

The Fairchild Creek Project

PLANNING FOR SUSTAINABILITY



The farm



Gord Vellenga and his family operate a farm in the County of Brant just south of St. George, Ontario. The family farms 240 hectares in a corn-bean-wheat rotation. They also produce forage to support their herd of 90 dairy cows.

Soil erosion

A tributary of Fairchild Creek flows through the Vellenga farm. This creek is in a valley with steep sides composed of easily erodable soils. In the past, rain and snowmelt washed soil and nutrients from the fields into the creek. The sparse natural vegetation beside the creek provided little shade during the hot summer months. High water temperature, nutrient and sediment levels in the creek resulted in poor water quality and degraded fish habitat.

The solution

In 1991, trees, shrubs and grasses were planted in two-metre buffers on either side of the creek. Buffers filter sediment from rainwater and snowmelt and cool the creek by providing shade in the summer.

Gord has also completed an Environmental Farm Plan and a nutrient management plan. He has built a manure storage facility, fenced cattle out of the creek and diverts clean roof water away from the cattle yard. He has retired pasture, planted trees around the house and has replaced old electrical equipment in his barn.

“In the past we didn't consider the environment in the management of the farm. Now it's become a normal part of our farm planning.”

- Gord Vellenga

In the 15 years since the vegetated buffer was established there has been a 170 per cent increase in the number of fish and a threefold increase in species diversity.

Before



After



The Fairchild Creek Project ...continued...



Eastern Kingbird



Photo by Daniel Cadieux
www.danielcadieuxphotography.com

Flea Bane



Photo by Jim Neary



The results

The vegetation planted in the buffer has now matured and shades the watercourse, reducing the temperature of the creek. The creek has narrowed, deepened and the banks have stabilized. Abundant vegetation has attracted a variety of wildlife. Fish populations have increased from 60 fish representing three species (1991) to 162 fish representing ten species (2006). This dramatic change is a good sign that the water is clean and that the creek has become more naturalized.

The buffer has also produced benefits for the farm.

“The buffer area traps soil and the vegetation acts as a windbreak preventing the fields from drying out. The extra moisture and nutrients benefit the crops during the dryer portions of midsummer producing higher yields and better quality crops.”

- Gord Vellenga

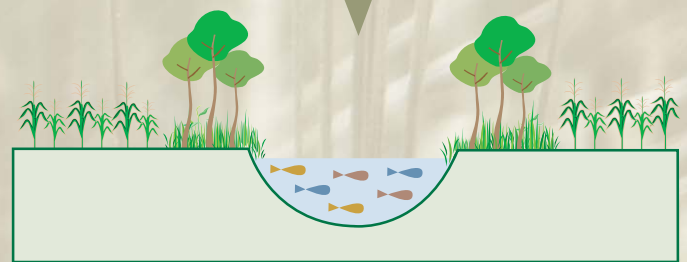
Trees planted in the old pasture surrounding the farmyard have stabilized the lane and shade the house in the summer reducing air conditioning costs. Replacing older equipment in the barn has cut electrical consumption by close to 25 per cent.

By adopting environmentally friendly management practices Gord has not only helped improve the natural heritage of Vellenga Farms but has also saved money and improved the efficiency of his dairy operation.

Fairchild Creek - Before (1991)



Faichild Creek - After (2008)



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