111.html

Hard Core in Tomatoes

During stressful weather--usually aggravated by excessive fertilization--the central core of a tomato may become tough and turn greenish white. The walls also may become pale and corky. This is usually a temporary condition known as “hard core.” Fruit that develops later is often free of this condition.

Older varieties of tomatoes normally have five distinct cavities that are filled with seeds and jelly-like material called locular jelly. However, many newer tomato varieties possess genetic traits to make the fruit meatier and firmer with the seeds being produced all over the inside of the fruit rather than in the five distinct cavities. These types of tomatoes do not seem to produce a hard central core nearly as readily as ones that are not as meaty.

The older variety, Jet Star, which has been widely grown for many years by Kansas gardeners, has a tendency to produce a hard core when stressed. Newer varieties such as Mountain Spring, Mountain Fresh, Daybreak, Sun Leaper, Sunmaster, Celebrity, Carnival, and other ‘semi-determinate’ varieties are less likely to suffer from this condition.
This program was a real pleasure to attend. Recipes for some of the great treats we sampled that night can be found below.

**Peppered Herb Cheese Ball**  
(Recipe from *Better Homes and Gardens / Herbs*, provided by Charlotte Griffin)

- 8 oz cream cheese  
- 4 oz goat cheese  
- 2 T chives, snipped fresh  
- 2 T basil, snipped fresh  
- 1 tsp caraway seed, crushed  
- 1 clove garlic, minced (or use garlic chives)

For outside coating:
- 1 T peppercorns (pink or green), crushed  
- 1 T parsley, snipped fresh

For more color try smoked paprika, too.

In medium bowl, combine cream cheese and goat cheese until smooth. Stir in remaining ingredients, except peppercorns and parsley. Form into a ball, chill for 30 minutes. Roll ball in crushed peppercorns and parsley (and optionally paprika). Chill for up to 24 hours or serve immediately.

Freeze to have on hand for company.

The following recipes were adapted from the book *The Best of Thymes* by Marge Clark and provided by Joanna Howe.

**Cheese and Chive Muffins**

- 1/2 cup cornmeal  
- 1 cup flour  
- 1 Tablespoon baking powder  
- 1 tablespoon sugar  
- 1/2 teaspoon salt  
- 3/4 cup milk  
- 1 egg, beaten  
- 1 tablespoon butter, melted  
- 1 tablespoon chives, fresh or freeze dried, chopped  
- 1/2 cup shredded cheddar cheese

Combine first five ingredients in a medium bowl. Add milk gradually, stirring only until just mixed. Stir in last four ingredients. Spoon into greased muffin cups. Bake at 375 degrees for 25 minutes for regular sized muffins or 15 minutes for mini sized, or until tester comes out clean.

**Ann Greenfield’s Lemon Verbena Bread**

- 1 cup sugar  
- 6 tablespoons margarine  
- 1 tablespoon lemon rind, grated  
- 1 tablespoon lemon verbena leaves, finely chopped  
- 2 eggs  
- 1-1/2 cups flour  
- 1 teaspoon baking powder  
- 1/2 teaspoon salt  
- 1/2 cup milk  
- 1/2 cup chopped pecans, almonds, or walnuts

**Glaze**

- 1/4 cup sugar  
- Juice of one lemon

In a bowl, cream sugar and margarine. Add lemon rind and lemon verbena leaves. Beat in eggs, one at a time. Sift together flour, baking powder, and salt. Add flour alternately to batter with milk. Stir in chopped nuts. Pour into a greased and floured 9x5x3 loaf pan. Bake at 325 degrees for 35-45 minutes, or until a tester comes out clean. Allow to cool, remove from pan and place on a plate (or back into baking pan). For the glaze, in a small bowl combine the sugar and lemon juice and stir until sugar is thoroughly dissolved. Pour over the cake, a little at a time.

**Herbed Butter**

- 2 sticks butter, softened  
- 1/3 cup snipped fresh dill, or three teaspoons dried  
- 1/3 cup minced fresh parsley  
- 2 green onions, minced (or 2 tablespoons fresh snipped chives)  
- 2 tablespoons chopped fresh French tarragon  
- 1 tablespoon chopped fresh celery leaves (or Lovage)  
- 1 to 2 tablespoons fresh lemon juice

Combine all ingredients in a bowl and mix to make a smooth butter. Flavor is best if allowed to blend overnight in the refrigerator. Allow to soften before serving.

Makes one cup.
Your MCMGA Board at Work

Editor’s Note: The MCMGA board is composed of the president, two vice presidents, two secretaries, two treasurers, two journalists, two state advisory committee representatives, one webmaster, one Fair Board representative, and the extension educator, a total of fourteen people. The board meets monthly and makes decisions on behalf of the membership on topics that come before the board. The bylaws printed in our membership guide provide a description of the duties of the MCMGA officers. This month and in future months, members of the board will describe the work they do on your behalf.

