

>> PARKVIEW FIELD, home to the Fort Wayne Tincaps, maintained by Keith Winter

around by draining the tarp in another direction.

When we take the tarp off the field, I try to have enough front office personnel on hand to "hold up" the opposite side to keep from dragging so much conditioner off the baselines and skin. There will always be some piles after the fold, but lifting the folded edge helps. When rolling the tarp back on the roll, we have a narrow window in the visitor's bullpen to place the tarp, so I make sure myself or one of my grounds crew is "aligning" the roll. A "bad roll" isn't worth hurrying, because you know it always has to come back out again.

Finally, if you are inflating the tarp and the weather is threatening, make sure it is ultra-secure. We have foot-long tarp stakes at every grommet and put a piece of equipment on three corners. In the center field corner, we roll the tarp up in the roll almost to the edge of the skin, because I like Mother Nature to water as much grass as possible.



To water or not to water, that is the question

ODAY, WE LIVE IN A WORLD POWERED BY TECHNOLOGY. It's hard to imagine how people survived without the technology we take for granted every day. Our cell phones, computers, and laptops, what we would do without them? Even the advances in technology within the turfgrass industry have improved dramatically from just 10 years ago. Technological improvements in our equipment, genetically improved turfgrass species, chemicals, fertilizers, and improved irrigation systems. Just think what the future may hold for our industry.

One piece of technology growing in popularity in the turfgrass industry is the use of soil moisture sensors. This type of technology has caught our attention in regards to improving our Environmental Stewardship of our areas, maintenance practices, playability of our varsity athletic fields, and communication between administrators, coaches, and staff at Michigan State University. Through field testing with Toro Turf Guard wireless sensors and daily use of Spectrum Technologies' TDR (time domain reflectometry), this technology is improving the management of our irrigation applications and consistency of the playability of our fields. Our approach to using the sensors and TDR is establishing optimum moisture content in correlation to our fields playing conditions, during the varsity seasons and off seasons. Through constant monitoring over the years, specific moisture percentages have been established for each of our fields. Daily readings with the TDR tell us if we need to adjust our irrigation for an event or upcoming weather conditions.

This technology takes the guess work out of the age old question of "to water or not to water"? We are able to teach students and staff to access the readings online or take field readings to assist in hand watering, irrigation set up, etc. The first year we used the TDR in Spartan Stadium we reduced our irrigation by onethird. This in turn will reduce the expense of inputs such as fertilizer, chemical applications, and labor. We also have

shared this data with administrators and coaches as a tool to communicate field conditions through the four seasons and what expectations are for safety concerns and playability.

In spring 2010, 175 points

of data were collected with our TDR at 5-yard spacings to determine distribution uniformity of Spartan Stadiums soil moisture content. With the assistance of software provided by Spectrum Technologies, the data was used to develop a visual representation of Spartan Stadium's moisture content following irrigation. With a 1% crown, the driest part of the field is down the middle, and then increases in moisture content as you get to the edge of

The first year we used the TDR in Spartan Stadium we reduced our irrigation by one-third.

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JOHN MASCARO'S PHOTO QUIZ

Answers from page 17

These brown lines were the result of a wild good chase... literally. During the first week of October 2009, this high school field experianced an early frost. This field is near a river and migratory Canadian Geese have this nice green area on their list of favorite places to visit on their way to Florida for the winter. Many different techniques for transient goose relocation have been tried including fake Coyotes, radio controlled cars (fun but frustrating), repellent sprays, chasing with gators, golf carts and even dogs. On this occasion, 60 or so geese were performing their grass pulling and drop fertilizing techniques on the sports field when the Sports Turf Manager, assuming that the frost had completely broken that morning, took off in a utility vehicle to scare them off. As you can tell the frost was still on the turf in this shaded area and the brown tire marks appeared the following day. Since it was still in the growing season, the area recovered quickly and the Sports Turf Manager vowed to never get that frustrated with the geese again! He is now using a handheld green laser aimed at the turf or water when the flock comes around and is having good results in keeping them off the property.



Photo submitted by Peter Thibeault CSFM, Sports Turf Manager at Noble and Greenough School in Dedham, MA..

If you would like to submit a photograph for John Mascaro's Photo Quiz please send it to John Mascaro, 1471 Capital Circle NW, Ste # 13, Tallahassee, FL 32303 call (850) 580-4026 or email to john@turf-tec.com. If your photograph is selected, you will receive full credit. All photos submitted will become property of *SportsTurf* magazine and the Sports Turf Managers Association.





