



President's Message

LOW TECHNOLOGY ON THE GOLF COURSE

I've never been accused of being a Casper Milquetoast, but writing my thoughts on high technology will probably inspire someone to nominate me for the "Curmudgeon of the Year" award. Others may accuse me of crankiness and blurred vision. Some may even suggest I'm guilty of being old fashioned and crotchety. Whatever the case may be, I must proceed with some thoughts about the hottest topic around.

And it is hot. You cannot pick up a journal or a newspaper without reading two or three articles about high tech or biotech or computers. High tech confronts us at every turn. We now have word processors, and typewriters are rapidly becoming a thing of the past. Biotechnology and genetic engineering offer the promise of huge economic gains in agriculture by developing crops resistant to drought, insects, diseases and pollution. Chances seem good that plants will be developed that grow bigger and better fruits and vegetables, and ones that grow faster, mature quicker and that fertilize themselves.

High tech is seemingly everywhere in our lives. Computers are used in grocery stores and banks. They are used in the post office and on television — surely you've watched the new TV program on PBS called "Hi Tech Times." What a sign of the times! Computers are an integral part of higher education and research on college campuses, and now we

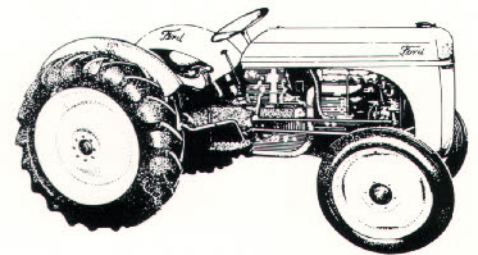
can even find them in grade schools. It seems the modus operandi is fast becoming "education as entertainment" in American schools. The list becomes endless.

The advanced state of technology is highly visible in our business, too. The GCSAA now offers seminars that give instruction in computer use. Those same computers are being used to operate irrigation systems, maintain inventories, assist with payroll and aid in the formidable recordkeeping our job now requires. Researchers are using high tech in their investigations. Plant pathologists are using high tech to help predict disease outbreaks on a golf course and guide fungicide applications. Plant breeders give hope to improved grass varieties on our golf courses. Their is little doubt that we are in the midst of the technology revolution in our profession.

I am not suggesting that most, if not all, of these developments are not good. They probably are. But as so often happens when a mind boggling array of anything is advanced at a break neck pace, not enough time is spent to reflect on the proper and best role it should play in our lives. I think this is particularly true of the high technology invasion in the past five years.

When anything goes wrong these days, it is quickly blamed on "the computer." Responsible actions seem less important, now that we have this convenient scapegoat. Increases in **word** processing have led to decreases in **thought** processing, and we are losing the importance of learning to correct errors of thinking in favor of correcting mistakes in transcribing. Kids need less modern math and more lessons in basic arithmetic. Likewise, they need fewer hours of computer time and more hours of instruction in English and composition. Classrooms should be filled with better teachers who are paid a fair wage, not robots or PC computers or mainframes. And wouldn't it be nice if the advanced state of technology in our telephone systems, which rivals higher mathematics in its complexity, could tell us who to call for repairs and service and to whom we send our monthly bill?

Similarly, I propose what we often need on our golf courses is a return to and a recapturing of low technology. We are, all too often, losing those abilities and attitudes and implements that make our profession an art or craft as well as a science. I most certainly do not want rethinking at the cost of proper use of high tech. Without progress and innovation, for example, my pumphouse would not be the efficient and effective unit it now is. Without invention and research I would be unable to use many of our newer machines, or would be struggling without sterol inhibiting fungicides. But neither do I feel we should abandon established practices from years ago or implements that have provided services for many years.

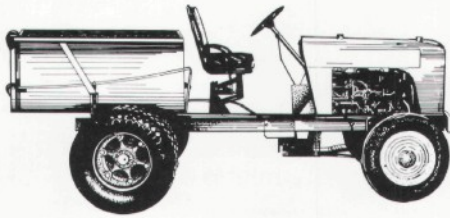


8N Ford — "The best little golf course tractor ever made."

