Team, which includes Tom Brown, Irrigation; Mike Lieker, Landscape; Eric Farr, Certified Chemical Applicator; Jim Meyer, Mechanic; and Steve Moore, Traffic, Safety and Playground Technician. Jim Wilson, Assistant Grounds Supervisor, heads up the Sports Facility Team, which includes Dennis Martin, Brenda Wade, Dan Moore, and Victor Mutunga. The Mowing Team includes Joe Golden, Steve Caldwell, Bill Turner, Khalid Nawaz, Bill Dickinson, and Gary Rutledge.

Together this group is responsible for some 800 acres of property including all of the lawns, landscapes, playgrounds, roads and parking lots at 30 schools. Athletic areas include 5 varsity stadium fields, 26 high school practice fields, 8 middle school competition football fields, 9 other middle school practice fields, and 24 elementary athletic fields. Of those 75 fields on 119 acres, 52 fields on 80 acres have centrally controlled automatic irrigation, 36 fields on 60 acres are Bermuda turf, and 15 fields on 30 acres are sand based rootzones. Our crew performs all maintenance and most construction work, including irrigation design and installation, dual slope laser grading, and turf installation. Having this capability in-house allows flexibility in renovation timing and keeps construction and renovation costs minimal.

SWIDAC football field maintenance is fairly easy and relatively inexpensive. In February-March, a low rate of Roundup is applied to control grasses and poa. In April, we mow to 1/2” and apply a balanced soluble fertilizer. May calls for 3/4” mowing every 5 days plus a 1-lb. application of slow release N and K.

June-August is busier with 3/4” mowing every 3-4 days, monthly aeration and sand topdressing, 1-lb. N urea every 21 days, and a Revolver application for cool-season grass control in July, if needed. The grass gets taller in September with 1.5” mowing every 4 days, 10-20-20 fertilizer, and Roots Standup every 7 days. October means a 2” mowing as needed and another 10-20-20 application. If we have an early frost or November playoff games are likely, we will topdress lightly and paint the field green to make the white lines, numbers and logos look brighter on the rapidly browning turf.

**Winterkill 2004**

Although we have been growing and transplanting our own Bermudagrass since 1996, we had not suffered significant winterkill until January 2004. We knew we had a major problem when turf areas from the size of a truck to entire fields were not showing signs of greening by mid-May 2004. By early June, it was clear that we had lost more than 20 acres of turf on 31 fields, including about 60% of the SWIDAC field. Turf loss like this would be catastrophic for most organizations, but for our crew, it was just an inconvenience.

Fortunately, our turf farm was healthy and green. Field usage schedules were modified. The crew worked tirelessly, harvesting and hauling some 40,000 bushels of sprigs and planting 2-3 fields per day until we finished in late June. All turf was re-established and all fields were back in service by late August 2004.

The Switzer District Athletic Complex is not only a shining star for the Blue Valley School District but also a source of pride for the Grounds Services Department. I thank the STMA for recognizing the extraordinary efforts of my staff in providing the students and patrons of the Blue Valley School District with safe and aesthetically pleasing playing surfaces.

Jody Gill is the Grounds Coordinator for the Blue Valley School District in Overland Park, KS.
SPORTSTURF asked several prominent turf managers to answer questions on how they stripe their fields. Here are some of the responses:

Trevor Vance, Kansas City Royals

ST: In your opinion, what are the most important things to know about mowing designs on baseball fields?
Vance: The field is the backdrop of the game. You want it to look crisp, sharp, and professional. Don’t take away from the game; the fans come to see the players, and after they say, “Wow!” when they first see the field, you don’t want them talking about it any more. You want your field to be beautiful but not “loud.”

Get comfortable with your mower first. Start simple; cutting a straight line isn’t as easy as it looks. Maybe start by cutting 1/2 circles; then you can’t tell if your lines are not straight. Don’t repeatedly go over a line trying to get it straight though.

Collin Castille, Houston Astros

ST: In your opinion, what are the most important things to know about mowing designs on baseball fields?
Castille: Knowing what your grass is capable of doing is the most important. What will the grass look like when you put a particular pattern in? How many times do you have to mow in order to get the grass looking the way you want it (or how long does it take to get an old pattern out).

Barney Lopas, Anaheim Angels

In his 9th year in Anaheim, Barney Lopas keeps it simple. “We cut a line from home plate directly to where each of our players stands, and we keep it that way throughout the entire homestand,” he says of his infield mowing pattern.

“When the team’s gone, we mow in different directions, but 5 or 6 days before they are back, we start burning in the old pattern,” Lopas says.

Lopas doesn’t always keep it simple though. His post-9/11 American flag was a masterpiece, as was the tribute “26” cut into the outfield to honor long-time Angels owner Gene Autry after he passed away. The number refers to Autry’s status as the “26th man” on the roster, says Lopas.

