

SHELTERBELTS: A GROWING INVESTMENT

PLANTING AN INVESTMENT

Trees have been cleared in the past for ease of maneuvering farm equipment in fields and to maximize crop land for production. Today trees are recognized to have benefits to the agricultural landscape such as their nutrient capturing role in riparian areas and energy savings, and odour reductions from shelterbelts.

Anyone living in the Maritimes knows that the winters are long and unrelenting. Heat loss through windows, walls and cracks are a common problem in confinement buildings, which lead to significant dollars being thrown out the window. Shelterbelt benefits can truly be felt in these months, through reduced wind velocity, heat will stay in the building and money will stay in your pocket.

10 to 15 % decrease in heating costs

Trees planted strategically around farm buildings can save 10 to 15 % of heating costs in the winter. The efficiency of the shelterbelt needs to consider the height of the trees and the porosity, or density of the trees.

TO OBTAIN MAXIMUM BENEFITS

A three row model planted on plastic mulch is recommended to achieve the ideal porosity for building protection. The closest row should be planted 30 meters away from the westward side of a building and should consist of a mix of native shrubs and hardwoods. The next row should consist of a fast growing species such as poplar and the third row should be a row of evergreens, such as pine or spruce, all planted approximately 3 meters apart. This design will also significantly decrease cooling costs in the summer months up to 70%.

70 % decrease in cooling costs

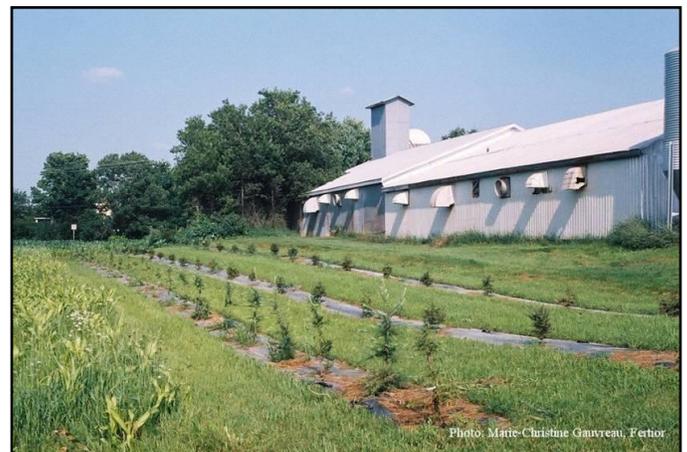


Photo: Marie-Christine Gauvreau, Fethor

Trees planted along a driveway in the winter will decrease snow removal costs by trapping the snow closest to the trees, therefore saving you money. Savings related to snow removal operations will vary according to height and porosity of the hedge. A 10 to 20 % savings will be seen after approximately 5 years for shelterbelts that include at least one row of evergreens or shrubs.



Snow accumulation closest to the shelterbelt

10 to 20 % decrease in snow removal costs



Photo: André Vézina, ITA caninus La Pocatière

Even snow distribution over a field

OTHER BENEFITS

- 70 to 90 % reduction in pesticide drift
- Reduced odour plume by 25%
- Reduced odour concentration by 33%
- Protection of livestock
- Reduced noise from nearby traffic
- Visual improvement of farmstead property
- Increased biodiversity
- Secondary farm income
- Reduced greenhouse gas emissions

SECONDARY FARM INCOME

Income from timber can be generated when the shelterbelt reaches 20 years of age for a design that includes poplars, and 40 years of age for those containing hardwoods. Timber from these designs can be worth up to \$40,000. This figure does not include branches that could be sold as firewood, which would be added income.

Incorporating fruit bearing and ornamental shrubs into the shelterbelt design can also generate added income to producers. For example; species such as American elder and service berry produce small berries that can be used in pies, jellies or to make wine.

CONCLUSION

The aesthetic value of farmstead shelterbelts are received almost immediately after planting.. Investing in the establishments of shelterbelts around farm properties will reap the benefits after 10-20 years primarily from savings in heating and cooling costs. A hedge made of 3 rows (poplars, evergreens, and hardwoods) will generate the most profit

Farmstead shelterbelts not only benefit the farmer, but also neighbors, wildlife and the environment.