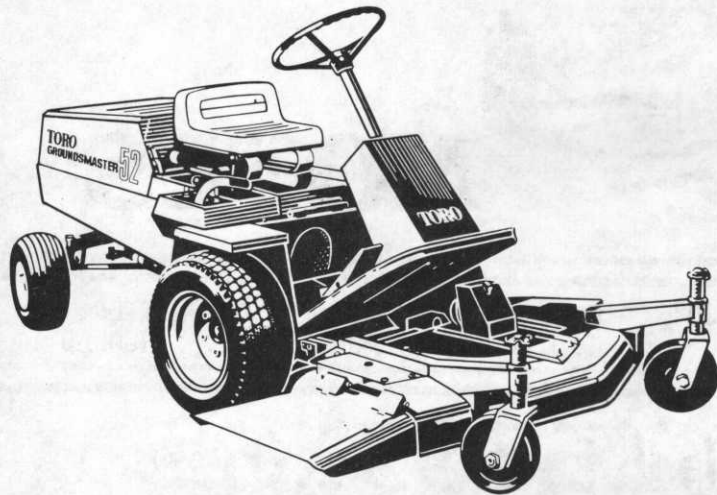




Groundsmaster 52[®]



The Groundsmaster 52[®] offers wide cutting ability. It trims tight around trees and other obstacles with the offset, forward mounted 52" deck. One pedal hydrostatic drive for responsive operation, hydraulic deck lift for fast, easy transport and cushioned seat for operator comfort. Attachments include 48" rotary broom, leaf mulcher, and vacuum.

OPTIONS AVAILABLE:

Vacuum attachment picks up leaves, trash, thatch, paper and pine needles, blows them into 12 bu., rear mounted disposable bags.

Cab and snowblower converts machine for cleaning sidewalks, driveways in warmth, comfort, and safety. Blower lifts hydraulically. Discharge chute rotates 200°, is controlled from cab. Two-stage snowblower clears 48 inch swath.

48 inch V-plow has front skids and reversible/replaceable blade for low cost snow removal.

48 inch rotary broom sweeps parking areas, paths, walkways, saving the cost and time consumption of manual labor.

Heavy gauge steel leaf mulcher mounts under cutting deck, allowing blades to vacuum and pulverize fallen leaves.

Groundsmaster 72[®]

OPTIONS AVAILABLE:

ROLL OVER PROTECTION SYSTEM

Certified roll over protection system (ROPS) for greater operator safety conforms to OSHA regulations, includes seat belts for greater security.

CAB with ROPS

Completely enclosed cab protects operator from weather. Includes ROPS. Heater and light kit available.

SNOWTHROWER WITH CAB

Two-stage 48-inch snowthrower with driftbreaker auger clears snow from sidewalks in a hurry. **Oversized second stage** prevents clogging, **electric chute rotator** puts snow where you want it.

V-PLOW WITH CAB

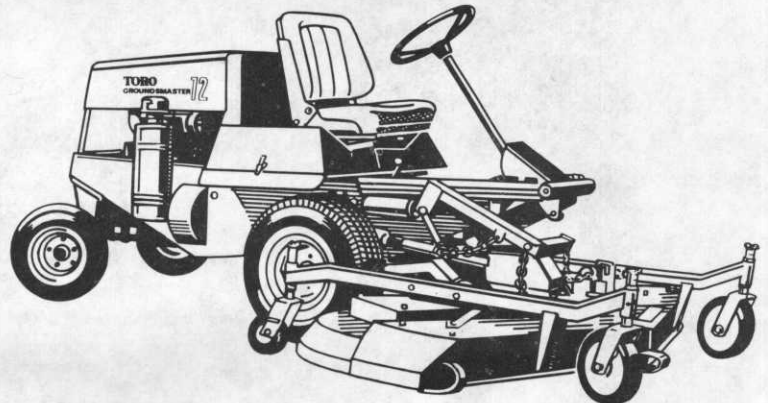
Rugged 48-inch V-plow for snow has front skid and reversible/replaceable scraper blades for low cost sidewalk snow removal.

