

Planting Trees for Climate Change

continued

Garden Watch

Have you noticed tulips sneaking through the soil earlier and earlier? Do you hear the cheerful Robin's call while snow is lingering on a spring meadow? The regrowth of flora and the return of fauna can reflect a changing climate when monitored over the long term. Try starting a garden log book or enhance your current plant records with arrival dates. Each year, record the arrival of birds and the flowering of plants - you may be surprised at the results! Remember that weather is wild! Warmer-than-normal seasons do not indicate a changing climate and seasons are generally later the further north you go. The longer you keep records, the more accurate the results will be! Start by keeping track of the following common species:

Flora

- Crocus
- Tulip
- Lilac
- Dandelion
- Lily
- Fruit trees



Fauna

- American Robin
- Tree or Barn Swallow
- Purple Martin
- House Wren
- American Goldfinch
- Monarch butterfly

Interested in getting involved in a program that is studying plants for climate change? Check out PlantWatch on the web at www.devonian.ualberta.ca/pwatch/

Lifetime Achievement Award

Next time you are at Fort Whyte Centre, stop by the Old Oak Tree just east of the Bird Feeding Station. This tree is 120 years old - quite possibly the oldest tree on our property! Over its lifetime, it has seen a myriad of changes, housed a menagerie of animals and produced a multitude of acorns. The Old Oak has also been working hard at removing carbon dioxide from the atmosphere. In its 120 years, it has removed 5065 kg of carbon dioxide from the atmosphere and converted it into leaves, branches and acorns. That 5065 kg of carbon dioxide is produced by one car making 5 round trips from Winnipeg to Toronto! So, next time you visit the Old Oak Tree, say thanks for all it has done to reduce the impacts of climate change. And let that tree be your reminder to plant a tree for climate change.

References:

- Introducing Trees*, Federation of Ontario Naturalists. *Planting Trees for Carbon Credits*, Tree Canada Foundation, 1995.
- The Simple Act of Planting a Tree*, TreePeople with Andy and Katie Lipkis, 1990
- Tree Canada website, www.treecanada.ca



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Planting Trees for Climate Change

Aynsley Toews

There are many reasons to plant a tree - landscaping your yard, cooling your house, honouring a birthday, providing animal habitat. Now there's another reason! And it will affect people all over the planet. This year, plant a tree for climate change. Yes, climate change!

We've all gone out to the car on a sunny day, only to find the interior as hot as a boiler room. Sunlight enters but can't escape through the windows. This, in a nutshell, is the Greenhouse Effect, keeping our planet warm and habitable - the perfect conditions for life! On Earth, the greenhouse gases act like car windows, rebounding heat back to the earth.

Carbon Sources - Finding the Culprits

The addition of greenhouse gases to the atmosphere traps more heat. Human activities - driving cars and heating homes - are increasing greenhouse gases at unprecedented rates. Carbon dioxide (CO₂) is an important greenhouse gas, one of the "heat-rebounders" in the atmosphere. CO₂ is also the product of fossil fuel combustion - it is spewing out the tailpipes of automobiles by the tonne - one of the many CARBON SOURCES. Since the Industrial Revolution, we have increased

CO₂ in the atmosphere by 30% - this may not sound like a lot but it has already caused a global increase in temperature. Scientists are no longer saying "if" but "when" and they agree that the consequences will be dramatic and costly.

The results for Manitoba are not just warmer temperatures - they include more extreme weather events, droughts, forest fires, dieback of the boreal forest, and pest outbreaks including mosquitoes. The impact of climate change is starting to be felt...right now.

Balance Your Sources & Sinks

If you want to create a carbon balance in your own life, plant 3 trees for every 100 kilometres traveled by automobile!

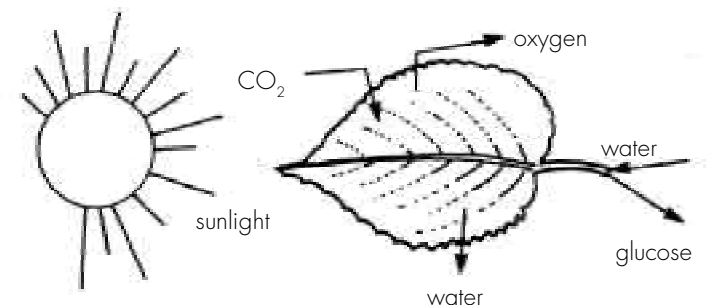
Carbon Sinks - Trees to the Rescue!

