

of what adjustments have been made, one quick fix is to revert back to factory settings and start from there.

Knowing the true effective height of cut is also important to the health and appearance of the turf. A cutting unit height of cut is usually set in a shop using a metal bar across the rollers to simulate the surface on which the cutting unit rests. The problem with this bench set height of cut is the actual surface on which the cutting unit rides is not stiff like metal—it's grass. Grass absorbs and cushions some of the weight, and it can give even more if it is wet. Because of this, the effective height of cut, or the height at which you are truly mowing the turf, is usually much lower than the bench set height. Cutting the turf lower than you think you are could very well lead to after-cut appearance issues. An effective tip to improve after-cut appearance is to raise the bench set height of cut.

Using the optimal clip rate, a more complicated concept is critical to achieving high quality after-cut appearance. Although unnoticeable to the eye, reel mowers leave a subtle scallop pattern, similar to waves on water, on the surface of the turf. The peaks of the "waves" are created by the reel blades and bedknife working together to gather and clip the grass. Ideally, the distance between the wave peaks, or the clip rate, should be equal to the height of cut.

The factors that affect the distance between the wave peaks are the frequency at which a reel blade hits the grass (a combination of the number of reel blades and the speed at which the reel is spinning) and the forward ground speed of the cutting unit. If the reel speed is too slow in relation to ground speed, there will be too much space between wave peaks, resulting in visible clip marks and uncut grass. If the

reel speed is too fast, the reel blades will unnecessarily impact the grass blades multiple times before being cut. This can lead to turf tearing and leaf tissue damage which is a visual eye sore and is detrimental to the long term health of the turf.

SMART MACHINE PRACTICES

Keeping reels and bedknives sharp is critical to achieving good quality of cut and after-cut appearance. Whether it is cutlery, a saw blade or a mower reel, blades cut cleaner and more accurately when they are sharp. Dull reels and bedknives tend to tear grass versus cutting it. This can make the after-cut appearance less attractive and endanger the health of the turf.

Light bedknife-to-reel contact will ensure a good after-cut appearance, too. With light contact between the bedknife and the reel, the two act like a pair of scissors to clip the grass. This light contact setup also serves to act as a self-sharpening mechanism for the two blades. This can lead to less maintenance through a longer service interval.

Verticutting is a practice vital to an attractive after-cut appearance and overall turf health. Verticutting is the process of using vertically rotating blades to remove some of the horizontal growth and thatch that occurs around a grass plant. This process provides several benefits to the turf: it opens the turf canopy to allow for more sunlight exposure, it allows top-dressing to penetrate into the plant and soil more easily, and it forces the plant to stand up straight and focus plant energy on vertical growth rather than horizontal growth. This emphasis on vertical growth leads to a more uniform turf surface, which then leads to a higher quality of cut.—provided by The Toro Company. ■

OFTEN OVERLOOKED GRINDING ADVICE

TURF MANAGERS and technicians all seem to have their own ideas on when and how to grind reels. For some, their grinding philosophies are as guarded as a certain colonel's seven secret herbs and spices.

So, for an expert look at reel maintenance, we asked Erik Sides, training manager for Jacobsen Turf Equipment, to give a few basics superintendents and technicians should keep in mind when it's time to grind.

Continued on page 44

New aerator model on market

Precision Welding has introduced its ProAerator commercial series of aerators in the USA. Available in four models with sizes ranging from working widths of 39" to 102", complete with closed spoon (core) tines or slicing blades which are independently mounted for easier turning and minimal turf damage. Mounted on a 1" steel shaft, tines are manufactured of temper-hardened steel and have oil impregnated Teflon-coated tine bearings with grease fittings for ease of maintenance and extended life. Commercial models are built using a welded 1 1/2" square solid steel frame with heavy duty expanded steel shields which serve as weight racks. Also available is an optional water tank for weight. Units are available with tow behind draw bar or Cat. 1, 3-point hitches. An optional tow-behind kit is available for use with all terrain vehicles.

Precision Welding



TurfMuncher field reclamation machine

Now turf manufacturers and field owners and builders have a sustainable alternative when it's time to replace existing turf field installations. TurfMuncher from Field-Away provides a cost-effective and efficient means of removing turf sports fields that need replacement. TurfMuncher offers an opportunity to reclaim and recycle used turf and infill. TurfMuncher is towed by a 25-hp hydrostatic drive tractor, and its hydraulics are powered by a separate 40-hp gasoline engine. After the turf field is pre-cut, TurfMuncher lifts the turf and infill in panels up to 15-feet wide and then separates up to 98% of the infill from the turf and deposits it into carts, buckets, or bags. Finally, the turf is rolled and doffed in rolls up to 250 feet. The TurfMuncher can reclaim up to 30,000 square feet of field turf per day.