ROTARY BROOM WITH CAB

Tough 60-inch rotary broom sweeps parking areas, paths and walkways, saves hand labor.

LEAF MULCHER

Heavy-gauge steel unit mounts under cutter deck so blades can vacuum up and pulverize leaves in fall, spring.



The Groundsmaster 72[®] has power to spare from its water cooled, 4 cylinder engine. The 72" floating cutting deck is offset to handle the bulk of the trimming jobs around trees, along fences, walls and other obstacles. One pedal hydrostatic drive for responsive speed selection in forward and reverse. Optional accessories like the rear discharge cutter deck, leaf mulcher, rotary broom and ROPS make this machine a versatile workhorse.

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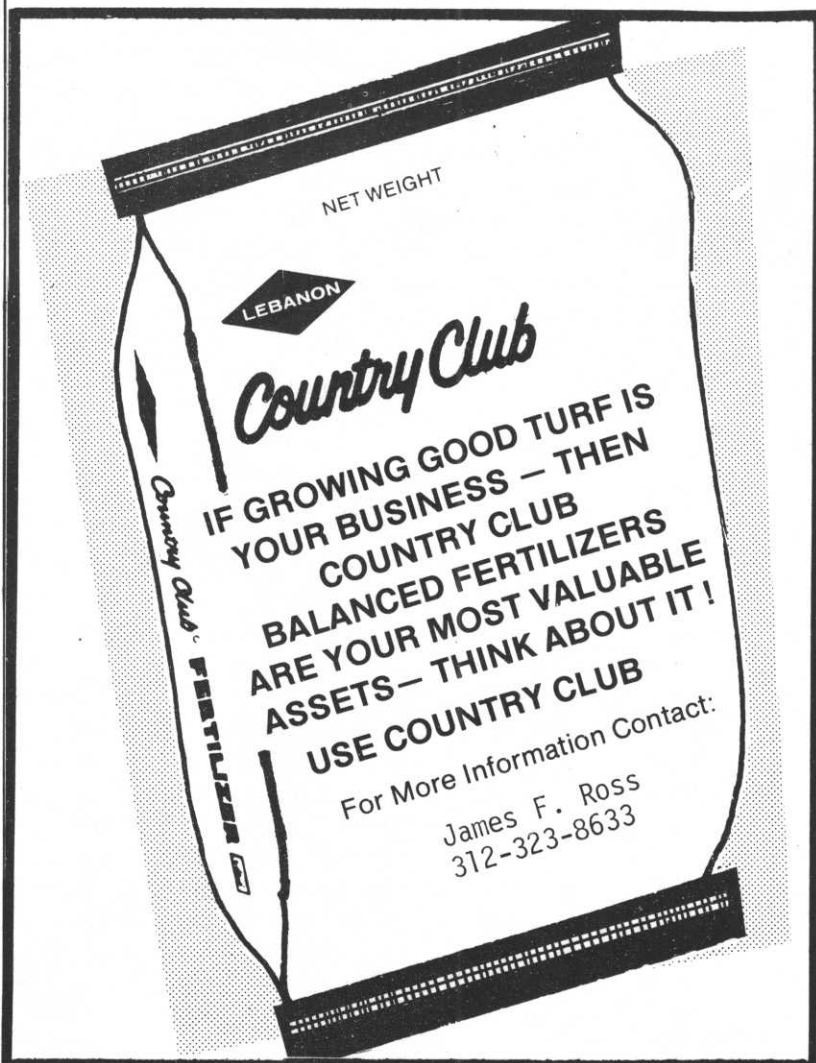
Dan Evavold