FLUOR FIELD at the West End, Greenville, SC



www.sportsturfonline.com

- Level of Submission: Professional
- Category of Submission: Baseball
- Head Sports Turf Manager: Greg Burgess
- Title: Head Groundskeeper

• Education: Bachelor's Degree in Turfgrass Management

• **Experience:** Four seasons in Triple A Charlotte; 3 years grounds crew for Clemson Univserity; student field manager for Clemson baseball/football. Interned for Greenville Drive in their inaugural season (2006) and have been head groundskeeper 2008-present.

• Full-time staff: Greg Burgess & Ross Groenevelt

 Other crew to recognize: Chris Rinebold, Christopher Grove, Kevin Donahoo, Barry and Josh Cole, Matthew Yochum, and Kyle Carter
Original construction: 2006

• Renovation: 2012.

• Reason for renovation: To remove the accumulated organic layer that was slowing down drainage and contributing to winterkill in our shaded areas. Large areas of this 22,000 sq. ft. have been sodded in the past years resulting in layering issues in several spots giving a weak root zone. Also, it gave this area a uniform Tifway 419 surface opposed to the preexisting surface mixed with 419, Princess 77, and Riviera bermudagrass.

• What was done: We excavated the top 4" out of the infield and foul territory grass (approx. 22,000 sq. ft.) down to clean USGA spec sand. 300 tons of organic material removed and 300 tons of 100% USGA spec sand brought back in to the void. Laser-graded everything in fair territory flat and graded foul territory to its existing clay-warning track edges to give approx. 1-1.5% fall. Sodded everything with Tifway 419 in solid big rolls. Turf blanketed for first 12 days to help promote root growth. Reestablished all clay and warning track edges. Replaced leaky, poor functioning irrigation heads with new heads. With obtaining turf blankets for the sod establish, they give us the tool to use them whenever we want to help combat bermuda winterkill and promote overseed establishment.

• Turfgrass variety: Predominantly Tifway 419 bermudagrass, with seeded variety bermudagrasses Riviera and Princess 77 in the outfield. Infield and foul territory is all Tifway 419

 Rootzone compostion: 100% USGA sand
Overseeding: October 3, 2011 overseeded the field in five directions at 8lbs/1000 sq. ft. with a 3-way perennial ryegrass blend (Majesty, Citation Fore, Quicksilver, Charger II). This year, we seeded Oct. 5 in four directions at 6 lbs/1000 sq.ft. (Grand Slam 2, Home Run, Flash II). All seed was topdressed and dragged in thoroughly. Seed began to germinate 5 days later. Drainage: Roger Bossard patented drainage system. 10-inch 100% USGA spec sand with 15 foot drain lines feeding into a main line bordering the warning track.

CHALLENGES

The theme of this year was rain. We as an organization had an advertised goal of getting 350,000 fans through the season this year. We wound up with 347,400 fans, due to a season high rainouts of three this year. We also set a new, year long record for tarp pulls with 72, a lot of which were dry pulls. The first half of the season, huge storms dropping inches of rain would get within .25 miles away but not ever reach the field, so the tarp was on a lot. The second half of the season these storms would form very close to the field and rain .5+ inches, but .25 mile away from the field stayed dry, so the tarp

was on a lot. We had to reschedule events or put them on the concourse because we would get .75-1.5 inches of rain the morning of the event, when only a 10-20% chance of rain was forecasted. Many overnight tarpings were precautionary more than anything. It is a lot easier and cost effective to take off a dry tarp in the morning than to dry out the infield.

Toward the beginning of our transition mid-late June, we had 6 days straight of 100-110 degree days which checked out 90% of what ryegrass we still had. This left huge voids in the grass in the infield and foul territory mainly. The outfield definitely struggled as well but not as much as an eyesore. Giving the timing of this heat wave, we did not have enough time to resod the much of these voids, resulting in very poor appearance for a very big July 4th five-game homestand. The playability did not suffer too much. Players kept their footing fine, but we did see a few bad hops. The lack of grass made the field play a lot faster, which the infielders did not like. At this time, we knew that were completely renovating all of the infield and foul mid-Sept., so we juggled trying to grow in these areas versus resodding much of it (ultimately sodding the same 6,000 twice in a 2-month span).

