# EARTH **FALK**( **Questions & Answers** About Our Environment

Dear EarthTalk: I'd like to have a garden that encourages bees and butterflies. What's the best approach?

- Robert Miller, Bakersfield, CA

Attracting bees and butterflies to a garden is a noble pursuit indeed, given that we all depend on these species and others (beetles, wasps, flies, hummingbirds, etc.) to pollinate the plants that provide us with so much of our food, shelter and other necessities of life.

In fact, increased awareness of the essential role pollinators play in ecosystem maintenance-along with news about rapid declines in bee populations-have led to a proliferation of backyard "pollinator gardens" across the U.S. and beyond. "Pollinators require two essential components in their habitat: somewhere to nest and flowers from which to gather nectar and pollen," reports the Xerces Society, a Massachusetts-based nonprofit that protects wildlife through the conservation of invertebrates and their habitat.

"Native plants are undoubtedly the best source of food for pollinators, because plants and their pollinators have co-evolved." But, Xerces adds, many varieties of garden plants can also attract pollinators. Plant lists customized for different regions of the U.S. can be found on the group's website

Any garden, whether a window box on a balcony or a multi-acre backyard,



(Stock photo courtesy of Stock Seed Farms)

can be made friendlier to pollinators. Xerces recommends providing a range of native flowering plants that bloom throughout the growing season to provide food and nesting for bees, butterflies and other pollinators.

Xerces also says that clustering flowering plants together in patches is preferable to spacing individual plants apart. "Creating foraging habitat not only helps the bees, butterflies and flies that pollinate these plants, but also results in beautiful, appealing landscapes."

Along these lines, gardeners should plant a variety of colors in a pollinator garden, as color is one of the plant kingdom's chief clues that pollen or nectar is available.

Master gardener Marie Iannotti, an About.com gardening guide, reports that blue, purple, violet, white and yellow flowers are particularly attractive to bees.

She adds that different shapes also attract different types of pollinators, and that getting as much floral diversity of any kind going is a sure way to maximize pollination.

Another way to attract pollinators is to provide nest sites for bees-see how on the xerces.org website. The group also suggests cutting out pesticides, as these harsh chemicals reduce the available nectar and pollen sources in gardens while poisoning the very insects that make growing plants possible.

Those looking to go whole hog into pollinator gardening might consider investing \$30 in Xerces Society's recently published book, Attracting Native Pollinators: Protecting North America's Bees and Butterflies, which provides a good deal of detailed information about pollinators and the plants they love.

Gardeners who have already encouraged pollinators can join upwards of 1,000 others who have signed onto Xerces' Pollinator Protection Pledge.

And the icing on the cake is a "Pollinator Habitat" sign from Xerces stuck firmly in the ground between two flowering native plants so passersby can learn about the importance of pollinators and making them feel welcome.

CONTACTS: Xerces Society, www. xerces.org, About.com "Bee Plants," http://gardening.about.com/od/ attractingwildlife/a/Bee\_Plants.htm.

Dear EarthTalk: I heard that my food choices can affect the use and therefore availability of fresh water around the world. How so?

– Denise Beck, Washington, DC

Our food choices and the availability of fresh water are inextricably linked. The crux of the problem is that human population numbers keep growingwe recently topped seven billion people worldwide-yet the amount of fresh water available remains finite.

And growing food and raising livestock to feed increasing numbers of humans takes a great deal of water. Worldwide, some 70 percent of fresh water is used for agriculture.

The United Nations Food and Agriculture Organization (FAO) estimates that, by 2050, two-thirds of the people on the planet will lack clean water to meet even basic needs.

According to the Vegetarian Resource Group, the livestock industry is the largest user of fresh water in the U.S. and in many other countries. The billions of livestock animals raised for food around the world each year consume substantial amounts of water directly.

The industry also negatively impacts the replenishment of fresh water through the compaction of soil, the degradation of banks along watercourses, the clearing of forests to expand grazing, and other factors.

An even larger issue is the water needed to grow the feed that livestock eat. Researchers for the 2006 FAO report "Livestock's Long Shadow" report that 2,400 liters of water go into the production of one hamburger, while only 25 liters are needed to produce a potato.

Likewise, a cheese pizza requires 1,200 liters of water-given the drinking, cleaning and feed needs of dairy cows—while a tomato pizza only needs 300.

Eliminating meat consumption would be a surefire way to save vast amounts of fresh water, and switching to a vegetarian or vegan diet is one way an individual can make a big impact on (Continued on Page 8)

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