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Surprising Data in Real vs. Fake Christmas Tree Debate

By JOHN COLLINS RUDOLF

When it comes to Christmas trees, Americans increasingly prefer plastic pines over the real thing.

Sales of fake trees are expected to top 13 million this year, a new record, as quality improves and they get more convenient, with features like built-in lights and easy collapsibility. All told, well over 50 million artificial Christmas trees will grace living rooms and dens this season, according to the industry's main trade group, compared to about 30 million real trees.

Kim Jones, who was shopping for a tree at a Target store in Brooklyn this week, was convinced that she was doing the planet a favor by buying a \$200 fake balsam fir made in China instead of buying a carbon-sipping pine that had been cut down for one season's revelry.

"I'm very environmentally conscious," Ms. Jones said. "I'll keep it for 10 years, and that's 10 trees that won't be cut down."

But Ms. Jones and the millions of others buying fake trees might not be doing the environment any favors.

In the most definitive study of the perennial real vs. fake question, an environmental consulting firm in Montreal found that an artificial tree would have to be reused for more than 20 years to be greener than buying a fresh-cut tree annually. The calculations included greenhouse gas emissions, use of resources and human health impacts.

"The natural tree is a better option," said Jean-Sebastien Trudel, founder of the firm, Ellipsos, that released the independent study last year.

The annual carbon emissions associated with using a real tree every year were just one-third of those created by an artificial tree over a typical six-year lifespan. Most fake trees also contain polyvinyl chloride, or PVC, which produces carcinogens during manufacturing and disposal.

Ellipsos specifically studied the market for Christmas trees bought in Montreal and either grown in Quebec or manufactured in China. Mr. Trudel said the results would likely differ for other cities and regions. Excessive driving by consumers to purchase real trees could tip the scales back in favor of artificial trees, at least in terms of carbon emissions.

Over all, the study found that the environmental impact of real Christmas trees was quite small, and significantly less than that of artificial trees — a conclusion shared by environmental groups and some scientists.

"You're not doing any harm by cutting down a Christmas tree," said Clint Springer, a botanist and professor of biology at Saint Joseph's University in Philadelphia. "A lot of people think artificial is better because you're preserving

the life of a tree. But in this case, you've got a crop that's being raised for that purpose."

Makers of fake trees argue that the environmental evidence isn't quite so clear-cut.

"If you buy an artificial Christmas tree and reuse it for at least five years, it's absolutely a green thing to do," said Thomas Harman, founder and chief executive of Balsam Hill, a maker of premium artificial trees. Mr. Harman said that the average amount of car travel by consumers to buy a real Christmas tree outweighed the added energy and pollution costs of buying an artificial tree from China.

The American Christmas Tree Association, the main trade group for artificial tree makers and retailers, says its own study found that it took 10 years of use before a fake tree became better for the environment than a real one, at least in terms of carbon emissions.

Yet the tradeoffs are not immediately apparent to consumers and even some tree growers.

On a bitterly cold afternoon at the Winter Market at New York City's Union Square this week, Lizza Stanley browsed for Christmas trees with her husband, Brian. They wondered if an artificial tree would be better for the environment because it could be reused time and time again.

The tree seller, Rob Rodriguez from Van Houten Farms of Orangeville, Pa., was of little help. "I don't even know for sure," Mr. Rodriguez said. "I would guess natural?"

The balance tilts in favor of natural Christmas trees because of the way they are grown and harvested.

Close to 400 million trees now grow on Christmas tree farms in the United States, according to the National Christmas Tree Association, which represents growers and retailers of real trees. About 30 million trees are harvested annually.

The living trees generate oxygen, help fix carbon in their branches and in the soil and provide habitat for birds and animals, Mr. Springer said.

Christmas tree farms also help preserve farmland and green space, particularly near densely populated urban areas where pressure for development is intense.

"It allows people with land that may not be the best farmland to have a crop that they can actually make a profit on, and not be under pressure to sell out to developers," said Mike Garrett, owner and operator of a Christmas tree farm in Sussex, N.J.

After the holidays, real trees can continue to serve a purpose. New York City, for instance, offers free curbside recycling for trees, which are turned into compost. The city's parks department also provides a free mulching service for trees at several locations after the holidays. In 2009, nearly 150,000 trees were composted or mulched in the city.

Artificial trees, by contrast, are manufactured almost exclusively in Asia from plastic and metal and cannot be recycled by most municipal recycling programs. After six to 10 years of use, most will end up in a landfill.

Melly Garcia, who bought a six-foot fir on the Upper East Side of Manhattan this week, said she was certain that the real tree was the correct environmental choice.

“The trees are coming from a sustainable place, and if you dispose of it properly, it goes back to the earth,” she said. “So I’m at peace with that.”

Jami Warner, executive director of the American Christmas Tree Association, the group promoting artificial trees, said that neither kind of tree had much of an impact on the environment — “especially when compared to something that most of us do every day, like drive a car,” she wrote in an e-mail.

On that point, Mr. Trudel of Ellipsos agrees.

“When you really consider it, if you exchange a couple of days of commuting by car with carpooling or riding a bicycle, you’ll completely overcompensate for whatever the impact of the tree is,” he said. “It’s not such a big deal. Enjoy your tree, whichever one you prefer.”

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