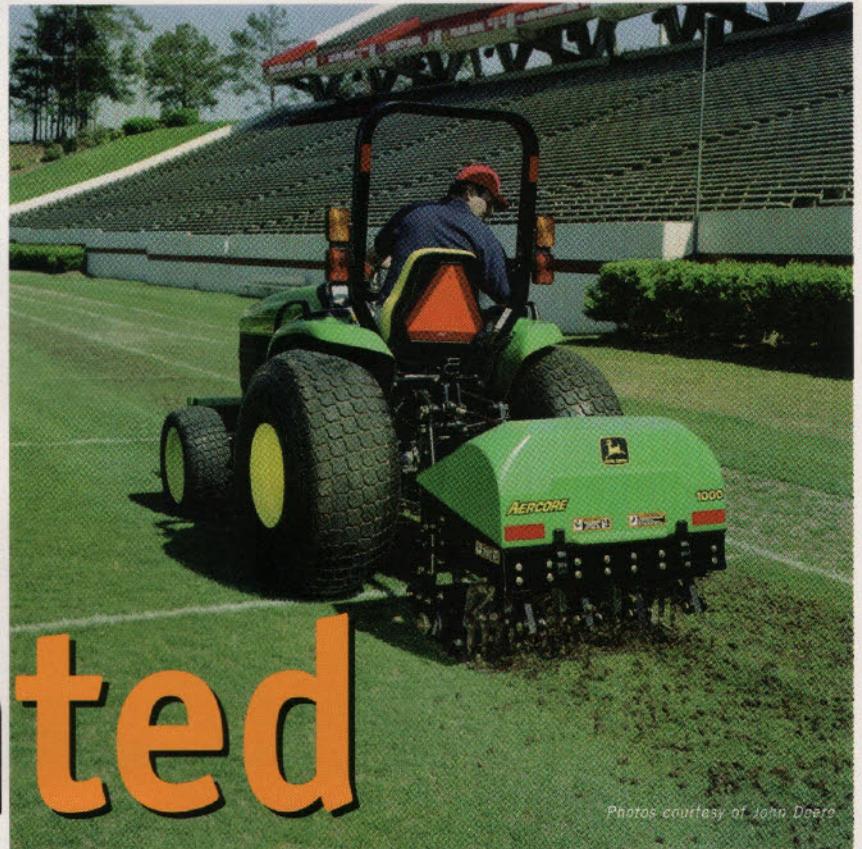


Getting acquainted



Photos courtesy of John Deere

How well do you know your aerator?

BY GRAHAM FOOT

It seems as though “aeration” is a word that strikes fear into the hearts of sports turf managers and superintendents everywhere. The when’s, how’s, and what size tines, all factor into a turf manager’s decision. Although aeration might be one of the more tedious and time-consuming tasks necessary to keep turf in top condition, it’s also one of the most important and life sustaining to the field or fairway.

It may take a while for this project to shed its “necessary evil” reputation, but by understanding equipment options and operation, researching advancements in the newer product models and remaining faithful to the upkeep of your machine, you can produce excellent coring results and extend the life of your equipment. All of these factors boil down to one concept—know your equipment. You’ll have healthier turf to show for it.

A smorgasbord of choices

Choosing the correct aeration equipment for your conditions is essential to the look of your turf and the life of the equipment. Turf managers are offered a veritable buffet of options that include coring head width, tine variety (a sub-

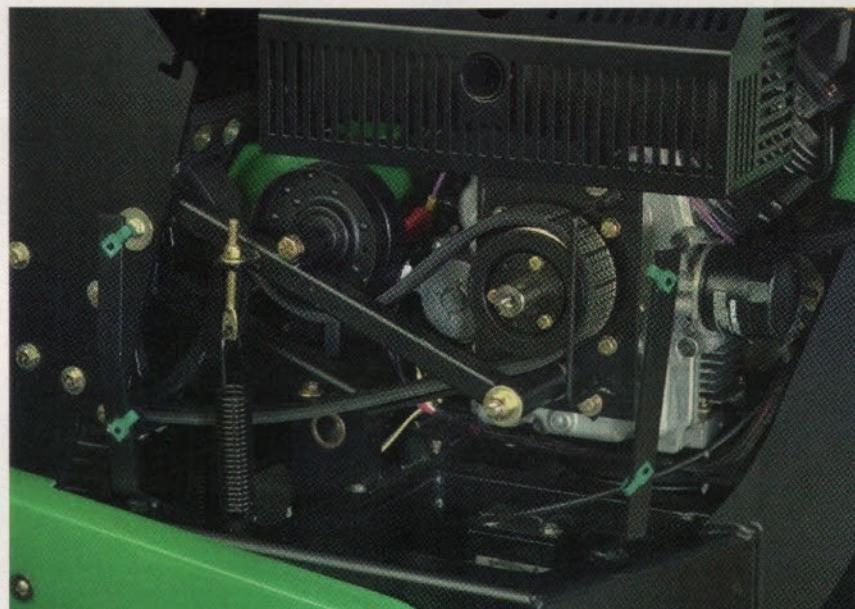
ject so diverse that it deserves an article all its own), and coring depth capacity, not to mention the unit itself. Should you use a self-propelled model? A tractor-mounted model? A hitched and towed model?

