Conserving Energy With Plants

A well designed tree transplanting program can do a great deal to add character to a golf course. Properly placed, trees and shrubs can direct traffic flow, insulate the course from surrounding homes, and provide eye-pleasing vistas, not to mention welcome shade for weary golfers.

However, a good planting program should not stop with the golf course. Trees and shrubs placed strategically around course buildings such as the clubhouse and maintenance shed not only make these areas more attractive, they also can result in a considerable energy savings.

Large deciduous shade trees on the southern, southwestern and western sides of a building will shade it during the hot summer months while allowing full penetration of the winter sun. A recent study showed that an 8°F. difference between shaded and unshaded wall surfaces was equivalent to a 30 percent increase in insulation value to the shaded wall. Recommended trees are oaks, lindens or ash planted approximately 15' apart and 15' from your building.

Deciduous trees can also help cool outdoor activity areas such as patios and picnic areas. They should be planted on the southern, southwestern and western sides of these areas to provide maximum effect. Deciduous vines, which also lose their leaves in winter, will also help cool a brick or masonry building when planted on its southern or western walls. However, vines can contribute to the decaying process in wood, so wooden buildings should be shaded with vines trained to climb a trellis.

A double row of evergreen trees planted on the north and northwest side of a building can help shield it from winter winds. Properly designed, a windbreak can reduce winter energy consumption by as much as 30 percent. Dense evergreen shrubs placed on the northern and western sides of a building can provide additional insulation.

Deciduous and evergreen trees also can give your air conditioning system a hand. Placed on the eastern, southern and western sides of the outdoor condenser, they can save as much as three percent in the system's efficiency simply by shading it. Trees and shrubs can be placed to act as a wind tunnel, channeling summer breezes into a building. However, plant masses should be designed to allow the natural downhill flow of cooler air, avoiding pools of cold air near your buildings in winter.