The 10-day break after this homestand was perfect to do any necessary sodding, but had to hold off until the 5th day of the break to sod due to two professional fast pitch softball games scheduled in the middle of this break. We ripped out and sodded 5,500 sq. ft on day 6 of the break, only allowing 5 days until our next game. We honestly could have resodded twice the much if the time and resources allowed. All other areas not resodded were pushed hard with .5 lb/1000 ammonium nitrate/weekly with our normal .5 lb 14-14-14 biweekly, until suitable conditions and coverage were met.

SportsTurf: What channels of communication do you use to reach coaches, administrators and user of your facility?

Burgess: The best way I communicate with coaches, new and old, are faceto-face meetings. This gives the coaches a good idea of the person and groundskeeper I am, as well as my intentions of maintaining the surface to a high standard. It always helps to have a good rapport with each coach. There will be coaches that will to come to me to tell me their plans and there are coaches that will never tell me unless I ask them. Some coaches will write their practice schedule for the next day on a dry erase board in the clubhouse following the night's game. This helps, but frequently changes overnight, so I make a point to speak with the coaching staff as they arrive to the ball field to double check their plans. This includes the home and away team because at this level, we have roving coaches in town often and they need to get work in with their players. Their workouts vary from day-to-day so communication is the key to making sure we have the field prepared for whatever drill they are planning.

The front office staff is the same way. I prefer face-to-face meetings, but it is very tough as we all are very busy throughout the day. The front office will have homestand meetings as well as game day meetings. I make a good effort to attend all homestand meetings to note any pregame, in-game, or post-game activities going on that would affect the field. Game day meetings are hit or miss depending on the teams' practice schedules. We also have a web-based calendar with all games and special events on it, along with the point person's name. This calendar is updated frequently and helps me have a heads up of games and events through the year to better plan staff, projects, etc.

Once our game schedule is set I will plan out my year for when I'm planning to aerify (solid or coring), topdress, resod, etc. As the year plays out, the gaps in the schedule where I plan these projects often get filled with either more games or special events. I communicate my plans to all front office staff to stress which gaps in the schedule are crucial to keep clear so I can do these management projects with the maximum amount of recovery time. Exceptional Results for Your Green Assets.







F.O.Y. | Flour Field

For any users of the facility, I try my best to be involved in the planning process as early as possible. Most of the staff knows to include me with information. In my opinion, having input early on in planning onfield events and games only helps the event run smoother and any dilemmas can be minimized. I can give input that most event planners do not think of at first as it pertains to the ball field.

SportsTurf: Any tips on communicating well?

Burgess: The "my way or the highway attitude" does not work as I have found out. In some cases it can be black or white and you can argue that, but it's best I have found to stay open-minded with anything presented to you. Games and events will get thrown on you at last minute, so instead of getting frustrated, I quickly begin to think of what my staff and I need to do to make things happen. I make sure the schedulers know of any limitations they have and what needs to take place for their event to happen, as well as how it's going to affect my plans for the field. Nine times out of ten, my plans for managing the turf are what usually have to change. Understanding that and dealing with it are important to know. Also, I make sure my entire grounds crew is familiar with where everything is stored and up to speed with the grounds crew "lingo" in case a scenario arises which requires immediate attention.

The most important tip I can give besides these is to stay in contact with those who have helped and those you have met. These individuals are people I can call anytime of the day or night with any kind of question. There are countless times, I feel like I have no clue what I'm doing or what the next step should be. It's great to get someone else's perspective on situations.

SportsTurf: What are your specific job responsibilities?

Burgess: My responsibilities pertain to almost everything that's growing on our property. This includes everything on the ball field, two off-field bullpens, a large grass berm seating area in left foul territory, all surrounding grounds of the stadium, and numerous plantings and pots throughout the inside and outside of the stadium. Each bullpen has approx. 750 sq. ft. of grass that is maintain exactly like the field to use as sod farms. This has worked out great for me to use as test plots and for when we need to do some small patches after our college tournament in late May. The outside grounds include general maintenance of mowing, fertilizing, pruning, and summer and winter annual installations. The outside grounds can be challenging to keep up sometimes with a small day staff during our minor league season. We have normal work to be done on-field each game day, so staying on schedule with our other responsibilities can be tricky.

SportsTurf: What do find most enjoyable?

