



Virginia Green Industry Council

Saving Energy with Plants

For Immediate Use

Contact: Virginia Green Industry Council

540-382-0943

Electronic Version:

www.viriniagreen.org

Homeowners who want to save money on their utility bills can use strategically placed trees and shrubs to reduce heating costs in the winters and cooling bills in the summer. By creating an energy-saving mini climate, homeowners can save money and energy and enhance the value of their property, according to Lin Diacont, President of the Virginia Green Industry Council.

Shade trees are among nature's most efficient climate controllers. In the summer, their big leafy umbrellas provide a cooling shade in or around a house. They also give off cooling vapor through transpiration. In winter, with their leaves gone, the trees allow the warming rays of the sun to come through. Shade trees planted on the east and south sides of a house are the most effective because they block out the hot rays as the sun passes overhead in the summer.

Evergreen vines, such as English ivy, are effective energy savers. When planted on the north wall of a house, their persistent foliage deflects the wind and their stems act as insulation.

A good windbreak of evergreens is effective in reducing wind velocity and heat loss from homes. When the house is sheltered on three sides, leaving the south side exposed, fuel savings can run as high as 30percent, according to experiments by the Lake State Forest Experimental Station in Nebraska.

Maximum wind reduction occurs at a distance of four to six times the height of the windbreak. So plantings should be installed at this distance from the house. Evergreen trees are the most effective. Choose a rapid-growing species which at maturity will reach from one to one-and-half times the height of the house. A 20-foot house would benefit most from a hedge of tall evergreens located 80 to 120 feet from the house on the north and east sides. A single row of trees will act as a windbreak, but a double or triple row is more effective.

Plantings along the foundation of the house, not only look beautiful, but add extra insulation against chilling winds in winter and help reduce solar radiation at windows during the summer. Dense shrubs, such as arborvitae, hemlock or spruce, when planted close to the house will affect its outside surface temperature by blocking the wind, creating shade and providing an insulating dead air space between the shrub and the house.

When planning the foundation plantings, select plants that enhance the façade of the house rather than overwhelm it. Consider the mature height and spread of the plants you choose for this purpose and leave enough room for them to grow naturally. Avoid framing windows with tall shrubs because they will make your house look smaller. The corners of the house often have winds higher than along the sides. Place groups of plants there and extend them around the house to give the feeling of unity to your plan. Foundation planting can be counted in energy savings as well as beauty.

Smart planting and energy-saving measures can help today's homeowner create his own energy-saving mini climate. That means the furnace and the air conditioner are not working so hard and that means a lot to the family budget.

Go to our consumer website for additional gardening information at www.VirginiaGardening.com

The Virginia Green Industry Council is the voice of the horticulture industry in the Commonwealth and is dedicated to enhancing the beauty of the state's environment, the well-being of our citizens, improving our state's economy, and improving the health and wellness for everyone in Virginia. The Council is made up of providers and consumers of horticultural products and services. The Council works to provide public and industry education, environmental guidelines and other information that will keep Virginia green and growing. For more information, visit www.viriniagreen.org. 540-382-0943 FAX: 540-382-2716

E-mail:info@viriniagreen.org

Virginia Green Industry Council
383 Coal Hollow Rd
Christiansburg, VA 24073-6721