



# Case Study: Replacing Old Fence Lines with Windbreaks

Windbreaks around the perimeter provide wind protection for the entire field.



Tom and Wendi Jackson own a 750 acre dairy farm, milking 200 cows with followers outside Kintore, Oxford County. Most of the farmland is used to grow livestock feed, but 250 acres are on a rotation of corn, soybean and wheat.

## Concerns:

Old, overgrown fence lines of shrubs made it difficult to run equipment along the edge of the fields. The shrubs were removed to improve the machinery operation, but this also increased the potential for soil loss due to wind erosion.

## Solution:

In 2006, 2010 and 2015, single-row windbreaks of Norway Spruce were planted along the perimeter of the fields to replace the removed fence lines.

## Benefits:

- The trees will grow taller than the previous shrub fence line, extending the wind protection further out into the fields.
- The new windbreaks have cleaned up the fence lines, reducing damage to the farm equipment and increasing the amount of cropping area. Tom has been able to get six more rows of corn into the field.



Trees planted by machine planters are easier to maintain. Machine planting is cost-effective; an average of 400 seedlings/hour can be planted.

*“We try to do a good job in conserving the land.”*

# Project Timeline:

- For each windbreak, the old fence line was removed in the fall before the trees were planted. The following spring, the site was levelled by light discing and a 3 m wide cover crop was planted for the length of the planned windbreak.
- The windbreaks were machine planted in May and an initial herbicide treatment was applied immediately after planting.

## Maintenance:

The trees were maintained during the first several years by **spraying herbicide** to reduce competition from weeds and grass. Tom also used a **weed-eater** between the trees in the third and fourth years to further control weeds. As part of the 2010 windbreak planting, extra trees were planted in a separate area of the farm to be used to **replant** dead or damaged trees in the future.



First windbreak, planted in 2006.

## By the numbers:

**2240 m** total length of windbreak around the perimeter

**950** Norway Spruce planted

**\$1393** project cost for all three windbreaks (in 2006, 2010 and 2015)



Second windbreak, planted in 2010.