For three seasons Lopas and crew mowed the outfield with walk-behinds but now have some nine-blade triplex mowers from Jacobsen for the outfield, as well both Jake and Toro walk-behind models. He uses them all to create his stripes.

Lopas says if you’re just starting to cut some lines into your field, use string lines to centerfield or a foul line, then mow three lines, mow them back again, before moving on to three more lines, and so on. “Pick a point on the fence and head straight for it. Once your lines are mowed in, it’s a piece of cake from there,” Lopas says. “Even I could do it!”
TOPDRESSER FOR PROGATORS

Specifically designed for the John Deere ProGator 2020 and 2030 utility vehicles, the TD100 Top Dresser is made of galvanized steel hopper that resists corrosion and is supported by a steel frame for strength. A fixed-speed nylon/polyester cord, endless conveyor belt moves material under the metering gate and through a rotating brush for even distribution. The conveyor belt and rotating brush are powered by a hydraulic motor that operates off the ProGator hydraulic system.

John Deere/800-537-8233
For information, circle 062 or see http://www.oners.ims.ca/4572-062

LOW-PROFILE SPRAYER

The Smithco Spray Star 1000 is a low-profile sprayer offering a new Hydro Drive System that eliminates belt drive/3-speed mechanical system maintenance. The unit's turning radius allows maneuvering around the tightest areas, while the 9.1 psi footprint floats over delicate areas. Extremely precise controls for spray application rates plus hydraulic power steering and the choice of computerized or manual spray control system.

Smithco/877-933-7648
For information, circle 064 or see http://www.oners.ims.ca/4572-064

"TURF TENDER"

Dakota Peat & Equipment has introduced the 414 Turf Tender to its topdresser product line. Built at the request of customers, the 414 features a 4-yd. hopper and is designed to spread any type of material needed for turf maintenance. The 414 features an electrically controlled hydraulic system that allows you to control spinner speed and belt speed from the tractor seat for "on-the-go" spread pattern adjustments.

Dakota Peat & Equipment/800-477-8415
For information, circle 065 or see http://www.oners.ims.ca/4572-065

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Closer Mowing Heights
Research conducted in Tifton GA shows TifSport can tolerate closer mowing heights than Tillway and Midiron. With TifSport, mowing fanatics can mow away to their heart's content.

Upright Leaf Blade Orientation
TifSport's leaf blade stiffness is being touted by many turfgrass professionals. With TifSport players seem to get better bounces.

Impressive Leaf Texture
TifSport has a similar leaf texture to Tillway, and a finer leaf texture than most other grasses. TifSport will deliver excellent footing for sports fields of all stripes.

Superior Turf Density
TifSport has a greater density than Tillway - about a 1 point difference on a 10 point scale. And it's about 3 points better than common bermudagrass.

Good Lateral Growth
TifSport is more aggressive than genetically pure Tillway, especially during the cool weather months. This may account for TifSport's rapid grow-in and repair time.

Superior Sod Strength
TifSport's superior sod strength means quicker installation with less waste, and that's got to be good for your bottom line.

Excellent Traffic Tolerance
TifSport's turf density, sod strength and good lateral growth rate give it a high ranking for traffic tolerance.

For a List of Licensed TifSport Growers Visit:
www.tifsport.com

Drought Tough
All grass has to have water, but TifSport can help you make it through those summer water restrictions. It stays healthier and recovers faster from drought than most other bermudas.

Cold Tolerant
TifSport has expanded the northern limit for warm season bermudagrasses. It has survived multiple winters as far north as Stillwater OK & Lexington KY.

Pest Resistant
Research has shown that mole crickets just plain don't like TifSport. That's just one more reason why you should.

Vigorous Root System
This inside view of a typical TifSport plug shows TifSport's impressive root system, stolons and rhizomes.

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Circle 158 on card or www.oners.ims.ca/4572-158
**TOPDRESSER HYDRAULIC KIT OPTION**

The Ty-Crop ProPass 180 low impact broadcast topdresser now offers an optional self-contained engine powered hydraulic pump and reservoir. The unit can be towed behind many types of vehicles, regardless of their hydraulic capabilities, which means you can share the topper without sharing the tow vehicle. Units feature light footprint, accurate spread pattern (so there’s no need to drag or brush in afterwards), and gives you the versatility to spread a variety of materials at varying widths and depths.

Ty-Crop/800-845-7249
For information, circle 066 or see http://www.oners.ims.ca/4572-066

**REDEXIM’S TOPDRESSER**

Redexim Charterhouse introduces topdressers to its line of turf maintenance equipment. Most models use hydraulics to power a permanently self-aligning conveyor belt, delivering the wet or dry material directly to the rotary brush, which can deliver a variety of materials, including sand and rubber infill mix, for a spread up to 1/2-in. thick in one pass. The Easy Spread model is a low cost solution that can be used with a variety of materials, spreading as much as 8 tons in one day using a single operator.

