

# Products



## Topdresser

The Turfco/SodMaster Mete-R-Matic topdresser is now available as an attachment to the E-Z-Go model GT-7 utility truck. The new model F-11, with a 13.5-cubic-foot hopper is powered by the truck's PTO. All control settings, including amount of material being applied, are made from the operator's position. Topdressing is spread evenly by a 36-inch wide brush. An optional drag mat permits backing up, lifting and storing on back of the topdresser when not in use. Turfco recently purchased the assets of the Sod Master division from Jacobsen Manufacturing Co.

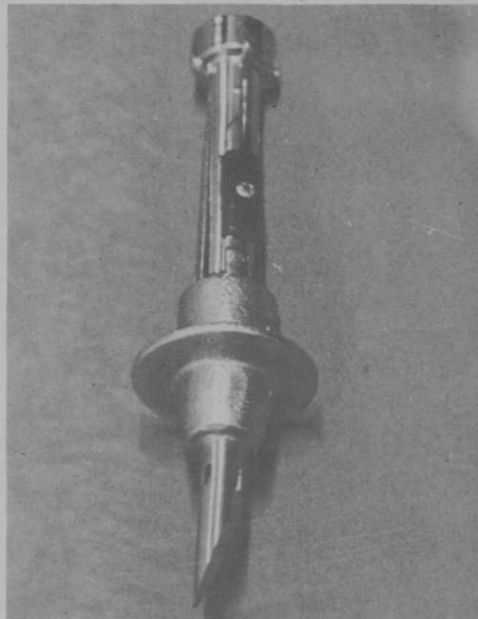
Circle 209 on free information card



## Power take-off

An engine-driven, rear PTO for 14, 16 and 18 hp Power King and Economy tractors is now available. The unit meets ASAE Tentative Standard S370T for 2000 rpm power take-off-driven tillers, flail mowers and other Category "O" equipment. The PTO operates at 2000 rpm (3300 rpm engine speed), is belt-driven from the front of the engine through a gear reduction box and has a one-inch diameter, stress-proof drive shaft. Listed as a dealer installed option, the Category "O" PTO will fit tractor models equipped with an electromagnetic clutch and 1 1/8-inch by 2 1/4-inch frame members. Models built before 1973 will require special modification.

Circle 205 on free information card



## Chemical rinser

Jet Rinse, from Select Styled Systems Ltd., is designed to clean chemical cans and other containers. It is claimed to be effective on any container, either metal or plastic, from one to five gallons. By inserting the device through the bottom of the can and rinsing through the top into the tank, total usage of the chemical can be obtained. The process also leaves a hole in the bottom of the can, preventing reuse of the container for other purposes.

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## Digging equipment

The Ditch Witch Model 6510 replaces Model R65 in their Modularmatic series. It features four engine options, two gasoline and two diesel; optional rear steering; increased ground clearance; and two-range hydraulic ground drive during trenching with infinitely variable speed control within each range. The Modularmatic design permits one vehicle to do multiple underground jobs by interchanging work modules. Modules immediately available for the 6510 include several trenching assemblies, a utility backhoe, boring unit and selected hydraulic tools.

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## Air seeder

Electric Technology Corporation's Erocon Air Seeder has two separate steel hoppers to hold seed and fertilizer. Each is individually metered at desired rates. The seeder is lightweight and can be operated from a 3/4-ton pick-up truck. A small, air-cooled diesel engine supplies air to broadcast seeding materials 40 to 70 feet, depending on seed type.

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## Rotary pump

The Mighty Max, a patented rotary roller vane pump, can be powered by an electric drill, an AC/DC motor, or a gasoline engine using the manufacturer's shaft connector. Shaft connectors come in three sizes: 1/4 x 5/8, 1/4 x 1/2, and 1/4 x 3/8. It is claimed by the manufacturer to pump all liquids and air. It will pump 17.5 gallons per minute at 2000 RPM and develop 43 PSI.

