

Best Management practices



Growing for a better future.

AGROFORESTRY and SHELTERBELTS

One best management practice for reducing global greenhouse gas levels brings together agriculture and forestry. This is called agroforestry - the practise of growing forest and agricultural products on the same area at the same time.

Trees planted on agricultural land are a clear example of afforestation - that is, the planting of trees on land which was not previously forested. This mainly includes trees planted for shelterbelts and wildlife habitat, in riparian areas, and as tree plantations. As such, trees qualify under the Kyoto Protocol as a recognized carbon offset.

What is a shelterbelt?

Shelterbelts are a row or rows of trees and groundcover shrubs planted on agricultural land primarily for agronomic and/or environmental reasons.

How do shelterbelts reduce greenhouse gas emissions?

Shelterbelts reduce agriculture related greenhouse gas emissions by taking land out of annual crop production. They also sequester atmospheric carbon.

According to an Agriculture and Agri-Food Canada study, a mature white spruce shelterbelt one kilometre in length and properly spaced could sequester 80.0 tonnes of carbon. Similar Scots pine and Colorado spruce shelterbelts of the same length could contain 62.9 and 82.2 tonnes of carbon respectively.

What are other benefits of shelterbelts?

- Reduce winter heat loss from buildings by reducing wind velocities. Shelterbelts can reduce fuel use from 18 per cent to 25 per cent.
- Trees and shrubs also provide much needed weather protection for livestock.
- Shelterbelts protect orchard trees from the drying effects of winter and their ripening fruit from summer wind damage.
- Shelterbelts help reduce odours and airborne dust from concentrated livestock areas.
- Trees create an aesthetically pleasing landscape, provide a source of income and economic activity, and create settings for recreation.
- Trees in an agricultural setting provide greater plant diversity, making for a healthier ecosystem.
- Shelterbelt trees act as a barrier to prevent wind erosion & increase available moisture by trapping snow and decreasing evapo-transpiration.
- Trees provide diversity of habitat and cover for many species of wildlife. In riparian areas fish and other aquatic animals benefit from the role of trees in reducing erosion and filtering pollutants and agricultural runoff.



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