



Lower Thames Valley Conservation Authority Rural Best Management Practice Factsheet

Windbreaks

What is a windbreak?

A windbreak is a planting of trees in rows which can offer benefits to your farm management plan. Windbreaks are great at sheltering your fields to prevent soil erosion, help shelter your crops by creating a 'microclimate' and can shelter buildings or greenhouses in the winter months from blustery winds. They shield buildings and can help reduce heating and cooling costs. They can also add beauty to landscapes and provide habitat for wildlife. Getting the results you want from a windbreak will depend on factors like location and size, as well as the kind of trees you use and the spacing between them. One of the most important factors when designing a windbreak is knowing exactly what you want your windbreak to achieve.

How does it work?

Farmstead Windbreaks

Farmstead windbreaks protect homes, barns and greenhouses from wind, resulting in reduced heating costs and more comfortable living environments. The most effective farmstead windbreaks are of medium density. They protect buildings and their surrounding areas, while allowing some air to filter through to prevent the build-up of cold air in the spring and fall and to provide some air circulation in the summer. A single row of Red Cedar, White Spruce or Norway Spruce has the ideal density for this purpose. To be most effective, the windbreak should be planted on the north and west sides of a house or barn, at a distance of about 30 meters from the building it is intended to protect.



Field Windbreaks

Medium density windbreaks are most effective for controlling erosion and protecting crops. Research in Ontario has shown that corn yields can increase by 25% and soybeans 6 to 8% down-wind of a field windbreak. As with farmstead windbreaks, a single row of Red or White Cedar, Spruce or Pine planted at least on the north and west sides of the field is best. Planting on all sides gives even greater protection. In some cases, windbreaks can also reduce soil erosion from fields.



What cost-share programs are available?

In an effort to improve the quality of our environment, Lower Thames Valley Conservation Authority (LTVCA) has developed a comprehensive Agricultural Improvement Fund (AIF) to improve Chatham-Kent, Elgin, Essex and Middlesex County's soil, air and water by providing grants for stewardship projects. Grants are available to qualifying farmers and landowners to plant trees and implement windbreaks. In kind will be considered for tree planting projects and cost share programs exist to offset costs. Please be sure to contact the LTVCA office for more information: P 519-354-7310.

How does this benefit the environment?

Windbreaks help reduce soil erosion caused by wind and water. Soil erosion can result in degraded soils and loss of field productivity. By helping to control soil erosion, windbreaks have a positive effect on air and water quality, and generally improve the environment. They can also add beauty to landscapes and provide habitat for wildlife.

References

Agriculture and Agri-Food Canada, Ontario Federation of Agriculture, and Ontario Ministry of Agriculture, Food and Rural Affairs, 2008. Best Management Practices: Establishing Tree Cover.

Wisconsin Department of Natural Resources Division of Forestry, 2003. Windbreaks that Work!



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