FULL HOUSE AT LONG LAKE

Nobody's sure of the reason the November meetings are so well attended. Is it 1) The busy season is over? 2) The complimentary cocktail hour hosted by Long Lake Ford? 3) The great food at the Hanson House? 4) All of the above? At any rate there were well over 80 in attendance. With the cocktail hour scheduled after the meeting, the result was a very, very short Business Meeting! About the only thing of significance was the acceptance of six Class C turf students from Anoka Tech into membership. Our unreliable camera failed in the pinch which means the picture of the group did not turn out. If we had a picture you would see Roger Bzdok, Marty Matson, Eric Farrar, Anita Halvorson, Cary Femrite and Keith Stachowski. Welcome! We hope your membership is most educational. Our thanks to Budd and Jerry Shaughnessy and their whole crew for the display and the libations. President Ostler announced with much sadness the death of Allen Ista, the superintendent at the Northfield Golf Club. Allen was a long time member and experienced the remodeling of the Northfield Country Club from 9-Holes to 18-Holes just about four years ago.

The Arrangements Committee reported that the January meeting will be held on January 14, 1980 at Izaty's Lodge on Lake Mille Lacs. This was a most popular meeting last year and I'm told the fish are just waiting for the Superintendents to come and catch them this year. For non-fishermen, the meal itself is worth the trip.



DISPLAY. Don Lindblad looks over Long Lake Ford products in Hanson House parking lot.



COMMITTEE MEETING. Some great decisions being contemplated. Recognize anyone?

MAXIMUM EMPLOYEE UTILIZATION

The best executives, those who climb highest in any organization, are those who get the job done on time and with a minimum of uproar and confusion. Those who try to keep a finger in every pie, hustling all the time to try to do everything themselves, are as much a failure as those who delegate everything and let every situation get out of hand.

In other words, your success is directly tied to that of your employees. Your appraisal of their capabilities and your willingness to trust them to take care of important details is as important to your managerial performance as your own abilities. If you can get your employees solidly behind you, your unit's productivity will go up and many of your major headaches will solve themselves. On the other hand, if your problems and needs as a supervisor leave your employees cold, chances are those problems are only beginning.

Employees who believe in what they are doing and the person for whom they are doing it are much more willing to make personal sacrifices in times of crisis and difficulty. They will display a higher level of interest and enthusiasm in their work and their attitude toward your organization and your department will be more conducive to a high level of performance. A healthy sense of teamwork and harmony will make your employees proud to be part of your group and keep things running smoothly even when you aren't around to supervise. When your people are solidly behind you, they will help boost your personal image by thinking well of you among themselves and speaking well of you to others. Finally, as you prepare to move up the ladder in your organization, you will be in a better position to develop and groom key aides to take over your job. The question is, how do you instill this loyalty in your employees? How do you keep their morale high in a business that runs the gamut from very slow times to periods of frantic activity?

One good way is by recognizing their achievements, abilities and talents. Everyone has an ego that likes flattery. Deserved praise and recognition from the boss go a long way toward motivating an employee. Many bosses think the content of an employee's pay envelope is thanks enough and when they want to reward someone, they give him a raise or bonus. The additional income is always welcome but public recognition can sometimes go just as far toward making an employee feel valuable. Design a series of certificates or wallet cards for such skills as fairway maintenance or chemical application. After all, these are important skills and employees who are proficient in them deserve to be recognized. Of if your club has an employee newsletter, make sure your people who deserve it are prominently mentioned.

By recognizing skills and encouraging employees to develop their abilities, you can make them feel that they are a valuable part of your organization. When they feel good about their jobs and are motivated to be more productive, they make you look good. And all you have invested is a little time and consideration.

