



Photos courtesy Trees for Mapleton

Trees for Mapleton helps farmers plant trees along streams (top, left) or as windbreaks and shelter belts.

MONEY REALLY DOES GROW ON TREES

Trees for Mapleton project wants to put money in farmers' pockets by having them protect their crops with windbreaks, reaping increased yields

By Keith Roulston

Since the days when settlers faced the daunting task of clearing dense forest from the Ontario landscape, it's been ingrained in farmers that trees are a problem.

But what if someone told you that *not* having trees around your farm was costing you \$15,000 to \$20,000 per year in lost yields for your crops, not to mention higher energy bills for heating and cooling your house and farm buildings?

That's the message the Trees for Mapleton project is getting across to farmers of that Drayton-area Wellington County municipality, and dozens of farmers are heeding the call, planting 40,000 trees this spring.

The value of trees has never been adequately explained to farmers at the kitchen table level, says Paul Day, chair of the Trees for Mapleton project.

Research at Ridgeway College some time ago showed that soybean could suffer 20-30 per cent yield loss if they weren't shielded by windbreaks, while wheat lost 25 per cent and corn 12 per cent. Even

forage crops like alfalfa were dramatically affected by the exposure to sustained winds if unprotected by windbreaks.

That research, Day says, didn't factor in the financial advantage for livestock farmers from moderating heat and cold for livestock by using shelterbelts around buildings. Research shows heating and cooling costs can be reduced 25-30 per cent with a well-placed shelter belt.

Day says he has first-hand experience with the practical benefits of windbreaks. He planted a single-row spruce windbreak 20 years ago. The trees are a good size now, and last year the operator of the combine harvesting corn in the field noticed an eight-to-10-per-cent yield increase when he combined near the windbreak compared to the centre of the field. The yield picked up again when he got to the other side of the field where the influence of the windbreak on that side protected the crop.

The value of windbreaks in hot dry years has been acknowledged before because it helps prevent winds

from sucking moisture out of the crops, Day says, but last year was cool and wet. Under those cool conditions the effect of the windbreak is to create a microclimate, increasing the heat units. He observed proof of the microclimate when he noticed that corn nearer the windbreak tasselled four or five days earlier than corn in the middle of the field.

A windbreak, Day argues should be production tool just like seed, soil, drainage, and machinery.

Most farmers would be happy to add an extra \$15,000 to \$20,000 to their bottom line but the figures add up even faster when you extrapolate to a larger scale. Day has calculated for his township that would mean a gain of \$3 million a year. Across southwestern Ontario, it can add up to an extra \$150 million in farmers' pockets.

Mapleton is typical of what's happened across southern Ontario's farm belt. When settlers arrived, in this case in the 1840s, the land was heavily treed. Trees prevented farmers from planting crops so the



Photos courtesy Trees for Mapleton

Workshops have (above, right) shown farmers how a windbreak can help increase crop yields (above left).

task was to cut down the trees as quickly as possible. Soon the only trees that were left were small woodlots at the back of the farm that provided fuel for heating and some timber for sale or use around the farm.

As years went by, undisturbed fencelines grew up in trees, but with the arrival of larger equipment, beginning in the 1950s, the emphasis was on tearing out fencelines and creating bigger fields.

“We missed a step,” says Day. “We should have surrounded those bigger fields with windbreaks.”

Across Wellington County tree cover is now down to 17 per cent of the land area (Environment Canada estimates 30 per cent is needed for a healthy environment). Mapleton has 10 per cent tree cover, with a portion of the township where a wind farm has been proposed having only three to four per cent cover. Trees for Mapleton envisions boosting tree cover to 20 per cent.

The strategy calls for wrapping every 100 acres with windscreens; buffering all waterways with trees; wrapping all woodlots with windbreaks (hardwoods in the woodlot grow faster if protected by an evergreen windbreak); planting shelterbelts around all farmsteads; linking forest fragments with tree plantings; and creating living snow fences along sections of road that are now exposed to drifting. If all that was accomplished, the potential is a staggering five million trees in one

township.

The Trees for Mapleton project grew out of an earlier success story with Trees for Peel — one of the two townships that amalgamated to form Mapleton. When money was left over from a local history project in Peel, it was put to work buying trees. Starting in 2001, the project eventually promoted nearly 100,000 and helped fund 75,000 trees in strategic plantings on over 100 farms.

Trees for Mapleton aims to make it attractive for farmers to plant trees, by getting the word out about how financially advantageous it can be, helping them technically and financially to make a plan, to buy and plant the trees and give them ongoing advice.