The answers to these questions are as varied as the turf conditions, and are personal to each turf manager. The important part is making sure the questions are asked when deciding on the right model. This is the first step to making

sure that the equipment is capable of doing the job at hand. Using the wrong equipment can cause problems with the turf, and it can place undue stress and wear on the equipment, costing you time and money.

Once the right equipment is in the arsenal, it’s not as simple as pressing “on” and motoring in a straight line down the field. Operating an aerator takes precision work, and when used incorrectly can make and (quite literally) break the health of your turf.

Manufacturers know that poor aeration quality is often not a result of poor equipment, but is a result of improper use of the machine. Using the equipment incorrectly can cause torn or elongated holes as well as problems with the machine itself. For example, leaving the turf guards off of the aerator could cause lifting of turf. Leaving deflectors and shields off means that



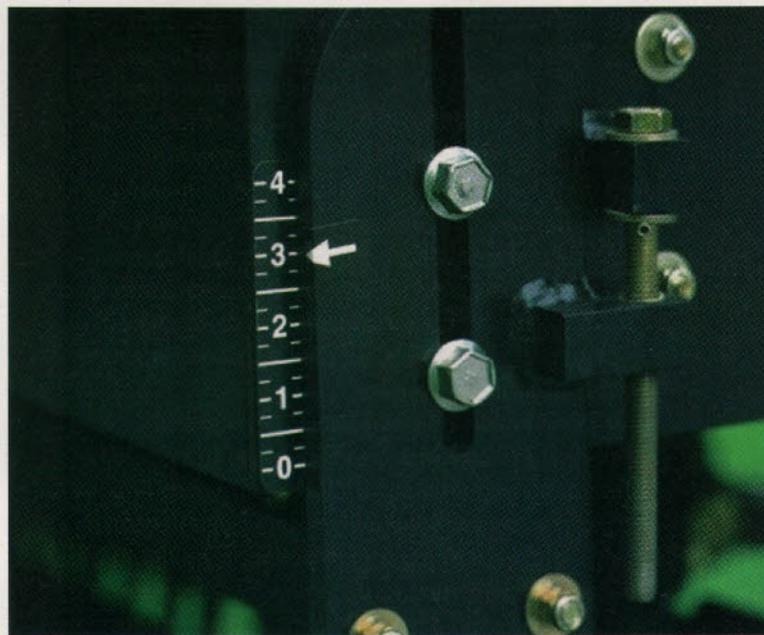
Operator’s manuals have important information about tire pressure, forward speed settings and core depth, all crucial to performance on the turf.

excess debris extracted with the core, such as loose dirt and rocks, can get into the belts and gears of the aerator, causing wear and tear.

Also, operators should be extremely familiar with the proper setup of the equipment. Operator's manuals will have important information about tire pressure, forward speed settings and core depth, all items crucial to the health of the machine and the performance on the turf.

Aerators are being designed to be cleaner, more efficient, more accurate and even quieter. One of the most useful new design trends is the increased emphasis on serviceability of the machine. Several of the newer models are made with sealed bearings, which keep water out when washing the equipment and eliminate excess oil dripping onto the turf. Chains are being replaced by quiet, more serviceable fiberglass reinforced belts that are easier to change and less expensive.

Aerators are also being designed with electric core activators, so that if the equipment runs out of fuel, the coring head can still lift off the ground as opposed to a hydraulic lift that won't work if the equipment is out of fuel. This design feature not only saves the turf from tearing, but can also prevent the struggle that goes along with manually lifting the coring head from the ground



Washing the equipment after every use is the number one to-do on the list because aeration is a dirty job.

in order to transport the equipment to the service bay.

