

PLANTING TREES, HEDGEROWS, SHELTERBELTS

Establishing and maintaining hedgerows and shelterbelts by planting new trees or conserving existing trees or shrubs will naturally protect soil, improve air and water quality, enhance wildlife habitat, and beautify the landscape. As a natural barrier to wind flow, they can have positive effects on crop production by moderating plant water use, reducing physical damage, changing air and soil temperature, as well as impacting CO₂ levels and relative humidity. Shelterbelts and hedgerows can be created by planting adapted species of trees or shrubs, or in some cases, allowing natural plant communities to establish by protecting selected areas from grazing cattle or cropping.

Implementation Tips

- Conserve existing shelterbelts.
- Conduct a site assessment to determine the site conditions and characteristics and determine what your goals are (e.g., providing habitat to native species, healing water cycles).
- Determine the high waterline (on average in the springtime) and then plant above this line.
- Examine the above ground competition from weeds and implement measures to protect seedlings.
- Leave a 5-metre buffer between the edge of the trees and where the cropland starts to reduce impacts of drift on seedlings.
- Consult an agroforestry or woodlot extension advisor to receive assistance with planting project design, implementation, tree health assessments, restoration planning and maintenance of forested areas.

“In the 1960s, my parents started planting maple trees along our drive, and it's just kept going from there. We're up to a couple acres of trees now, and three kilometres of walking trails which we keep open to the community. Now the trees, they do take a bit of maintenance, but that's how we support biodiversity and it creates new habitat in our area. We, us, the farm, the family, we're all part of a larger system. The farm isn't separate from our environment. When we support it today, it supports us tomorrow.”

— Holger, a dairy farmer in British Columbia

Benefits



Carbon sequestration



Increased resiliency to the effects of climate change



Improved soil health



Enhanced biodiversity



Estimated return on investment
Medium



On-farm emission mitigation potential +

Resources

- **Webpage:** Tree Planting Guide, Tree Canada (dfc-plc.info/PTHS1)
- **Webpage:** Plant trees on farmland, Conservation Evidence (dfc-plc.info/PTHS2)
- **Guide:** Shelterbelts, Agriculture and Agri-Food Canada (dfc-plc.info/PTHS3)
- **Research Study:** Drever, C.R., Cook-Patton, S.C., Akhter, F., Badiou, P.H., Chmura, G.L., Davidson, S.J., Desjardins, R.L., Dyk, A., Fargione, J.E., Fellows, M., Filewod, B., Hessing-Lewis, M., Jayasundara, S., Keeton, W.S., Kroeger, T., Lark, T.J., Le, E., Leavitt, S.M., LeClerc, M.-E., Lemprière, T.C., Metsaranta, J., McConkey, B., Neilson, E., St-Laurent, G.P., Puric-Mladenovic, D., Rodrigue, S., Soolanayakanahally, R.Y., Spawn, S.A., Strack, M., Smyth, C., Thevathasan, N., Voicu, M., Williams, C.A., Woodbury, P.B., Worth, D.E., Xu, Z., Yeo, S., Kurz, W.A., 2021. Natural climate solutions for Canada. Science Advances 7, eabd6034. (dfc-plc.info/PTHS4)