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## Turf sweeper

The Olathe Model 48 Turf Sweeper has a 10 MPH speed, hydrostatic drive, instant reel adjustment, and rubber figured reels. It will pick up clippings, wet or dry leaves, rocks, cans, bottles and other debris, according to Olathe Manufacturing. Model 48 will also convert to a truck in a matter of minutes for year round use.

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# "I wish my quarterbacks were as durable as this John Deere Tractor."

*Coach Dan Spadoni, Dollarway High School, Pine Bluff, Ark.*

Last season, Coach Spadoni had all four of his quarterbacks out at one time or another with injuries.

But his John Deere 850 Tractor never missed a day's work.

"In the two years we've had it, we've used it to mow both of our football fields, the practice field and the grounds around the school," says Coach Spadoni.

"And we've never had any problems. Even opposing teams have told us ours is the best field they've played on!"

Which, of course, is why Coach Spadoni and School Superintendent James Matthews decided to buy a John Deere 'Little-Big' Tractor in the first place.

## **Not too big, not too small**

They were looking for a tractor big enough to handle

\*Maximum PTO horsepower at 2600 engine rpm (by official test).

\*\*Maximum PTO horsepower at 2400 engine rpm (by official test for the 950, factory observed for the 1050).

a large-acreage mowing job. Yet small enough so it would be economical to buy and operate.

The 22-PTO-hp\* John Deere 850 filled the bill on both counts.

Its compact, water-cooled, 3-cylinder diesel engine has the power and stamina to run a rotary mower day after day, year after year. Yet being a diesel, it gives the kind of fuel economy a school's budget really appreciates.

## **More than just a mower**

Another reason Coach Spadoni picked the John Deere 850 is its versatility.

It has a well-spaced 8-speed transmission that can match up to just about any job you want to do, plus a differential lock.

It has a Category I 3-point hitch, 540-rpm PTO and adjustable drawbar, plus more than 20 power-matched implement options.

And it's available in a variety of different tire styles and sizes.

## **Built to last**

Of course, like all John Deere tractors, the 22-PTO-hp 850 is built to last.

"You can actually *feel* how solid it is when you ride it," says Dan Spadoni.

And to prove it, we ask only that you test drive one yourself at your nearby John Deere dealer.

Try out the 850, the 27-PTO-hp 950 or the new 33-PTO-hp 1050 with turbo-charged diesel engine.\*\*

See for yourself why John Deere 'Little-Big' Tractors are a big winner with schools, parks and golf courses everywhere.



## **Nothing runs like a Deere®**

For more information, write John Deere, Dept. 63, Moline, Illinois 61265.



## **The little-big tractors from John Deere**

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# Classified

When answering ads where box number only is given, please address as follows: Box number, % Golf Business, Dorothy Lowe, Box 6951, Cleveland, Ohio 44101.

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Mail ad copy to Dorothy Lowe, Golf Business, Box 6951, Cleveland, Ohio 44101.

## BUSINESS OPPORTUNITIES

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## HELP WANTED

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Minot, North Dakota 58701

**GOLF COURSE SUPERINTENDENT—**Position for 18 hole, southwestern course, will consider qualified assistant ready for his own course. Send detailed resume, including history of earnings. Box 206, Golf Business, Box 6951, Cleveland, Ohio 44101.

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**GOLF COURSE SUPERINTENDENT—**Position for 18 hole private golf course in Weston, Massachusetts. Ten year minimum experience required. Home on golf course. Salary range open. Send resume to Malcolm Elfman, President, Pine Brook Country Club, 42 Newton Street, Weston, Mass. 02193.

**GOLF COURSE SUPERINTENDENT—**18 hole, watered course in northern Illinois seeking qualified superintendent. Must be certified. Supervision, experience, conscientiousness and enthusiasm are prime requisites. Salary range open. Fringe benefits. Send resume to: Box 205, Golf Business, Box 6951, Cleveland, Ohio 44101.

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## MISCELLANEOUS

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# Directory

If your company is selling a service to the golf course market you can now get your company name and service in front of your total golf market potential for less than \$19.00 per month.