The maintain game

It's no secret that daily preventative maintenance is the most important thing a turf manager can do to expand the life of a piece of equipment. The basics, while seemingly obvious, sometimes get left by the wayside if the staff is short-handed or if the day is just "too busy." But this type of neglect can turn costly. Simple daily maintenance of aeration equipment is essential, not only to the machine's life span, but also to its performance the very next time it's in use.

Washing the equipment after every use is the number one to-do on the list because aeration is a dirty job. Also, give it a visual once-over for broken tines, worn belts, low fuel, and damaged turf guards. In addition, familiarize yourself with the recommended scheduled service

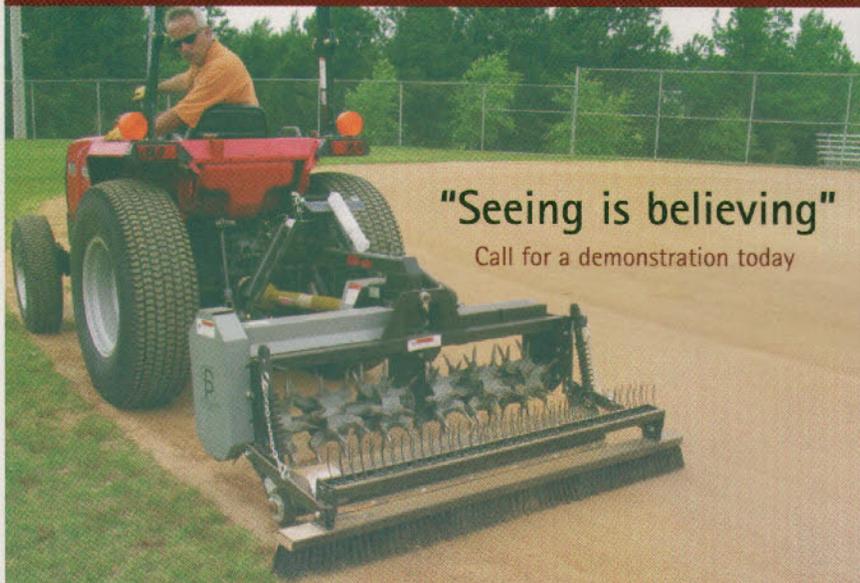
checklists found in most operator's manuals. Typically, manufacturers will provide service checklists in hourly usage increments. It may be helpful to post these schedules in the service bay area so that your staff can set reminders. The performance of your aerator and the beauty of your turf depend on it. **ST**

Graham Foot is manager, John Deere Golf & Turf Product Support.

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Aerator storage

Storing the aerator

1. Select a dry storage area with a firm, level surface.
2. Install support legs and remove the aerator from the machine.
3. Wash the machine. Clean the tines with high-pressure water while still clamped in the tine holders.
4. Remove the tines from the tine holders. If tines are still usable, coat with oil and store in a plastic bag.
5. Check for loose or missing hardware.
6. Check for rubber flex-link bumpers and flex mounts for wear or cracking. Replace if necessary.
7. Check turf guards for damage and replace if needed.
8. Check the aerating tine ram and tine holders for damage.
9. Loosen belt tension.
10. Check belt drives for wear or damage. Remove material from pulley grooves.
11. If the aerator must be stored outside, use waterproof cover.

Return the aerator from storage

1. Wash the machine and lubricate the powershaft.
2. Replace drive belts if needed; adjust belt tension.
3. Change the gearbox oil.
4. Install the tine holders and the aerator to machine.
5. Raise the aerator enough so tines cannot contact the ground. Run machine with PTO engaged at idle speed for 5-10 seconds to check for unusual sounds.
6. To achieve desired hole spacing and depth, test the aerator on practice turf. New tines must be broken in on practice turf before use.
7. Listen for any unusual mechanical noises while operating on practice turf.
8. Check for loose or missing hardware after operating on practice turf.

-courtesy of John Deere



DEEP SLICER

The SISIS MultiSlit machine is a deep slicer with a working depth from 6-8 in. The frame has an integral weight bar for additional weights if required and floating pressure rollers that follow ground contours.

The MultiSlit has a working width of 48 in. and fits directly to compact tractors. Conversion frames are available for use with most trucksters.