FieldAway



Ariens' professional 36 Sno-Thro

Ariens Company offers the Professional 36 Sno-Thro with a 342cc Ariens Polar Force engine by Briggs & Stratton, which removes snow from sidewalks and large areas with its 36-inch clearing width. The all-steel, 16-inch serrated auger and three-blade, 14-inch steel impeller enhance clearing ability. A 50-foot discharge range ensures that snow lands outside of the clearing path of the machine. Automatic traction control optimizes maneuverability, and with no levers or triggers, steering is effortless. The Sno-Thro also features a 120-volt electric start with recoil backup, a 3.2 quart fuel capacity, 6 mph forward and 2 mph reverse speeds.

Ariens Company



BEAM CLAY® INFIELDS!



Beam Clay® has supplied products to every Major League Baseball Team and over 150 Minor League Teams, more than 700 colleges and thousands of towns and schools from all 50 states and worldwide. Beam Clay® supplies special mixes for infields, pitcher's mounds, home plate areas, red warning tracks, infield conditioners, drying agents, plus over 200 other infield products, including **regional infield mixes blended for every state and climate** from bulk plants nationwide!

BEAM CLAY®

800-247-BEAM (2326)
WWW.BEAMCLAY.COM



ADVANTAGE 3050 TOPDRESSER



50 ft. spread pattern, spill-free loading, and light footprint help ADVANTAGE 3050 topdresser live up to its name



New durable chisel-point tines

www.TurfTimeEq.com
800-201-1031

Continued from page 35

CHECK THE REEL FIRST

Before doing any grinding, Sides advises that you thoroughly clean the reel and cylinder. Next, always check to make sure the reel and roller bearings are good and reel has proper end play.

"It's virtually impossible to get a good, consistent grind if there are worn bearings," he said. "Save yourself the headache and check these before wasting time at the grinder."

You should also look for a "coned" reel by using a pi-tape or other measuring device to check circumference. An uneven reel can affect cut quality as well as lead to contact with the bed knife. If you find a coned reel, Sides recommends following the directions for your specific grinding equipment to get the reel back to true.

MAINTAIN PROPER CLEARANCE

"Easily the most overlooked, but key component of reel maintenance is to make sure bedknife clearances are maintained," Sides said. A couple of minutes spent ensuring the reel blades are not coming into contact with the bedknife can save hours of grinding time down the road.

"We definitely promote daily clearance checks," Sides said. "As a rule, you want between one-thousandth to two-thousandths clearance between the bed knife and reel blades. Avoid metal-to-metal contact, as that quickly wears down a reel." Pulling a reel, mounting it in the grinder and replacing the unit can take up to an hour per reel. Daily clearance checks take just a few minutes and can help extend reel life and save shop time by extending the duration between spin grinds.

DON'T OVERLOOK THE RELIEF ANGLE

When you do have to grind, Sides says, don't overlook the relief angle. "There are two distinct schools of thought on grinding," he said. "Those that spin grind only and those that relief grind in addition to spin grinding. I recommend everyone maintain the relief angle throughout the life of the reel."

The relief is key to keeping the reels and the tractor working the most effi-

KOCHER CO. INC.
Water Movement Solutions

FULL Line of Irrigation Hose
featuring **KOCHER'S**
Highly Efficient Full Flow Couplings

Dura Flow
Ultralite

GH Series
Clear GH Series

NEW
Multi-Purpose
Cleansing Pellet

Wetting Agents

Nozzles

Applicators

••Nozzles••Wetting Agents••Adapters••Swivels••Connections••

••••• www.kocher.com •••••

TEL: 800-420-4673 FAX: 800-772-0255

#1 Top dresser!
Self-Propelled Top Dresser

Innovative - Versatile - Quality

Ecolawn spread :
Top soil, compost, crum rubber, calcite clay, pelletized products.

Distributors :
Tidewater: 800-825-4300 / Serving: VA, WV, DE, MD, NC, SC
Roberts Supply: 800-373-5542 / Serving: FL, AL, GA
Emmett Equipment: 800-659-5520 / Serving: OH
L&M Distributing: 320-267-0241 / Serving: MN, IA, ND, SD, WI
Douglas Equipment: 503-663-2053 / Serving: OR, WA
Bill Chounet: 775-463-5599 / Serving: CA, AZ, NV
Keith Schuler: 630-202-8438 / Serving: IL, IN, MO, MI
Lawn Ranger Inc: 800-265-7729 / Serving TX, OK, KS

www.ecolawnapplicator.com

Please fill out this form in its entirety

Yes, please start/continue my **FREE subscription to Sportsturf**

FOR FASTER SERVICE visit our web site at <http://www.submag.com/sub/tf> or fax to 847-763-9569

No, thank you.