During the process of photosynthesis, trees 'breathe' in CO₂ and convert it into leaves, branches and bark. Because of this, we call them CARBON SINKS! Tree Canada states that one Canadian tree can remove more than 9 kg of CO₂ from the atmosphere each year or more than 700 kg in its lifetime. Think of the amount of CO₂ that the world's forests can suck out of the air each year.

Native Tree Species

Average CO₂ removed from atmosphere each year* (kg)

Elm (<i>Ulmus americana</i>)	123.0
Ash (<i>Fraxinus sp.</i>)	103.9
Trembling Aspen (<i>Populus tremuloides</i>)	65.3
Balsam Poplar (<i>Populus balsamifera</i>)	63.5
White Spruce (<i>Picea glauca</i>)	55.5
Manitoba Maple (<i>Acer negundo</i>)	54.3
Oak spp. (<i>Quercus sp.</i>)	42.2



* Based on an average amount of CO₂ removed over the life of a tree under good growing / site conditions.

Planting Trees for Climate Change

Trees are Cool!

Trees can be even more beneficial for climate change if you plant them close to your house. Not only will they continuously remove carbon dioxide from the air, they will also reduce energy needs by shading your home. Plant large, leafy species on the south side of your home for cooler summers. Create a winter windbreak of evergreen trees on the north side of your home. Using less home heating and cooling energy saves you money and ensures less CO₂ is produced. Planting a tree is one of the most important things you can do for the next generation.

The best time to plant a tree was twenty years ago. The second best time is now.

— Anonymous

Fort Whyte Centre's Carbon Bank

We are banking on our future - a future without the hardships of a changing climate. Planting trees is a great way to slow climate change because trees remove carbon dioxide from the atmosphere.

Fort Whyte Centre, with support from EcoAction 2000, the DeFehr Foundation and Domtar Inc., is planting trees for climate change! "Carbon bluffs" will be planted at both Fort Whyte and at the Transcona Community Bioreserve, balancing the Centre's greenhouse gas emissions. Fort Whyte's sources of greenhouse gases include: visitor and staff automobiles, bison, a gas barbecue and a gas fireplace. Fort Whyte staff and community volunteers will plant over 2,000 trees this year alone! Watch for a green ash carbon bluff at Fort Whyte Centre and a fruit orchard at the Transcona Community Bioreserve.

Where to Buy Native Trees

Jeffries Nurseries
Portage la Prairie,
MB
Ph. (204) 857 5288
Fax. (204) 857-2877

**Penndale Nursery
& Garden Center**
Hazelridge Road
in Birds Hill Ph.
(204) 222-0380

**Schrimer's Home and Garden
Showplace**
1505 Molson in North
Kildonan Ph. (204) 668-8357

**Shelmerdine Nursery &
Garden Center**
7800 Roblin Blvd. in
Headingly
Ph. (204) 895-7203

**St. Mary's Nursery & Garden
Center Ltd.**
2901 St. Mary's Road in St. Vital
Ph. (204) 255-7353



Three Cheers for Trees!

One large tree can provide a day's oxygen for up to four people

One large tree can lift up to 400 litres of water out of the ground and into the air each day

One tree can absorb almost 10 kg of carbon dioxide each day

Trees intercept rainfall and reduce run-off - consider reforesting your riverbank

Trees take root in our lives every day - our houses, brooms, mops, baseball bats, doors, and furniture are all made of wood!

Plant A Tree for Climate Change!

continued



- 1 Dig a hole twice as wide as the tree's root ball and 2 inches deeper than the root ball.
- 2 If using potted trees, be gentle but firm when removing the container. Lay the tree on its side and tap the container until the root ball is loosened from the sides and bottom.

- 3 Orient your tree! Use evergreens as wind breaks - place them on the north-west side of your house. Use leafy trees as shade trees - plant them on the south, east and west sides of your house.

- 4 Once the tree is in the hole, stand back and make sure it's standing straight. Backfill with soil firmly under and around the root ball. Your tree should now sit 2 inches deeper than the surrounding soil.



- 5 Using your heel to press down firmly to collapse any large air pockets in the soil. This will help stabilize the tree in the hole. Don't wait until the planting is finished; press down every few shovels of soil.

- 6 Get it wet! By planting 2 inches deeper, you have created a well to collect and hold water. After planting, water thoroughly.

- 7 Stake the tree if exposed to wind. Plan to remove stakes as soon as the tree can support itself (in about two years).

- 8 To keep your tree happy and healthy, cover planting area with 6 inches of compost or mulch. This will also slow the growth of weeds and trap precious moisture.

