

Trees—An Integral Part of Golf Course Scene

James T. Snow

Agronomist, USGA Green Section

The value of trees to our landscapes cannot be overstated. Golf courses, particularly, benefit from the beauty projected by many native trees, especially when those trees are appropriately utilized on the course and properly maintained.

There are many considerations involved in developing a successful tree program. An overall plan must be created, which includes an inventory of trees present on the course, deciding on the tree species to be used for replacing old specimens and planting new areas, determining tree placement on the course, properly planting young trees and maintaining satisfactory health and appearance of older specimens. The importance of such a plan cannot be overemphasized. Continuity is essential when dealing with trees, which may live for 50 to 100 years

or more. Long range goals and objectives with regard to tree planting and maintenance can be met only by a solid long range plan.

Of the mistakes made in dealing with the various aspects of a tree planting and maintenance program, three stand out as being particularly widespread; tree selection, tree placement, and care and maintenance.

Selecting the Proper Trees

One of the most difficult parts of a tree planting program is deciding on the species of trees to be used. The starting point with such a problem is to determine the specific function of the tree which is to go into any particular location. Consider some of the many different functions which trees may serve on the golf course:

- Pure aesthetic appeal
- Strategic positioning
- Isolation of one area of the course from another
- Safety barrier

- Traffic control
- Framing a view
- Screening off unwanted views
- Protection of adjoining properties/saving errant shots
- Boundary definition
- Distance indication
- Target indication or definition
- Line of play definition
- Shade
- Barrier to vandalism and accidental damage
- Erosion control
- Wind control
- Wildlife refuge
- Edible fruit or nuts

As you review this list, it is plain enough to see that certain species would be better suited to some of these uses than would other species. For example, an evergreen border would produce a better year-round screen than would a border composed of deciduous trees. Also, a tree with a high, thin crown would be better for use near a green than would a tree with a low-branched, thick

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	Parts Per Million
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Cobalt	5.1
Copper	405.0
Mercury	4.8
Molybdenum	13.0

crown, which would block light penetration and air circulation around the green.

Following is a list of specific factors which should be considered when selecting trees for the landscape:

1) Hardiness and adaptability—Select species which are hardy in your climate zone and adaptable to the respective sections of the course, e.g. wet areas, exposed hillsides, infertile soil areas, etc.

2. Rooting habit—Many trees, such as certain pines, willows and maples, have extensive systems of surface feeding roots which rob the turf of moisture and nutrients. Remember to consider rooting habit when locating trees in close proximity to greens, tees and fairways.

3. Foliage type—There are evergreens and both large and small leaved deciduous types to choose from. Large leaves are sometimes difficult to deal with, from a litter and maintenance

standpoint. Many different colors, textures and sizes are available.

4. Fruiting characteristics—Interesting fruit can add seasonal color to the course, but it can also be a maintenance headache. For example, catalpa, osage orange, horse chestnut, apple, and certain pines and spruces are best kept in rough areas, if used at all.

5. Crown shape—There are many different crown shapes from which to choose, from the conical shaped little-leaf linden and pin oak to the irregular honey locust to the columnar types of Norway maple. The tall, columnar types are particularly well-suited for use as screens.

6. Foliage density and shade potential—Because heavy shade is detrimental to the growth of turfgrass, it is important to avoid planting trees with dense foliage too close to tees and greens. Norway maple, beech and certain oaks are notoriously heavy shade producers.

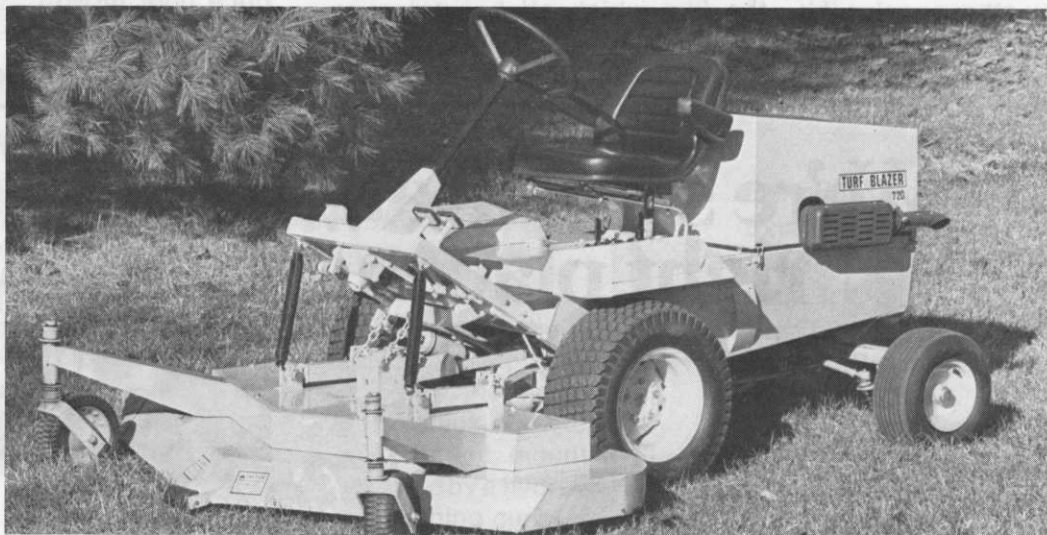
7. Insect and disease susceptibility—While no tree is completely immune to the ravages of insects and disease, avoid overusing species which are susceptible to many pests and diseases. The American elm is one obvious example. Others may include certain willows, poplars and sycamores.

