

conditioners] also help control dust control during the summer, because they hold water in the soil longer. This is especially true of the diatomaceous earth products; in most of the country, it should be possible to wet the soil thoroughly in the morning and play on it all day without having to stop and re-water.” The authors say diatomaceous earth conditioners can also be used in smaller volumes than calcined clay.

Tips for limited budgets

With a little creativity, quality products, and volunteer support, a small budget can go a long way. Raechal Volkening, a consultant who spent 7 years with the Milwaukee Brewers before starting her own business, shares her experiences with budget-challenged organizations.

Before Raechal’s tenure with the Brewers, one of her jobs was head groundskeeper for the Butte Copper Kings. During her season there, she was faced with very little funding for supplies or labor. In order to achieve success, she was forced to come up with some creative solutions. “Thankfully, the previous groundskeeper had some Pro’s Choice on hand that the crew could work with. I was able to get by with the existing supplies. “Beyond that, I found

four staff members through the welfare department that were eager to learn and got the community involved for additional labor. I borrowed equipment from other local organizations wherever possible. But the biggest lesson I learned was not to think of myself as an island. There is a lot of support available when you reach out.”

- Create a sense of pride and ownership by getting the community (athletes, parents, booster club members, etc.) involved.
- Have players work on their specific areas (pitchers on mound, infielders on lips, etc) for greater connection and sense of ownership.
- Take advantage of work-study programs.
- Share or borrow equipment, especially items you only need a few times a year.
- If your program has more than one field, pick one to showcase. Make it the example of what all your fields could be.
- The value in amendment products is cumulative. If you can only afford to use a limited amount of product now, build up over the season or subsequent seasons. ■

This advice supplied by Oil Dri, makers of Pro’s Choice products, www.proschoice1.com.

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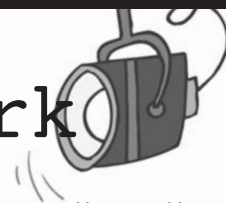


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Mark Razum, Colorado Rockies, courtesy of Pro's Choice

Spotlight on Mark



Mark Razum recently finished his 13th season as the head groundskeeper for the Colorado Rockies and has been a groundskeeping professional for 30 years. He began his distinguished career as a member of the Cleveland Indians grounds crew, working under the direction of Marshall and Harold Bossard. He later moved to the Oakland Athletics, first tending to spring training fields and working his way up to head groundskeeper.

Mark has been recognized with numerous awards throughout his three decades in the business. Chief among them is the 1998 Turf/Grass Professional of the Year, an award presented by the Rocky Mountain Turf/Grass Association. This award was a direct result of his efforts during the '98 All Star Game, where Mark and his team created an elaborate star design cut into the grass of the field. During his tenure with Oakland players voted his field the best in the American League for three straight seasons (1992-1994).

Mark is passionate about his fields and is constantly looking for ways to improve them. That being said, he knows that players need a consistent playing surface. He balances the need for improvement and consistency by experimenting with products on little league or community fields before implementing on Coors Field.

Each March Razum prepares his field, starting with leveling the infield dirt and adding soil conditioners to give him a solid base he can maintain through the season. He says Colorado's volatile weather presents a big challenge and he relies on such products to help get the

field back to playable condition as quickly as possible, as well as when the climate becomes dry in the summer and the dirt needs moisture.

Razum says uniform conditioner particle size keeps his field consistent. "Our players are counting on us to deliver a consistent playing surface every time they step onto the field. We make it our goal for the field to play the same on opening day through the playoffs. The grounds crew's contribution is to worry about the field, so the players can concentrate on the game," he says. "Last season, when the team set two major league records for the lowest number of errors and highest team fielding percent, I know the crew directly contributed by providing our team with a consistent playing surface they were familiar with and could trust."

Razum says young turf managers should keep learning as much as they can from people in the business. "I started when I was 17 on a crew in Cleveland and absorbed all the knowledge I could from those around me," he says. "Remember that your fields are your calling card. People will see your fields and comment on them. Scouts look at fields and make recommendations on what they see."

"As far as products go—experiment with the options available. If you have access to high school or little league fields, see what works on those before implementing for larger stadiums. Get opinions from players and coaches. That said, be sure to be consistent; players need to know they can trust that the field will play the same every game," says Razum. ■

Spotlight: illustration courtesy of istockphoto.com.