SISIS Equipment/864-843-5972

For information, circle 093 or

see www.oners.ims.ca/2081-093

DEEP TINING

Wiedenmann's XP Terra Spike allows deep aeration and removal of compaction to a depth of 16 in. Features include a central adjustment of the entry angle from 90 to 65 degrees; central adjustment of depth; and a three-speed gearbox that allows a high operating speed.

Wiedenmann/866-799-3004

For information, circle 092 or

see www.oners.ims.ca/2081-092



AERATOR

The original Drill & Fill is not just for golf courses anymore. The Drill & Fill reaches depths up to 12 in. For special needs, the Drill Aerator goes to depths up to 18 in. Hines Drill Aerators are guaranteed to relieve compaction and promote healthy turf in even the hardest soils, says the company.

Hines Manufacturing/252-937-4555

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Different strokes for different turfs

BY FLOYD PERRY

One of the necessary tasks for quality turf strength and spot refurbishment of worn areas is the ability to penetrate and aerate that surface with various utensils at different times of the growing season.

The human body can live for approximately 7 minutes without oxygen; how long can our athletic field roots survive without oxygen? How long will your turf survive with a "parking lot" surface?

Many of our national research colleges have recommended since the early 1950s that core removal was the best technical manner to alleviate com-

paction and allow sufficient oxygen and moisture to reach the sub-soil root structure. During that post-war era most sports were just seasonal and there was only biannual turf maintenance to maintain quality, which might have been sufficient.

But what about today's extended schedules and multi-seasonal field turf use? How do we as progressive groundskeepers handle cool season turf fields without irrigation? What about baseball and softball outfields that become fall soccer/football practice fields? Aeration options have changed, too.

Sometimes if we can alternate our soil penetration with different tines, especially when afield is in play or practices are intense, then the turf root has a chance to consume sufficient oxygen and moisture to continue the growing process.

Since our society consistently watches television and sees prime game fields that are prepared by outstanding groundskeepers with superior equipment, they are not tuned into our youth fields that are over-used, under-irrigated, and improperly maintained due to time and funding. "Turf grows by the inch and is killed by the foot," so let's attempt to give that blade a little extended life by breaking up the surface more than twice a year. And with minimal disruption of turf evenness so play can continue.

Today's aeration techniques and technology have increased tremendously since time and field use has become a pair of enemies. Manufacturers have created various alternatives to core pulling since the downtime and core elimination process is very extensive and sometimes extremely time-consuming. Here are just a couple of variations, illustrated by the accompanying photos (courtesy of Floyd Perry):

- A. Shallow core pulling
- B. Fracturing
- C. Deep tine/soil core
- D. Drill and fill or drilling only
- E. Water injection

Since time, manpower, finances, and Mother Nature are many times working against us, we progressive groundskeepers must keep on the lookout for innovative ways to breathe life into our sub-surface soil without affecting the game day performance.

Core v. tines

Core aeration improves growing conditions by loosening soil and reducing thatch. However, solid-tine aerators and deep hollow tine units are more effective at solving drainage problems that result from deeper compacted layers, and thus are more often used for sports fields. **ST**

Floyd Perry, turf teacher and writer, can be reached at 800-227-9381.

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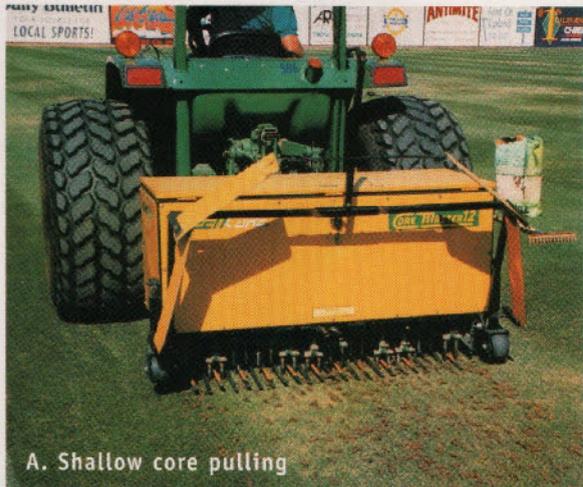
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A. Shallow core pulling