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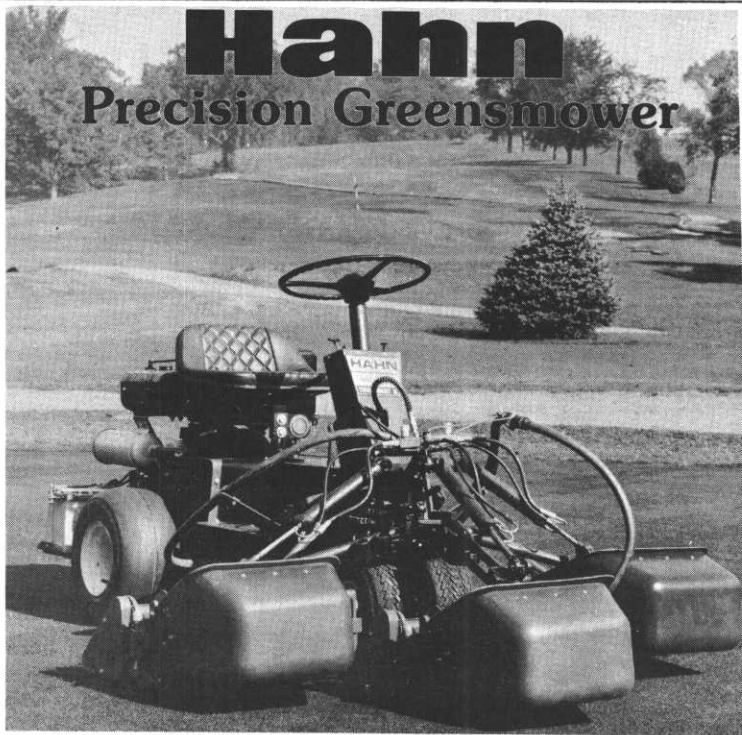
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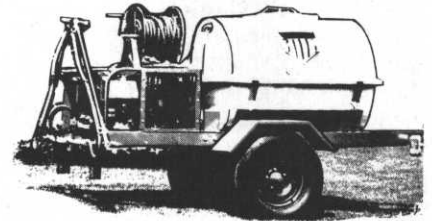
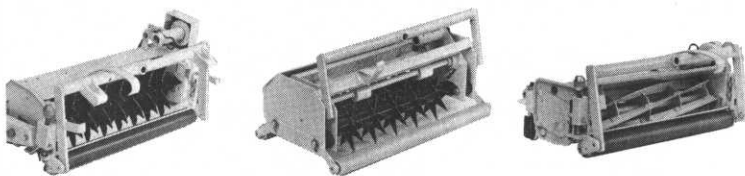


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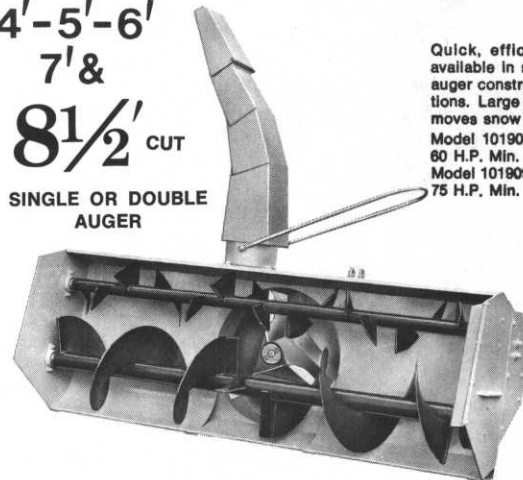
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SOME IDEAS ABOUT ROOTS

by
Dr. W.H. Daniel, Purdue University

Roots - Turfwise

Our historical roots, as a family and individuals, have recently received special attention. However, the roots of concern in turf are those little white stringy things that supposedly are below the grass you see on the surface.

First, what is a root? Roots are initiated at the nodes occurring along stems. These may be concentrated in a crown or spread along a stolon. Portions of mature roots are mainly conductive tissues plus providing some storage of nutrients, especially starches.

The working part of any root is the soft adsorptive root tip and the root hairs near it. This is where the payload of water and elements are adsorbed for transfer to the crown, stems, and leaves known as the turf cover. And, woe is the plant which had **lost** its root tips! So, a living root is that plant tissue joined to the node and extending to and including a root cap. Although some branching is normal, when individual root tips die, the older root parts seldom initiate new root tips. Physiologically the plant's response is to initiate a new root at the node and just start again (provided extra energy is available and time is allowed). In other words, the energy path is to start a new root, which has least transfer distance for nutrients. So, keeping root tips alive and active is the first challenge of turf managers.