New groomer machine

The PR72 Pro Groomer from Infield-Drum.com is a multi-function machine that that will save you labor when it counts the most. It restores, maintains and keeps infields level, and well-groomed. Levels by cutting off high spots and filling in low areas. Breaks up hard, compacted surfaces. Saves labor, reduces water puddling, and controls weeds. No need for hydraulics or 3 pt. hitch. Pull with a variety of machines. No tools needed to adjust. Available with manual or electric lift.

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Building a mound

- Determine mound center by running a string line from the back point of home plate through the center of 2nd base. Measure 59 feet from the back point of home plate along this line; this point is the center of the mound. Draw an 18-foot circle using this point as the center.

- Determine placement of the rubber using the same string line measure 60 feet, 6 inches from the back point of home plate and sink a stake; this is the front of the rubber.

- Determine the height of the mound by using a transit level and take a reading off home plate. The top of the rubber must be 10 inches above the plate. Sink a stake on the sides of the mound and mark the 10-inch elevation. Use a string as a guide when setting the rubber.

- Establish the base of the table area first, 4 inches high. Be sure this area is thoroughly compacted as it supports the rubber. This can be done with infield mix to save money.

- Set the rubber and begin constructing the table and the slope. Use a 3 to 4-inch depth of mound clay for the table and a 4 to 6-inch depth on the slope.

- Build in layers, 1 inch at a time, packing material tightly and adding moisture as needed. If using bricks, set the top of the bricks ¼ to ½-inch below the final grade. Top with bag mound clay. Check the alignment of the rubber often to guard against movement.

- Fill in back and sides in the same manner, gradually sloping to the edge of the circle. Topdress with infield conditioner.

- Water thoroughly and cover the mound with a tarp to retain moisture.

This information courtesy of Diamond Pro, www.diamondpro.com

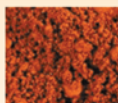
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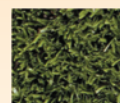


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Houston's Minute Maid Park first to roll out Platinum TE paspalum

SINCE MINUTE MAID PARK OPENED IN 2000, the Houston Astros have always sought creative ways to improve their game day product and facility. This innovative thinking has continued this offseason, as Minute Maid Park will now feature a new playing surface, recently installed by Astros groundskeepers.

On November 23 last year, Astros groundskeepers, led by the Director of Major League Field Operations Dan Bergstrom, began to roll out 2.3 acres worth of new sod in an effort to improve Minute Maid Park. The new sod, named Platinum TE Paspalum, is the first of its kind to be installed in any sports facility in the world.

"The Astros grounds crew has embraced the challenge of keeping a beautiful stand of turf under the roof of Minute Maid Park," said Bergstrom. "We expect to keep our playing surface in top-notch condition for our players, and we are excited to have the latest technology and turfgrass genetics with our new [turf]."

Platinum TE Paspalum is a turf that works well for Minute Maid Park's conditions due to its lower sunlight requirements. Compared to the sod used in previous seasons, the Platinum TE Paspalum should have a green-



er color, an improved wear tolerance and an increased tolerance to the shade at Minute Maid Park.

Platinum TE Paspalum is bred by Turf Ecosystems, LLC, which aims to develop new turfgrass cultivars and maintenance products that are better suited to both performance expectations and environmental limitations. ■



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Tools & Equipment

WE OFTEN HEAR from turf managers who don't ever seem to get the life out of their turf spray equipment that they would like. Common concerns: equipment wears out too soon, employees invent new and ever more creative ways to destroy equipment, equipment is down waiting for repairs, etc.

We have found that turf departments with well-designed fertilizer and weed control spray rigs can reduce problems significantly with a few easy steps. Here are our "Top 10 Spray Equipment Productivity Tips":

10. Good filtration

Design good filtration to prevent debris from getting into your system. Debris will clog or damage pump, plumbing, fittings, hose and spray guns. It will cost you money, reduce productivity by bringing your system to its knees and create expensive repair bills. Design your filtration based on your water source, type of application, sensitivity of your pump, technician skill. For example, impure water in may require more than one strainer. Place filtration so it is easily accessible for technicians to check and clean. If it isn't easy, they won't check it and it will cost you.

9. Clean your filter

The biggest secret in spray equipment is "check your filter." There is nothing you can do with your spray equipment that will save you more money than this simple activity. We repair and replace more fertilizer and weed control spray equipment because of clogged filters than for any other reason. Conduct spot checks to ensure spray techs are cleaning filters.

