

Planting hedgerows and windbreaks

Hedgerows, also called windbreaks or shelterbelts, once divided Island farms into a pattern of small fields. They provided shelter for livestock, protected houses and barns from winter winds and helped cool the buildings in the summer. The micro-climate in the fields was improved as the trees provided wind protection for the crops; the soil held heat and moisture and wind erosion was minimal. As farm mechanization increased the number of hedgerows decreased. Larger machines needed larger fields in which to manoeuvre. Soil erosion increased and important wildlife habitat corridors were lost as hedgerows were cut.

Many of the hedgerows which were not cut are old and collapsing. Old hedgerows can be revitalized and new hedgerows can be established. With good planning and the appropriate tree and shrub species a hedgerow can provide cover and food for birds and wildlife, be a source for fuelwood and lumber, provide privacy, reduce road noise and be beautiful year round, in addition to the other benefits that hedgerows give to the land and the buildings on it.

Why plant a hedgerow?

- increase wildlife habitat
- decrease soil erosion
- increase soil moisture and temperature
- provide protection to buildings and decrease heating bills
- trap snow to cover fields and not roads
- aesthetic value

An important factor to remember while designing and planting a hedgerow is that the effect will keep changing as the trees grow. A young hedgerow may cause snow to drop away from a driveway but as the trees mature snow may land directly on the driveway. Remember also, that the aim of a hedgerow is to reduce the velocity of the wind, letting it pass over and through the trees. A 50% density is ideal and can protect a field, orchard or building on the leeward side for a distance of up to ten to fifteen times the height of the trees. Planting shrubs with trees will create an even wall of foliage and

branches from the ground up to sieve the wind. Tall coniferous and deciduous tree, shrubs of medium height and low-growing plants such as wild rose and bayberry make a particularly effective combination.

Many species of trees and shrubs will grow well in hedgerows. Quick maturing species such as poplar, willow, red maple, and white birch can be planted with slower maturing white spruce, white ash and red oak. The fast growing species will provide protection for the other trees and shrubs and cover and food for birds. Once the slower maturing, longer living trees and shrubs are well established the pioneer species will begin to decline; they can be harvested for fuelwood or left to provide nesting sites for cavity-dwelling birds. If the trees and shrubs grow together and block too much wind, lower limbs can be pruned or some trees removed to keep the density between 40-60%.

A single row of trees and shrubs can be effective but plantings of two and three rows are better. Choose native species when designing a hedgerow as they are adapted to the local climactic changes, provide food and cover for the bird and mammal population, are readily available and are beautiful. Ideally, windbreaks should be planted at right angles to the prevailing winds. In the winter the winds are generally from the north and northwest but in the summer the winds come from the south and southwest. Another design consideration when enclosing a field is access. Angle planting at entrances will slow the wind. Access also allows cold air to leave a field. If possible leave an opening about 50 feet (15 m) wide at the low end of the field.

A sunny hint for new hedgerows: Newly established hedgerows can sometimes be hard to see, especially from tractor seats. Plant a row of sunflower seeds when planting the trees and shrubs in the spring. The sunflowers will grow quickly and with their large leaves and bright yellow flowers they are easy to see. They will provide some wind protection, make passer-bys smile and provide food for birds.



The best time to plant is early spring, especially if using bare root stock. If you are planning ahead, prepare the site in the fall - plowing or tilling, adding compost and mulching with bark, wood chips or eelgrass to provide winter cover, add organic material and keep weeds down. The earth will be easy to dig in spring and the mulch can be used in between rows to keep competition down.

If you can't prepare in the fall and just dig individual holes for the plantings in spring, mulch around each plant with several layers of newspaper topped with wood chips or bark. It is important to control vegetative competition until the trees and shrubs are well established. The space between the rows can be mowed when necessary.

To revitalize an old hedgerow, plant a single or double row of trees and shrubs 15 feet (4 m) from existing trees, on the most protected and sunniest side possible. Do not plant between the existing trees unless there are large gaps. When the new trees are well established remove the old trees. Plant new trees and shrubs in the old line.

A word of caution: Old hedgerow trees may have wire fencing imbedded in them. They are often rotten in the middle and can be dangerous to remove.

The following sample plantings demonstrate some possible planting arrangements using native species, angled access and a spacing which allows easy maintenance.

Keys to windbreak plants

(use any combination of species from appropriate categories)

Coniferous trees

White spruce
Black spruce
Red pine

Low shrubs

Red-osier dogwood
Bayberry
Wild rose
Sweetfern

Deciduous trees

Red oak
White birch
Red maple
White ash
Pin cherry
Apple

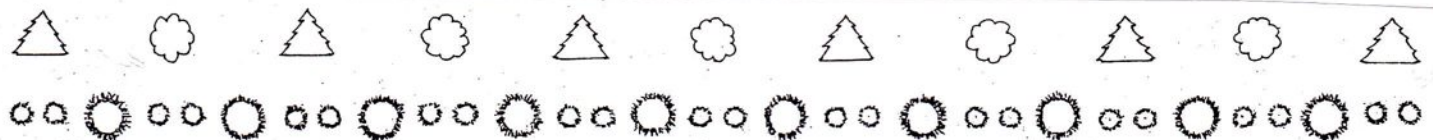
Tall shrubs

Mountain ash
Serviceberry
Hawthorn
Wild raisin
Choke cherry
Willow
Red-berried elder
Common elder
Alder

SINGLE ROW WINDBREAK: Scale 1" = 15' (2.5cm = 4.6m). Each plant is 7.5' (2.3m) apart.



DOUBLE ROW WINDBREAK: Scale 1" = 15' (2.5cm = 4.6m). Each tree is 15' (4.6m) apart. The tall shrubs are planted at the same spacing, while the low shrubs are 3' (.9m) apart. Leave 8' (2.4m) between the rows.



TRIPLE ROW WINDBREAK: Scale 1" = 15' (2.5cm = 4.6m). Spacing is 15' (4.6m) within rows and 10' (3m) between rows. The entrance road is angled to give more wind protection for the field.

