Shelterbelts

Windbreaks or shelterbelts are plantings of single or multiple rows of trees or shrubs that are established for environmental purposes. The height of the tallest row and overall density of foliage and branches of an individual planting greatly influence the size of the nearby area that is protected or sheltered.

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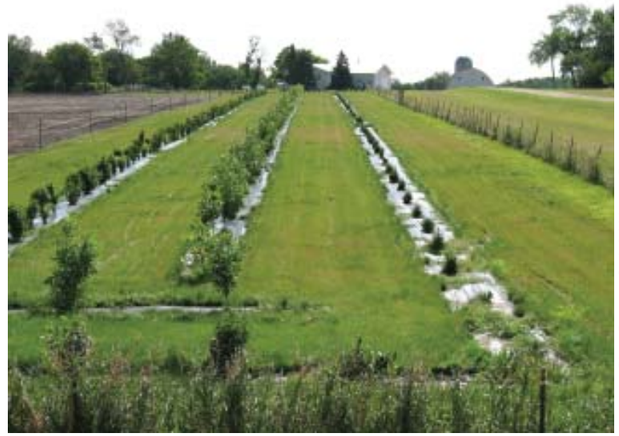
Planting a shelterbelt.

This shelterbelt or windbreak was originally planted by the Jenson family. They built the house and buildings on this property and lived here for about 50 years. This shelterbelt is comprised of conifers, deciduous trees and shrubs which are planted in rows. Almost all of these plants are the ones that were originally planted making them over 50 years old. Very little natural regeneration has occurred.



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One year after planting.

According to the North Dakota Trees Handbook, the reasons to build a shelterbelt include:

- Controlling wind erosion. When properly installed, shelterbelts in agricultural fields can reduce soil losses up to 30 tons/acre/year.
- Increasing crop yields. Yields can be increased by 5–35%.
- Increasing water use efficiency. Shelterbelts can trap and spread snow across adjacent fields. They also help reduce transpiration during the growing season.
- Reducing home energy costs. In the north central states a shelterbelt can reduce the energy costs of a house by up to 25%. Protection from wind reduces heating needs and shade can reduce cooling costs.
- Providing noise control. One study indicated a 5–10 decibal reduction in noise levels. As South University Drive receives more traffic, we are happy that this shelterbelt is here.
- Improving snow control. Shelterbelts hold and trap snow away from buildings. Over the long term they are cheaper to operate than snow fences.
- Protecting livestock. Shelterbelts can reduce livestock injury from freezing winds.
- Improving weight gains in animals. Winter wind protection results in 10–15% less feed needs for cattle.
- Improving milk production in dairy cattle. Winter wind protection significantly increases milk production.
- Protecting wildlife. Over 100 species of birds and mammals use shelterbelts. One of the best places for bird watching at the Living Lab is in this shelterbelt.
- Improving ground water quality. Shelterbelts can reduce nitrogen, nitrates and phosphates in ground water.

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Newly planted shelterbelt.

- Providing storm water run off control. Trees and shrubs can slow down polluted water run off into our streams and rivers.
- Providing income alternatives. Some shelterbelts can provide Christmas tree and firewood production as well as nuts and berries.

To be effective, shelterbelts need to be properly installed and maintained. There are many sources of information on shelterbelts. Locally, the extension services, Cass County Soil Conservation District and Clay County Soil and Water Conservation District are two places to find information. This shelterbelt is maintained by removing fallen branches and trimming trees. This allows easy access to the shelterbelt by visitors. Over the long term dead and diseased plant material will be removed and replaced in order to keep the shelterbelt functioning.

RIVER KEEPERS