NORTHERN MICHIGAN TURF MANAGERS ASSOCIATION

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TUESDAY, OCTOBER 2nd, 1984 GRAND TRAVERSE RESORT, ACME

Our next meeting will be a very special one in that we will be permitted to play golf on the new Jack Nicklaus "<u>BEAR</u>" course at Grand Traverse Resort. Jack's involvement in golf in Northern Michigan has helped to make this area a great golfing mecca as well as a beautiful area to live in.

Jon Scott, CGCS the golf course superintendent has gone all out to get starting times from 10:00 A.M. until approximately 2:00 P.M. with golf and carts being courtesy of the Resort. As is usual with our golf, we will have a little tournament of sort which will cost each entry the sum of three dollars.

This is an exceptional occassion in that <u>only</u> members of our Association will be permitted to play golf and no guests. Everyone will have to have a starting time and the number to call for that is 616/938-1620. Doug Grove is the golf professional and this number is at his golf shop in the building of The Sand Trap. Lunch is available in the Sand Trap so one can have lunch, pick up your golf cart and use your starting time.

Dinner will be served up in the hotel building which is north of where the intersection of M-72 and U.S. 31, on U.S.31. A cash bar will be set up at the hotel for "Happy Hour" or a place to relax for those coming for dinner and the meeting. There will be no restrictions on guests for dinner so you may bring along a prospective member, your wife or your gal friend. Dinn er will be served at 6:30 P.M. Our speaker for the meeting after dinner will be Dr. Joseph M. Vargas, Jr. and at a very important time in our business. Dr. Vargas is one of the outstanding plant pathologists on disease in this country and with winter almost here with its variety of killing diseases, it is always good to have the latest information on protection and how we can avoid the worst.

As usual, the postcard is enclosed, time is not too plentiful so please don't procrastinate, make up yoir mind and mail the card, immediately.

We operate on a fiscal year starting our 1985 year as of November 1st. Everyone will owe dues for 1985 with few exceptions where some have already sent in their check. Dues have not been increased for the new year, a bill will be sent to you however you can help make the job of your fellow associate a little easier by sending your check to our Sec-Treas. Tom Reed at his address shown above. If there is any question as to the amount, ask Tom or a member of the Board. We appreciate your cooperation. Thanks.

9 Holes of Golf will be played on the "Bear" Course and 9 holes on the other course, of the Grand Traverse Resort.

Going Around with Big Wheels

by LARRY W. GILHULY Director, Western Region, USGA Green Section

AZINESS HAS probably been responsible for more shortcuts, not to mention valuable innovations, than we are ready to admit. Most of us are always looking, at least subconsciously, for easier ways to perform laborious or routine tasks.

An example of imagination spurred on by outright lethargy is contained in the story of an old mountaineer and his wife who were sitting in front of the fireplace one evening just whiling away the time. After a long silence the wife said, "Jed, I think it's raining. Get up and go outside and see."

The old mountaineer continued to gaze into the fire for a second, sighed, then said, "Aw, Ma, why don't we jest call in the dog and see if he's wet."

Although this story illustrates laziness at its extreme, we will all agree that at times everyone feels this way. When ideas evolve that will speed maintenance operations and do less damage to the turf, they can become very valuable inventions for the golf course superintendent, his staff, and the playing membership.

One such idea originated in 1958 with Earl Morgan, owner of Similk Beach Public Golf Course, in Anacortes, Washington. Morgan, who also owns an oyster farm, needed a machine that would provide traction over the oyster beds but cause little harm during the harvest of the oysters. Using the same idea in 1960, he used the big tire tractor on his golf course for mowing fairways and roughs under the moist conditions of northwestern Washington.

Milt Bauman, retired superintendent at the Seattle Golf Club, in Seattle, Washington, borrowed the idea and applied it to the rolling hills of Seattle Golf Club (*Figure 1*). He was not only pleased with the mowing results, but he also began using the big tire for many other operations that previously had been done by heavier and slower pieces of equipment.