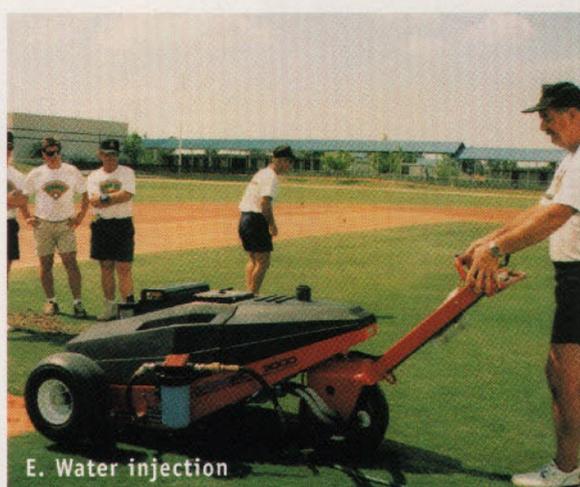
B. Fracturing



C. Deep tine/soil core



D. Drill and fill or drilling only



E. Water injection

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The Billy Goat PR and CR Series power rakes offer construction grade bearings, premium engines, heat-treated flails or knives, and a single piece steel engine base. The units feature padded, ergonomic handles that fold down for easy transportation and storage.

Billy Goat/816-524-9666

For information, circle 107 or
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FAST START ENGINE

Schiller-Pfeiffer, Inc., manufacturer of Mantis and Little Wonder branded equipment, now has the new FastStart Engine for the popular Mantis Tiller/Cultivator.

The major change is the inclusion of a ratchet and spring that have two functions: they make the recoil cord easier to pull, and they store the energy from this pull and release it in a short powerful burst. This allows the user an easier time pulling the cord, while allowing the engine to experience the strong crank from the recoil mechanism necessary to start the engine more quickly.

Mantis/Little Wonder
877-596-6337

For information, circle 104 or
see www.oners.ims.ca/2081-104

PTO POWER

First Products' AERA-vator is the only PTO-powered unit on the market and uses patented vibrating tines to fracture soil in the rootzone. You can aerate established turf, incorporate soil additives, or prepare the soil for seeding. The unit has a swing hitch that allows you to turn without tearing established turf. Available in several widths ranging from 40-80 in. wide with optional seed box.

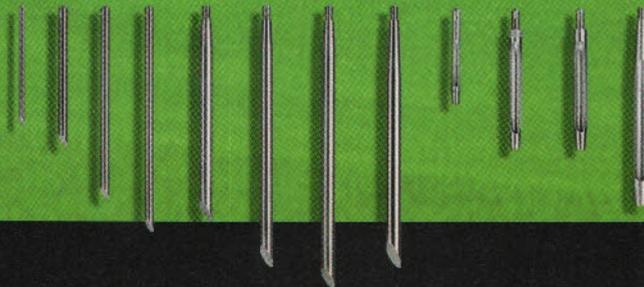
First Products/800-363-8780

For information, circle 090 or
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Billy Goat/816-524-9666

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Greens TERRA SPIKE®



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PlanetAir introduces its HD 50 utility vehicle tow unit aerator for non-intrusive athletic field frequent maintenance. With patented planetary motion, patented earth shattering motion, rollers front and back, micro adjustments for varying depth of tines, PlanetAir is a different machine. PlanetAir's patented planetary motion uses a smooth rotating mass to penetrate tough conditions without strain on the machine or the operator.

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DEEP TINE AERATING

The Soil Reliever 60 for 30-45 hp tractors is perfect for any deep tine-aerating task, says manufacturer Southern Green. As the unit is pulled across turf its deep-spading action fractures the soil into small, even particles with its chain-driven tines that can go as deep as 16 in. The crankshaft design delivers leverage by placing added weight directly over the tine heads, and the soil-fracturing action creates channels into the grass root structures allowing oxygen, water, and nutrients to penetrate more quickly throughout the soil profile.

Southern Green/800-888-9883
For information, circle 091 or
see www.oners.ims.ca/2081-091



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BLEC/864-843-1159
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JOHN DEERE AERATOR

With an 80-in. coring swath, the John Deere Aercore Aerator 2000 delivers high productivity without sacrificing hole quality, durability, or ease of service. The unit, designed to produce coring holes up to 4 inches deep, can cover 100,066 sq.ft. per hour.

