

"Operation Windbreak" began in 1998 and focused primarily on farmstead windbreaks. The project has been expanded to establish windbreaks on major roads in the area. They are needed to improve driving conditions in winter weather and increase highway safety.

Partners and sponsors (see back page) have joined together to begin a multi phase project to address these needs. Over forty miles of exposed road ways have been pinpointed for further study.

Traffic corridors will be prioritized by risk factors, related accidents statistics, and ease of access to required planting distances. Future sites may need to be considered on private land bordering high risk areas. There are cost share dollars in USDA Farm Bill programs which may be able to defray costs to those landowners.

Volunteers are needed. A long term plan is being developed and funding sought. Call 635-1278 if you want to be involved.

Benefits of windbreaks:

A good farmstead windbreak adds thousands of dollars to property values.

Benefits such as energy conservation and snow control are the result of wind speed reduction.

Benefits such as wildlife habitat and aesthetic value are the result of having trees and shrubs in the landscape.

Livestock protected by a windbreak

Energy conservation

Well designed and placed windbreaks can reduce energy costs by as much as 20 to 40 percent. The type of home, energy efficiency, efficiency of home heating unit, and other factors will determine the individual savings. Any heated building or confinement space will benefit from the reduced chill factor resulting from reduced wind speeds.



Snow control

Windbreaks can be used to control or store snow, keeping it away from critical areas in the farmstead. Single rows of shrubs or trees can function as snow fences, trapping snow away from protected areas. Windbreaks become more functional for snow stopping and storage as rows are added beyond the minimum. Significant snow drifting can occur in the first two heights of a narrow windbreak. Wider windbreaks will result in more snow accumulating inside the windbreak and less drifting through.

To trap additional snow, establish a living snow fence 50 to 150 feet away from the windbreak on the upwind side.

Windbreak design

Windbreaks for the home or farmstead should be carefully planned. The windbreak becomes an integral part of the site for at least 50 years. For the greatest protection, locate the the windbreak on the north and west sides of the farmstead. Extend the windbreak 50 feet south and east beyond the last main protected structure. This additional windbreak avoids sweeping winds on the farmstead corners. The inside row of narrow windbreaks should be at least 75 feet from buildings or structures or the outside row should be 100 to 150 feet away from the protected zone.

An established windbreak will provide protection from wind and snow 300 to 600 feet from the most leeward row. It should be set at least 75 feet from buildings and roads. Be sure to consider both overhead wires and under ground cables when choosing your location. Check with your local electric company and MissDig (1-800-482-7171) if there are indications of these utility lines within your planned area. Always check with local zoning or with the Natural Resources Conservation Service (NRCS) before establishing trees along road ways.

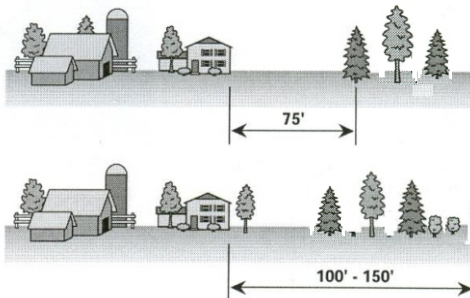
Try to use at least three rows of trees and stagger them. Use spruce on the outsides for density and pines in the middle for height. Deciduous trees and shrubs can be added on the leeward side. A variety of trees and shrubs will lessen the chances of insect and disease problems with your planting. The species you select should be based on your soils. Site preparation and planning are important components of a good windbreak. Proper spacing and planting are critical to the success of the windbreak.

Tree Spacing

No single recommendation on row and tree spacing will satisfy all requirements concerning tree culture or windbreak benefits. Close spacing may provide some wind protection earlier, but wide spacing enables trees to retain lower branches longer and may result in a taller windbreak because of less competition between trees.

If possible, space all rows 20 feet apart including shrub and hardwood trees. Wide spacing will reduce competition between rows, and result in windbreaks that retain lower foliage longer. In addition, the wider spacing allows for more snow storage inside the windbreak. If space is limited, the spacing between the shrub row and conifer trees can be reduced to 16 feet. Rows of deciduous trees should not be spaced closer than 14 feet.

Within-row spacing will vary with species used and landowner objectives. Large conifers should be planted 14 to 25 feet apart; small conifers, 8 to 16 feet apart; deciduous trees, 8 to 20 feet apart; and shrubs, 3 to 13 feet apart depending on species. Narrow spacing between trees within a row will result in short-term increased density of the windbreak; the increased competition will result in self-pruning and a less effective long term windbreak.

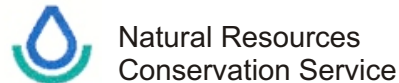


Operation Windbreak is sponsored by:



Chippewa County
Emergency Management

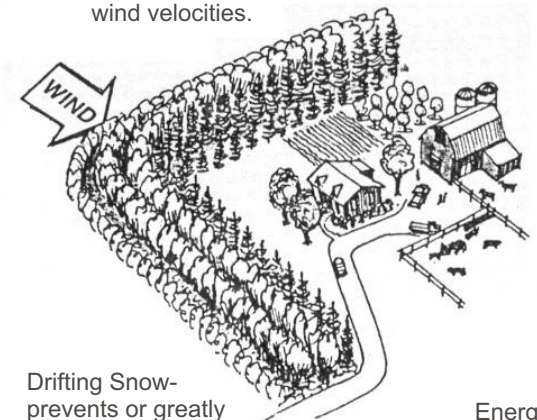
Partnering with:



OPERATION: WINDBREAK

Windbreaks address the following issues:

Cold Winter Winds-
protects the farm family and
farm animals by reducing
wind velocities.



Drifting Snow-
prevents or greatly
reduces drifting
around buildings,
on walkways and
roadways, and in feedlots.

Energy
Consumption-
lowers the costs
of home heating
(up to 30%).