Your Board at Work

Vice Presidents Nancy White and Ann McEndarfer

For the past two years, we have shared the duties of vice president, and now the new bylaws formalize this arrangement of dividing the two very specialized duty groups.

In the traditional role of vice president, the vice president covers the duties of president when the president is unavailable. That includes conducting board and general meetings, co-signing checks and financial obligations, attending meetings of the Extension Office board, and any other duties assigned by the president. The vice presidents also attend monthly meetings of the Master Gardener board.

In addition, the vice president for education is in charge of planning and implementing bi-monthly general membership meetings and providing opportunities for earning education hours at those meetings whenever possible. Other duties include serving as a resource to members about other education possibilities, both within Monroe County and beyond. In the past, we have planned various short education experiences, such as field trips to relevant gardening venues, participation in the Spring Wildflower Foray, and distribution of information about workshops and gardening classes within driving distance.

The vice presidents also oversee committees, such as the refreshment committees for general meetings, write and submit announcements of meetings and general events for Roots and Shoots or through email notices, and solicit topics for general meetings and for education opportunities. The vice presidents provide a formal survey at the beginning of the calendar year to program gather suggestions.

Want to Make a Hypertufa Trough?

Munchkin Nursery & Gardens in Milltown, Indiana, is offering hypertufa classes on Saturday, September 15 at 10:00 a.m. and on Sunday, September 16 at 2:00 p.m. This is an opportunity to make a trough and take it home with you that day. All supplies (including a bag of custom blend potting medium for your trough) are furnished, but you do need to bring a pair of long rubber gloves to use for mixing. Your trough will be made on a 16” x 16” board and covered with plastic for transporting. Fee for class and supplies is $35. Call 812-633-4858 or email JoAn Riley at joriley16@otherside.com or Gene Bush at genebush@otherside.com for reservations and information.

Lilacs with Dead Canes


Lilac borers are insects whose larvae bore into stems usually during May and June. A sawdust-like material call frass is often seen around the base of stems after it has been pushed out the hole made by the borer. Canes often wilt and die during late summer. The larvae passes the winter inside the dead canes and pupates the following spring, usually during April. The adult, clear-winged moth resembles a wasp and often emerges during May through June, though there is a great deal of variability. Eggs are laid on the stems of lilac, and the cycle starts over again. There is one generation in Kansas.

Though it is too late to spray for lilac borer this year, removal and destruction of dead canes will help reduce populations next year.
While **nonpoint source pollution** is a term with which many people in the agricultural business may be familiar, many urban and suburban dwellers are not. That will be changing as communities implement measures specified by the Clean Water Act to reduce potential pollutants that rainfall picks up as it flows over lawns, driveways, streets, and parking lots. Property owners are learning that fixing leaky automobiles and reducing lawn pesticide and fertilizer use help local streams and ponds. One practice in particular is emerging as way that people can not only filter and reduce the amount of storm water runoff from their property, but to beautify their lawns and provide habitat for bees, butterflies, and birds. That practice is called a rain garden.

What is a rain garden? The name may be a bit misleading. A rain garden is not a rain forest or a water garden. It is, however, a garden designed to infiltrate storm water from impervious surfaces into the ground. In fact, it does just about the opposite of what we have been trying to do for years with drainage practices.

So rain gardens represent a new way of thinking (although people who remember cisterns may see a throwback to an earlier day). If we were doing a rain garden approach, we would direct the downspout water to an area in which we had built a low berm that would cause the water to temporarily pond when it’s raining. The berm wouldn’t be so high that it would cause water to back up to the house foundation – just something in the range of two to eight inches. To increase the amount of water that is temporarily held and infiltrated by the garden, we might replace soil that is high in clay with compost and sand. Lastly, we would add the secret ingredient – plants, but not just any kind of plants – rain garden plants.

What are these rain garden plants? You’ve probably heard of some of them. How about black eyed Susan, coreopsis, blue flag (iris), butterfly milkweed, or liatris? These are plants of the native prairies and wetlands of Indiana, and they work well in rain gardens for several reasons. They are adapted to the soils, insects, and animals of this area. They can usually provide food for butterflies, bees, or birds. They don’t need fertilizer, or for that matter, water (once they are established in the right soil environment). But the main advantage of native plants for rain gardens is their deep roots – significantly deeper than most turf grasses. When some of these roots die off during the winter, the porosity of the soil is improved, creating a virtual storm water sponge.