Before the specific jobs are outlined, some pertinent data about price, avail-

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ability, wheel sizes, etc., should be discussed. These tires and wheels may be available at outlets across the country. In this case, however, an Oregon firm manufactured the wheels in their machine shop for the specific tire size. They must first know the make, model, and year of the tractor. Next, they go to a local dealer and get the stud bolt size for the wheels, mount the tires, and ship them to your door. Tires and wheels can be made for most conventional tractors, such as John Deere, International, Ford, Massey Ferguson, etc.

The size of the tires varies according to personal wishes. The front tires are $31 \times 15.50 \times 13$. They cost \$400 per wheel and \$250 per tire, or \$1,300 to equip the front of the tractor. The rear wheels are $48 \times 31 \times 20$, or $44 \times 41 \times 20$. (Although the tractor pictured here has an overall width of 11 feet, recent modifications allow the width to be reduced to 9 feet 6 inches.) For the 31-inch wide wheel, the cost is \$450. The tire cost is \$2,000 each, or \$4,900 to equip the rear of the tractor.







Figure 1. (Left) Milt Bauman, CGCS (retired), left, and fairway mowerman George Howen stand next to the "shaved" rear wheels.

Figure 3. (Below, left) Overseeding of greens is one of the many operations possible with the high flotation tires.

Figure 4. (Above) Overseeded bentgrass results three weeks after using the large slicer/ seeder on No. 5 green, Seattle Golf Club.

The total cost in 1984 to equip a tractor with big tires would be approximately \$6,200.

At this point, it is very easy to dismiss these tires and wheels as being too costly. However, let us go over a list of functions these tires perform and then come to a decision. As for Seattle Golf Club and Bauman's experience, he states, "The best thing about big tires is that, if you can walk on the golf course, you can work the tractor. If it is too wet to work, the tractor will spin out, but it causes little damage to the turf. I maintain we cannot afford to be without these tires."

JUST WHAT MAKES big tires such a good investment? First, the tires are 10-ply and, at this time, the tires at Seattle Golf Club are 12 years old and still going strong. This fact alone, however, does not show where the time savings lie. What makes the large tire

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cost effective is the reduction in compaction and versatility in its operation.

With the advent of the large 7-gang hydraulic lift mowers, the need for a standard turf or farm-type tractor might seem to be on the decline. However, how versatile are the large hydraulic units? Once they have mowed the fairways or roughs, their use ends. This seems a costly piece of equipment (over \$30,000) to sit in the maintenance facility with no alternate use.

On the other hand, the big tire tractor performs many tasks:

1. Mows fairways and roughs. The tires come equipped with large tread for traction. However, for golf course management operations, this tread most be removed (Figure 2). By making a slick tire and leaving just enough tred for traction, the tractor can mow effectively until the course becomes too wet to work. One good aspect of this tire is that when it spins, the turf is not damaged and it will not tear out chunks of sod, as most tractors do. As William C. Campbell, former President of the USGA, commented after the 1981 USGA Senior Amateur Championship, "With the use of the high flotation tires, Seattle Golf Club provided some of the smoothest, tightest fairways to be found anywhere."

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2. Fertilizes the entire golf course. When ammonium sulfate is applied to fairways, tees, greens, and rough at Seattle, it takes the operator five hours to complete the task (*Figure 3*). To fertilize greens alone, only 30 minutes is required for 18 greens. After a green or tee is fertilized, it is difficult to determine where the tractor actually drove, because there are no wheel marks and no compaction. This one task saved countless dollars in labor costs and, according to Bauman, nearly paid for the tires.

3. Light topdressing of the greens. Whether using a Lely or Meter-R-Matic II topdresser, the big tire provided little compaction when applying small amounts of sand. It also greatly speeded the operation.