Send check or money order to Dorothy Lowe, Golf Business Directory Section, 9800 Detroit Ave., Cleveland, Ohio 44102.

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# Reader forum

## Are trees vital to a golf course?

NO. Trees are not vital, they are nice, but not vital. There are very good tests of golf in the United States as well as Scotland that prove the point. It is very unfortunate that so many people equate big trees with good golf courses. I submit that it has become a stereotype concept that unless there are big trees all around most every hole, the average golfer immediately asked **when**, not **if**, trees are going to be planted.

Golf courses are not parks. They should not be highly manicured from fence to fence. There should be natural looking features such as grassy knolls that can sometimes go dormant and give contrast, streams or lakes that are not always entirely rimmed with concrete, and there should be trees or shrubs if they are natural to the area. Above all, golf courses should not be alike. It makes no sense to me to try to establish a course that looks like it was cut out of an Eastern deciduous forest when it is located out on the great plains.

**Stan Metsker**  
The Country Club of Colorado  
Colorado Springs, CO

## Aerify before adding sand topdressing

Mr. Kallander's excellent article in the October issue of **GOLF BUSINESS** was read with great interest and his conclusion that you do not improve the permeability of a green by adding a highly permeable layer to the surface is incontrovertible.

On the other hand, I would take issue with his statement that a screen analysis is only useful if it forecasts permeability. If you mix equal parts of gravel (highly permeable) with clay, you will decrease the already poor permeability of the clay. This is simply an extreme example of the general statement that adding a permeable material to a less permeable one does not always improve the permeability. A careful study of the screen analysis of the two materials will give you a clue, but the problem is so complex that you will have to go to the laboratory to get definite answers.

Mr. Kallander treats topdressing as a material which is applied to the surface of a green which, by definition, it is. However, when it is being

used as part of a program to improve permeability, it should be preceded by aerification and followed by being dragged into the aerifier holes.

Assuming that the topdressing is highly permeable, the permeability of the green is immediately increased in three ways:

1. The effective surface area of the green is increased since water can enter the soil thru the sides of the aerifier holes, as well as the surface of the green.
2. There is hydraulic pressure on the lower portion of the holes which will further absorption.
3. The holes punch through the most compacted and therefore least permeable portion of the soil profile.

It may be argued that this is a benefit of aerification, not topdressing, but without topdressing, the aerifier holes would soon close up.

If topdressing is used in this way, it is often advisable to occasionally leave the plugs on the surface, verticut them, and drag them back into the aerifier holes thus the topdressing is gradually incorporated into the base soil. Under these circumstances particle size is very important. Consider two sands, each with a permeability of 15 inches per hour:

Sample One is a very coarse 1 to 2 mm sand which would have a **very** high permeability except that it is contaminated by enough clay (perhaps 15%) to reduce the permeability to 15 in./hr.

Sample Two is a very uniform fine sand (perhaps .1mm) with a permeability of 15 in./hr.

Sample One would be detrimental to the permeability of most soils in most concentrations. In spite of its good permeability, it would not be a suitable topdressing.

Sample Two, on the other hand, would improve permeability of most soils in most concentrations. While it might not be the optimum particle size topdressing for all greens, it is difficult to imagine a circumstance where it would not be a suitable topdressing, assuming of course that it would not be followed by later soil topdressings which would produce layering.

Until recently the only relatively inexpensive way to improve the permeability of tight greens was to aerify as deeply as possible with a spoon as large as the members would tolerate and then topdress

with a suitable material which was brushed into the holes. If done several times a year for several years, great improvement could be made in the permeability of the top few inches.

Fortunately there is now equipment available which can inject sand nine inches deep into a green and which can do more to improve permeability in one day than it was previously possible to do in several years.

**John Moreland**  
Cambridge Soil Services  
Glencoe, AL

## Lime vs Japanese Beetle

The merits of liming turf are known to the experienced turf managers in the humid region of the United States. When the Japanese beetle was first devastating turf in the Washington, D.C. area, Mr. Rubin Hines laid out liming test plots. His efforts showed the beetle larvae did not damage the limed areas on his golf course.