The best little golf course tractor ever made went out of production in 1952 — the Ford 8N. We have one, and when employees have a choice between the 8N and a tractor that is 25 years newer, the 8N is selected every time. It is smaller, easy to operate and offers great visibility for the operator. And for a mechanic, there are few towing vehicles that are easier to service or repair. Young engineers working to improve these kinds of machines should learn some design principles from the Ford 8N. It is low technology at its best!

The first time I visited Bill Roberts and his maintenance facility at SENTRYWORLD I could see that Bill also appreciates low technology. As we walked the length of his fabulous shop we passed untold numbers of the latest equipment available for maintaining a golf course. Surprisingly, he had little to say about any of it and barely paused to comment on features or advantages or shortcomings. But he lit up like a Christmas tree and started a lengthy conversation when we reached the other end of the

building where several older TORO Series IV tractors were parked. His story was of how he acquired them and of the work done to overhaul, refurbish and bring them into service. They are among the most useful machines in his equipment inventory and are clearly his pride and joy! Right in the midst of high tech, no less! I also have a TORO Series IV tractor of WWII vintage, and no amount of money could buy it. Solid, multi-functional and low technology machines like it just aren't available anymore.



Toro Series IV Tractor

From time to time we become confused with what is low tech and what is high tech. One of the "latest" trends in our business is the hand mowing of putting greens. A dozen years ago, walking greens mowers were considered low, low technology when viewed with the new triplex riding greens mowers. Now, suddenly, the walking mower (which was low tech) is one of the newest innovations, sophistications and refinements in preparing a golf course for play! Score another point for low technology.

With the move back to walking greens mowers comes the thought of transporting them from green to green, and more low tech moves forward. One of the handiest methods I've seen for this task is the stone boat. It is of such low technology that we are able to design and build them right in our shop! And another implement that is nearly as simple and useful as a stone boat is the wheelbarrow. Yet, I've watched young employees load a Cushman truckster, move it 20 feet and struggle to dump the box. When I suggest "Why not go back to the shop and get a wheelbarrow?", they look at me and wonder if I'm serious. Why use something of such low technology when you can use a \$7,000 machine?

I have a fondness for the superior job other low tech practices give me. Each and every spring, before we open our golf course for play, we hand sweep all of the putting greens with stiff bristle barn brooms. All debris and trash from winter is removed, the excess topdressing is evened out and cleaned up, and any sloughed leaf tissue is removed by this procedure. Even though it is a time consuming and physically demanding task, there just isn't a machine that will come close to the excellent results. It is low tech at its finest. And if there was a similar example, it probably would be hand raking sand traps. The finished product by hand raking is so superior to that of a machine that PGA Tournament officials insist on it for tournaments under their sponsorship.

To continue would be flogging a

dead horse. My point, I think, has been made. But one broad and simple yet important advantage to low technology must be recorded or my essay will be incomplete. It is, in fact, probably the most important point of all. More than sentimental pleasures or unnecessary hard work, low technology gives employees (and Superintendents) a kind of salvation. It can, if only briefly, remove us from dependency on and slavery to machines. It gives everyone a greater sense of value and self-worth. That can only be good.

So I will continue to make appropriate use of high technology, when it is logical and offers true usefulness. And at the same time I hope I'll be able to maintain a common sense perspective on time proven and helpful low technology.

I wonder where my shovel is?

Monroe S. Miller



BRAYTON
CHEMICALS, INC

Joe Wollner
541 Schiller St.
Sun Prairie, WI 53590
608-837-9797

CALO-CLOR®
BRAND

Still the best above all the rest

Consistently the number one Snow Mold control in university trials and on golf courses. An excellent suspendible material which provides season-long control with one application.

CALO-GRAN®
BRAND

Same quality as CALO-CLOR, with convenience of a granular formulation

The same effective control as CALO-CLOR, plus the convenience of dry application. Two pounds of CALO-GRAN is equivalent to 1 oz. of CALO-CLOR.