4. Allows the use of a large fairway slicer/seeder on greens. As shown in *Figures 4 and 5*, the tractor gave excellent results with little disruption when using this equipment on greens. The bentgrass seeding operation takes approximately 45 minutes to one hour per green. Light topdressing immediately followed the

Figure 5. (Below) Fertilization and light topdressing provide little compaction and increased efficiency in the operation.

Figure 6. (Bottom) The "big tire" combined with a large-tire trailer is excellent for brush cleanup or soil movement under wet conditions.



slicer/seeding and was repeated in one week. After two weeks, the greens were back to normal and bentgrass populations were increased.

5. Overseeding fairways or seeding new areas. The big tire equipped with the fairway slicer/seeder does a very good job of overseeding existing fairways. With the wide width of the tires, the overlap of the tires provides a rolling action to permit better soil/seed contact. After new areas have been seeded, the large tires are perfect for rolling.

6. Brush removal. In the Pacific Northwest and elsewhere, severe wind storms can cause considerable damage to trees. Many times, these winds are followed by excessive moisture, and conventional tires mar the turf or are unable to get onto the golf course. The high flotation tires are able to go anywhere a good operator wants to go and will not rut the turf. This tractor, combined with trailers (also with large tires), is an efficient labor-saving vehicle in inclement weather (Figure 6). Furthermore, when the course is too wet to haul material with small dump trucks, the big tire tractors and trailers offer good alternatives.

7. Aerification or slicing fairways. Under wet conditions, the use of the high flotation tractor will cause little or no damage during the aerification or slicing of fairways. It also does a good job of smoothing the surface during the operation because of the tire overlap.

8. Allows fairways and roughs to be swept under wet conditions. Many times the golf course superintendent and his staff are frustrated by the inability to clean up the golf course during wet conditions. Although the sweeper may cause some rutting, the tractor will work well under these conditions.

9. Allows closer access to greens or tees for spraying operations. The big tire, combined with large tires on the spray rig, allows an operator to move closer to the green and not rut or compact the area around a green or tee. Again, this speeds the operation and reduces employee fatigue.

These are some of the many jobs this versatile piece of equipment can perform. Whether the large tires would effectively fit into your operation will be determined by the climate, topography, type of soil, etc., with which you must deal.

They have worked well at Seattle Golf Club and others report similar success. They should work well for you. After all, maybe you can teach old, wet dogs new tricks!

USGA GREEN SECTION RECORD

Hi-Tech Equipment Calls for Higher Skills and Better Training

by KARL ED OLSON

Agronomist, Eastern Region, USGA Green Section

T TODAY'S PRICES for golf course maintenance equipment, can any golf club really afford minimum-wage operators? And are you, the golf course superintendent, constantly sharpening your teaching skills and training techniques? Of course the answers should be "no" to the first and "yes" to the second question. But honestly, is this reality? Too often, perhaps, the answer is "no" to that question.

Careless operation and haphazard maintenance can cost a golf course thousands of dollars each year in repair and replacement. Expensive, sophisticated equipment requires high operating skills and sound mechanical maintenance. What can be done to protect the club's investment and the superintendent's reputation?

A number of surveys have shown that operator abuse of equipment can be



Put "hands-on" the operating manual before "hands-on" the machine.

traced to several factors: 1) low wages, 2) temporary nature of employment, 3) inadequate training, and 4) little or no communication between operators and supervisor. It was not uncommon years ago to find permanent employees who could be responsible for operating, adjusting, and maintaining a piece of equipment strictly on their own. This gave them a sense of pride and a feeling of belonging to the organization. It frequently resulted in a consistent, safe, and efficient operation. At many courses today, employees are expected to operate all kinds of equipment, but they have no responsibility for maintaining any of it.

If a superintendent was ever offered a brand-new hydraulic greens mower for \$300, he would probably think twice before accepting the offer. At that low price, something must be wrong, stolen, or missing. Yet that same superintendent is expected to hire reliable, permanent

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help for \$5 an hour or less. Most qualified people laugh at that salary. The first step in hiring a capable crew is to offer a wage commensurate with their abilities and responsibilities. Remember, these people are going to be maintaining your golf course, worth millions of dollars, and they will be doing it with equipment that costs tens of thousands of dollars.

