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Plant Trees for Windbreaks and Visual Screens

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A well designed and installed windbreak can improve privacy, reduce energy costs to heat a home, and increase wildlife usage of an area. When designing a windbreak the purpose and desired height need to be taken into consideration.

If you want a short, 10-12 foot tall visual screen you may want to consider shrubs instead of trees. A single row of large shrubs will grow taller than a person in a car can see over and will take up less space than multiple rows of trees. There are many

varieties of shrubs that flower or produce berries for wildlife. When planting shrubs, make sure to plant native species that will not become invasive like autumn olive has. It is necessary to take into account the mature height of the species being planted. If you are planting a species that reaches 80 feet in height at maturity it is not a good idea to plant them under a power line. Also take into account the width of the tree or shrub at maturity. Roots and branches can be destructive to foundations or siding on buildings.

To reduce winter heating costs or provide shelter for livestock, a larger and deeper windbreak is desired—3-5 rows deep (or more). Choose a species that retains its lower branches well and is relatively free of insects and diseases. Native species tend to be much more resistant to our insects and diseases than imported species like blue spruce. In an ideal windbreak the trees retain their lower branches, so do not plant trees too close together. Planting space for windbreaks is often 10-12 feet apart instead of the 8x8 spacing for timber production. A wider spacing allows the trees to hang onto their lower branches longer and will create a shorter stouter tree that blocks the wind better.

A very critical step in establishing a windbreak is site preparation. Plantings in sod have a very low success rate. Grass is much more effective at removing water from the soil than tree seedlings are. To get trees established they need freedom from competition, whether it is done by tillage or herbicides. Mowing does nothing for competition control; it stimulates root growth of grasses and actually increases competition for moisture. Prepare the site before planting and maintain vegetation control for several years to keep competition at a minimum and growth at a maximum. Vegetation control after planting can be done with tillage if the rows are planted in straight lines, but it is still difficult to till close to the seedling without damaging the seedling or the roots. Herbicides are effective but you must take care not to apply any on the seedling or yourself. Another option is planting in a furrow. Removing the sod can provide up to two years of vegetation control. Planting in a furrow is effective for conifers because they tend to need less fertility to grow, but is not recommended for hardwood seedlings. The disadvantage of planting in a furrow is that mice and small rodents may use the furrows as runways and they tend to eat the tender bark on the young seedlings.



Additional information:

USDA-NRCS information

<http://www.nj.nrcs.usda.gov/technical/ConservationChoices/Windbreak.html>

Colorado State University Extension – Windbreak Planting and Design

<http://www.coopext.colostate.edu/Adams/sa/windbreak>

Benefits of landscaping around your home

<http://blog.tomlinsonbomberger.com/index.php/2011/04/04/made-in-the-shade/>