

Plant and Site Considerations for Choosing Trees, Shrubs

By Bob Mugaas, Minnesota Extension Service



PART II Site Considerations*

The conditions of the planting site are as important as choosing the proper plant. Soil type and drainage, available water and sunlight, exposure to drying winds and other factors must be considered. Attempting to match the requirements of the plant to the site increases the survivability, performance, and longevity of the plant selected.

The first step in assessing the condition of the planting site is to examine the soil. Is it sandy and well drained? Is it moist with some organic material? Is it heavy clay and, therefore, wet and perhaps compacted? Construction practices such as cutting and filling, installation of underground utilities, and backfilling against foundations can create great diversity in soil structure. This variability can change drastically with depth and between planting locations on the same property.

Because plant roots require both moisture and oxygen for growth, soil drainage should be checked before planting. A poorly drained soil, high in moisture, but low in oxygen, prevents both proper root development and growth of beneficial soil micro-organisms that are responsible for decomposing organic matter and releasing plant nutrients.

To test for soil drainage, dig a hole 18 inches deep, fill it with water and let it stand overnight. If the water has not drained by morning, there is a drainage problem. (Do not test the drainage in this manner after heavy rainfall or before the ground has thawed in the spring.)

Soil pH is a measure of the acidity or alkalinity of a soil. A pH below 7 (neutral) would indicate an acid soil, and a pH above 7 indicates an alkaline soil. Many plants have an optimal range of pH; some are acid loving, and some may do best when the pH is near 7. Most trees thrive on a pH between 6.0 and 7.0. Soil

pH is raised by calcium carbonate or lime. Plant species that will tolerate a high pH should be considered for areas with buried concrete, near foundations, or sidewalks, etc. Plant species considered tolerant of high pH include: green ash, white ash, amur corktree, ginkgo, hackberry, honeylocust, and Russian olive. Evergreens perform best in slightly acidic conditions. There are some exceptions: arborvitae, ponderosa pine, Colorado blue spruce, Black Hills spruce, muhgo pine, and junipers can tolerate a wider pH range.

Water

The correct amount of water for plants is essential. Select plants that are tolerant of excess water for low areas where water may be standing or very close to the surface, or where a heavy clay soil exists. Standing water or a high table means low oxygen content in the soil. Therefore, trees and shrubs that can tolerate excessive moisture are often better suited to these poor sites. Trees that are able to tolerate moisture are: green ash, river birch, hackberry, swamp white oak, red maple, and Russian Olive. Drought tolerant trees can withstand extended periods with little water and are best suited for sandy soils. They include: green ash, amur corktree, ginkgo, hackberry, Kentucky coffeetree, and Russian olive. Drought tolerant shrubs include amur maple, barberry, caragana, honeysuckle, buffaloberry, spirea, and lilac.

Sunlight

Although some plants can tolerate low light conditions, most require full sun to maintain their vigor and attain their optimum performance. Deciduous trees considered to be more shade tolerant include: green ash, white ash, river birch, ironwood, Kentucky coffeetree, American linden, Norway maple, hackberry, red maple, and sugar maple. Evergreen plant materials tolerant of shade include Canada Hemlock and yews. Evergreens

tolerating a filtered shade situation include arborvitae, Balsam fir and Douglas fir.

Location

The location of the planting site in relation to other trees and objects such as buildings, fences, etc. will have a considerable influence on temperature and moisture conditions. Prevailing westerly winds will have a drying effect on non-protected sites. The south side of a building will be much warmer and drier than the north side. The warming effect of the sun on a cold winter day can cause injury to bark and may cause the tree trunk to split. For evergreens, this warming can cause water loss and growth activity resulting in needle damage when the temperature is again lowered. Plant hardiness can be greatly affected by the amount of protection provided by individual microclimates.

*Adapted from Minnesota Extension Service publication (AG-FO-3825) "Planting and Transplanting Trees and Shrubs" by Bert T. Swanson, James B. Calkins, Peter-Jon Rudquist and Steven Shimek.

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Because of hosting the U.S. Open Championship this summer, we are faced with some rather unique situations pertaining to resources and products we must have for a short period of time.

Part of the preparation of such an event involves additional landscaping and annual flower plantings over and above what we do normally. We will not be able to re-use all the plant material; we simply cannot accommodate over 10,000 annual plants.

Therefore, we are looking for interested parties that we can re-sell or barter these plants to. All plants are potted and will not have been taken out of the pots for our purposes. The pots will be available after June 17, 1991; most are in 4½" size.

We will be able to offer these annual plants well below wholesale market prices. Below is a sample plant list and approximate quantity:

White Nicotiana	2300	Dusty Miller	1500
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These 'Fringe Benefits' Give One Pause to Consider

Some stories need to be told. Some are difficult to tell, but, I want you to remember Artie, not this writer's poor attempt in the telling.

This summer I was standing near a golf course shop marking time until someone from the crew came by. An old, battered station wagon pulled in and stopped. The driver's door opened slowly, and a cane preceded a gimped-up leg out the door. A weary voice came next. It said to me, "Hey, Mac, how's it going?" The face cracked a grin, but because of a stroke, it smiled only from the right. It was Artie, a long-time crew member, retired, looking tired and looking old.

