

News Article

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Consider installing a windbreak

If you live in the country, you know what a cold winter wind buffeting the house feels like. This fall, consider installing a windbreak.

Purdue Extension publication FNR-38-W, *Tree Windbreaks for Farms and Homes*, states that evergreen windbreaks can block up to 75 percent of the winter wind around the home, resulting in a reduction in winter heating costs up to 15 to 25 percent. Windbreaks can make the difference between the presence or absence of wildlife in open areas lacking cover. Adding shrubs can provide food for wildlife and an attractive transitional feature. Additional benefits include visual screening for increased privacy, shelter for livestock, and protection of other farm buildings.

Multiple rows of trees and/or shrubs may constitute a windbreak. Ideally, a farm or homestead windbreak should be composed of at least two rows of conifers and one row each of tall deciduous trees, tall shrubs, and short shrubs. The windbreak should be planted perpendicular to the prevailing winter wind, placed at a distance of 2-5 times the height of the windbreak from the area to be protected. Most tall-growing species of trees vary from approximately 20 to 50 feet at 20 years of age, and eventually reach a height of 50 to 80 feet.

Common conifer (cone-bearing) species used in windbreaks include white pine, red pine, Northern white-cedar, Norway spruce, Austrian pine, blue spruce, and white fir. Each species has its own advantages and disadvantages. For example, white pine will probably be the tallest of all conifer species at twenty years of age (26-35 feet tall), but it is very sensitive to salt (from road de-icing salts) and thrives best in well-drained to moist soils. Red pine has the longest needles of any species mentioned, needs slightly drier soils than white pine, and is sensitive to salts. Austrian pine has fairly long needles, but is very susceptible to fungal diseases. Blue spruce is very tolerant of salt, but lacks longer needles. Norway spruce and white fir are moderately tolerant to salt, but also lack longer needles. Northern white-cedar is sensitive to salt and prefers slightly wetter conditions than most other species. The bottom line – do your homework beforehand so that you can choose the right trees for the location they will be growing in. Selecting more than one species of tree may help you avoid future disasters from diseases or insects that are host-specific: all will not be lost.

The location of the windbreak is not just determined by prevailing winds and the space to buildings. Consider power lines, road visibility, snow drift patterns (e.g. windbreak should be at least 100 feet from a driveway), buried power lines, septic absorption fields, and other uses of land that may conflict with the windbreak.

Spacing is another important consideration. In-row spacing for most species is from 8 to 16 feet, with a between-row spacing of 12-20 feet. Twin-row high density spacing should have a between-row spacing of 4-12 feet. Each row should have trees planted so that they align with the center open space of the prior row.

Non-conifer species provide other benefits. Wildlife can benefit from fruit or nut trees that provide food, and shrubs may provide additional shelter.

Protected from the wind, a small orchard, nursery or garden may be possible inside the windbreak.

Maintenance of the windbreak will involve watering in dry periods, monitoring for pests, excluding livestock and grazing deer, and limiting competing vegetation.

For more information, find Purdue Extension publications FNR-38, "Tree Windbreaks for Farms and Homes," at <https://ag.purdue.edu/fnr/Shared%20Documents/Tree%20Windbreaks.pdf>. This article contains excerpts from the publication. Similar publications can be found at Purdue Extension's Education Store, <https://mdc.itap.purdue.edu/>.

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