WHAT KIND OF people do you look for when hiring? Running a greens mower, in many ways, is more complicated than operating an automobile. Don't assume that if someone can drive and maintain a car, he can run and maintain a greens mower. Furthermore, experience on another golf course doesn't mean the person knows what is expected of him on a new job. The most important qualities to look for are maturity and common sense.

When new employees are hired, how much time should be allotted for training? Is one week enough? Is three weeks too much? Is enough time allowed for training before the person is needed as an active participant on the course? Too often an employee is expected to properly mow greens after only verbal instructions.

To begin with, a new employee, or old employees dealing with a new piece of equipment, should read the operator's portion of the equipment manual before ever turning a key. Once confident that the person understands the manual, the mechanic should go over the book and the unit with the employee. The mechanic should let the employee know what ongoing daily maintenance procedures he (the operator) will be responsible for. This step makes the operator understand that he plays an active role in the operation of his machine.

Having the operator work closely with the mechanic will also help prevent operation of a piece of equipment whose performance is not up to par. The operator needn't know how to replace an engine or restore a hydraulic system, but he should be responsible for and know how to clean filters, check tire pressures, oil levels, hydraulic lines, and steering cables before operation. The operator should know what weight oils go into what machine, and he should check these levels often enough to avoid damage to the hydraulics and the engine. For this portion of the training program, the superintendent and the mechanic must thoroughly know about the piece of equipment themselves. This

means reading the manuals, studying the machine, and attending training seminars.

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Aword About safety. We should never, under any circumstances, allow an employee to alter or bypass safety stops on equipment. If the machine does not work properly, it should be thoroughly checked out by the mechanic. An hour in the shop is considerably less expensive than a maimed operator. Always have a downed piece of equipment repaired properly. Showing the employees that you are concerned with their well-being will make them more conscious of their own safety.

After the employee has completely read the manual, it is time to move the machine. Depending on the circumstances, the actual trainer may be the superintendent, assistant, or foreman. The first step is checking out the machine. The employee should check tire pressure, oil levels, and hydraulic lines. He should check for signs of leakage where the unit was parked. Safety features should also be checked, and the mechanic should go over the complete check list. The employee should then start the unit and be shown the proper driving pattern from the shop to the yard and to the golf course. If all employees know the traffic patterns, accidents can be avoided in the shop area. Time should be spent practicing starting, stopping, and parking the units. Also, by assigning each unit its own parking spot, it is easy to tell if that piece of equipment has an undetected leak.

Show the employee what to do when he brings the unit in for the day. If there is an equipment log or a service form to be filled out, he should be instructed in the proper procedures. He should check to see if the unit is due for routine maintenance and, if so, inform the mechanic. Keeping up with preventive maintenance on equipment can prevent costly repairs and engine replacements before their time.

When the employee feels comfortable with the operation of the machine, it is time to move him to the course. For example, let's assume the person is learning how to mow greens. The best place to practice would be a nursery or practice green. Show the employee the proper speed and angle of approach, then park the machine. Follow this with a walk through, explaining when to slow to mowing speed, when to lower or

engage the cutting units, when to disengage the cutting units, and where to turn. Then, have the employee start the unit and drive through the mowing process without actually mowing. Tell him when he will begin to cut, stop cutting, and turn. By using a dry-run approach, turf and equipment damage caused by inexperience can be avoided. Now is the time for the employee to establish the habit of constantly checking what work he has done. Explain how the reels and bedknives work. Show him what a proper cut looks like and what to watch for when a cutting unit is out of adjustment. Tell him also to watch for hydraulic fluid on the green and show him pictures of this problem so he can identify it. By constantly checking his work, the mower operator will soon discover a leaking hydraulic line well before six greens or more are mowed. The employee should be told, at this time, what to do in the event of a hydraulic leak. He should know whom to contact and where the proper materials are stored in case of trouble.

