

June 22 - 28, 2009 is National Pollinator Week

I was out working in my garden the other day and I noticed all the insects busy pollinating the flowers and vegetable plants in my garden. I stopped to think about the problems we've been having with honey bees the last couple of years and this year with Colony Collapse Disorder (CCD). What would happen if we didn't have honey bees to help pollinate our crops?

What is Pollination and who does it?

Pollination is a vital stage in the life cycle of all flowering plants. When pollen is moved within a flower or carried from one flower to another of the same species it leads to fertilization. This transfer of pollen is necessary for healthy and productive native and agricultural ecosystems. Pollination ensures that a plant will produce full-bodied fruit and a full set of fertile seeds. With no pollination at all, most plants could not produce fruit nor set seed and many of the foods we eat would no longer be available. The plants that many wild creatures rely on for food or shelter would also disappear.

About 75% of all flowering plant species need the help of animals to move their heavy pollen grains from plant to plant for fertilization. There are about 1,000 of all pollinators that are vertebrates such as birds, bats, and small mammals. Most pollinators (about 200,000 species) are beneficial insects such as flies, beetles, wasps, ants, butterflies, moths, and bees.

Why are pollinators important to us?

The work of pollinators ensures full harvests of many agricultural crops and contributes to healthy plants everywhere. Pollinators are critical to an ecosystem. Their role in ecosystem health has gone largely unnoticed. As landscapes are converted from wild to managed lands, many pollinators' habitats may be destroyed or fragmented. Habitats that remain are often in isolated patches, degraded by invasive plant species or other biological or man-made influences. These changes can lead to the loss of wildflowers used by pollinators for foraging, nesting and/or egg-laying.

Of the estimated 1,330 crop plants grown worldwide for food, beverages, fibers, condiments, spices, and medicines, approximately 1,000 (75%) are pollinated by animals. Almost 90 % of all flowering plants rely on animals, rather than the wind for pollination. The following are examples of foods that depend on pollinators: apples, bananas, pumpkins, blueberries, chocolate, melons, peaches, vanilla, and almonds.

Since the world is so dependent on pollinators there has been some concerns and there is direct evidence of decline of some pollinator species in North America. Pollinators are vital to agriculture not only for fruit, vegetable, and seed crops and some crops that provide fiber, drugs and fuel but also for bee-pollinated forage and hay crops, such as alfalfa and clover, which are used to feed the animals that supply meat and dairy products.

Managed pollinator decline

As mentioned in the beginning of my column populations of the honey bee, North America's most important managed pollinator, are in decline in the United States. Many farmers depend on honey bees, which they lease for specific seasons to pollinate crops. Managed pollinator decline can adversely affect the availability, price, and quality of many fruits, vegetables, and other products that depend on animal pollination.

Interesting facts

- Bees can fly at about 7 miles per hour and have to beat their wings 190 times per second to do it. Bees are constantly on the lookout for bright-colored flowers with sweet scents.
- Some kinds of bees, other than honey bees, pollinate flowers by their buzzing (vibrations), knocking the pollen loose from the anthers and onto the stigma. This is called "buzz pollination."
- There are several thousand known species of native bees in the U.S. alone and more than 20,000 species worldwide.
- Butterflies and moths need a place to land on the flowers that they visit, so they prefer broad, flat flowers. Since they have long, straw-like mouthparts, they can suck nectar from deep within the flower.
- Most species of bees don't sting. Although all females are physically capable of stinging, most bee species native to the U.S. are "solitary bees," that is, not living in colonies and don't sting unless they are physically threatened or injured. Only honey bees are defensive and may chase someone who disturbs their hive.
- In the U.S. the annual benefit of managed honey bees to consumers is estimated at \$14.6 billion. The services provided by native pollinators further contribute to the productivity of crops as well as to the survival and reproduction of many native plants.

What can you do to save pollinators?

Watch for pollinators. Get connected with nature. Take a walk, put in a garden and look for pollinators midday in sunny planted areas. Reduce your impact. Reduce or eliminate your pesticide use, increase green spaces, and minimize urbanization. Pollution and climate change affect pollinators, too!