J.B. Polivka and R.J. Wessel, entomologists at the Ohio Research & Development Center in Wooster, Ohio, summarized an eight-year study, 1949-57, with this statement: "That the Japanese beetle larvae population is directly correlated with soil acidity seems to be definitely established. The studies also indicate that it is possible to obtain reduced levels of grub population by applying lime."

At Lyons Den Golf, 100 pounds of pulverized dolomitic lime was applied per 1,000 sq. ft. (2Ta) to change the 4.6 pH in the heavily disease-infested thatch. A year later, we observed that the limed thatch had no noticeable grub damage.

Eight-and-one-half of the five-year old fairways and roughs that were not limed, were heavily damaged.

Aerifying after liming seemed to have broken the lime barrier and the grub population returned. Now

we aerify first, then apply lime.

The 100 pounds of lime per 1,000 sq. ft. has not moved into the soil. The pH just below the limed layer in the thatch is the same as before liming, 4.6. Liming thatch is like liming a cellotex board. It will not go thru, not even with 100 inches of water.

Yet our lime layer did inhibit beetle egg laying. It is known that the Japanese beetle lays its eggs in the soil, not thatch. Was it possible that the lime barrier inhibited the female going to the soil to deposit eggs? No research has been done on the LIME: THATCH vs JAPANESE BEETLE, so far as this writer knows.

To do an in-depth study from our observations would require several years of study by entomologists, next by agronomists on the effects of continued liming on different soils, and then the pathology department to tell us of changes in the fungi population in thatch and soils.

The findings of these researchers working as a team would require a lot of people and people have to be paid. It is a national problem, where ever there is grass, not just golf courses. Yet, the great investment in golf course turf that must be protected from grubs, calls for leadership to come from golf club and course owners.

It is up to all of us to "squeal our wheels" and let the Secretary of Agriculture know that the threat exists. The State Directors of Agriculture and the heads of research centers must be told of the need. Will you help?

Researchers will have to tell us how much money will be needed, before asking for funding. In this inflated economy, costs will be higher and funds will be difficult to come by, yet if we don't, the Japanese beetle grub will destroy the greatest "spirit lifter" of all to the human race. GRASS.

**OLD Bill Lyons**  
Lyons Den Golf  
Canal Fulton, OH

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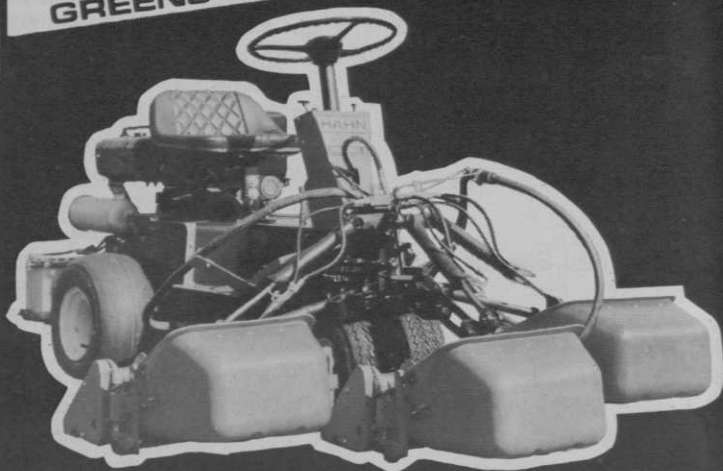
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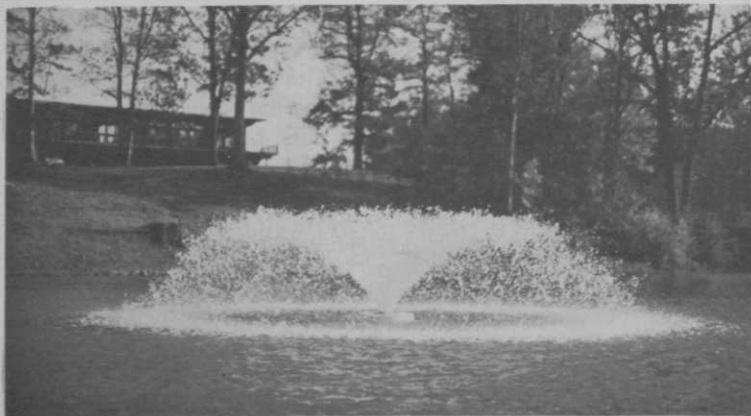
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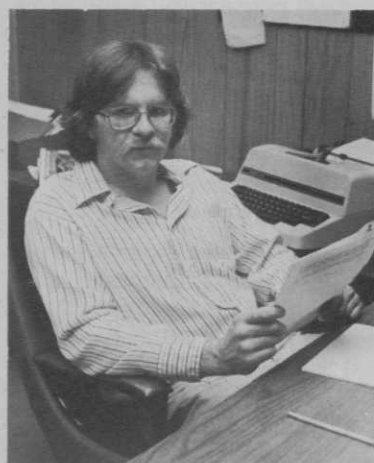
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## Viewpoint



