

# Nature's Air Conditioners

If you have ever escaped from blazing hot sun in a shady spot under a tree, you know how these natural air conditioners can make you feel more comfortable. A mature shade tree can block up to 90 percent of solar radiation, which could translate to a significant reduction in your home cooling cost. A Pennsylvania study found that air conditioning needs could be reduced by up to 75 percent by shading a house with trees!

Computer models devised by the U.S. Department of Energy predict that the proper placement of as few as three shade trees will save an average household \$100-\$250 in energy costs each year – and that study was done before energy costs soared!

## **Reduce energy use**

With the increased costs of using fossil fuels for heating and cooling our buildings, it only makes good sense to take advantage of the following principles.

“Plant deciduous trees on the south and west sides of a building,” advises Tchukki Andersen, staff arborist with the Tree Care Industry Association. “Those are the sides where the sun’s rays are most intense. Since deciduous trees lose their leaves in winter, they offer shade during summer but permit the winter sun to provide warmth,” adds Andersen. “Where there isn’t room for trees, shrubs and vines can provide similar benefits.”

Deciduous trees with high, spreading crowns can be planted to the south of your home to provide maximum summertime roof shading. Trees with crowns lower to the ground are more appropriate to the west, where shade is needed from lower afternoon sun angles. Trees should not be planted on the southern sides of homes in cold climates because the branches of these trees will block some winter sun.

“Although a slow-growing tree may require many years of growth before it shades your roof, it will generally live longer than a fast-growing tree,” notes Andersen. Also, because slow-growing trees often have deeper roots and stronger branches, they are less prone to fail during windstorms or heavy snowstorms. Slow-growing trees can also be more drought resistant than fast-growing trees.

Trees, shrubs and groundcover plants can also shade the ground and pavement around the home. This reduces heat radiation and cools the air before it reaches your home’s walls and windows. Use a large bush or row of shrubs to shade a patio or driveway. Plant a hedge to shade a sidewalk. Build a trellis for climbing vines to shade a patio area.

Shrubs planted close to the house will fill in rapidly and begin shading walls and windows within a few years. However, avoid allowing dense foliage to grow immediately next to a home where wetness or continual humidity is a problem. Well-landscaped homes in wet areas allow winds to flow around the home, keeping the home and its surrounding soil reasonably dry.

## **Enhance property values**

Beyond energy savings and beauty, homeowners who take care of their trees and keep manicured yards find the value of their properties increase. A research study at Clemson University lists maintaining beautiful landscaping as a cost-efficient way to increase the value of a home. In a comparison of house prices to house characteristics, location and landscape quality, the study showed houses that obtained an “excellent” landscaping rating from a local landscaping professional could expect to sell at a price 6 to 7 percent higher than equivalent houses with a “good” landscaping rating. Improving landscaping from “average” to “good” resulted in a home premium about 5 percent.

## **What can you do?**

For a green household landscape audit, contact the Tree Care Industry Association (TCIA), a 71-year-old public and professional resource on trees and arboriculture. It has more than 2,000 member companies who recognize stringent safety and performance standards and who are required to carry liability insurance. TCIA also has the nation’s only Accreditation program that helps consumers find tree care companies that have been inspected and accredited based on: adherence to industry standards for quality and safety; maintenance of trained, professional staff; and dedication to ethics and quality in business practices. An easy way to find a tree care service provider in your area is to use the “Locate Your Local TCIA Member Companies” program. You can use this service by calling 1-800-733-2622 or by doing a ZIP code search at [www.treecaretips.org](http://www.treecaretips.org).

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