8. Release the pressure

Take the pressure off. When you are done spraying, release the pressure. Squeeze the handle of your spray equipment so that the system is not under pressure. If you don't want to waste the material, spray it back into the tank. Your equipment will have fewer breakdowns and will last longer if you remove the stress of constant pressure from the spray components. Never store equipment overnight under pressure.

7. Don't run it too fast

Don't push your equipment to its limits. Our

experience is that techs run power spray rigs at high speeds to get their jobs done quickly. This will reduce sprayer life. Your power spray rig can run at extremes for short periods but it is not designed to be run full out all the time. Running "in the red" for extended periods will shorten engine and pump life. Make sure your techs know proper operating ranges.



turf spray equipment productivity tips

By Andrew Greess

6. Clean it out

Rinse your system with clean water periodically to remove old chemical buildup, debris, etc. Chemical buildup and debris can clog your filter, starve your pump, damage spray tips, and play havoc with other components as well. All of these items fall into the category of "not good." When in doubt, rinse it out. Be sure to follow herbicide labels and laws when cleaning out spray tanks.

5. Don't wait for failure

Preventive maintenance will save you time, money, equipment breakdowns, etc. You are running your equipment hard and pumping strong chemicals through it. It will need service. This service will be much cheaper and less painful if you do it before you need it. Read manufacturer's recommendations then customize for your use and application. Develop a good relationship with your spray equipment provider and ask for

their help. A good preventative maintenance program is your best friend for reducing equipment down time and improving productivity.

4. Train employees to report problems

We are constantly amazed at the equipment problems employees will tolerate. They will continue to use leaking pumps, hose, backpacks, etc. Ignoring these problems inevitably leads to higher repair expenses and increased down time. Encourage your employees to report problems so that you can take the appropriate action before a small problem becomes an expensive problem.

3. Emergency repair kit

Many simple repairs can be performed by technicians in the field. Field repairs can allow the technician to finish their work before heading to the service site for more thorough repairs. You'll want to assess technicians' skill and training to determine which parts you are comfortable with technicians changing in the field. An easy example is to provide the technician with an extra o-ring for the filter.

2. Don't over-pressurize manual sprayers

If your backpack isn't spraying, don't pump it up more. You will break it. It is easy to turn a \$3 o-ring replacement into a \$50 repair. I like this analogy: I was dining at a restaurant in France. The waiter didn't understand English. So I yelled louder. Don't overpressure your manual sprayers! It doesn't work.

1. "Preflight" checklist

Spray techs should check equipment at the start of the day to save time and money. If you are going to have an equipment problem, find it early, at your shop, where it is easier and cheaper to fix. Spray equipment problems get worse and more expensive. Find them sooner rather than later. Technicians should report any problems or exceptions to their supervisor. ■

Andrew Greess is president of Quality Equipment & Spray, www.qspray.com, which builds custom landscape, fertilizer & weed spray equipment. Please share questions and equipment nightmares with Greess at Andrew@qspray.com.



John Mascaro's Photo Quiz

» Answer: from page 21

The huge wrinkles in this artificial turf infield and displaced infill material were a result of Hurricane Ike. The hurricane made landfall as a strong Category 2 in Galveston County, TX during the early morning hours September 13, 2008. The eye came within 5 miles of the Big League Dreams Sports Park. Between the hurricane and the passing front the next day, more than 15 inches of rain fell on the complex. The drainage system for the artificial turf infields as well as the natural grass outfields are entirely dependent on electric pumps that move the water from the six baseball/softball fields to a retention pond. Due to the fact that there was no electricity during the storm the water had no where to go so it backed up through the drainage

system, which caused the artificial turf to float up in several spots. When the pumps were working again and pumped the water out, the artificial turf settled back down but the stretching caused wrinkles.

The sports turf manager came up with an ingenious plan to make a giant carpet stretcher by taking a 4 x 4-foot sheet of three-quarter inch plywood and screwing twelve lag bolts through it. The wrinkles were then pulled out with a front-end loader. Overall, the complex fared quite well with only superficial damage and was opened back up for play just 7 days later.

Photo submitted by Mike Estlinbaum, Director of Maintenance at the Big League Dreams Sports Park in League City, TX.

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 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.



