What's all the buzz about?

It's plain and simple: we need bees! You may think of bees as a nuisance if you've recently been stung or if they've made a nest in your attic. But bees are essential for growing fruits and vegetables. In Connecticut, that means crops like apples, peaches, berries, melons, cucumbers, tomatoes, pumpkins and many more. Bees pollinate these plants as they travel from flower to flower. Without pollination, these plants would not continue to produce seeds and fruit. It is estimated that honey bees, bumble bees, other bee species and pollinators are needed to produce two-thirds of the food we eat each day.



A honey bee busy at work. (Photo: Paul Fusco)

In recent years, beekeepers in Connecticut have lost nearly 50% of their honey bee hives over the winter. Researchers believe mites, other parasites, and disease are contributing factors, but so are loss of habitat, lack of available food from flowering plants, and improper pesticide use. This drop in bees could negatively affect our state's farm economy. This is not just a local problem, but a national and an international one as well. It is so severe that the White House established a new Pollinator Health Task Force and the U.S. EPA has issued **risk assessment guidance**. Insecticides highly toxic to bees must now be labelled with a bee icon and the statement, "Do not apply this product while bees are foraging. Do not apply this product until flowering is complete and all petals have fallen."

You can be a part of the solution and help protect bees in several ways:

- Make your life a little sweeter. Buy local honey! Doing so supports beekeepers in our state. You can find local honey at farmers' markets, stores that sell CT Grown, on-line or directly from a CT apiary.
- Dig It! Use your garden to help nourish bees by choosing flowers and native plants that provide pollen and nectar. Bees find blue, purple, white and yellow flowers appealing so sunflowers, asters, bee balm, blueberry,

Continued on page 2

What's all the buzz about? Continued from page 1

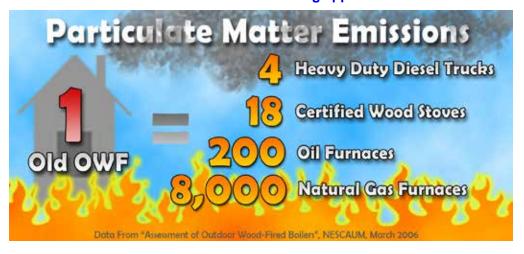
lavender and azalea are examples of a few you can include. Use a variety of plants so your garden will be blooming throughout the growing season.

- Spray it Ain't So. Avoid using any insecticides on flowering plants when bees are visiting, especially neonicotinoids a type of insecticide found in many home gardening products. They have a chemical structure similar to nicotine, are very toxic to bees, and can end up in the nectar and pollen months or even years after application. If the active ingredients listed on the product label include acetamiprid, clothianidin, dinotefuran, imidacloprid or thiamethoxam, it is a neonicotinoid. Products sold under various brand names can contain these chemicals and might be labelled, for example, as Rose & Flower Insect Control, Tree & Shrub Protect & Feed, or Citrus and Vegetable Insect Control.
- Bee a Careful Shopper. A recent study showed that more than half of the "bee-friendly" plants sold at major nursery outlets and garden centers, including those at big box stores, were treated with neonicotinoids. While your intentions may be to attract bees with newly purchased plants, these plants may be harmful to them. Play it safe by checking with your local nursery or going with organic plants.
- Bug Off. Swarming honey bees may look threatening but it is just the sign of a healthy colony reproducing a new hive. The swarm, made up of worker bees protecting the queen bee, will be over within a few days when they find a permanent home. Don't reach for a can of insect-killing spray! Rather, wait it out since they are not aggressive, or contact a beekeeper who can relocate the bees. The CT Agricultural Experiment Station (CAES) keeps an up-to-date list of beekeepers and bee clubs in the state.
- Let It Bee. Provide habitat for nesting bees by allowing some rotting wood, hollow stems, and tunnels in soil
 to remain in your yard. If you have native bees nesting in your yard, just leave them be and enjoy watching
 them as they go about their important task of pollinating your plants. For more information on the different
 types of bees and how to protect them, visit www.ct.gov/CAES. To learn how to build a bee house, go to
 www.nwf.org.

A Good Deal for Good Neighbors

Do you or someone you know have an outdoor wood-burning furnace (OWF)? Then you'll want to find out more about DEEP's new **Good Deals for Good Neighbors** program, which provides funding to Connecticut residents to remove and/or replace older, dirtier OWFs. An OWF is essentially a wood-fired boiler in a small, insulated shed with a smoke stack.

While wood provides an alternative source of energy, wood smoke contains many pollutants including fine particulates and air toxins, which can cause adverse health effects. One way to minimize pollution and to reduce wood smoke is to use the **cleanest wood-burning appliance** available. Outdoor wood-burning furnaces are one



of the air pollution sources people complain about most. Now's the time to get rid of or upgrade that OWF. Current owners can apply for funding in the amounts of \$4,000 to remove the unit or \$7,000 to replace their existing OWF. The deadline to apply for program funding is October 31, 2014.

