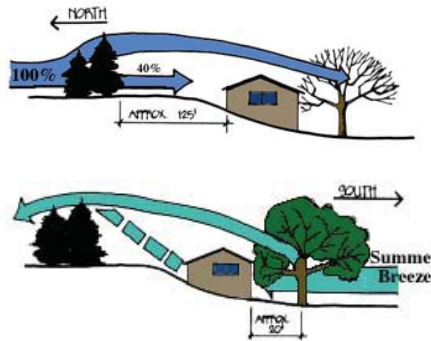


Landscaping for Energy Conservation - Part II

Energy conservation is an important environmental and economic issue. Global warming, the greenhouse effect and rising energy costs are placing increased demands on the environment. The use of Earth-Kind landscaping principles and practices can help reduce energy demand and lower utility bills.

Winter winds in Texas usually blow from the north or northwest and accelerate the rate of air exchange between a house and the outdoor environment. Although living windbreaks have been utilized for many years, their value has increased with the advent of higher fuel costs. Savings of up to 23 percent have been recorded when comparing completely exposed homes and those landscaped to minimize air infiltration. Conversely, summer winds normally blow from the south or southwest with generally positive effects on human comfort. Tall trees from the south and west can reduce the temperature while allowing breeze to pass beneath and through the foliage canopy.



Planning Windbreaks:

Windbreaks obstruct and redirect the flow of wind. As wind strikes an obstruction it can move over, around or through it. The extent of protection on the leeward side is related to the height and length of the windbreak. Impenetrable windbreaks create a strong vacuum on the protected or leeward side which reduces the protection. Windbreaks composed of living plants allow some of the wind to penetrate which makes them more effective. The effective zone of protection for a living windbreak is approximately thirty times its height although maximum protection occurs in a range of 5 to 7 times the height of the planting. Therefore, if planning a windbreak 25 feet tall, it should be located 125 to 175 feet (5 to 7 times 25 feet) from the house to be most effective.



Earth Kind uses research-proven techniques to provide maximum gardening and landscape enjoyment while preserving and protecting our environment.

The objective of Earth Kind is to combine the best of organic and traditional gardening and landscaping principles to create a new horticultural system based on real-world effectiveness and environmental responsibility.

The principal goals of Earth Kind include:

- Water conservation
- The safe use and handling of fertilizers & pesticides
- Reduction of yard wastes entering urban landfills

As your interest and knowledge in these areas grows you will have an increased awareness of the many programs, practices and activities that are Earth Kind. Working together we can make a difference in conserving and protecting our valuable natural resources.

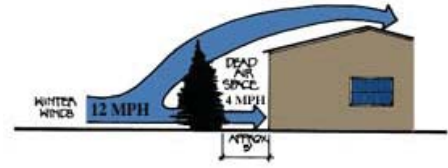
For more information see our Web site:

EarthKind.tamu.edu

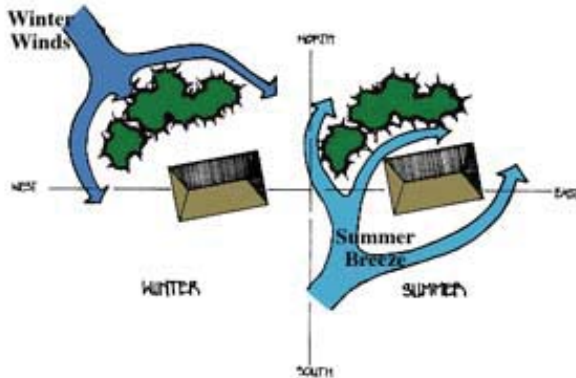


The following criteria are helpful in planning an effective windbreak:

1. The optimum foliage density for the windward side is about 60 percent.
2. Windbreaks are most effective when they extend to the ground.
3. The width of the planting is important as it relates to penetrability. For most evergreen plants, two or three rows are sufficient but if deciduous materials are being used, four or five rows may be necessary. Rows should be staggered.
4. Windbreaks work most efficiently when the length is 11.5 times greater than the mature width.
5. The height of species within the width of the windbreak should be varied to create rough windbreak edges.



Fall, late winter and early spring are ideal planting times since adequate moisture and cool weather can promote root growth before hot dry weather. Mulching the newly set out plants helps prevent excess moisture loss and heat gain.



Other Types of Windbreaks:

In addition to traditional windbreaks, shrubs can also be used closer to the home for winter protection. This is more practical for small areas and subdivision lots where space does not allow the use of conventional windbreaks. For this type of protection, dense evergreen plants are most appropriate. They should be planted close enough to form a solid wall and far enough away from the house (about 4 to 5 feet minimum) to create a dead air space. This relatively still or dead air has much less cooling power than moving air which can decrease the loss of heat through the walls. Still another way to moderate the temperature inside the home is to use rows of shrubs on the northwest side to protect it from cold winter winds as well as to direct summer breezes around it.

A well planned and installed windbreak can enhance home and community beautification and contribute to increased real estate values. In addition, these Earth-Kind landscaping practices offer one of the most practical methods of reducing energy consumption while preserving and protecting the environment in which we live

Visit the Earth Kind Web site for more ways to preserve and protect the environment...



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