Burgess: The most enjoyable part for me is working with my grounds crew. From game-timers to interns to my assistant, I have had some fantastic people working for me. I had a professor in Clemson that always said, "Surround yourself with great people." That's the mentality I keep when hiring new staff and the potential I look for in them. I enjoy seeing them grow and taking pride in the finished product come first pitch. We have developed a great team dynamic that shows when we are out on the field.

SportsTurf: What task is your least favorite and why?

Burgess: Probably the task I like the least is tarping the field. It is easy to tarp the field...in most cases, when I have enough help. But there are times when the tarp goes on or comes off with very little help. I'll do whatever I have to do to make sure we get a game in and we are not drying an infield before game time. The 2012 season had its fair share of tarping and even set Fluor Field records. We had countless storms that dumped buckets of rain either right beside the stadium and we didn't get any rain, or we got dumped on and the other side of the street didn't get a drop. On those days, the tarp was more than likely on the field. I am never opposed to the task of rolling tarp, but when it is on the field in our hot and humid climate, it was bound to play a role in our transition and the turf's performance. I'll give it up to the tarp crews; I worked their tails off rolling the tarp on and off the field. The amount of unfortunately timed rain played its part in our 2012 campaign of getting 350,000 fans through the stadium during the Drive season. Our record of three rainouts kept us just short at 347,700 fans.

SportsTurf: How did you get started in turf management?

Burgess: I grew up around turf management on the commercial end of it, as my father was an equipment sales representative. I worked for his landscaping company and was able to ride along with him when he would call on golf courses throughout the Southeast. In high school, I started as a seasonal game timer on the grounds crew for the Charlotte Knights. All I did for the first year was run a chalkbox, drag the infield during the game, and clean dugouts post game. But from the beginning I enjoyed working on the crew and seeing professional baseball. I came back each season and was able to do more and more on the crew. This experience influenced me to go to Clemson University for turfgrass management. While at Clemson, I worked on the grounds crew for the athletic department under the guidance of Mike Echols. I was given the chance to see turfgrass on a year round collegiate level. I progressed to a student turf manager of baseball and had the opportunity and privilege to mow the (real) Death Valley on game day mornings. My last summer in college I was an intern for the Greenville Drive in their 2006 inaugural season under head groundskeeper Ray Sayre. I had a blast that summer and was able to work on a freshly built state-of-the-art baseball field and was able to see first-hand some of the challenges with a new sandbased field.

SportsTurf: What was your first sports turf job?

Burgess: I was an assistant groundskeeper for the Triple A Charlotte Knights under head groundskeeper Eddie Busque. Eddie has continued to mentor me through all facets of minor league baseball. I was able to work a regular home game schedule, get my first taste of special events, and know the work required throughout the off-season and especially leading into the next season. Eddie has been in the business for quite a while and he is very knowledgeable about the building of new ball fields. Through application, I began to understand the design and components of a ball field that take place under the turfgrass. I'm very grateful for the experience I had in Charlotte. That is where I began to discover what kind of groundskeeper I'd like to be.

One year later, the Greenville Drive head groundskeeper position came available and I was lucky enough to get it. The relationships I made with the staff during my internship season proved to be extremely advantageous. Fluor Field at the West End is a 100% sandbased field with a state-of-the-art gravitational drainage system patented by White Sox head groundskeeper Roger Bossard. The sand profile percolates at over 26"/hour into 2 miles of 4", 6", and 8" drain tile. It also has flipper valves installed in case the nearby Reedy River was to ever backup, so the field would not turn into a bathtub. I have learned a great deal about this field and am still learning every day.

SportsTurf: What changes if any are you considering or implementing for the winning field in 2012?

Burgess: After our 2012 season, we were able to renovate our infield and foul territory turf. We pulled out everything down to the original sand profile to help solve issues we had with uniformity, drainage, and rooting. While keeping my normal fertility program simple, I plan to keep a much closer watch on my nutrient levels on this renovated area, as nutrients will leach out more quickly than rest of the field. And as usual, I'm always trying to think of new ways to become more efficient with any projects in the future. Eventually I'd like to renovate the rest of the field. **SportsTurf**: How do you see the sports turf manager's job changing in the future?

Burgess: What I see changing in the future for turf managers is more of everything. For example, when I first took this position we had 70 Drive home games and a handful of special events ranging from early April to mid-September. This has progressed to this year's schedule of 110 games and roughly 30 special events ranging from mid-February to mid-November. With the effect of the economy, I understand the need for the extra games and events. There is no longer just a 70-game schedule anymore. Managing this extra work load and wear on the field while maintaining our normal cultural practices and keeping the expected high standards I want is the way my job is changing. This is not necessarily a bad thing. I see it as more experience and knowledge I'm gaining, which will be invaluable to me in my next step in my sports turf career.