2 P2VIEW | FALL 2014

New Video Encourages Paint

Recycling

It is now easier than ever for Connecticut residents to recycle their unwanted paint, stain, and varnish. To help spread the word about this free program, DEEP created an informative public service announcement with the same comical husband and wife who were featured in DEEP's electronics recycling video. To view the video, go to www.youtube.com — type in ctdeepvideos. For paint drop-off locations throughout Connecticut, go to www.paintcare.org.



Thinking Smaller



The average size of a new home in the U.S. increased dramatically from 1,000 square feet in the 1950s to 2,500 square feet in 2007. With larger houses came the need for larger lots, greater heating, cooling and energy use, increased maintenance, and more stuff to fill the spaces — all having a greater impact on the environment.

The trend may be going in the other direction. **A 2010 survey** by the real estate research firm Trulia found that the median new home size had declined to 2,100 square feet and a third of the survey respondents indicated that their ideal home size was smaller than 2,000 square feet.

Small homes are gaining a following among those looking for residences that are greener, more affordable and have less to maintain. Their smaller

footprint saves land as well as energy, water, and resources. In many circumstances, going smaller makes more sense, such as downsizing once the kids have flown the coop and for younger people who want their own place but don't want all the responsibility that comes with a larger home. And more people are willing to trade square footage for a home located within walking distance of their jobs, shopping and transit.

Smaller homes incorporate innovative design such as windows and high ceilings to open up the space, making them feel more expansive. Clever storage and dual-purpose spaces are also utilized. Building materials that are high-quality, durable, and non-toxic (as well as being sourced from local or salvaged materials) are used to further improve the living space and be kinder to the environment..

Need more reasons to consider going smaller? Check out these articles in **The Washington Post** and **MSN Real Estate**.

Ask Eartha



I heard that dry cleaners use toxic chemicals that remain in the clothing. Is there a "greener" way to deal with my "dry clean only" clothes?

Meg D., Rocky Hill, CT

Most dry cleaners clean garments with either perchloroethylene (commonly referred to as perc) or with hydrocarbon solvents. In Connecticut, perc is still the most widely used — and the most toxic. Animal studies have shown that breathing perc in high concentrations can cause cancer. Even in lower concentrations, it can cause headaches, dizziness, and skin irritation — and perc can linger on the clothes you take home.

In addition to its health impacts, improper use, storage, and disposal of perc has resulted in widespread contamination of groundwater at dry cleaner sites. Because of these concerns, perc is more regulated than in the past. The U.S. EPA is calling for a partial phase out of perc by 2020 and some states have gone further by requiring dry cleaners to phase in alternative technologies over the next several years.

Hydrocarbon solvents are less toxic than perc, but still are considered hazardous chemicals. They contain naphtha, which also has harmful effects on human health and the environment.

A few dry cleaners have switched to a silicon-based solvent (siloxane) and are calling themselves "green



cleaners." Although currently there are less regulatory requirements for siloxane than for perc or hydrocarbon solvents, there are health and environment concerns with this solvent as well. In fact, a comparison of alternatives to perc by the Toxics Use Reduction Institute (TURI) rated siloxane more preferable than perc but less preferable than hydrocarbon solvents.

A better alternative that some dry cleaners are using is a process called "wet cleaning." Wet cleaning utilizes water as the solvent in computer-controlled machines along with specialized detergents. The process is generally non-toxic and not hazardous.

Wet cleaning does take more time and work. At the end of the cleaning cycle, the garments have to be air-dried slowly and stretched with steam to prevent shrinking. And the cost of replacing the machines is a considerable expense for a small business. Fortunately, TURI (www.turi.org/drycleaning) was able to show that by making the switch to wet cleaning, business owners could still save money while reducing the risk of environmental contamination and improving the working conditions for employees. And their customers are happy with the results — clean clothes without the smell and feel of chemicals!

What can I do?

- Read the garment's care label. If hand or machine washing on delicate cycle is indicated, choose that over dry cleaning.
- Avoid buying clothing that requires dry cleaning. Many fabrics that were traditionally "dry-clean only" are now manufactured to be washable.
- Switch to a business that offers wet cleaning. If there are none in your area, ask your local dry cleaners what they are using and choose the cleaner using the least toxic chemical.
- Breathe easier after picking up your dry cleaning, take off the plastic and **air out the solvent** on a porch outside or in your garage before bringing the garment into your home.



Eartha answers selected environmental questions.
Email your question to judith.prill@ct.gov and watch future issues for your answer.

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4 P2VIEW | FALL 2014