Synthetic turf logo cutter

From Turf Sewing Machines, Newark, NJ, this portable, 2.5-pound hand-held cutter is set up with a steel plate on the bottom so you can slide it easily under the synthetic turf you're cutting. Design prevents it from dragging on stones, etc. was originally built for Pirelli Tire. Cuts all turfs, carpets, rubbers, straight and curved. Features gear-driven muffler to eliminate air flow noise.

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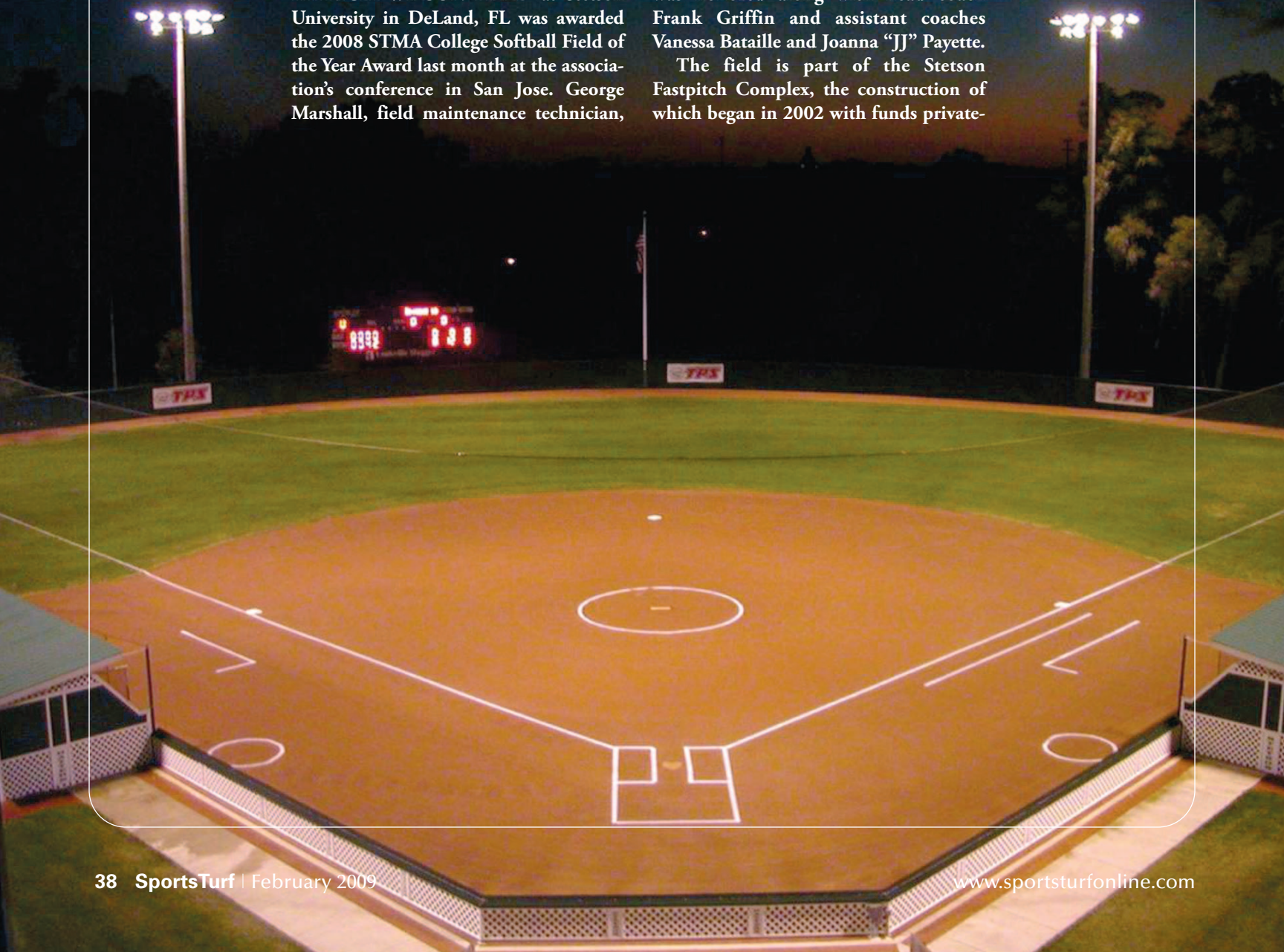


Hatters earn Softball Field of the Year crown

PATRICIA WILSON FIELD at Stetson University in DeLand, FL was awarded the 2008 STMA College Softball Field of the Year Award last month at the association's conference in San Jose. George Marshall, field maintenance technician,

was honored along with head coach Frank Griffin and assistant coaches Vanessa Bataille and Joanna "JJ" Payette.