Which version would you like to receive?

Print Print/Digital

Signature: (required) _____ Date: _____

Name: (please print) _____

Title: _____

Company: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ Fax: _____

Email: (required) _____

October 2011 - Expires March 2012 - RS1110

1 What is your company's primary business? (check ONLY ONE)

- F Sports Complex G Athletic Field and/or Park Architect/Designer
T School, College or University P Park
H Other (please specify) _____

2 Which of the following best describes your title? (check ONLY ONE)

- A EXECUTIVE/ADMINISTRATOR — President, Owner, Partner, Director, General Manager, Chairman of the Board, Purchasing Agent, Athletic Director
B MANAGER/SUPERINTENDENT — Superintendent, Landscape/Ground Maintenance Manager, Foreman, Supervisor
C GOVERNMENT OFFICIAL — Government Commissioner, Agent, Other Government Official
D SPECIALIST — Architect, Designer, Consultant, Agronomist, Horticulturist, Certified Specialist
F COACH E Other (please specify) _____

3 Do you have the authority to buy, specify or recommend products and/or services for your business or organization?

Y Yes N No

4 Yearly operating expenditures (excluding salaries)

- F Over \$1 million C \$50,001 - \$100,000
E \$500,001 - \$1 million B \$25,001 - \$50,000
D \$100,001 - \$500,000 A \$25,000 and under

5 Please also send a free subscription to the following people at the same location

Name _____ Title _____

Name _____ Title _____

SportsTurf ADVERTISERS' INDEX

Advertiser	Page #	Web Address
Barenbrug USA	48	www.barusa.com
Beam Clay	44	www.beamclay.com
Covermaster	17	www.covermaster.com
CoverSports USA	11	www.coversports.com/ST
Cub Cadet Commercial	47	www.cubcadet.com/sportsturf
Diamond Pro	2	www.diamondpro.com
Ecolawn	44	www.ecolawnapplicator.com
Ewing Irrigation	9	www.ewing1.com
Field Away	33	www.turfmuncher.com
Hydraway Drainage Systems	19	www.hydraway.net
John Deere	5	www.johndeere.com/SportsTurf
Kochek Co., Inc.	44	www.kochek.com
Kubota Tractor	3	www.kubota.com
Pro's Choice Sports Field Products	21	www.proschoice1.com
Southern Athletic Fields	13	www.mulemix.com
Sports Turf Managers Association	37	www.stma.org
Sports Turf Managers Association	41	www.stma.org
Stabilizer Solutions	15	www.StabilizerSolutions.com
TifSport Growers Association	25	www.tifsport.com
TurfTime Equipment, LLC	44	www.TurfTimeEq.com
World Class Athletic Surfaces	13	www.worldclasspaints.com

ciently. "Without the relief angle, you potentially increase drag on the reels or increase the likelihood of metal-to-metal contact," Sides said. "This puts more strain on the entire tractor and generates more heat in the hydraulic or electrical systems."

In addition to adding wear to the unit as a whole, this additional strain can also start to have a negative impact on fuel economy.

"Drag, wear and heat are minimized with a relief angle and proper bedknife clearances," Sides said.

The proper angles for reels can generally be found in manufacturer's manuals.

How often to grind is another question Sides is frequently asked. While there

is no hard and fast rule, this is a major factor that a lot of folks overlook.

"How often and how heavy you topdress will dictate how often you'll need to grind," he said. "The more sand that goes down, the more frequently you'll have to grind."

One way to extend reel life and still aggressively topdress is to make sure the sand gets worked in well before mowing. Brushing or dragging will help keep the sand down at the root level where it belongs and not up eroding the reels on your mowers.

LAY OUT A GRINDING SCHEDULE

Finally, Sides recommends setting up a

grinding schedule. This will help ensure that units get taken care of regularly as well as allow turf managers to plan enough time to get the job done.

"Too often, we see reels get overlooked because there's just no time to grind," Sides said.

This schedule should be flexible, however, to deal with changing conditions. For example, a change in the topdressing program should lead to a review of the grinding schedule.

"Most people go too long between grinds," Sides said. "Having an established timeline helps keep reels in optimum mowing condition." ■