Why are storm water “sponges” a good thing? Not only are most of our waterways impaired at the present, but new development is occurring constantly. We would like to see all of these waterways to be fishable and swimmable, but this will obviously be a challenge. Rain gardens are a way to turn that challenge into something fun and interesting. The idea came about in an area of the country with a keen awareness of the value of clean water – the Chesapeake Bay. It’s original name was bioretention, a term that is still used in more technical circles. Clean water, however, is valuable not only in the Chesapeake Bay area, but here as well.

Because rain falls everywhere, nonpoint source pollution is not a problem that lends itself readily to government solutions. The Storm Water Environmental Education Team (SWEET- a collaboration of Ivy Tech, Indiana University, Ellettsville, Bloomington, Monroe County, and all interested citizens) is trying to help everyone get involved. Check out [www.co.monroe.in.us/stormwaterquality/](http://www.co.monroe.in.us/stormwaterquality/) to discover more about storm water quality issues, and click on the “rain gardens” link for specific information on how to build your own (including a list of rain garden plants).

If you’d like to learn about how you can improve water quality through gardening plan on attending to following program sponsored by SWEET:

<table>
<thead>
<tr>
<th>What: Rain Gardens</th>
<th>Who: Monroe County Drainage Engineer Todd Stevenson &amp; Monroe County Parks and Recreation Naturalist Cathy Meyer</th>
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<tbody>
<tr>
<td>When: Monday, September 10th from 6:-8:00 p.m.</td>
<td>RSVPs would be appreciated at 349-2575 or <a href="mailto:afthompson@purdue.edu">afthompson@purdue.edu</a></td>
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<tr>
<td>Where: Monroe County Highway Garage, 2800 S. Kirby Road, Bloomington</td>
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<td>Location</td>
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<td>State Fair Purdue Education Booth</td>
<td>August 12</td>
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<td>Monroe County Fair</td>
<td>July 22-29</td>
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<td>Hilltop Garden &amp; Nature Center</td>
<td>year around</td>
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<td>Templeton Garden Project</td>
<td>spring/fall</td>
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<td>MG Demonstration Garden</td>
<td>seasonal</td>
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<td>T. C. Steele SHS</td>
<td>seasonal</td>
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<td>Cheryl’s Garden</td>
<td>seasonal</td>
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<td>Flatwoods Park Butterfly Gardens</td>
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<tr>
<td>MCMGA Horticulture Hotline</td>
<td>year around</td>
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<td>MCMGA Speakers Bureau</td>
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<td>MCMGA Newsletter</td>
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<td>MCMGA Web Site</td>
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<td>MG Program Committee Member</td>
<td>year around</td>
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<td>Middle Way House</td>
<td>seasonal</td>
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<td>Wylie House</td>
<td>year around</td>
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<td>Bloomington Hospitality House</td>
<td>year around</td>
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<tr>
<td>Mother Hubbard’s Cupboard</td>
<td>year around</td>
</tr>
<tr>
<td>WonderLab Garden</td>
<td>2 times monthly</td>
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<tr>
<td>Garton Farm</td>
<td>year around</td>
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PLEASE WEAR YOUR NAME BADGE WHEN VOLUNTEERING.
**Keep Plants Watered for Drought Recovery**

By B. Rosie Lerner, Purdue Consumer Horticulture Specialist

Much of Indiana found rainfall scarce throughout the summer and even into the fall, so gardeners need to make sure their landscape plants have an adequate supply of moisture before winter arrives.

Most plants could benefit by a deep watering every couple of weeks or so, right up until the ground freezes. But some plants will need even closer attention. Newly planted trees and shrubs may have limited root systems and may need a weekly watering. Evergreen plants are particularly subject to winter drying since their leaves continue to lose moisture all winter long. Once the ground is frozen, little water is taken up by the roots to replace that which is lost through the leaves. Broad-leaved evergreens, such as rhododendrons and hollies, have more leaf surface exposed and are most subject to injury.

It's best to water deeply occasionally, rather than frequent shallow sprinkling. Apply 1 to 1.5 inches of water around the root zone of the plant. Be aware that the roots may spread farther than you think. The size of the root system varies, depending on the plant species, its age and the soil conditions. In general, the roots extend quite a distance beyond the drip line of the tree or shrub.

For newly established plantings and shallow-rooted plants, a winter mulch can be helpful not only in conserving soil moisture, but also in keeping plants in the ground. These plants can be heaved out of the ground if the soil tends to alternate frequently between freezing and thawing. Apply winter mulch after the plants have become fully dormant, generally by late November or perhaps December. Use a 3- to 4-inch layer of coarse material such as straw, chopped leaves or shredded bark.