Bud Esterline of Muncie one time said, "Bill, on Monday I cut the cups and could see roots about five inches deep. It was dry, so Monday evening we made a big effort to water the greens real good. Tuesday morning early it rained and it was so cloudy and wet that we couldn't mow Tuesday. Although still raining, we finally mowed a little Wednesday afternoon, and the rain just set in there. Brown patch began to show. We finally got our greens mowed on Friday, and on Saturday the weather cleared up and all I had for roots were a few black strings! I lost my complete root system between Monday night and Saturday morning." Now what? Bud knew he had to lightly water those greens, to watch for wet wilt, to keep the leaves moist enough so they wouldn't wilt until new roots would generate. If he could get by for about seven days he'd have some new roots growing, and later some good roots working again, and back to normal. Five days of wet weather cost Bud his root system, and then it took him ten days to get partial replacement.

Where are the roots? Would you believe 90 percent of root length is in the upper two inches or 5 cm. In West Germany, my friend Dr. Boecker, reported extensive testing.

Roots			
inches	cm	%	
0-2	0-5	90	Boecker found 81 to 91% for fescue
4	-10	5	86 to 94% for bluegrass
6	-15	3	85 to 93% for bentgrass
	below	2	Root distribution in June and September were near equal

Don't fret over this distribution; just realize that it is the active root tips doing the work.

Ideally, a diffuse extensive root system is desired, but for every use, management, rootzone and irrigation, what is normal, adequate, and necessary will vary. As turf managers, you want all the roots possible or practical.

Roots have been found over 100 inches long under Bermuda in California tests. However, roots of three feet for fescue and zoysia, 2 feet for bluegrass and bentgrass would be considered quite long. When trenches are made across roughs or tall grass areas, the long root extension in the soil profile is usually impressive.

Roots are plant membranes. "Here, you root; do this! Absorb (take in) 5,000 pounds of water plus one pound of elements the plant must have. By the way, **keep out the excessive and avoid the unneeded.** Meanwhile, let's hope nematodes make no holes, and rhizoctonia doesn't infect. And, while you're constantly expanding, we'll try to keep the leaves healthy, the mower sharp, the wear distributed, the drouth averted, and we'll try to avoid scalping or other turf stress." After all, the top must send energy clear down to the root tip. When energy is short the number of root hairs diminishes, the diameter reduces, and the root initiation slows.

Roots are powerful adsorbers. Before the plant wilts, roots will take water from soils down to 13.6 atmospheres, a pF of 4.5 or tension equivalent to 14 meters of water. The wise turf manager has every reason to utilize the reservoir of moisture within a rootzone between irrigations. In other words, it is foolish to ignore the rootzone moisture storage potential when managing the turf.

What is water-air balance for roots? Incidentally, the root tip must have some oxygen as it works. Waterlogged soils are hard on roots. Being waterlogged for more than 24 hours under stress weather is a cause for concern. Most turf managers have seen roots growing over the surface of the ground in an attempt to be where there is air. Roots may be deep or shallow just in response to air supply. We've seen roots grow in water when air is added, but remember, oxygen travels through water 1000 times faster than through wet compacted soils.

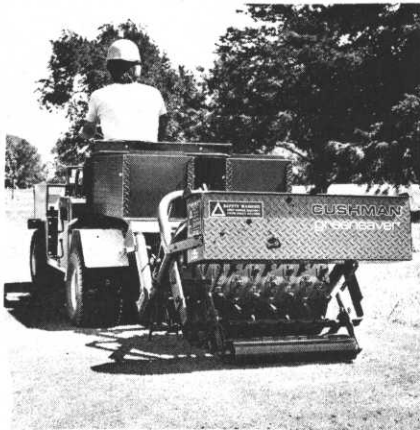
Roots are strong! When roots are numerous their combined strength is in athletic fields, tees and traffic areas. New roots in new soils always look good. A measure of success is to have sufficient roots to hold the soil mass for their entire depth of penetration when held by the surface sod.

Research on rooting of sods has been conducted to determine resistance to an upward pull after one month of growth.