NLY AFTER the employee is thoroughly comfortable with the mechanics of mowing should he actually move to the real thing. Send him out with an experienced person the first three or four times to show him the most effective way around the golf course and to help him with any problems. This can be a critical point in an employee's career. While he doesn't need the careful watching he needed while learning, he should feel free to come to the supervisor and mechanic whenever he has a problem. He should also be told when he is doing a good job. This builds his confidence and makes him a more valuable employee. At the same time, the employee should understand that he will be accountable for the job he does. This will also improve his performance.

Without a doubt, the most valuable assets in any golf course maintenance operation are the personnel on the crew. Therefore, it stands to reason that, if they are treated and trained properly, they will gain great respect and pride in the job they do. Quality personnel will significantly affect equipment operating costs and productivity while minimizing expensive machine down time and repairs. But selecting and training personnel is not easy; therefore, it is one of the qualities found in great golf course superintendents.

Fall Planting and Transplanting of Trees

Howard Pidduck, Cornell University

Fall planting can extend the work season and offer the grounds manager the opportunity to improve the landscape during the time of reduced work loads. There are some basic rules of good plant care that must be observed before any planting program can be successful.

First, provide a soil media suitable for good plant growth, devoid of rubble and road salts, yet capable of anchoring the tree firmly.

Second, provide adequate water to encourage root growth during the fall, before winter freeze up. Watering should also aid in the setting of the soil and reduce the chance of large air pockets, which tend to dry out the roots, creating a barrier to the movement of soil moisture by capillary action. Overwatering or excessive repeated watering can lead to drowning, the suffocation of the roots by water completely filing the open porous spaces between the soil particles. The loss of soil oxygen is as much a detriment as the lack of water. Third, choose species best suited to the landscape site most able to survive fall planting. These include Norway and sugar maples, sycamores, red and pin oaks, lindens, ginko (maiden hair), horsechestnuts and almost all of the conifers. Avoid exposure to open, severely windy sites. These are best left to a spring-time planting.

Root systems with a thick fleshy covering as a rule, are best planted in the spring. Example of these are dogwoods, tulip trees, magnolia, yellowood, sweetgum, beech, birch and tupelo.

Fourth, nursery grown trees that have been root pruned the year before and have had the crown properly shaped offer the best hope of survival. Selecting forest grown trees requires an exceptionally large root ball, disproportionate with the crown in order to assure sufficient roots to support the top. Larger equipment is then required to complete the move, making it more expensive plus making it a riskier process. Fifth, staking the tree securely is often overlooked or omitted. It is necessary to stop or reduce movement of the crown which flexes the tree, creating a cavity around the base of the tree at the soil line. Water can then collect in the cavity, freeze, and destroy the bark, thus interrupting the cambium flow at the soil line, resulting in death of the plant. Mechanical damage is also caused to the root system as the crown flexes, resulting in slower establishment, or may cause the tree to tip and expose the roots. Staking systems can vary but success is best accomplished when two or three hardwood stakes are utilized. Stakes are placed on more than one side and aligned to protect the tree from the force of the prevailing wind. Wires should never completely circle the trunk and should always be covered with a length of old garden hose, thus preventing any injury to the trunk of the tree. The larger trees need the added support of the three wire system placed equally about the trunk, fastened at least halfway up the main stem and far enough at the base to be beyond the rootball. A 45 degree angle for the supporting wires is best. Sixth, enough cannot be said for the practice of mulching fall planted tree. Mulching aids in preserving the soil temperatures, giving a longer period of time for roots to establish themselves before winter freeze up. Moisture is retained and weeds are reduced during the following growing season, thus improving the appearance of the planting. Seventh, wrapping the trunk with burlap or a special paper tree wrap protects the trunk from damage through freezing

and thawing. This damage is characterized by vertical splits and or a loosening of the bark from the trunk. During periods of wet, rainy weather the practice of wrapping can be delayed, or substituted by a burlap screen placed a short distance from the tree. Under no circumstances should the first wrapping be left on indefinitely, but should also be removed within the first year. Failure to remove it can cause girding as the trunk continues to expand.