The STMA Field of the Year Awards began in 1988 and are given annually in baseball, football, softball, soccer and sporting grounds in three levels: professional, collegiate and schools/parks. A panel of 11 judges independently scores the applications and the winners are announced at the STMA Annual Conference and Exhibition. Winners receive signature clothing, complimentary conference registration, three night's accommodations and a trophy for display. The Field of the Year Program is made possible through the generous donations of Carolina Green Corporation, Ewing Irrigation Products, Hunter Industries, and World Class Athletic Surfaces, Inc.



WIEDENMANN'S WILL WOLVERTON ON AERIFICATION

healthy field is goal of every sports turf manager. To get that superior field, one very important requirement is a high number of plants per square inch. To achieve this you need soil conditions of approximately 45% minerals, 25% air pores, 25% water pores, and 5% organic matter. Quite often the number of air pores is reduced due to compaction and poor water infiltration, which causes saturation, meaning that the roots of the grass cannot breathe as they are literally drowned in water.

Aerification, especially at deeper depths, can resolve this issue by punching through any "black layer or hard pan," thus reducing compaction which increases water, air, and nutrient exchange to the roots. As a result, root depth will increase causing healthier leaf production and improved resistance during stress conditions. This can be accomplished with either solid tines or coring tines. One advantage of using coring tines is the ability to reduce thatch while reducing de-

compaction. The downside is the mess that is left on the field from the cores.

There are some new machines on the market that help with this clean-up process. One particular machine collects the cores and transfers



them into four rotating screens that separate the sand from the organic material (thatch). The sand is then returned to the field and the thatch is collected. This saves time, labor, and the cost of sand or topdressing material. Aerifiers and complementary machines continue to advance to make the aerification process easier and faster while creating great results.











GreenSlicer for aeration

GreensGroomer WorldWide, Inc. presents the GreenSlicer for cost-effective aeration needs. Developed and launched in 2006 for the golf course market, it provides the ability to spike or aerate without all of the complex machinery. The GreensSlicer is an affordable alternative to motorized methods, a ground-driven, well-engineered performer that satisfies the needs of sports turf professionals. It's a low disruption tool that opens up the upper turf profile, allowing for improved water and oxygen infiltration. Strictly a tow-behind unit, the GreensSlicer doesn't require hydraulics, PTO, or separate power source. It's easy to adjust cutting depth with its simple water tank ballast and the split-tine shafts prevent turf tearing when cornering.

GreensGroomer WorldWide, Inc.

Redexim's Verti-Drain "Bullet"

The new model Verti-Drain "Bullet" has working widths of 60" and 80" and can be used with tractors of 35-50 hp. It has working speeds near 3 mph hence making it easily the highest production aerator ever built. All models are equipped with maintenance free, self lubricated sealed bearings on all pivot points, three speed gearbox, and the patented parallelogram action. These Verti-Drain models are fast and strong, penetrating nine inches into the soil. Depth adjustments are done from the tractor seat as adjustments of the front and rear rollers are done hydraulically. **Redexim North America**

Toro's ProCore 648

Toro's ProCore 648 is the most productive walk greens aerator with a 48" coring swath. Its innovative wheels-behind design eliminates crushed cores and hole damage. The TrueCore ground following system maintains consistent coring depth and consistently round holes are achieved through elastomer RotaLink geometry. The ProCore 648 is also easy and safe to operate: a single switch on the handle controls the tine head and a handle ball engages forward and reverse. **The Toro Company**

Turfco expands TurnAer XT5 product line

Turfco revolutionized aeration with the patented and patent-pending TurnAer[™] XT5 steerable and reversible aerator. Now with engine options, increased speed and a new weight system, the XT5 is more efficient and performs better on hills. The XT5 aerator is now available with an optional one-gallon-tank Subaru engine or a Briggs & Stratton engine. With a new gear ratio system, the aeration speed is increased by 14%. More ground can be covered in less time without sacrificing quality or the ability to turn while aerating. The new weight system allows operators to adjust the weight in the back of the aerator, improving hill performance and control on hills. Operators can take advantage of the enhanced speed on hills, while still maintaining control.