8. Susceptibility to ice and storm damage—Commonly planted trees which are very susceptible to storm damage include red maple, silver maple, birch, ash, callery pear, poplar and willow. In general, trees with weak crotches, brittle wood, shallow roots and those infested with insects and disease are most likely to be damaged by ice, snow or wind.

9. Height—Consideration of mature height can be very important. Tall trees would be useful if planted for shade, visual screen or as strategical hazards, but would be a hindrance if they blocked a scenic view or interfered with play from the tee.

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10. **Longevity**—Among various trees, expected life spans differ dramatically. Certain oaks can live hundreds of years, while some poplars may last 20 years or less. If a planting is to be an important and permanent feature of the landscape, the use of trees with greater longevity would be desirable. Every golf course should plan ahead for the eventual loss of older specimens by planting young trees to take their place.

11. **Outstanding characteristics**—There are many aesthetic characteristics, in addition to flowering and fruiting habits, which may make a tree worthy of use on a golf course. Among these are fragrance, leaf shape or texture, fall color, bark texture or color, crown shape and branching habit.

Do not rely too heavily on just one or two species of trees for the backbone of your landscape plan. Golf courses planted to American elm trees many years ago have been devastated by Dutch elm disease. Others have had similar experiences with Norway maples because of the susceptibility to verticillium wilt. There is always the potential for this type of disaster with any other species if it is overplanted. You should use a variety of trees in the landscape.

Of course there are other good reasons not to plant just one or two kinds of trees. Think how much more beautiful and interesting any landscape is when it displays a variety of plants with different colors, textures, sizes, etc. Consider, for example, if 500 red maple trees were planted on the course one year, how they will grow, mature and decline all at the same time and leave the course at the end of the cycle much the way it was at the beginning.

This brings us to another point. How often has it been said, "We're getting a huge lot of fast-growing trees at a bargain price from Dead Leaf Nursery which is going out of business!" This is not to say you shouldn't take advantage of such a situation, just don't let this type of approach become the sole basis for your program. After all, the trees you plant today will affect the appearance of your golf course for the next 50 to 150 years! Fast-growing trees certainly have a place on many courses today, but when you recall a visit to a course well-known for its beautiful trees, it is usually the majestic specimens of oaks, beeches and the like which stick out in your mind. So be sure to include a certain percentage of the slower-

growing, perhaps more costly specimens in your plan. They will provide the real backbone for the future. And remember, not all "bargain trees" are bargains. They may be root bound or have some other problem which will inhibit proper growth and development.

Site Selection

Some knowledge of the trees you have selected is necessary in order to locate them in areas where they will prosper. As it is with turfgrasses, different trees are more adaptable to certain areas than others. For example, willows and red maples are particularly adaptable to wet areas on the course, while a tree like the red pine would not survive under these conditions. In addition to wetness, the growth of trees may differ according to other environmental factors such as soil texture, pH, availability of light, temperature extremes, exposure to winds, etc. As a plant reaches the limits of its cold hardiness, it needs a more favorable environment in which to grow properly. For example, when a flowering dogwood is planted on an exposed site in New England, it may not survive or else may produce poor growth. When planted in a protected area near other trees

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or buildings, however, it can be one of the finest ornamental plants.

One of the greatest mistakes in planting trees on the course and near each other is not taking into account the mature size of the plant. Trees can reach heights ranging from 15 to 200 feet and attain shapes from narrow upright to broad-spreading. Too often potentially large trees are located immediately adjacent to tees and greens, which means that some day these often used turf areas will be invaded by roots and shaded during much of the day. Turf-grasses cannot stand up to heavy play under these circumstances.

Just as often, trees are planted too closely to each other. Imagine what happens to specimens capable of growing 30 to 50 feet in width, when they are planted 5 to 10 feet apart! Close planting may be appropriate when the trees are to form a windbreak or screen, but when the specimens are to be developed to their best potential,

they should not be planted closer than their potential width. For example, if oak trees will be 50 feet wide when mature, they should be planted at least 50 feet apart. Trees should also be spaced so that maintenance equipment can easily pass between. Economically, close spacing means more trees will be needed initially and more money will be spent on maintenance in the future.

There are times, however, when it is desirable to overplant trees. For example, a dense planting of small trees may be needed to achieve a certain effect. Nevertheless, it must be recognized that thinning will be needed as they grow. Unfortunately, it is sometimes like pulling teeth to have even one tree removed from an overcrowded stand. If thinning is not done at the proper time, the appearance and health of all the trees will be in jeopardy.

THIS ARTICLE WILL BE CONTINUED NEXT MONTH WHEN IT WILL DISCUSS CONSIDERATIONS FOR USE OF TREES AROUND GREENS, TEES, FAIRWAYS AND ROUGHS. IT WILL ALSO COVER THE CARE AND MAINTENANCE REQUIRED OF A GOOD TREE PROGRAM.

At a banquet too much food was served and far too many long speeches were made. When the last speaker's turn came, the hour was late and he was weary. "I have been asked," he said, "to give an address and I shall beg the privilege of giving my own. It is 1440 Garden, and with your kind permission, I will go there at once."

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