

Oh Christmas Tree

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→ Christmas trees present environmentalists with a dilemma. But the joy their beauty brings need not be at the cost of the planet.

For thousands of years, all around the world, people have been decorating trees on the Winter solstice to celebrate the turning of the year and the renewal of life. To honor Saturn, the god of sowing and agriculture, the Romans decorated evergreens in their celebration known as Saturnalia. In ancient Britain, the Druids hung trees with apples and candles to welcome the light of the new year. The modern Christmas tree dates back to the 17th Century where it became associated with the birth of Christ and a new hope for spiritual salvation.

By the 19th Century the practice of felling young firs and decorating them for Christmas had spread across Europe and North America. But by the beginning of the 21st Century, with the proliferation of the artificial tree and environmental concerns about deforestation, the Christmas tree has become a moral issue. Is it better for the planet to buy a real or artificial tree? If it's real, should it live with roots? Are Christmas tree farms an example of sustainable forestry, or do they leech the soil and pollute water tables? Should we forgo the cheering glow of a decorated tree in our living rooms and go out and plant a tree instead?

The first thing to recognize is that very few people go out and harvest a Christmas tree for themselves from an indigenous wood. Most of the many millions of Christmas trees bought each year are specially grown as crops, and as crops, they come with all the same environmental benefits and concerns.

On the downside, Christmas tree farms can have all the worst characteristics of monoculture – vast acreage of a single species, lacking in biodiversity and blighting the landscape with regimented rows of saplings, and run by agribusinesses concerned only with profit. The trees are susceptible to pests, so pesticide use is common. And after Christmas, unwanted trees are burned, releasing their carbon, dumped or clutter landfill sites.

On the plus side, Christmas trees are often grown as a supplementary cash crop by farmers, or forestry organizations, often where little else will grow, and provide diversity from main crops or tree types. A stand of Christmas trees next to fields or natural woods can increase wildlife species' diversity. In North America, Christmas tree farms provide shelter for grosbeaks, sparrows, chickadees, foxes, coyotes, mice voles, squirrels and other creatures. In mountain areas, Christmas tree farms are far friendlier to wildlife than any alternative agricultural crops.

Christmas trees can only be harvested after 6-10 years, so to run sustainable businesses farmers can only cut at the most one tenth of their crop a year. Meanwhile, the rest of the trees will be capturing carbon dioxide as they grow, and filtering the air. One acre of trees can remove 13 tons of airborne pollutants a year. And farmers have to keep planting new trees to stay in business. The UK's Forestry Commission provides around 100,000 Christmas trees a year – mainly Norway spruce, Noble and Nordmann fir, and Scots and lodgepole pine. The Commission plants two trees for each one it harvests.

Pesticide use in Christmas tree farming is decreasing in many areas. And if properly managed, Christmas tree farms can have positive effects on the surrounding environment. One study in North Carolina in 1998 and 1999 found that five farms had little impact on the quality of water in the streams that ran through them, while one farm that had been in continuous production of Christmas trees since the 1950s has some of the best water quality in the area. In many areas where people have Christmas trees, local authorities now provide recycling facilities where the trees are chipped for mulch, or composted, or used to create barriers on beaches, rivers or in other areas of erosion.

Buying an artificial tree does not solve the moral dilemma. Most are made from polyvinyl chloride (PVC), often using lead to stabilize the vinyl. Health concerns about PVCs has caused many companies, such as Wal-Mart and Microsoft, to phase out their use in packaging and other uses. And artificial trees are non-chippable, non-mulchable and generally non-recyclable.

For those who just don't like the idea of cutting down trees for decoration, there is always the option of a live tree. Many organizations sell trees with their roots so they can be replanted after Christmas. This is fine provided you have an appropriate site for the species and you have time to care for it properly until it is established, but live trees are not much good for city-dwellers.

One innovative alternative is the Original Living Christmas Tree Company, which rents out live trees in pots for the Christmas period, and then collects them afterwards and supervises their proper replanting in the community. The company operates in the Portland area of Oregon, and offers balsam, Nordmann and Douglas firs, Norway spruces and pines, which it buys in from local growers. It charges \$75 to rent a tree through to January 2nd. On collection, the company plants the trees in parks, schools, churches or other sites where the owners pay \$10 to have a tree. The company only takes as many orders for trees as it has for replanting in January. Original Living Christmas Tree Company has been going for

15 years, and so far has planted out over 2,000 trees. The company also has do-it-yourself instructions on its website for those outside the Portland area and who want a living tree at the heart of their home this Christmas.

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