



[News](#) - February 12, 2009

## **Blooms Away: The Real Price of Flowers** **What is the environmental impact of all those flowers given on Valentine's Day?**

By Carolyn Whelan

[Roses](#) are red... They are also fragile and almost always flown to the U.S. from warmer climes in South America, where roughly 80 percent of our roses take root; to warm the hearts of European sweethearts, they are most often imported from Africa. They are then hauled in temperature-controlled trucks across the U.S. or the Continent and locked up overnight in cold boxes before their onward journey to the florists of the world. According to [Flowerpetal.com](#), which tries to limit the environmental impact of flower purchases, sending the roughly 100 million roses of a typical Valentine's Day produces some 9,000 metric tons of carbon dioxide (CO<sub>2</sub>) emissions from field to U.S. florist. So what's a lovesick, albeit "green," beau to do?

First off, don't assume that imported roses are environmentally hostile. A [2007 study by Cranfield University in England](#) found that raising 12,000 Kenyan roses resulted in 13,200 pounds (6,000 kilograms) of CO<sub>2</sub>; the equivalent number grown in a Dutch hothouse emitted 77,150 pounds (35,000 kilograms) of CO<sub>2</sub>. (Both examples include energy used in production and delivery by plane and/or truck. The roses from Holland required artificial light, heat and cooling over the eight- to 12-week growing cycle, whereas Africa's strong sun boosted rose production by nearly 70 percent over those grown in Europe's flower auction capital.

"In Ecuador, the low-carbon impact of flower farms was evident. Greenhouses used no artificial heating or lighting, and most farm workers walked or biked to work," observes Amy Stewart, author of *Flower Confidential: The Good, the Bad, and the Beautiful in the Business of Flowers*. "In the U.S., most flowers grown commercially come from climate-controlled greenhouses, and many workers drive to the farm."

Although there is no study that makes a similar comparison of flowers grown in and outside the U.S. Colombia set up a "Florverde" (Greenflower) brand in 1996, and now labeled as such on bouquets at Wal-Mart and other big chains, with high environmental and social (worker benefits) standards. Roughly one in five U.S.-bound Colombian blooms is Florverde-certified, meaning stringent standards are verified by annual inspections done by Icontec in Bogotá and Geneva-based SGS, S.A. (Société Générale de Surveillance).

Similar "Sustainable-," "Fair Trade-" and "Organic-" branded bouquets are increasingly available at mega-retailers and florists in the U.S., including Sam's Club, [FTD](#), natural food stores and Web sites like [Flowerbud.com](#), [Organicbouquet](#), [TransFair](#), and [1-800-flowers](#). (Due to the expensive nature of going organic, however, international "organic" brands may have laxer guidelines than those in the U.S., authorizing less, but not zero, pesticide use; they also may be produced from cuttings that were not organically grown.) They boast labels like FlorEcuador or the U.S.'s VeriFlora, each with their own standards and independent inspection schemes.

Florverde's standards, for example, include minimal water use via drip irrigation and rainwater collection; hummus

fertilization; boilers with air pollution filters; sulfur vaporization; integrated pest control for 46 percent less pesticide use; and environmentally sensitive waste disposal. Among social programs and benefits offered to workers: educational and housing subsidies; day care centers; literacy education, higher- and shorter- than-average wages and workweeks, respectively; on-site health care; full benefits including medical, disability and retirement insurance; and a floriculture school for those displaced by violence. Florverde is working to further grow the program and cut energy use, according to Colombian floral association, Asocoflores, chairman, Ernesto Vélez. With advice from U.S. universities, it is also testing biological pesticides, such as natural predators, and sending heartier breeds like carnations by ship.

Roses are so delicate they can't be shipped large distances by sea because they wilt at temperatures above 32 degrees Fahrenheit (0 degree Celsius), and demand is uncertain at all times other than on Valentine's and Mother's days, when many rose bushes are cut back to make sure each plant blooms or reblooms at the same time to up the number of total stems to fill burgeoning sales orders on those holidays. "Few companies can fill one container with one species on one single day and have the supplier wait a week," says Christine Boldt, executive vice president of the Association of Floral Importers of Florida, noting also the noxious gases and diseases that may result from mixing up flowers. "Our product is very perishable."

"Importing flowers is a thorny issue," agrees Stuart Orr, a freshwater manager at WWF International in Switzerland, highlighting the trade-off between cutting poverty and CO<sub>2</sub> emissions. "Kenya's Lake Naivasha is one of the most perfect places to grow flowers—at a high altitude, with plenty of water and sunshine. And flower farms employ people and generate income. [But] they are also big water and pesticides users." He argues, however, that such flower farms can both spur development and, by changing their ways, reform industry practices.

At that lake, for example, roses at the Oserian flower farm are now grown with geothermal waste heat to cut energy use. And no roses are grown within 0.31 miles (half a kilometer) of the lake to ensure that no there is no pesticide runoff. (Five years ago growers were accused of allowing pesticides to pollute the lake, home to hippos.)

Another potentially less-polluting floral option in the U.S. is to buy locally grown flowers. About one third of the cut flowers in this country are grown domestically, mostly in California, first home to orchids, mums, daffodils, irises and other varieties. But even there, energy-gobbling hothouses are often the norm.

You can also opt for heartier breeds like lilies, birds of paradise and ginger from Costa Rica that can survive the three-day boat trip at temps nudging 50 degrees F (10 degrees C). Those after carbon offsets—investments that offset the CO<sub>2</sub> involved in growing and transporting the flowers with reductions in CO<sub>2</sub> elsewhere such as planting trees or renewable energy projects—can buy through FlowerPetal.com

Finally, if your beloved doesn't love roses, try berries, ferns or, when in season, field-grown flowers such as sunflowers, larkspur or dahlias. The Web site [LocalHarvest](#) lists the names of producers selling blooms grown locally. And the [Association of Specialty Cut Flower Growers](#) can help make flower gathering an adventure through a "pick your own" search on its Web site—an option in season at fields in Wisconsin, Washington, Maryland and New Hampshire.

"Explore your local options," urges Gabriela Chavarria, a bee specialist and director of the Science Center at the National Resources Defense Council, noting that because natives thrive in their natural environment minimal heating or lighting inputs are required. "Many natives are about to come out. They are part of the ecosystem, food for bees, and have a tiny carbon footprint."

### Further Reading

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[Cap-and-Trade Program Creates Green Jobs](#)

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