You may have noticed that the roundtable discussion on replacement parts was not featured in this issue. There was so much discussion involved that it is going to run as a two-part series in the January and February, 1980 issues of GOLF BUSINESS. I have about 100 manuscript pages that I have to boil down to four or five magazine pages.

The job is not easy. We do have a hang-up calendar of events for 1980 in this issue. I hope you all will hang it up and keep track of important conferences.

If you want a little uplift, look at page 29 in the November, 1979 issue of "Golf Digest". Joseph Dey puts in a good word for the Superintendent. One quote in particular strikes me, and remember, Dey is speaking to the golfer: "You think golf is hard to play? How would you like to be charged with *maintaining* a course, with several hundred members to please? The greenkeeper's world is now a world of scientific and mechanical know-how." And he goes on to describe some of the more technical aspects of the job. Thank you, Mr. Dey.

I would like to share an observation that I have made in attending a few conferences and trade shows lately. Trade shows create a lot of work for a company, coming in with equipment to set up a booth that they have paid for. The main reason an exhibitor puts forth his time and money is to reach a potential customer. That potential customer is you, the Superintendent. Now, to phrase delicately, if you, the potential customer, don't walk through the trade show and spend some time purveying the various exhibits and talking with manufacturers, they are going to decide that the interest in that particular region of the country and at that show, doesn't make it worthwhile for them to haul their wares in, pay good money for an exhibit booth, and spend a lot of time setting up and tearing down. Now, that's a long sentence, but what it all boils down to is that they aren't going to be there next year. And you're going to go back to that same show and say, "What happened? There were a lot of people here last year. Where are they now?"

Now don't get me wrong. I'm not saying there is no loyalty in this industry. Far from it. However, an entity who bases its existence on making a profit, can only afford to lose so much before it has to give up. Sometimes the exhibit hours don't agree with having a good time in a conference city. But if you want to continue to enjoy the conference and watch it grow, you're going to have to put in some time at the show. Besides that, it's a learning experience.

To end on an upnote: Merry Christmas and Happy New Year! I hope that 1980 will be a very prosperous year for you.

*Ron Morris*



# 51st INTERNATIONAL Turfgrass Conference And Show



"CONSERVATION... OUR KEY TO THE FUTURE"

**FEBRUARY 17-22, 1980  
ST. LOUIS, MISSOURI**

Golf course managers, educators and industry representatives from around the world will gather in St. Louis, Feb. 17-22, for the 51st International Turfgrass Conference and Show. Join them for this once-a-year opportunity to learn about the latest developments in turfgrass management, services and equipment.

Conference highlights include:

- preconference seminars
- four days of education sessions
- turfgrass industry show
- annual meeting and election
- ladies' program
- certification examination
- social events

More conference information and registration materials will be mailed to GCSAA members in October. Others may use the coupon below to request materials. Please complete and send to: GCSAA Headquarters, 1617 St. Andrews Drive, Lawrence, Kan. 66044.

Send GCSAA Conference and Show materials to:

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