Lately I've run into a lot of "Arties." I'll bet you know them, too. They're the guys who worked on golf course crews. They were the stayers, faceless to the members, even though a lot of them worked at the same course all their working lives. Sometimes they stayed on the same job, doing the job well, and, well, mostly just staying. Over the years I often wondered why they stayed in the low-paying, dead-end jobs.

After Artie gets out of the car, we start sharing remember whens. I wonder why he stayed as we talk. He talks of the days when he cut straight lines on dew-covered greens, of early morning light and of the sun breaking through. He talks of the sun making rainbows through irrigation mist before it is folded into night.

Sometimes the Arties talk about the cycle of the day, sometimes about the cycle of the year, the overcoming of yesterday's winter night by sun-stirred crocus. They always talk about the spring and the smell of new-mown grass. They talk about this year's battle will be won. They talk of summer twilight and fall and falling leaves and crickets or some such thing. One more winter, one more spring. The cycle of the day, the cycle of the year are different than the cycle of life. Artie's life is in late December. He has no hope for another spring.

Artie tells me, "You know Mac, I really do miss the golf course. It's tough now, but I loved it." (He grins again, and again he grins only from the right.)

We finish our fond remembering whens. I say to Artie, "It's so great to have seen you again. How's life really treating you? His grin is gone. He is quiet. He looks at me; I look at the ground and make a feeble effort to fill his emptiness with more remember whens, cliches and a touch of Irish wit.

Artie rescues me at last from my monologue. He says, "Mac, would you give me a hand?" We walk over to his wagon and start taking empty, gallon milk jugs from the back. We take them over to the water spigot and fill them, then load them

back into his spent station wagon. He opens his door, gets in the car, pulls in his cane, rolls down the driver's window and says to me, "It's been real tough, Mac. I can't afford even, to get my pump at home fixed. It's been down for two weeks. You know, though, I still miss the golf course." He looks at me, I look back at the ground. Again, he rescues me; with a wave he pulls off and drives down the road.

I think I know why they stay at the job until the winter of their lives. They are bonded to the land. Bonded to cutting straight lines on dew-covered greens in the early morning light.

I wonder of members here who remember Artie. I wonder if Artie remembers them while reading their postcards from sunny climes, while digging through club trash for empty milk jugs and other small favors. I wonder if they remember Artie was the one who cut straight lines on dew-covered greens and could see rainbows in irrigation mist at twilight. I would tell them he drags a leg and smiles only from the right. And he drinks water from their empty milk jugs at night.

—Reprinted from *Virginia Turfgrass Newsletter*



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National News Notes

Texan Receives 1991 Leo Feser Award

The 1991 Leo Feser Award was presented to Gary Schinderle, CGCS, of Oakmont Country Club in Denton, Texas. The Leo Feser Award is presented annually to the author of the best article written by a GCSAA-member superintendent and published in *Golf Course Management* magazine.

Schinderle's prize-winning article, "Identifying And Correcting Severe Water Quality Problems," appeared in the May 1990 issue of *GCM*. In his story, Schinderle told how he watched the turfgrass at his newly constructed course sicken and die, and what he did to bring it back to life.

He said that the difficulties he had in trying to pinpoint the cause of his turf's decline prompted him to share his hard-earned expertise with fellow superintendents by submitting the article (his first) to *GCM*.

"I felt like I had to do something, like I had a responsibility," he said. "Writing an article like that for *GCM* takes a lot of time and work, but I wanted to do it because I felt I had information to share with other golf course superintendents who might find it interesting and useful.

"As for the award, I'm honored," Schinderle said after learning that he had won. "It means a lot to me to be recognized by my peers for having made a significant contribution to the profession."

Schinderle has been the superintendent at Oakmont since 1985. He spent the four years before that at Lakeridge Country Club in Lubbock, Texas. He joined GCSAA in 1975, the same year he received a bachelor's degree in ornamental horticulture from the University of Illinois at Champaign-Urbana.

The award is named in honor of Leo Feser, a pioneer golf course superintendent and a charter member of GCSAA.

Feser is credited with keeping the association's official publication alive during the Great Depression. For three years he wrote, edited, assembled and published each issue of the magazine from his home in Wayzata, Minn. He died in 1976.

3 Superintendents Honored For Distinguished Service

Dr. Noel Jackson, plant pathologist at the University of Rhode Island; W. Bruce Matthews, golf course architect, and Dr. Eliot C. Roberts, executive director of The Lawn Institute, were honored for their dedication and outstanding service to golf course superintendents and the golf community at the 62nd International Golf Course Conference and Show in Las Vegas.

Jackson, Matthews and Roberts were selected as recipients of the 1991 Distinguished Service Award. The selection was made by the board of directors of the Golf Course Superintendents Association of America (GCSAA), the organization that hosts the annual conference and show.

