



Case Study: Field Windbreaks to Reduce Soil Loss



Windbreak 27 years later.



Bill has lived in Oxford County for 65 years and began farming in the early 1970s. He has a pig operation and owns two neighbouring 50 acre parcels that are in a corn, soybean and wheat rotation.

Concerns:

Years ago, when Bill noticed a shift to larger field farming operations, he became concerned about the increase in soil erosion in these larger fields and took action to protect his own fields.

Solution:

In 1989, 2600 Norway Spruce were planted around the perimeter of the field and down the middle of his two parcels of land. There was already a hardwood windbreak along the roadside.

Benefits:

- Reduced wind speeds have decreased soil loss from his fields.
- Bill estimates that protection from wind damage has increased crop yields by 10%.

“I think it is most important to keep in mind good stewardship with ownership.”



Windbreaks trap snow, which can increase soil moisture in the spring.

Over the years, neighbours have commented that Bill’s windbreaks are a good idea, and several other landowners in the area have planted windbreaks on their farms.

Project Timeline:

Fall 1988 - the existing vegetation around the perimeter of the fields was mowed

Spring 1989 - a cover crop was planted in the locations identified for the windbreaks

May 1989 - the windbreak trees were machine planted by the Upper Thames River Conservation Authority

Maintenance:

The trees were maintained during the first several years by spraying **herbicide** to deter competition from weeds and grass. This regular maintenance resulted in a very high tree survival rate.

To aid in the longevity of the windbreak, Bill is considering **thinning** the trees. Thinning allows the remaining trees have more resources and space to grow, resulting in a stronger and healthier windbreak.



The existing hardwood windbreak can provide some shelter from winds and wildlife habitat.



Norway Spruce are winter hardy, fast growing and long living.

By the numbers:

2600 Norway Spruce seedlings planted

1725 m of total windbreak around fields

\$248 project cost (in 1989)

“We are basically holding onto this property for our descendants; we are just a step in time.”

Additional BMPs:

Bill constructed two berms to reduce soil loss from water erosion, a few years before planting the windbreaks.