Redexim Charterhouse Inc/800-597-5664
For information, circle 067 or see http://www.oners.ims.ca/4572-067

For information, circle 066 or see http://www.oners.ims.ca/4572-066

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**SHIELDED SPRAYER**

These 52- and 132-in. aerodynamically designed shielded sprayers deliver an even spray of small droplets that "stick" to vegetation achieving greater coverage with less chemicals. Independent floating chambers follow the ground contours for precise application. The spray attachment is for Grasshopper's full line of True ZeroTurn, FrontMount, and MidMount mowers. Grasshopper/866-345-8621 For information, circle 069 or see http://www.oners.ims.ca/4572-069

**IMPROVED NEWRIDER MARKING MACHINE**

Newstripe, Inc. has improved features on the NewRider 2000 riding field marking machine. Alloy steel axles, integrated heat shield, and reduced height improves its overall durability and value. The 65-gal. tank can paint up to 22,000 feet of 4-in. line, the equivalent of 4 football fields. The unit has all welded structural steel chassis, 10 hp commercial grade engine, dual paint pumps and hydrostatic transmission. Comes with an 18-month warranty, the longest available. Newstripe, Inc/800-624-4766 For information, circle 071 or see http://www.oners.ims.ca/4572-071

**“TURF SLICER”**

The TS-48 by GreensGroomer overseeds, opens dry spots, and aerates. Strictly a tow behind unit that requires hydraulics, PTO, separate power source (engine), or 3-point hitch setup. The TS-48 is made up of two rows of tines, offset front to back to create 2 in. on center spacing. Each row of tines has a split shaft, reducing turf damage while making sharp turns. Two 25-gal. water tanks present infinite adjustment of addition weight. Greensgroomer/888-298-8852 For information, circle 072 or see http://www.oners.ims.ca/4572-072

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SPORTSTURF 35
TORO CORE COLLECTOR

Toro has introduced the Pro Sweep 5200 core collector that features a 52-in. sweeping width with an exclusive floating brush housing that rotates from side to side and front to back, allowing the sweeper to collect cores on uneven terrain. The pivoting sub-frame allows you to maintain positive tongue weight and for better traction on inclines, even when the sweeper is filling up. In addition, the roller height is adjustable for specific turf applications.

The Pro Sweep is powered by a heavy-duty Workman's high flow hydraulics. Toro Commercial Equipment/800-344-8676

For information, circle 070 or see http://www.oners.ims.ca/4572-070

PLANETAIR AERATORS

PlanetAir continues to excel in the aeration market with the unveiling of the High Density 50 Tow and the High Density 50 PTO aerators. PlanetAir boasts the ability to produce a 3/4-in. hole with a “2x2” spacing at a rate of 1.2 acres per hour. The patented coring tine cuts clean cores at the surface and shatters the soil below. This technology results in up to 90% less clean up, says the company. The results are more durable, dense and playable turf due to the intense root zone aeration. The unit's versatility means you can aerate circles around a pitcher's mound, goal post, or difficult corners while the aerator is working in the ground without tearing turf.

PlanetAir Turf Products, LLC/877-800-8845

For information, circle 073 or see http://www.oners.ims.ca/4572-073

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with Xavan®

For more information about DuPont™ Turf Blankets, call Earth & Landscape Solutions (ELS) at: (800) 289-2448

Circle 170 on card or www.oners.ims.ca/4572-170
**ACCUPRO SPRAYER**

Single seat sprayer with great visibility features an 18-hp Kohler V-twin OHV air-cooled gas engine with the 5-speed transmission; full suspension front and rear. Comes in 160- or 210-gal. Broyhill/800-228-1003, x34
For information, circle 091 or see http://www.oners.ims.ca/4572-091

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**NEW HYDRO VERTI-DRAIN**

Redexim Charterhouse has unveiled a new ride on Verti-Drain 7007 with hydrostatic drive, powered by a 13-hp Briggs and Stratton Vanguard OHV engine, and uses a hydrostatic transmission supplied by Eaton, with a forward speed of over 6.5 mph. It has a three-wheel drive option available, and has a working capacity of over 12,000 sq. ft. per hour.
Redexim Charterhouse/800-597-5664
For information, circle 097 or see http://www.oners.ims.ca/4572-097

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**NEW TECHNOLOGY, LOW PRICE**

Topdressers are the key to great turf. Millcreek’s new Cub models, at under $9K, bring the best within reach of any school or park budget. Most topdressers choke on wet, clumpy soil treatments. Millcreek’s Saber Tooth technology spreads wet or dry, coarse, or fine materials quickly, evenly, and to precision depths. Minimize injuries and get true bounces with the Cub.
Millcreek Manufacturing/800-311-1323
For information, circle 099 or see http://www.oners.ims.ca/4572-099