The project is a partnership of the Wellington Stewardship Council (of which Day is a member), Grand River Conservation Authority, Drayton Kinsmen, Wellington Soil & Crop Improvement Association, Wellington’s Green Legacy tree planting program, Township of Mapleton, Trees Ontario and the Maitland Valley Conservation Authority. But most important, says Day, are the Mapleton landowners.

The partnership makes it attractive for landowners to take part in the Trees for Mapleton project. Day estimates that an average 200-acre farm that plants 2,000 trees could benefit from \$5,396 in goods and services, starting with \$1200 worth of trees from the County’s Green

Legacy program and \$1,000 for tree planting from Trees Ontario (50 cents a tree). The Wellington Rural Water program provides an incentive payment of \$107/acre for seven years for taking land out of production for trees, which would add up to \$2996 on the four acres needed for 2000 trees.

As well, Trees for Mapleton was successful in getting a Trillium Foundation grant to cover the salary of an agri-forester to work with farmers, providing, Day estimates, about \$200 worth of service for each farm.

Dallas Campbell is that forestry technician who co-ordinates the project, splitting his time between the Grand Valley Conservation Authority office, which administers the funding, and the Mapleton Township office in Drayton.

The work in Drayton involves working with farmers and other landowners. There have been field days and community meetings to bring people together to make them aware of the program, but often he works directly with farmers and other landowners.

This is the big advantage Trees for Mapleton has, says Day – someone to work directly with farmers to get the message out at the kitchen table. It means Mapleton is privileged to have its own agriforester.

Campbell says his consultation generally starts with talking to the landowner about what purpose they

want trees to meet on their property, and what kinds of tree species they might use. They'll walk the area to be planted, Campbell says, and see if it's a windbreak or fencerow or a block along a waterway. They'll take a soil sample to see the soil conditions they're dealing with. Gradually a planting plan takes shape.

Back at the office, Campbell will obtain an aerial photograph of the land to be planted and superimpose trees on it at the appropriate spacing to give the landowner an idea of what the property will look like. Then they calculate the number of trees needed and come up with a cost estimate.

There are five or more different sources of funding that can assist the farmer in accomplishing the planting plan at an affordable price.

So far about 40,000 trees have been booked for planting this spring, with hopes for a similar planting come fall. If you were talking about large block plantings that's not a large number, but it's impressive when most of the plantings are 500 or 1,000 trees along a fencerow or by

***Potential
for
Mapleton:
5 million
trees***



a stream. So far 25-30 landowners have committed for the spring planting.

A big advantage of the Trees for Mapleton program is that the program doesn't end when the trees go in the ground. Though there is no ongoing funding for the plantings, Campbell is there for advice and technical support. "It's a big part of my role – being there for the next couple of years," he says. The first couple of years are pivotal for the long-term success of a tree planting.

It's an advantage in that a private company would do the planting, then move on to other clients, he says.

Campbell sees a positive attitude toward trees generated by the project.

This summer he'll be involved in other public events to try to encourage more landowners to plant trees come fall.

Day admits there's still skepticism about the value of trees with some landowners. The dollars and cents advantages need to be demonstrated, but there are other advantages that go beyond crop yields or fuel savings. Midwestern U.S. states, for instance have found that creating living snow fences returns \$15 for every one dollar invested, by cutting road snow maintenance costs. And that doesn't even include the value of accidents prevented and lives saved.

Then there's the potential for farmers to make money through trees planted if climate change cap-and-trade policies create compensation for carbon sequestration.

And beyond that, he says, there's the ability to moderate the effects of climate change by using windbreaks and shelter belts to slow windflows. When people think of soil erosion, he says, they think about soil blowing in the wind, but even on heavier soils like those in Mapleton, winds still suck the moisture out of plants.

Modern programs like Trees for Mapleton aren't the first time farmers have been given financial encouragement to plant trees, Day says. As far back as 1883 the government realized that farmers had gone too far in stripping the landscape of its trees and paid farmers 25 cents a tree to plant trees along roads. At today's equivalent that would be about \$25, he says.

Day, whose family took up the farm he still lives on from the Crown in 1845 and began clearing it, looks back at history for another lesson. Back then settlers got together in "bees" to help clear each other's land, he says. Now he dreams of landowners coming together in bees to plant trees again. If so, the research shows that farmers can put more money in the bank, and society can create a more liveable environment.◇