Many woody plants may continue to show effects of the drought next spring and beyond. Some branches may die back during the winter and fail to leaf out next year. In the case of twig injury, rather than death, the stems may leaf out, but die back later in spring or summer as that branch becomes stressed. Prune out any dead or damaged branches by cutting back to their point of origin.

If plants appear to be dead, cut away the outer bark and look for green tissue underneath, an indication that there is still hope for regrowth. Also, check for the presence of buds, which, likewise, should be green in color when cut open. Dead plant twigs generally will break clean when bent; live twigs should still be somewhat flexible.

**Heat Stops Tomatoes from Setting Fruit**


Temperatures that remain above 75 degrees F at night and day temperatures above 95 degrees F with dry, hot winds will cause poor fruit set on tomatoes. High temperatures interfere with pollen viability and/or cause excessive style growth leading to a lack of pollination.

It usually takes about three weeks for tomato flowers to develop into fruit large enough to notice that something is wrong and an additional week before tomatoes are full size and ready to start ripening.

Though there are heat-set tomatoes such as Sun Leaper and Sun Master that will set fruit at higher temperatures, that difference is normally only 2 to 3 degrees. Therefore, the brutal temperatures the state is seeing this season will cause a future tomato drought.

Unfortunately, there isn’t much we can do about this but wait. Cooler temperatures will allow flowers to resume fruit set.
Xeriscaping™ means reducing water use by purposeful landscape planning and purposeful garden management.

Things to do to reduce water use in your yard - **Purposeful Landscape Planning**

1. Select drought-tolerant plants. Plants native to Indiana are often drought-tolerant and can take the heat, cold, wet, and dry of Indiana weather. For a list of drought tolerant plants, both native and non-native, please see below.

2. Group plants with similar water needs together. This lets you water just a small area frequently while letting the rest of your plants survive in drier soil. If your yard has a low spot, use it for your water-loving plants.

3. Reduce lawn area that is highly managed and irrigated. Perhaps you want the lawn in front of your house or in the children’s play area to be lush and green. Water just this grass on a regular basis, and let the rest turn brown and go dormant during dry weather.

4. Get rid of some of your lawn. Groundcovers and drought-tolerant ornamental plants often need less water than lawns to survive and thrive.

Things to do to reduce water use in your yard – **Purposeful Garden Management**

1. Add organic matter to your garden soil. This will help make water more available to your plants. Organic matter helps both sandy soils and soils with lots of clay. You can use compost, decayed leaves, or baled sphagnum moss.

2. Use mulch to help retain soil moisture. This will also help control weeds. You can use shredded bark, dried leaves, even stone. Mulch should be thick enough to reduce water loss from the soil but not so thick that it prevents rain from reaching the soil. One to two inches of mulch is usually sufficient. Remember to keep all mulch several inches away from the trunks of trees and shrubs.

3. Follow wise watering principles. If possible, use a soaker hose in your garden areas. Whether you use a sprinkler or a soaker hose, water slowly so the water soaks into the soil. If it is running off instead of soaking in, reduce the rate of application. Don’t water during the heat of the day when most of the water evaporates instead of going into the soil.

4. Water your lawn deeply and infrequently. If you water only a little bit each day, the deeper roots will die from lack of moisture. Lawn grass should be watered to a depth of 4-6 inches. Don’t water again until the grass shows signs of stress – a change in color or footprints that can be seen after you walk over the grass. Use a screwdriver to check how deeply you have watered. Push the screwdriver into the soil. It will move easily through damp soil and with more difficulty through dry soil.

5. Water your garden plants deeply and infrequently. Trees, shrubs, and flowers should be watered to a depth of 8-12 inches then not watered again until they begin to show water stress (slight wilting, change in color) or until the upper soil is dry. To tell if soil is dry, squeeze a small handful. If it stays in a ball it is still moist; if it breaks apart, it is dry.

**Drought-Tolerant Plants for Your Indiana Home**

These plants will need to be watered the first year they are planted. Thereafter, they should need minimal watering. For the first three years after planting, trees and shrubs should be watered when weather has been extremely dry. Good drought-tolerant annuals include cosmos, portulaca, and salvias. Avoid impatiens. Among perennials for shade, select brunnera, false Solomon’s seal, veronica speedwell, tiarella, sweet woodruff, and coral bells; for sun, consider sedum, asters, dianthus, leadwort, coreopsis, penstemons, coneflower, liratri, and Russian sage. Among shrubs, consider potentilla, cotoneaster, junipers, caryopteris, spireas, and deutzia.
Master Gardener General Meeting
Tuesday, September 25, 6:30 p.m.
St. Marks on the Bypass, Room A

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