The field is part of the Stetson Fastpitch Complex, the construction of which began in 2002 with funds private-



ly raised. Coach Griffin personally designed and built the backstop and dugouts; in 2003 TV-quality lighting and a concession stand were added, and in 2007 the press box and grandstand were completed in time to host the Atlantic Sun Conference tournament.

The 419 bermudagrass field hosted nearly 600 hours of play in 2008; high school tournaments, camps and clinics added another 164 hours of play. Marshall overseeds in late November or early December after a preemergent application, typically using 500 pounds of Eagle Supreme perennial ryegrass for the entire complex.

Marshall, formerly the grounds field supervisor for Stetson's entire campus (180 acres), now works exclusively at the softball complex, which includes painting, mowing, verticutting, aerating, topdressing, irrigation repairs, spraying, and infield skin maintenance.

Due to drought conditions the past few years, Marshall has had to deal with the rationing of reclaimed water by the city. During the main season, February to May, it was being turned off twice a week for nearly 40 hours total, making it a challenge to coordinate herbicide, insecticide, and fertilizer applications around practice and games. Marshall sometimes had to wet down areas before painting as well.

SportsTurf: What's most important piece of equipment or product in your program?

Marshall: I use almost all Toro equipment. For our turf, the most important piece of equipment is the Toro Aeravator, and I use a Toro Sand Pro with a Rahn grooming bar for our infield. I find both pieces of equipment highly effective for the overall appearance of the field.

ST: What are your biggest challenges and how do you approach them?

Marshall: The biggest challenge is maintaining the field because of heavy use during the season. We may have up to one hundred games in addition to four months of everyday practice on the field. Constant care is a must including fertilization, aerating, mowing and irrigating.

ST: How do you communicate with management and field users?

Marshall: Because we have a small staff made up of our coaching staff and me, communication is facilitated. We have a common goal of giving the best product we can to whomever uses our



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FIELD OF THE YEAR

field, and users are usually more than cooperative in return. Therefore, communication with field users is very smooth.

ST: What's the best piece of turf management advice you've ever received?

Marshall: The best advice I ever received is that bermudagrass grows by the inch, and is killed by the foot, from Floyd Perry. It needs rest.

ST: How do you keep your "engine" charged to do your best every day?

Marshall: When you have a beautiful facility like ours, a supportive staff, and an athletic director who is behind your program, coming to work with enthusiasm each day is easy. Keeping the facility looking good is just something I expect from myself.

ST: How do you balance work and personal life?

Marshall: I am a 25-year retired veteran of the Fire Service. Strange hours are something my family always had to adjust too. Working unusual hours is nothing new. Our program's philosophy is that God and family come first, education second, and softball third. Because of that, the balance just works out. ■

The STMA Field of the Year Awards Program has been made possible through the generous support of its sponsors. They include Carolina Green; Covermaster; Hunter Industries; Surface Athletics/Profile Products; Scotts Turf Seed; and World Class Athletic Surfaces.



Patricia Wilson Field, Stetson University—Maintenance Schedule

| Maintenance | Frequency | Details |
|-------------------------|-------------------|--|
| Aeration | 3x/year | Late spring, summer, early fall |
| Fertilization | Monthly | Use various mixtures depending on growth and condition of grass desired. Walk-behind rotary spreader is used. Mixtures include: 24-2-11 15-3-15 with Ronstar 21-0-0 22-2-11 |
| Irrigation | Average 4-5x/week | Varies with weather and temperature conditions; average 30-60 minutes per zone using reclamation water. Repairs made in-house as necessary. |
| Mowing | 3x/week | 2x/week in slower growing seasons |
| Overseeding | Annually | Usually late November to early December; approximately 500 pounds of Eagle Supreme perennial rye is used on entire complex; 275 pounds on outfield. Walk-behind drop spreader is used. |
| Spraying | As needed | As needed for insects or worms; 2x/year with pre-emergent. Post-emergent, middle of fall before overseeding, late spring to eliminate rye for transition. 50-gallon pull behind boom sprayer and 3-gallon backpack sprayer are used. |
| Tilling & Laser Grading | Annually | 1x/year in December (contracted out) |
| Topdressing | Annually | 1x/year in summer |
| Verticutting | Annually | 1x/year in summer |