Plant for pollinators. Create pollinator-friendly habitats with native flowering plants that supply pollinators with nectar, pollen and homes. Support pollinator havens. Design your garden so there is a continuous succession of plants flowering from spring through fall. Select old-fashioned varieties of flowers whenever possible because breeding has caused some modern blooms to lose their fragrance and/or nectar/pollen needed to attract and feed pollinators.

Install houses for bats and native bees. Supply water for all wildlife. Provide water for butterflies without it becoming a mosquito breeding ground. Fill containers daily or bury a shallow plant saucer to its rim in a sunny area, fill it with coarse pine bark or stones and fill to overflowing with water. Butterflies can drink from the cracks between the filler but mosquito larvae have a hard time becoming established.

One more interesting fact

Remember my column on chocolate some time ago? A tiny fly, no bigger than a pinhead, is responsible for the world's supply of chocolate. Midge, tiny flies that live in damp, shady rainforests, are the only animals that can work their way through the complex cacao flower and pollinate it. I don't want to live in a world without chocolate and the many other foods we depend on pollinators for. How about you?

If you would like to learn more about pollinators check out the following website:

<http://www.nappc.org/> or www.pollinator.org

Teachers check out Nature's Partners: Pollinators, Plants and You which is an inquiry- leaning-based curriculum for young people in the 4th through 6th grade at <http://www.nappc.org/curriculum/>

Bloomin' Bash at Hillbilly Daylilies

A fun event for the whole family to benefit Big Brothers Big Sisters of the Eastern Panhandle. This July, Hillbilly Daylilies will present their first-ever "Bloomin' Bash" to benefit Big Brothers Big Sisters of the Eastern Panhandle. Hillbilly Daylilies, located in Bunker Hill, WV, specializes in field grown daylilies and every July invites customers to visit and experience over 350 varieties of daylilies in peak bloom. Customers are able to purchase the daylilies of their choice and Hillbilly Daylilies digs and prepares them on the spot. The Bloomin' Bash, being held on July 11th, will not only showcase thousands of beautiful flowers in bloom, but also gives visitors the chance to participate in several educational workshops ranging from growing a kitchen herb garden to encouraging pollination in your own back yard. Hillbilly Daylilies owner and event coordinator, Lisa Giles, is excited about this inaugural event, "We have worked very hard to make this a fun event for the whole family. With the educational workshops for adults, fun garden projects for the kids, live music, vendors, and food, there really is something for everyone. And, it is a great way to support Big Brothers Big Sisters of the Eastern Panhandle." Admission is \$5 per person and children under 5 years old are admitted free. Gates open at 9am and the event lasts until 6pm. Food and ice cream will be available from Texas BBQ and Rock Hill Creamery with live bluegrass music by Sleepy Creek and Skystone. Antique Tractors and Steam Engines will be on display and daylilies will be for sale. The Berkeley-Jefferson Master Gardener Association will be on hand giving out lots of gardening info and answering questions. Workshops for adults include Growing a Kitchen Herb Garden 10am; Rain Barrels 11am; Native Plants in the Home Landscape 12pm; Composting 101 1pm; Pollinators in Your Backyard 2pm; and Growing Herbs to Use and Enjoy 3pm. The kid's tent will be hosted by Denis Scott, WVU extension agent, and will hold fun garden projects. For more information and to pre-register for workshops: call 304-229-6698 or visit their website at www.HillbillyDaylilies.com. Hillbilly Daylilies is located at 1105 Giles Mill Road, Bunker Hill, WV 25413.