Mallinckrodt
®

**PROFESSIONAL
TURF PRODUCTS**

Turf Products



A Player's Perspective

TREES ON THE GOLF COURSE

By Dr. David Cookson

Opinions concerning golf course trees are highly subjective. Traditionalists, who have immersed themselves in the origins of the game and have often returned several times to the Scottish links courses where golf got its start, would prefer a course without any trees at all, and vociferously expound this point of view. On the other hand, insular midwestern types, such as most of us, used to the quietude and subtle grandeur of forested areas, feel a golf course is naked and stark without an adequate number of trees to beautify the holes and outline the challenge awaiting an off line shot. Still, although most who read this essay will be in agreement as to the desirability of trees on the golf course, there are some points to be made concerning their placement and maintenance.

The greatest error in tree placement is planting the wrong kind of tree in the wrong place on the course. In Wisconsin, unless the course is carved out of a pine forest, evergreens should never be placed where they may easily come into play. They are fine for framing a green, or adding distinction to the area near tees, but they should be placed far enough away so as to be highly unlikely spots for a golf ball to finally come to rest. Trees which come into play should be deciduous, where the lower branches may easily be trimmed so that the player can both get under the tree to advance the ball and also play forward under the branches if he is unfortunate enough to be directly behind it. It is patently unfair for a nearly perfectly hit drive to bound only a few feet off a fairway into an unplayable position in or under an evergreen tree adjacent to the landing area, yet many courses (including my own) have just such conditions. The tendency of the non golfer or the arboreal infatuate, is to consider inviolate the natural shape of the evergreen, often a spruce, totally ignoring the question as to whether this shape will permit a golf shot to be played from its vicinity. This

is wrong; a tree should not be so situated as to exclude relief from it other than by taking a penalty — unless it stands far away from normal play. Consequently, these trees should be trimmed of their bottom limbs, as deciduous trees are, perhaps not as high but enough so that the ball can be advanced if underneath and the otherwise impenetrable evergreen can be played through under the lower limbs.

The other big problem with trees is the reluctance to remove one. Many of us have such innate respect for a healthy tree that we consider it sacrilege to cut it down whatever the reason favoring its removal. On the golf course this most likely occurs when trees initially planted far apart, grow tall and spread into each other; or trees placed as saplings too close to greens, mature and cause damage to the green by shading or rooting, and also interfere with play by their subsequent proximity to the green surface. Again, I have seen plans to markedly improve the design of a golf hole, increasing playability and safety, thwarted because implementation would have caused the removal of a healthy large oak. This too is wrong; new trees can be planted to replace the old, and they grow surprisingly fast when one retrospectively evaluates the decision to remove the healthy tree, a few years later. On the other hand, the case can well be made for keeping a difficult to replace strategic tree standing in position until its last sign of life, to try to maintain the shot making character of a specific hole.

My plea then is to consider carefully whether the planting of a tree is appropriate in that specific location for that specific species, and if subsequently it is obvious that a mistake has been made, rectify the error by either adequate trimming or removal of the tree. The primary concern should be whether trees enhance the playability of the golf holes, not how beautiful they may be as individual specimens.

David Cookson



An Architect's Opinion

DEVELOPING SPACE BY TREE PLANTING

By Bob Lohmann

Due to a combination of relatively flat topography, disease epidemics, and plant sales, golf courses have become major clients of tree sales business. Even though both the golf course and trees are natural parts of the environment, proper planning is needed to make them compatible with each other. Trees don't grow in turf, but instead grow naturally in the woods with other trees where there is no competition between the fine manicured turf and the fragile feeder roots of the trees. So, placing trees on the golf course requires more thought than just filling in the open spaces. All golfers need room to play the game, and all trees need room to mature. Through a mixture of tree groupings and open space, both the golf course and the trees can survive.