Eighth, little or no fertilizer need be added if the soil used to backfil has resonable nutrient levels as determined by a previous soil sample. Small amounts of phosphorus and potash can be added (1/4 cup per bushel of soil) if desired. Never place the fertilizer in the hole so that it can come in direct contact with the exposed roots. Nitrogen based fertilizers need not be used as they promote top growth. New growth in the crown is to be avoided.

Ninth, The success of failure of all plantings often can be attributed to the planting depth. Although some species may survive for short times with minor grade changes. NEVER change the depth at planting time. The rule here is "plant at the same depth to which it has been growing".

Care should be used when transplanting to firmly tamp the soil so that no large air pockets persist around or under the soil ball. These same pockets can exist when using the pointed tree spades to excavate the planting hole.

Credit: Hole Notes

If you have a wood burning stove or fireplace, this should interest you: Beechwood fires are bright and clear If the logs are kept a year. Chestnut's only good, they say If for long it's laid away. Birch and Fir logs burn too fast. Blaze up bright and do not last. Elm wood burns like churchyard mold, Even the very flames are cold! Poplar gives a bitter smoke, Fills your eyes and makes you choke. Applewood will scent your room With an incense like perfume. Oak and Maple, if dry and old, Will keep away from winter cold. But ash wood wet and ash wood dry A king can warm his slippers by!

The nurse had prepared an attractive young lady for surgery and wheeled her out to the examination room. Presently a man dressed in white clothes came into the room. He stopped, looked at the girl, lifted the sheet, nodded his head and walked away. A few minutes another white clad fellow came in and did the same thing. He was followed by still another man who repeated the process.

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"For goodness sake, when are you going to stop looking and operate?" the patient asked the last man.

"Darned if I know, lady," came the reply. "We're just the painters."

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Additions To By-Laws

Section VII, C .: Every member will be responsible for guests brought to meetings or any other affair of this Association. Should the guest of a member be out of line in his conduct, the member may be called upon to meet with the Ethics Committee or the Board of Directors or Both.

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This is a new paragraph in our By-Laws therefore the present paragraphs C and D, will move one letter down the alphabet, becoming paragraphs "D" and "E".

Section IV: A: Any member of the Board of Directors who misses two or more Board Meetings in succession without a valid reason, may be replaced by action of the Board. Replacement will be in accordance with Article IV of this Constitution-By-Laws.

The present paragraph in this section will be paragraph "B".

We are looking for locations to have several of our 1985 meetings. If you and your club would like to offer your facilities, will you please contact "Tuck" Tate. Please do this in person, note or telephone at his new number 616/352-4398. You might also make this change in your membership booklet for ready reference.



Make Sure You "Temper" Your Temper

are luxuries the wise executive cannot the effectiveness of a legitimate show afford. Consider these costs next time of anger. Anger inspires actions that you are tempted to fly into a rage:

ployer who regularly loses poise and than in acting evenly. self-control.

brought to his/her attention for fear of administrator's anger will oppose good creating a scene.

Loss of the effect of legitimate an-

Temper tantrums and fits of anger ger . . . Frequent shows of temper ruin haven't been thoroughly thought out. Employees lose respect for an em- We are more interested in getting even

Employees who see the employer Administrators who can't control them- acting capriciously, even if they aren't selves can't control others either. Fear the targets, are wary. They are conof an employer's temper can result in cerned that they could be the next isolation from a free flow of informa- targets of unreasonable wrath. Those tion and ideas. Problems won't be who habitually taste the ideas as well as bad ones.

*** Ocotber 27th, 1984, is the definite date of our big social party for the gals. It will be held at McGuires, Cadillac so gals, plan to make a day of it. Details will be sent to you, but reserve the date.