Jackson has been a turfgrass researcher and educator at the University of Rhode Island since 1965, when he moved to the United States from his native England. Jackson's research work and fungicide evaluations have contributed a wealth of information on turfgrass patch diseases. He has also lectured at and participated in turfgrass conferences, seminars and symposiums throughout the United States and in the United Kingdom, Canada and New Zealand.

Matthews has been a member of GCSAA for 56 years. In addition to serving as a golf course superintendent and building a distinguished career as a golf course architect, Matthews also has been active with turfgrass research at Michigan State University and Purdue University. He designed and owns Grand Haven (Mich.) Golf Club.

Before founding The Lawn Institute in Pleasant Hill, Tenn., Roberts spent 28 years as a turfgrass management teacher, researcher and administrator at universities in Massachusetts, Iowa, Florida and Rhode Island. Roberts will be retiring soon from his position as executive director of the institute.

In his eight years as executive director, he has traveled extensively to speak at seminars, conferences and meetings dealing with turfgrass and grounds management.

Hazard Communication Help Available

As the Occupational Safety and Health Administration (OSHA) steps up enforcement of the Hazard Communication Standard, golf course superintendents should become better educated on HazCom requirements.

Because the federal government maintains that employers, including golf courses, maintain a written hazard communication program and conduct training for their employees, help is available from OSHA.

There is an on-site safety and health program available in each state for employers who need help meeting HazCom requirements. The programs are funded by OSHA, but are completely separate from the inspection effort; OSHA says the administration will not cite violations turned up in the training process.

Superintendents might consider working with other superintendents and local chapters in the area to coordinate the trainings. For information about contacting your regional OSHA office, call the GCSAA Office of Government Relations at 800-472-7878 or 913-841-2240.



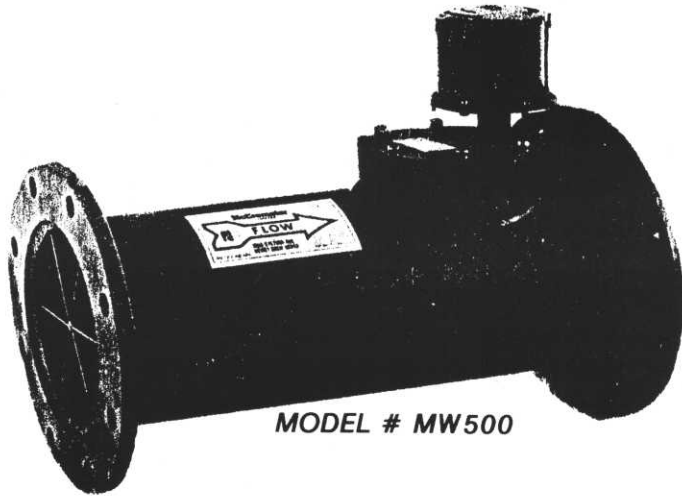
Brochure Examines Vital First Steps In Planning A Golf Course

Master Planning: The Vital First Steps in Golf Course Construction, a 12-page pamphlet which details all the steps involved in developing a golf facility, is now available from the American Society of Golf Course Architects.

The brochure covers topics such as building a golf course from scratch, remodeling an existing course and developing a construction schedule. It provides information on evaluating a golf course, locating a qualified architect and establishing a budget.

To receive a free copy, send a stamped, self-addressed envelope to The American Society of Golf Course Architects, 221 N. LaSalle St., Chicago, IL 60601.

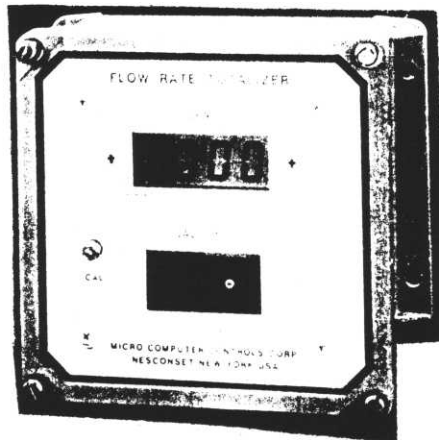
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EDITOR'S CORNER

By John Harris
The Lafayette Club



I played out my final "Ode to Winter" in March by partaking in the final MGCSA hockey competition. My first pair of hockey skates lifted my game to new heights. (I actually touched that round black thing.)

I would like to thank the associate members who brought these winter outings together. It gives superintendents a chance to relax as well as an opportunity to discuss the upcoming season over gourmet pizza.

* * * *

By now, some of our courses are open for play or very close to it. I hope the winter has been good to your facility. I always have felt that if our courses can come into the Spring with a minimum of winter kill, half the battle is over.

* * * *

1991 seems to be shaping up as the "Year of the Budget Crunch." If you have been asked by your committee to curb expenses, be sure to make them aware of areas you intend to cut or services less than the norm.

A detailed labor report can be of assistance in providing your committee with the necessary insight on where the labor goes and what would be acceptable or what member players can live without.

Make the decision unanimous, thereby alleviating any undo stress on yourself.

* * * *

The April meeting will be held on the 22nd at Owatonna Country Club. Weather permitting, we should have our first outing of the year. Hope to see you there.

—John Harris, Editor



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