Overplanting is the easy way to place trees on the golf course. Just as in the entire golf course facility, trees should be part of a planning program that begins with the initial analysis and inventory, and leads to an overall planting and replanting plan. Before any trees are placed on a golf course, the existing plant material should be analyzed. To determine the importance of any particular tree, one must anticipate the life span, the potential size, and the present condition of the tree. If a group of specimen trees are interfering with an existing sand bunker, the out-of-play bunker should be removed, and the trees should remain. But when weedy and trash trees grow old and lose their branches adjacent to fairways, sand bunkers, or greens, they should be removed.

Trees provide the framework and background of the golf course. The best planting plans may be drawn in a day, but it takes many years and a lot of

work for a golf course to develop a mature woody look that does not inhibit the golfer's game. During this maturing process, a sense of direction, through a landscape space, is developed. The designer's intent is to control the visual experiences of the golfer while allowing the golfer to concentrate on the game.

A few well placed trees become important strategic elements of the golf course design. They can be used to define target areas and fairway turning points. But when too many trees get close to golfers, they become a nuisance. Along with destroying the original design of the golf course, the maintenance of an old tree is costly. Trees tend to prune themselves of small twigs throughout the year. They should be planted no closer than 30 to 40 feet from tees, greens, and fairways depending on the species of the plant and the design of the golf hole. Trees with high open crowns are ideal near and around tees and greens, while low branching trees and shrubs should be avoided.

Plantings can be done in small tight groups for immediate effect and mulched beneath to eliminate grass mowing. An uneven spacing gives the planting a natural look similar to what is found in the woods. Planting done in moderation, using a mixture of tree varieties, will avoid monotony while not overwhelming the golf course. If trees need to be close to the fairway, they should be clean, open-crowned trees planted far enough apart to allow room for maintenance equipment and golf play.

Remember that successful planting on a golf course demands skillful analysis, planning, and design, as well as a thorough knowledge of plants and golf design principles.

ROY G. ZEHREN

PH: (414) 242-5740

NATURAL ATHLETIC TURF INC.

Specializing in

GOLF COURSE • RENOVATION • NEW CONST.

TEES • GREENS • FAIRWAY TURFING • DRAINAGE
SAND BUNKERS • RETAINING WALLS • NURSERY

ALSO

"PURR-WICK" & SAND SYSTEMS

ASTROTURF CH-4 "DRAG MATS"

BY CONTRACT OR "T & M" BASIS

11040 N. Buntrock Ave. Mequon, WI 53092

LAKE SHORE SAND TDS 2150 TOP-DRESSING SAND

- CREATES A TRUER PUTTING SURFACE
- IMPROVES WATER INFILTRATION RATE
- HELPS CONTROL WEEDS—INCLUDING POA ANNUA
- MATCHES USGA SPECIFICATIONS

— TYPICAL DISTRIBUTION —		
MESH	MM	% RETAINED
30	0.60	0.2
35	0.50	0.8
40	0.42	3.4
50	0.30	28.0
60	0.25	25.9
70	0.21	23.5
100	0.15	18.0
140	0.10	0.2

JORDAN R. SENSIBAR — AREA REPRESENTATIVE —
(414) 271-0625

515 West Canal Street • Milwaukee, WI 53202
(take the 6th Street viaduct)



Editorial

WHY NOT BOTH?

By Monroe S. Miller

The GCSAA is in the process of evaluating their scholarship and research program. That's all well and good, and I'm completely in favor of periodic reviews of any and all programs in which I participate. Since Bill Roberts is serving on the GCSAA Committee charged with this review, it was natural that he would bring it up at our last board meeting. The response of his inquiry from one of my fellow directors took me by surprise, however. I considered his view preposterous, but it precipitated a lot of thought on the subject, more than I've given it for years.

His premise was that the market place is full of college graduates; so many graduates, in fact, that their numbers may soon affect the ability of those of us who have been in this profession for a number of years to move freely in the business. He also expressed fear that these numbers may even impact on maintaining current positions. His solution, as you've probably guessed by now, is to eliminate the "scholarship" from the scholarship and research program. It is worse than preposterous. Such an action won't have any impact toward solving this problem.