Master Gardener Tours

June 19 - 21 are the dates for the Pennsylvania Lavender Festival being held at the Willow Pond Farm in Fairfield, PA, ten minutes west of historic Gettysburg. Admission is \$5.00: children 12 and under attend for free. There will be a group of Master Gardener's traveling from the area on June 20, leaving at 9 am. For more information on the group travel contact Melanie Files at mafilesretired@verizon.net. For more information on the Pennsylvania Lavender Festival go to <http://www.palavenderfestival.com/>

July 18, 2009-Food Preservation Workshop

The Berkeley-Jefferson Master Gardener Association in cooperation with the WVU Extension Office, is planning a Food Preservation Workshop on July 18 from 9-11 AM. The workshop will be held at Trinity Episcopal Church on King Street in Martinsburg. Trinity will be the host for this event. Master Gardeners Louise Finch, Maggie Keeler, Mary Palmer and Melanie Files will make presentations on the Master Gardener organization, drying foods, vacuum sealing of frozen foods, and cold storage. Sue Flanagan of the WVU Extension Office will present information on pressure canning and boiling water bath canning. The event is open to the public; however, preregistration through Sue Flanagan's office is required so that we have adequate materials for those attending. If you have questions, please contact Melanie Files at mafilesretired@verizon.net.

Berkeley County Youth Fair Dates to remember

Poultry Blood Testing - Saturday, July 18, 2009 from 9:00 am to 11:00 am.

Goat Health Check - Thursday, July 9th from 5:30-7 pm at the fairgrounds...Breeding Stock Only

62nd Annual Berkeley County Youth Fair dates are August 3 - 8, 2009

Farmers Needed to Participate in the West Virginia Farmers' Market Nutrition Program

The West Virginia Farmers' Market Nutrition Program (WVFMNP) will authorize farmers' to participate in the 2009 FMNP. All farmers participating in WVFMNP must be a bona fide farmer and must sell at an authorized farmers' market or farmstand, or be a local farmer cooperative. In order for a farmer to be legally authorized to participate in the WVFMNP, the following must be met:

- a) Must be a bona fide farmer, meaning an individual authorized to sell eligible produce at participating farmers' markets or farmstands. The term farmer shall mean producer as termed A person or organization that grows or manufactures goods or services for sale.
- b) Must be a bona fide farmstand, meaning the structure should not be movable and is used primarily for the sale of fresh, locally grown fruits and vegetables (Vehicles, wagons, carts, trailers, or other wheeled equipment are not acceptable)
- c) Local Farmer Cooperative is individuals who exclusively sell produce from the local farmers and take the vouchers only for those products which are West Virginia grown from the local farmers. A list of those farmers whom you purchase from must be included on the Farmer Application.
- d) Farmer that is selling honey must have their colonies registered with the State and/or list the name of the apiarist they are buying honey from. Product labeling must have been approved through the WV Department of Agriculture and meet all Consumer Labeling Requirements.
- e) Farmer must submit a completed WVFMNP Application and Agreement to the WVFMNP office. All trainings must be completed by June 26 and paperwork received in Charleston by July 10, 2009. Failure to do so will result in farmer being unable to participate in the 2009 WVFMNP Program. All questions on the Application must be completed or the form will be returned.
- f) Each Application will be screened by the WVFMNP office.

At least twenty-five (25%) of the produce sold by farmers, must be grown by the farmer, the remainder must be locally grown by a local producer. Locally grown means grown in West Virginia or in the adjacent county to West Virginia's border in a neighboring state. Locally grown is fifty miles (50). If your market organization designates different regulation and you are a member of that organization you must follow their regulations as long as they are in compliance with our WVFMNP Rules and Procedures. The program begins July 1, 2009 and goes through October 31, 2009. This program is funded through The United States Department of Agriculture and the State of West Virginia. Local farmers needing training to participate in the 2009 WVFMNP can call Mary Beth Bennett in the Berkeley County Extension Office telephone (304) 264-1936 before Wednesday, June 17th to be trained. Applications for the WVFMNP are available through local Extension Offices if the agents have been trained to conduct the program. More information on this program is available on request by contacting the number listed above.

Garden Tips

- Seed pole limas and snap beans
- Renovate strawberries after last harvest
- Pinch back garden mums
- Treat lawn for white grubs
- End asparagus harvest

Until next time ...Happy Gardening and Farming!