Turfco Direct

John Deere Aercores

The Aercore 1500 is tractor-mounted with a heavy-duty frame, tine rams and adjustable hole spacing and increases productivity while providing flexibility needed on the job. The 1500 can pull as many as 30 cores per square foot, depending on the ground speed of the tractor, and is compatible with the John Deere Twenty Series compact utility tractors. The Aercore 2000 has an 80-inch coring swath, produces good quality coring holes up to 4 inches deep, and can cover 100,066 square feet per hour. Operators have a choice of two coring patterns, a 2.4-inch pattern or a 3.2-inch pattern, depending on the speed of movement.

Turf Time Equipment aeration options

TurfTime Equipment offers a number of tools that provide flexible and cost effective solutions for an efficient aeration program. The TurfTime Advantage aerator can be fitted with interchangeable coring, solid, or slicing tines. Precision chisel point solid tines promote quick recovery, allowing frequent aeration without disruption of play. For removal of excess organic matter, the Thatch Master verticutter and dethatcher, with its thin blades, and choices of spacing and depth of cut becomes an integral part of any aeration plan. TurfTime Eq. topdressers, for heavy seasonal applications, or frequent light treatments, maintain and enhance the effects of the complete aeration program. Used together these machines maintain ideal conditions for healthy and beautiful turf, suit current restrained budgets, and increase the income stream by keeping facilities in play. **TurfTime Equipment**

AerWay soil aeration equipment

AerWay by SAF-HOLLAND is an innovative world leader in the manufacture of soil aeration equipment for agriculture, golf courses, sports fields, orchards and vineyards. The AerWay ground driven design provides the utmost in durability, flexibility with high speed performance.

AerWay has a variety of tine options available to help you tailor your sports field turf maintenance activities. Quickly replaceable complete tined roller assemblies and attachments will let you use the same AerWay platform. Do all of your aeration or soil preparation for sanding and overseeding at higher speeds without the costly breakdowns of mechanically driven equipment. For compaction relief and the stimulation of subsurface air/water percolation without disrupting play nothing beats an AerWay. **AerWay**

Jacobsen Quick Aerator

Convert your Cushman Turf-Truckster into a productive aerator with the Quick Aerator attachment from Jacobsen. It easily attaches to your Truckster in minutes and offers a variety of tine styles to choose from including slicing, coring and spoon. Lift or lower the unit from the driver's seat with the Truckster's standard hydraulics. The Quick Aerator is ideal for any turf areas, including sports fields and recreational areas.

Jacobsen

AERA-Vator

Since 1991 the AERA-Vator manufactured by First Products Inc., has established a reputation of providing soil aeration and cultivation in the hardest dry conditions. Different aeration methods are used to open the soil surface to introduce oxygen and allow nutrients to reach the turf root zone enhancing root development. Aerification techniques have evolved over the years and "as with everything else" advancement in equipment technology has significantly simplified the process. First Products uses the only "patented" PTO-powered vibrating rotor to fracture the soil. This method is sometimes called shatter tine aeration and works best in dry conditions.

First Products Inc.

Wider Shockwave relieves sports surfaces

Launched at the STMA Exhibition, the new Shockwave 275 by Imants is a new wider model has a working width of 109" suitable for 100hp+ tractors. The Shockwave is a linear decompactor, designed to totally decompact heavy wear areas by relieving soil compaction, improving aeration and removing surface water. They have proved exceptionally effective in these extremely wet weather conditions. Whether working in isolation or in conjunction with existing pipe drainage schemes, the Shockwave is the perfect method of draining water quickly and unhindered to the existing sub-surface systems. The Shockwave also leaves a continuous slit allowing the operator to slit back to drains, ditches or other water collection systems. **Campey Turf Systems**

Z-Plug zero-turn aerator

The Z-Plug zero-turn aerator addresses the slow and labor-intensive job of aeration. The first stand on zero-turn aerator of its kind, the Z-Plug has capabilities of adding attachments such as a slice seeder, snow blade, de-thatch rake, sprayer system and spreader. Powered by a 23 hp Vanguard Commercial engine, the Z-Plug can aerate over 80,000 square feet per hour (at 8 mph), and produces core depths up to 3 1/2". The unique floating tine head with hydraulic down pressure can maneuver around trees and beds while engaged. The tine head can be lifted up in 2.5 seconds for quicker turns. Quick release attach points make mounting and removing attachments simple without tools.