Don't misunderstand. This is a friendly disagreement; although I feel strongly that he is wrong and that his logic is bent like a pretzel, many of the points of his argument are valid and need consideration and reflection from all of us. It is his solution that I disagree with. Denying a student a scholarship will not keep him out of our field of endeavor.

What's happening in our profession has already happened in many others. The scenario goes something like this: the word gets out that a particular career is exciting and offers wonderful opportunities; many college-bound youth select it as a major; the colleges and universities tune up to

turn out however many students desire that major, usually with little regard for the true needs of the marketplace. What results, whether it is teaching or engineering or golf course management, is that the career track ends up with about 90% of the stations closed. We are not facing a new or unique problem.

Those kids graduating from turf schools are facing a situation similar to that of Woody Allen, who said that earning college degrees hadn't gotten him the work he wanted, but at least he was now being turned down for dates by a better class of women! Actually, the result of overpopulation in our profession is underemployment — work is being done by college graduates which once was being done very capably by people without college training. It is happening on my own staff. Overeducation, indebtedness from college and underemployment **will not** be solved, however, by withdrawing a scholarship plan. Denying a student something less than \$10 per week probably won't go far in dissuading him from selecting golf course management as a college major, if that is what he wants to study.

Why? The answer is easy — jobs that may not require a degree to execute with success and competence nowadays require a degree just to **get**. And although college grads may be filling jobs once held by non-grads, they aren't automatically filling the spots once guaranteed by a degree. In all parts of our society there is more educational competition. I've read of one prediction that states there will be 2.5 college graduates competing for every "college" job in this year of 1985. Feeling a little less lonely, now?

Our profession responds like most others do. This "game" is called Defensive Education. Economist Lester Thurow

describes it this way: "As the supply of more highly educated labor increases, individuals find that they must improve their own education qualifications simply to defend their current position. If they do not go to college, others will and they will not find their current job open to them." Michael Harrington, author of the book *Decade of Decision*, calls this the "tiptoe syndrome." The people in the second row at a parade have to stand on tiptoe to see over the heads of those in the front row. Everyone behind them also stands on tiptoe just to stay in the same place. So it is with college. A degree doesn't guarantee that you'll get ahead; the lack of a degree may, however, decide who falls behind. The threshold to our profession is rising, and cancelling scholarships won't change that. The fact is, the situation is probably what is best for golf — the level of competence is rising and should be manifest in better managed golf courses.

I guess I understand how this situation can make some feel trapped and cynical and even furious. But the elimination of scholarships will not change or even salve the discontent and nervousness this problem is causing. We must continue to **encourage** scholarship, not to create more competition on an individual basis, but to carry on the upgrading and improvement of our profession. We must always want to count the best among our members, and college training can help toward that goal.

Pursuit of excellence, especially academic excellence, should be easy to sell to GCSAA and WGCSA members. A scholarship program that is fair and generous expresses that commitment. And the encouragement and honor attending a scholarship just might inspire a student to continue his education and someday fill the shoes of men like Jim Beard and Joe Vargas and Gayle Worf and Jim Love. We'll always need the kind of help they give us.

And, please, forget about the loud-mouthed jerk who boasts that he spent his scholarship money on a stereo (or a car or a vacation). Don't let the arrogance of such a fool deprive some worthy students of scholarship support.

A final thought: I do not pretend

or suggest that college education alone will be sufficient for success in my profession. Mark Twain's words seem appropoe: "I never let school interfere with my education." Preparation for golf course management requires heavy doses of on-the-job training. Vocational and practical experience are very important. I've heard myself many times, while shaking my head as I watch an employee, say: "Four years of college and that kid can't even drive a tractor." But let's not pretend that life will be better for everyone if we limit the number of students coming out of our turf management colleges. And let's also admit that withholding scholarships will probably hurt us in the end.

It has always been the GCSAA Scholarship and Research Fund. Let's keep it that way.