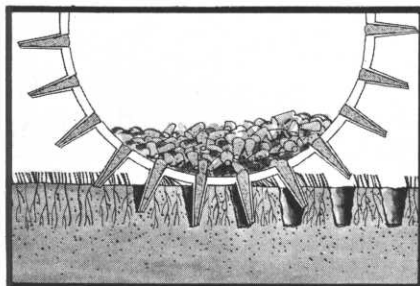
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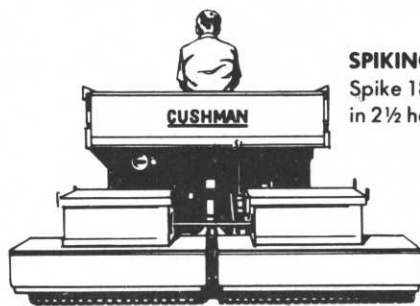
Cores are pushed into the rotating drum as the Greensaver penetrates the ground.

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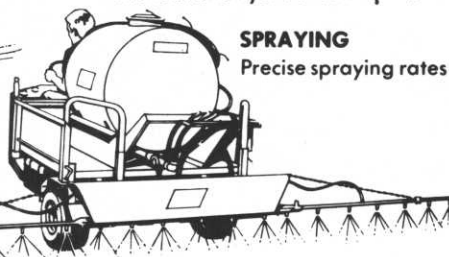
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Continued from Page 7

How would you insult roots?

1. Reduce the air at root tips
2. Increase the water to excess
3. Compact the soil; use equipment and carts
4. Smear, seal the surface
5. Raise the temperature
6. Overcrowd the plants
7. Lose leaves to diseases; lost energy
8. Reduce leaf surface
9. Shade by trees, buildings, other plants
10. Overfertilize and stress plants

What would you do to favor roots?

1. Increase oxygen in rootzone
2. Avoid any overwatering or continued wetness
3. Vertically core, spike, slit open rootzone surface
4. Topdress to raise cutting height
5. Topdress to minimize surface compaction and effect of thatch
6. Increase leaf surface
7. Avoid or spread wear
8. Avoid disease or turf weakening
9. Lower the temperature - cooling when possible
10. Reduce shade or competition
11. Fertilize - low to medium nitrogen
12. Provide ample potassium and minor elements

Turf managers and their crews can't make a root! You can help; let the plants make them. You can kill the root or slow it down.

Happy

New

Year

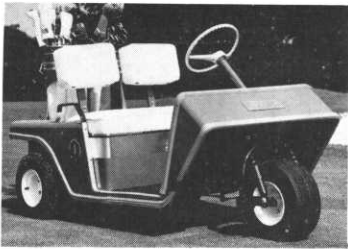
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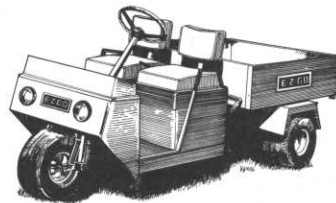
PREPARE FOR SALES CALLS by having some idea of what you will order. Study that firm's promotional literature and trade magazine advertisements to develop a list of questions about products which interest you.

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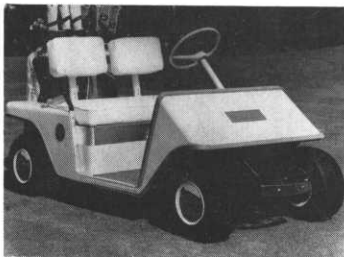


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TRAIN YOUR STAFF to separate the unimportant and unneeded items which salesmen are seeking to sell you from those products which could be of some value. Give someone on your staff the authority to turn down those which obviously have little value.

MEET WITH SALESMEN in an area of your building where you are least likely to be interrupted. The few minutes each day you save by making your meetings more efficient will add up to a sizeable total by the end of the year.

DON'T BOTHER YOUR SALESMEN with matters over which they have no control. If you have a problem which they cannot solve, go directly to the company and use the time saved for more pressing matters.

It doesn't hurt to cement valuable relationships over an informal cup of coffee when you both have time to spare, but a hard look at the way you deal with salesmen can result in a considerable amount of time saved on everyone's part.

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