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Circle 160 on card or www.oners.ims.ca/4572-160
BETTER SPREADER CONTROL
EarthWay Products introduces the Ev-N-Spred Control Center that allows the operator to balance the spread pattern for the left and right side throwing ports and to control the rate with the spring-close "T" speed handle.
For information, circle 068 or see http://www.oners.ims.ca/4572-068

SPORTSTURF HEATING
Inditherm's under-turf heating uses patented conductive polymer technology. Flexible pads do not affect drainage and use low voltages, generating uniform heat over the entire surface and rootzone. This solid state system does away with boilers and maintenance, and eliminates leaks. Energy costs are up to 75% less than traditional hydronic/glycol systems, bringing heated fields within reach for many more teams. Fields can be zoned to manage stand shading. Inditherm is fully and automatically controllable; easily integrated into management software and systems. Suitable for natural and artificial turf.
For information, circle 088 or see http://www.oners.ims.ca/4572-088

NEW STRIPER
FieldLazer is Graco's newest airless line striping system. The technology atomizes paint better for brighter, longer-lasting lines. Its durable piston pump siphons paint directly from the original container. The tall wheel cart rolls easily over rough terrain. And the high capacity manifold filter makes tip clogs a thing of the past.
For information, circle 061 or see http://www.oners.ims.ca/4572-061
SIMPLE DESIGN
TOPDRESSER

Earth & Turf Products introduces its Model 24D TruFlow, a push-type topdresser for dry, flowable materials, including sand, infield mix and calcined clay on athletic fields. Features include: 3-cu.ft. capacity; 8-in. diameter dispersal drum; 24-in wide spreading pattern; spreading begins when front wheels engage the ground, no engagement lever; and ends spreading when tilted back on rear wheels.

Earth & Turf Products, LLC/888-693-2638
For information, circle 063 or see http://www.oners.ims.ca/4572-063

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Have you changed your filters lately?

BY TONY STRICKLAND, CSFM

Common sense tells us that changing filters is important. Consider, for example, the oil and fuel filters of the engines we use to perform work that determines how we are looked at professionally. Would any of you consider reusing the old filters? I have been told that using the old filters leaves the dirtiest material in the system which will, with time, clog the filters to the point they cease to function.

No, this is not another equipment maintenance checklist (nor is it a recommendation to check the filters of your lives although it is wise to do so periodically.) This is about the use of "Filter Fabric" and "Socked Pipe" in athletic field construction.

"Filter fabric" filters the water that is to flow into the pipes under it or adjacent to it and the sock on the "Socked pipe" is used similarly. How can we allow a filtration system that cannot be changed economically to be installed at the showplaces of our profession? This is a great characteristic if you want to prevent the subsurface from mixing with the soil profile!

Let’s face it, filters do and will clog and if by its own definition filter fabric does its job, which I don’t doubt, how many filtration processes can they perform before they become impervious to even the smallest molecule? Even with the most pristine conditions with the best engineering and using USGA approved sands, the installation process of these systems will generate some amount of fines that will be filtered out of the water to prevent the pipes from clogging. Now, take in account the activity of the sport on the field, the cultural practices of the sports field manager, aeration produces fines, traffic of any kind produces fines, organics from the roots produces fines and some fines come from fertilizers. Granted some of these are minute particles and some may pass through the fabric but how long does it take before the smallest particles start to bridge across the pores in the fabric?

I have personally experienced this problem. One morning, I walked out on the field at a minor league facility. Though it had not rained in 24 hours, there was an 8-12 inch layer of water covering the most of the outfield and very little water coming out the out-fall of the drain pipe. This didn’t make sense.

“They” (the local municipality) said the field was just three months old and had been constructed in-house using the labor of prisoners from the local jail. They reported the field had subsurface drainage and a sand base profile from a reputable local source. I asked the engineers who had surveyed and managed the installation of the sub-surface drainage system to come onsite to locate the drain lines for inspection. We not only found the sand to be improper but the pipes also had a “sock” on them. After the engineers and I observed the separation and sedimentation of the sand layer, which created a gunky thick ooze at the transition from sand to gravel and restricted the rapid percolation as you would hope for, we also noticed no water movement into the gravel surrounding the socked pipe. I then scratched through the gravel to find the pipe, still no water movement; I then decided to cut the fabric and only then did the water create a vortex that would be the envy of the “Tidy Bowl Man.”

My crew and I spent the rest of that season removing the twenty or more drain plugs across the field after every rain just to get the water off the field, not to mention chasing the waterfowl off. We still lost 14 home games that year while the sun.