

Tree Windbreaks Help Reduce Winter Fuel Bills

UNIVERSITY PARK, PA (Centre Co.) — Homeowners who are turning blue from rising winter heating bills may want to start planning where to plant a tree windbreak to lower future energy costs.

Dr. Gordon Heisler, Penn State adjunct professor of forest resources and research forest meteorologist with the Northeastern Forest Experiment Station of the U.S. Forest Service, has conducted research to determine the effect trees have on houses and other buildings. He and Dr. David DeWalle, Penn State professor of forest hydrology, have found that tree windbreaks typically can save 10 to 12 percent or more of the energy used to heat a home.

"Other studies have found savings as high as 40 percent, though that figure may be a bit optimistic for the average home," said Heisler. "However, it's clear that a well-planned windbreak can reduce wind velocity and heat loss while beautifying a yard at the same time."

To grow a winter windbreak, Heisler suggests planting a row of coniferous trees on the side of the house exposed to prevailing winter winds. "In most of the United States, these winds come from the north and west, so windbreaks usually are most effective on these sides of a house."

Nearby hills and mountains can cause variations in weather patterns, and Heisler recommends noting the direction of prevailing winter winds before planting. He also suggests contacting weather services or airports to gain similar information.

Heisler also said the National Climatic Center in Asheville, North

Carolina, can provide interested individuals with prevailing wind patterns for particular areas. The center can be reached at (704) 259-0682.

"Though savings increase as the protected perimeter increases, just a few well-planned conifers will make a difference to a house that's currently exposed," he said. "They should be planted about 50 feet on the east and west sides of the house. On the north side, closer windbreaks will be more efficient. On the south side, windbreaks should be far enough from the house to allow winter sunlight to reach it."

The researchers note that any conifer will provide adequate protection from winds. "First, check which species grow best in your areas," said Heisler. "In general, choose fast-growing, visually dense species with stiff branches. Norway, White, and Colorado blue spruce are among the best

windbreak trees.

"Blue spruce is perhaps the densest, but it grows more slowly than the other varieties. Fast-growing trees will begin saving fuel costs more quickly. Pine and spruce should be planted about six feet apart and cedar and arborvitae should be about three feet apart. Planting trees farther apart reduces their effectiveness for blocking wind."

Heisler said that a single row of dense conifers will provide an adequate windbreak, although efficiency may increase with 1 to 4 added rows. Generally, 1 or 2 rows is most cost-effective.

Lower branches should not be pruned, for this can increase wind speed near the ground rather than reduce it. Homeowners also should avoid planting windbreaks directly upwind of driveways and sidewalks to avoid nuisance snowdrifts.

Finally, homeowners should consider a windbreak's effects on summer weather. "If your home is not air conditioned, don't block the direction most of the summer breezes come from," said Heisler.

Crops, Dairy Days Feature Important Farm Topics

The Tri-County Dairy/Crops Fair for Clearfield, Elk, and Jefferson counties will be held on January 24, 1990 at the Ramada Inn in DuBois. The day-long program will begin at 9:00 a.m. with registration. There is a \$6.50 registration fee, which includes lunch.

There will be several businesses setting up displays of their services for farmers. Time is built into the program for farmers to learn more about the services offered.

The program begins at 9:30 a.m. and concludes at 4:00 p.m. Speakers will include Steve Spencer, Penn State Dairy Extension, discussing milking equipment and mastitis; Dennis Calvin, Penn State Entomology Department,

discussing insect problems in field crops; John Yocum, Penn State Agronomy Department, will discuss the growing of soybeans and weed control in field crops; Susan DuFour, county extension agent, will discuss the issue of BST; and Dave Gordon, multi county Extension agent, will discuss pesticides in water and the testing for these substances. The concurrent program this year for women is "Stress-Tapping Your Resources." It will be presented by Nancy Covert, county extension director.

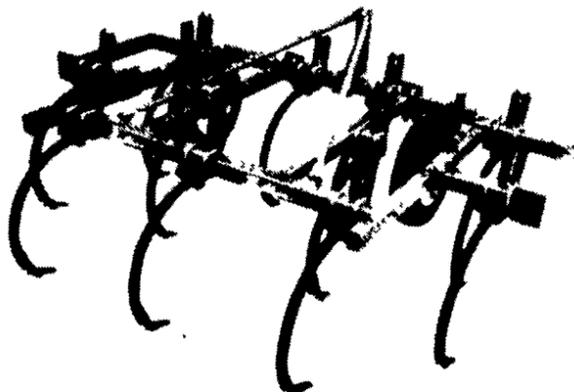
Pre registration must be made by Wednesday, January 17, 1990. To register or receive further information, contact the Clearfield County Cooperative Extension office.



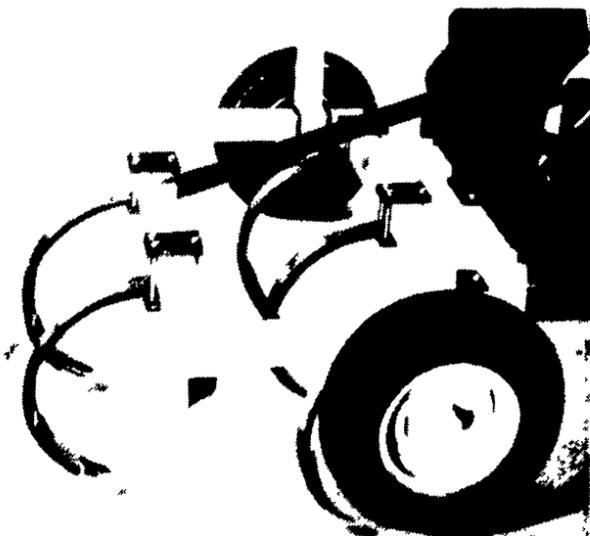
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