L.T. Rich

PLUGR's variable speed PL845 Pro VS

PLUGR's PL845 Pro VS is the first reciprocating turf aerator on the market to allow the operator to select various speeds to maximize productivity or core density, and to adjust for complexity, area, and operator preference. With the sleek unibody design and 30" effective aeration width, the PL845 variable speed aerator is the perfect machine for situations involving multiple lawn sizes and types and multiple operators. Like all PLUGR aerators from SourceOne Outdoor Power Equipment, the new Pro VS is designed for easy operation, low maintenance, excellent aeration results, repeat customers, and profitable productivity. **SourceOne**













Tools&Equipment | Aeration













Soil remediation tool from Earth & Turf

The one-pass design of the Earth & Turf Linear aerator changes and improves the structure of soils for healthier turf. Soil and thatch restriction are permanently modified. Used after the area has been topdressed with calcined clay, compost or sand, the Linear Aerator conditions a 58-inch swath by cutting grooves in the turf 3" deep, approximately one half inch wide and 3.5" apart. Aggressive, reverse-spiral-mounted teeth cut the grooves and bring both soil and topdressing material up over the rotor. The blended materials are then brushed back into the grooves by steel fingers on a filler bar, which reciprocates side to side.

The 1,035 Lb. Linear Aerator is designed to fit the Category I 3-point hitches of tractors with 35 to 45 PTO horsepower. Standard, 540 RPM power take off drives the unit's rotor at 168 RPM through a strong, 100H chain. **Earth & Turf Products, LLC**

Broyhill's AccuAire

Broyhill's AccuAire core aerator is one of the most flexible aerators on the market, able to penetrate the toughest terrain. The FlexWin design allows the AccuAire to follow the contour of the ground, providing even penetration. Solid steel frame and extra-wide racks add weight to maximize core depth. Core spoons rotate on new sealed roller ball bearings for years of heavy-duty service. Water tanks are optional for extra weight on compact turf. Available in 3 point and trailered. Equipped to use slicer blades or core spoons, widths 69 inches or 93 inches. The trailered AccuAire is equipped with a hydraulic cylinder or electric actuator lift. **Broyhill**

Millcreek core aerators

Millcreek's simple, rugged core plug aerators give turf roots the air and water they need, especially in high traffic areas such as around soccer goals and other heavily used areas on natural grass fields. Millcreek aerators feature independently mounted spoon wheels with rear discharge, enclosed in a heavy gauge steel safety cage. Millcreek aerators are tractor mounted on a three-point hitch (500 pound capacity). Weights are added to tow behind units for penetrating dry or compacted soil.

Millcreek Manufacturing

Core aerators from Land Pride

Land Pride's 25 Series Core Aerators are available in 60" and 72" widths to relieve soil compaction and allow air circulation in sports turf. These aerators use replaceable case hardened closed spoons mounted on weighted rotating discs, and the spoons pull cores up to 3" in length from the soil profile every 7" of forward travel. Pulled cores are deposited on the surface for subsequent drying, pulverization, or removal. Optional poly water tanks fit in the top mounted weight trays in order to achieve maximum penetration. When filled with water, these tanks provide significantly increased down pressure on the spoons.

Land Pride

Exmark 30-inch stand-on aerator

Designed to deliver maximum productivity and durability turf professionals demand, the Exmark 30-inch standon aerator features a split-tine design to allow easier turning with tines engaged. The compact design heightens maneuverability while the 30-inch aeration width and 7.5-mph top speed deliver maximum productivity. Mass is centralized directly over the tines for maximum core depth consistency, and core depth is adjustable, from 2- to 5inches. The self-cleaning tines are easy-to-replace. Tine down-force is hydraulic-actuated, and adjustable by the operator. An electric-start Kawasaki V-Twin powerplant delivers professional-grade power, reliability and durability. The Exmark 30-inch stand-on aerator is covered by a 1-year limited warranty.

Exmark Manufacturing

Creating a healthier turf

Aerate and loosen compacted soil in less time with less labor compared to walk-behind or pull-behind aerators, even in the tightest of spaces, with a Grasshopper AERA-vator coreless lawn aerator. The PTO-driven AERA-vator works without slicing or cutting, improving turf development and water absorption with little surface disruption. The patented vibrating tines deep-fracture soil instead of plugging cores, which means turf areas are immediately available for use. The AERA-vator attaches in place of the out-front mower deck for zero-turn maneuverability.

Grasshopper