UW—MADISON TURFGRASS ALUMNI MEET

Graduates of Dr. Jim Love's Turfgrass Program at the University of Wisconsin — Madison gathered for an alumni meeting during the GCSAA Convention and Show in Washington, D.C. The meeting was held at the Sheraton-Washington Hotel on Sunday night, February 10th. Those in attendance included Roger Bell, Dave Beno, Bob Erdahl, Mike Handrich, Mark Keinert, Monroe Miller, Pat Norton, Jerry O'Donnell, Tom Parent, Jeff Parks, Tom Schwab, Mike Semler, Randy Smith and Jack Soderberg. Classes from 1963 to 1983 were represented, and wives and children were also present.

The evening wasn't limited to pleasant conversation and reminiscing; discussion on an expanded role of the group took place. A project to update a directory of all graduates since the program's beginning was established. Each and everyone in attendance is looking forward to the next meeting in San Francisco in 1986.

MORE THOUGHTS ON "NAMES"

The editorial in the last issue of the GRASSROOTS that proposed a name change for our Association has sparked a lot of spirited discussion on the subject of "What's in a name?" The following piece comes from Jim Latham and is excerpted from the introduction of a relatively new book by the British author F. W. Hawtree entitled "The Golf Course: Planning, Design, Construction and Maintenance."

This book is first of all about golf course architecture. It begins with the writings of the earliest architects of golf courses because their books are not easily come by and the similarity of their philosophy and ours is of significance. Having mostly the same aims, their results were noticeably different but this is probably of less significance given the infinite variety of their sites and local variations in interpreting their instructions.

Their successors have written far less on the subject and, indeed, there comes an early limit to what can usefully be said about golf course architecture in general. This had led to the second aim of these pages. I have tried to expand the subject into specific sections which may be of wider use to those thousands of golfers who every year, after peacefully and anonymously enjoying their golf in the rank and file of members, allow themselves to be elected to the Green Committee. There are not many guide books to help them find their way through these byways of golf although there are almost too many advising them how to play it.

In Scotland, their leader will be called Green Convener — a neater, more musical term than Chairman of the Green Committee. It also emphasizes that the 'Green' referred to is the whole course not one of eighteen small parts of it. That distinction, regrettably, is lost in solecisms like 'Greens Chairman', 'Greens Committee' and, worst of all, 'Greens-Keeper'. This error by analogy is mostly found in lands where the greenkeeper has graduated to 'Course Superintendent,' 'Course Manager' and 'Curator'.

We have perhaps been backward in British greenkeeping in providing the intensive training, the degree courses and research which have produced so many talented golf course superintendents in the United States and elsewhere; but there has been an immense fund of solid experience handed down from which the profession in the British Isles has moved steadily forward. 'Greenkeeper' is still an honourable title. It might only be regretted that the term 'Clubmaster,' which became 'Steward' when it crossed the border, was not matched by 'Greenmaster' for the man who cared for the course.

The term 'Green Convener' will be used here out of deference to the Scots who invented the game of golf. We cannot thank them enough. But the Green Chairman (or, simply, Chairman) and the Green Committee will equally be present. 'Le President de la Commission du Parcours', 'der Præsident des Greenvorstandes', 'el Capitan del Campo', and their Committees are also invited to these meetings. They are all welcome.

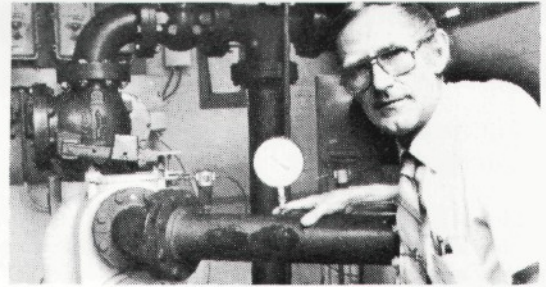
The election of the Green Convener will reflect personal qualities, whether they be leadership, bonhomie or business acumen; or he may, unwisely, have talked himself into the job the frequent expression of strong views. Often it is a stepping stone to subsequent captaincy. Sometimes it derives from his principal occupation: a farmer will be expected to know about turf—an engineer, about machinery. I am not one who believes that the chairman of a specialist committee should necessarily be an expert on the subjects under review. An incisive, analytical mind will soon draw out, compare and balance the opinions of the experts assembled. But where the members of a committee are themselves equally new and unversed in the matters requiring decision, it seems to be desirable that its chairman should have some background knowledge to enable him to guide the discussion; and this will be still more fruitful if his committee has done some homework as well.

