



The NRCS Plant Materials Program eNewsletter for the conservation community

Landowner's Living Snow Fence Prevents Accidents

During a storm, the wind would deposit snow over a particularly hazardous stretch of Route 41 outside of Cortland, New York. No matter how many times the snow removal crew plowed the stretch, an hour later it drifted over again. Some days, a dozen motorists veered off the road.

"I've driven this road all my life," says Dave Barber, general foreman for the Cortland County Highway Department. "And that's a dangerous part of the highway. The wind just howls and sometimes you'd see ten-foot-high drifts."

In 1993, the local NRCS field office worked with landowner and dairy farmer Steve Butts to plant a living snow fence, one of the first in the area. They completed a 900-foot demonstration planting in Butts' cornfield, using shrubs that grow fast, have dense branches, and don't root-sucker or spread by seed.

Ten years later, the snow fence exceeds 13 feet tall and often stacks up to five feet of snow on the leeward side, tapering down to 12-18 inches near the road surface. A motorist sliding into the ditch along the stretch has become a rare occasion.

"It's really made a difference," Barber says. "I think the landowner likes it too. People aren't knocking on his door at all hours of the night asking to be pulled out."

Butts estimates the snow fence costs him \$65 annually in lost silage corn production. But he says he doesn't care—the cost is insignificant compared to the benefits to his operation, public safety and reduced road maintenance.

John Dickerson, NRCS plant materials specialist in Syracuse, New York, says sometimes crop yields go up near living snow fences.

"Windbreaks and living snow fences slow wind speed, improve pollination and increase soil moisture retention."

"Plus," he says, "living snow fences save lives."



Snow piled up on the leeward side of the snowfence.

Snowfence Helps Dangerous Highway

A living snow fence is saving lives in Idaho. *USA Today* once named a stretch of Interstate 84 outside of Burley, Idaho, the "Most Dangerous Freeway in America." Wind and blowing snow caused several multiple vehicle pile-ups and numerous fatalities.

With the help of the Plant Materials Program, the local NRCS field office staff planned and designed over 4.5-miles of living snow fence, and planted it with pine trees, Rocky Mountain juniper and other shrubs.

"The trees and shrubs have already decreased the blowing snow," says Dan Ogle, plant materials specialist in Boise, Idaho. "As they continue to grow, this section of I-84 will become a much safer place to drive."



More info:

<http://plant-materials.nrcs.usda.gov/technical/publications/windbreak.html>

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Plant Solutions

Ask the Expert



Bud Malone, Extension Poultry Specialist, University of Delaware

Question: Many conservationists are working to improve air quality around confined animal operations. In your work with poultry farms and windbreaks, what techniques are most effective?

Confined animal agriculture will be facing tighter restrictions on emissions as urban encroachment causes more neighbor complaints and as the Environmental Protection Agency (EPA) works to meet the requirements under the Clean Air Act. Here in the Northeast, our greatest challenge is poultry operations.

By using trees as a buffer, we hope to visually screen the operation from the neighbors, improve production efficiency, and capture ammonia, dust and odors emitted from the exhaust fans.

We recommend planting multiple tree rows around the perimeter of the houses. At one site, we planted Eastern red cedar, the most dense species, on the outside, a middle row of Leyland cypress, and bald cypress on the inside, closest to the exhaust fans. Deciduous trees placed closest to the exhaust fans serve as a prefilter and will shed the emission-laden leaves in the fall and grow fresh leaves in the spring.

Contact: Bud Malone at malone@udel.edu



Above: Planting trees. Below: A shelterbelt of Eastern red cedar grows near a poultry house.

Did You Know?

Did you know even an island paradise needs wind protection? In Hawaii, the trade winds blow at 15 to 20 miles per hour, or stronger, causing considerable damage to crops.

The need for windbreaks is increasing in recent years as growers switch from sugar cane and pineapple to vegetables and seed corn. Sugar cane and pineapple grow well without windbreaks but other crops do not.

In the past, farmers planted ironwoods, eucalyptus, Cook and Norfolk pines and other tall trees for windbreaks.

“Many producers are now favoring more compact, faster-growing trees that take up less space,” says Bob Joy, NRCS plant materials specialist in Hoolehua, Hawaii. “For example, ‘Tropic Coral’ tall erythrina likes Hawaii’s lower elevations and can grow up to 40 feet tall in four years.”

Other growers are planting windbreaks with multiple uses, such as banana trees.

Contact: Bob Joy at bob.joy@hi.usda.gov



‘Tropic Coral’ tall erythrina, a Plant Materials Program release.

Quotable Quotes

“He who plants trees, benefits another generation.” --Synephebi

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