

## Shade Trees Help Cool Landscapes

*Texas A&M AgriLife Extension Service — Galveston County Office*



PHOTO CREDIT: Dr. William M. Johnson

**Summer is a fun season to enjoy time outside with friends and family—provided you have sufficient protection from the sun. Shade trees act as giant sun blockers to help humans stay cool and comfortable in the landscape as well as reducing air-conditioning costs.**

At this intensely hot time of year, I like to remind people how important shade trees are in our landscapes. Even more, the hot summer months are the best time to determine where additional shade is needed.

Most of us know energy bills soar right along with the temperatures. But shade trees in the land-

scape can help us keep cooler while lowering utility bills. And the shade provided by trees often is the only thing that makes it possible to sit on a patio or a deck during the day.

Shade trees play an important part in the concept of sustainable landscaping. Trees that shade the house during the

summer can lower air conditioning bills by blocking the sun from the windows, exterior walls or roof.

Air conditioners cooling a fully shaded house have been shown to work only half as much as those in a house which has its walls and roof exposed to the sun. Other research reports show shade trees



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will reduce heat gains by 40 percent to 80 percent, depending upon their placement and density. That means even a sparse shade tree may be a better energy saver than an interior curtain.

Deciduous trees (those that drop their leaves during the winter) generally are the best choices. These trees let the sun shine on the house during the winter when the sun's added warmth is welcome. Then they provide shade during the summer when it is needed.

The location of your shade trees is very important in how well they will help reduce energy consumption. Trees should be planted on the southwestern and western sides of the house to be most effective. Trees in those locations will shade the house from the most intense sun during the hottest part of the day. Planting trees to the south and east also will help shade the house.

Of course, this doesn't mean you should completely surround your home in a forest of trees. People frequently plant too many trees on their property – not realizing how large they will become later on.

Trees also need to be planted the proper distance from the house, and away from concrete-surfaced areas. Although house slabs generally are not affected, thinner concrete surfaces, such as patios, sidewalks and driveways, can be damaged by roots from trees planted too close. The recommended distances generally are related to the mature size of the tree. Larger trees, such as oaks, should be plant-

ed farther away from sidewalks, driveways and the house than smaller trees like crape myrtles or yaupon hollies. As with all big trees, plant well away from your house, approximately half the width of your tree's mature canopy.

In addition to shading your home, decide on other areas where shade is necessary or desirable. Outdoor living areas are virtually unusable in Texas Gulf Coast landscapes during the summer without some sort of shade. Properly planted trees can provide that shade. Choose small-growing trees for planting close to patios, since they are more in scale with the location and are less likely to damage surfacing materials.

When landscaping for energy conservation, deciding on the right placement, number and type of trees requires careful planning, but you have plenty of time to think about it. Although now is the time to make decisions on where shade is needed and where to plant the trees, don't forget the ideal tree planting season in Texas is from November through February.

### Gardening in the Heat

Speaking of dealing with high temperatures, weekend gardeners often are more accustomed to air-conditioned homes and offices than the heat outside. So each year about this time I make it a point to caution gardeners about working in the heat.

High temperatures combined with exceptionally high humidity make summer conditions difficult to endure when working outside. The most stressful time of the year for us and our gardens runs from June through September, and it does take its toll on us as well as our plants.

Gardening outside in especially hot weather also stress humans. As sweat is lost by the body, dehydration occurs. This can cause headaches, weakness, nausea and sometimes even leads to heat stroke. Gardeners working outside in hot weather may lose up to two quarts of water each hour.

To prevent dehydration, drink before, during and after working outside. It is especially important for the body to have a good storehouse of fluids well before the start of outdoor gardening activities. Drink before you're thirsty and drink cold liquids, because they are absorbed by the body faster. Drink water or sports drinks, or if you choose other liquids, make sure they contain only a small amount of sugar, since it slows down liquid absorption by the body. Avoid beverages containing alcohol and caffeine.

Another tip is to work in your garden in the early morning or late afternoon when it is cooler.

Also, wear a hat and loose, comfortable clothing and use sunscreen. Take frequent breaks, and try not to stay outside in the heat for extended periods.