INSIST ON EXCELLENCE

L.W. ALLEN OFFERS A COMPREHENSIVE VARIETY OF QUALITY PUMPING AND CONTROL SYSTEMS TO ACCOMMODATE THE NEEDS OF ANY GOLF COURSE IRRIGATION SYSTEM.

FIFTY YEARS EXPERIENCE IN SALES, SERVICE AND ENGINEERING CONSULTING ENABLES US TO HELP YOU IN THE PLANNING OF A NEW PUMP PLANT FOR YOUR IRRIGATION SYSTEM OR IN THE UPDATING OF AN EXISTING STATION.

WE ALSO OFFER COMPLETE MACHINE SHOP FACILITIES FOR PUMP REBUILDING AND REPAIR, AND WE MAKE FIELD SERVICE CALLS ANYWHERE IN WISCONSIN.



- Electric motors for all applications
- Centrifugal and turbine pumps
- Variable speed and variable frequency systems
- Wide variety of controller systems
- Optional accessories for pump stations, including:

- | | |
|---------------------------------------|-----------------------------------|
| —Reduced voltage starting | —Self-priming equipment |
| —Phase protection | —Backflow preventors |
| —Lightning arrestors | —Manual and automatic selectors |
| —Surge protection | —Intake and discharge components |
| —Run time meters | —Dialers tied to telephone system |
| —Hi/low pressure protection | —Booster stations |
| —Indicating lights for all situations | —Pressure control valves |



L.W. ALLEN, INC.

2714 Industrial Drive
Madison, WI 53713

800-362-7266
608-222-8622

50 Years



WHITESPIRE JAPANESE WHITE BIRCH

(*Betula platyphylla japonica* 'WHITESPIRE')

By Professor Edward R. Hasselkus, Department of Horticulture, University of Wisconsin—Madison



Dr. E. R. Hasselkus

The cultivar name 'WHITESPIRE' has been officially registered for the birch which formerly was known as P.I. 235128 or the "University of Wisconsin strain" of the Japanese white birch. Whitespire has proven to be the most borer-resistant white-barked birch under evaluation in the Longenecker Horticultural Gardens of the University of Wisconsin Arboretum—Madison. Three 28-year-old trees have remained free of the bronze birch borer on a droughty site where plants of *Betula pendula*, *populifolia*, *pubescens*, *utilis* and other seed strains of *B. platyphylla japonica* have become infested with borers. Its borer-resistance has been confirmed in trials at The Ohio State University.

Seedlings of *B. platyphylla japonica* P.I. 235128 were received from the U.S. Plant Introduction Station, Glenn Dale, MD in 1957. Dr. John Creech had collected the seed from a single tree in a native stand of trees in the Yatsugatake mountain range in Nagano Prefecture, Japan. According to Dr. Creech, *B. p. japonica* occurs in two distinct distribution regions, a massive northern distribution that connects eventually with the Siberian distribution and a separate distribution in central Honshu. There is a distinct band where the tree does not occur between these two regions of distribution. P.I. 235128 came from the southern part of the latter distribution. This may explain its tolerance of high temperature stress and possibly its borer

resistance.

The 28-year-old University of Wisconsin Arboretum trees now measure 35 feet in height and 15 feet in spread. They have a distinctive narrow pyramidal form with fine-textured leaves and twigs. The non-exfoliating, chalky white bark is marked with black triangles at the bases of lateral branches.