Operators have a choice of two coring patterns, 2.4-in. or a 3.2-in., depending on the speed of movement. The unit features the patented "Flexi-Link" design that ensures tines stay perpendicular to the ground for a higher-quality, consistently round hole. The high-speed tine rams push into the turf and then pull out quickly, leaving little or no scuffing at the top of the hole.

John Deere/800-537-8233
For information, circle 087 or
see www.oners.ims.ca/2081-087

RYAN RIDING AERATOR

Versatile 30-in. riding aerator combines speed, variable core spacing and Ryan's reversing gear box ground drive return system to deliver precise, productive aeration to greens, tees, fairways and sports turf. Adjust spacing quickly and easily from the operator's seat even while in operation. Choice of tines and tine holders match the GA 30 to varying soil and turf conditions.

Ryan by Jacobsen/888-922-8873
For information, circle 089 or see www.oners.ims.ca/2081-089



BUDGET AERATION

Turfco's Aerator TM-62 provides quality aeration on a budget. Equipped with a 62-in. wide steel frame, the unit is ideal for large area aeration of sports turf and most commercial applications. It can be mounted to any small tractor with a 3-point hitch.

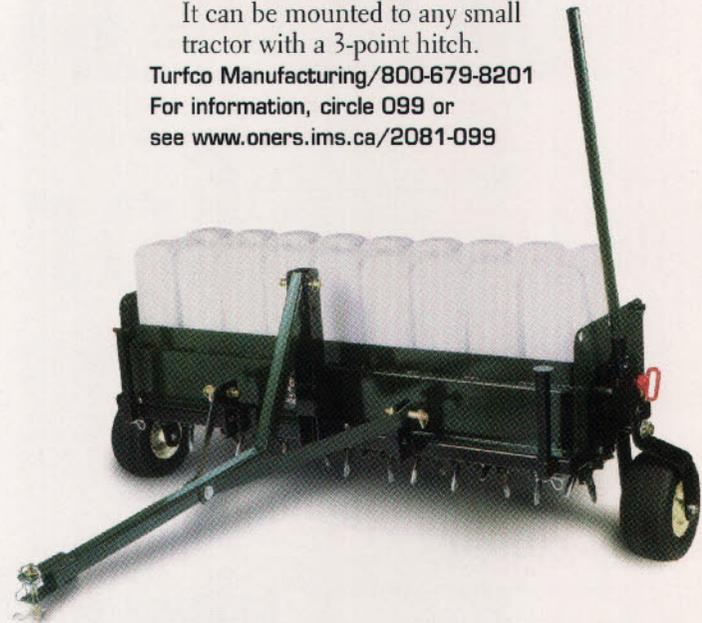
Turfco Manufacturing/800-679-8201
For information, circle 099 or see www.oners.ims.ca/2081-099

CORE AERATOR

Broyhill's AccuAire core aerator features the FlexWing design that allows the unit to follow the contour of the ground, providing even penetration. The solid steel frame and extra-wide racks add weight to maximize core depth in all types of soils.

Equipped to use slicer blades or core spoons, the AccuAire is available in 69 or 93 in. The unit is equipped with a hydraulic lift, and hooks up easily to utility vehicles equipped with hydraulics or three-point hitch.

Broyhill/800-228-1003 ext. 34
For information, circle 106 or see www.oners.ims.ca/2081-106

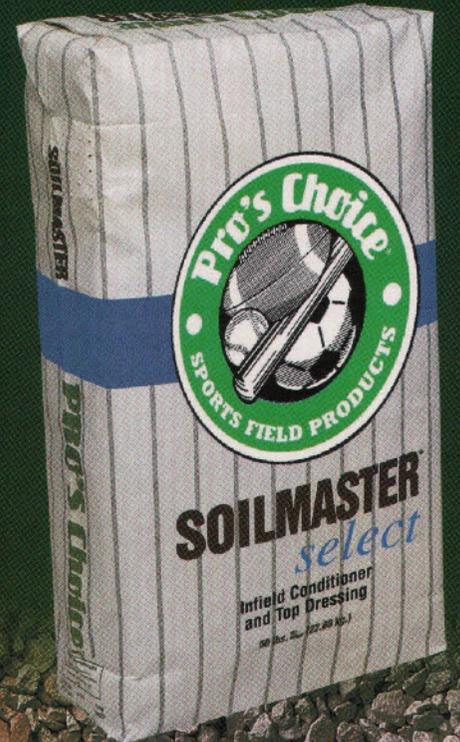


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