The Evergreen Nursery, Sturgeon Bay recognized the potential of this birch and has been its major grower and promoter. Seed of 'Whitespire' has been distributed annually to Evergreen Nursery and several other Midwest nurseries during the past nine years, so liners are now widely distributed throughout this country. Having been propagated from seed, there is no assurance that these seedling progeny are not hybrids, however, the relative isolation of the parent tree makes this unlikely. Seven-year-old seedling progeny of Whitespire birch have attained a height of 20 feet and a spread of 9 feet. They are extremely uniform with well-developed white bark and the slender pyramidal form of the parent tree.

Vegetative propagation of cuttings taken from the parent tree has been generally unsuccessful. However, propagation through

microculture has been accomplished by Knight Hollow Nursery of Madison, providing the potential for clonal propagation of 'Whitespire' by the nursery industry.

Whitespire birch is winter hardy throughout Wisconsin and has survived summer temperatures as high as 120°F in Oklahoma. Although adaptable to a wide range of soils, poor drainage results in stunting and the development of chlorotic foliage. It is currently the only white-barked birch with resistance to the bronze birch borer.



Bark of Whitespire birch is chalky-white.

Editor's Note: Dr. Edward Hasselkus is a Professor in the Department of Horticulture at the UW—Madison. Well known throughout Wisconsin, as well as the rest of the country, as an expert on landscape plant materials, Dr. Hasselkus was a speaker at the WGCSA meeting held at Maple Crest C.C. in Somers, Wisconsin in 1983.



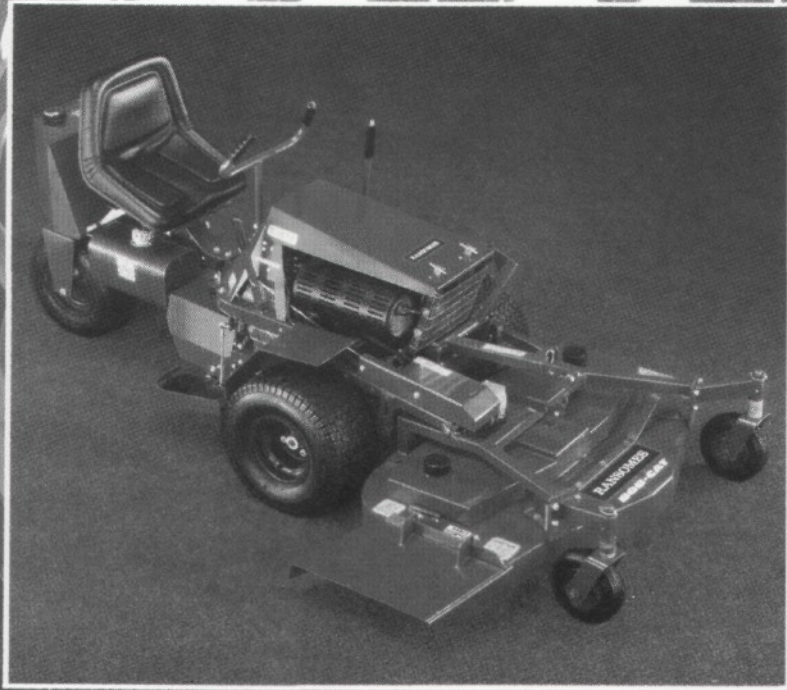
Whitespire birch has a narrow pyramidal form.

ATTENTION!

Due to a scheduling oversight, the March meeting of the WGCSA has been changed to **Monday, March 25**. The time will be **10:30**. The place remains the Traveller's Inn in Fond du Lac.

You must mail in a second reservation; it will be in your mail soon. Apologies for any inconvenience.

The high and the mighty.



When mowing is a tall order, our new little rider is a trooper. Small in size for more maneuverability. Big on features for better performance. A dependable four-cycle engine. A generous 48" adjustable cutter deck. Steering and brake controls designed for easy operation. It may be our smallest rider, but it still packs the power of a Ransomes Bob Cat.

Because it grows on you.

Hanley

(608) 837-5111

RANSOMES

The grass machine.