Inspect & calibrate to save \$\$

hen applying chemicals, you want to be sure you don't miscalculate. If you apply too little, you run the risk of the product not working effectively. If you apply too much, you may be looking at potential damage to your turf, not to mention a major unnecessary expense.

Some extra planning and responsible chemical handling procedures, such as frequent sprayer calibration, can mean big reductions in chemical costs.

Fortunately, there are several ways to help ensure precise sprayer calibration, and correspondingly accurate chemical application. Your distributor should offer sprayer inspection and calibration services to help identify equipment wear issues and recommend a service and parts replacement program to aid in accurate application. Once a sprayer has been inspected, your distributor can also calibrate the sprayer for optimal chemical application. This sprayer inspection and maintenance investment can have a tremendous payback potential.

Another helpful tool is www.toro.com/calibrate. This useful software tool will give you a step-by-step guide to calibrate any sprayer. To begin the process, you must be

able to verify:

* What volume the sprayer is putting out.

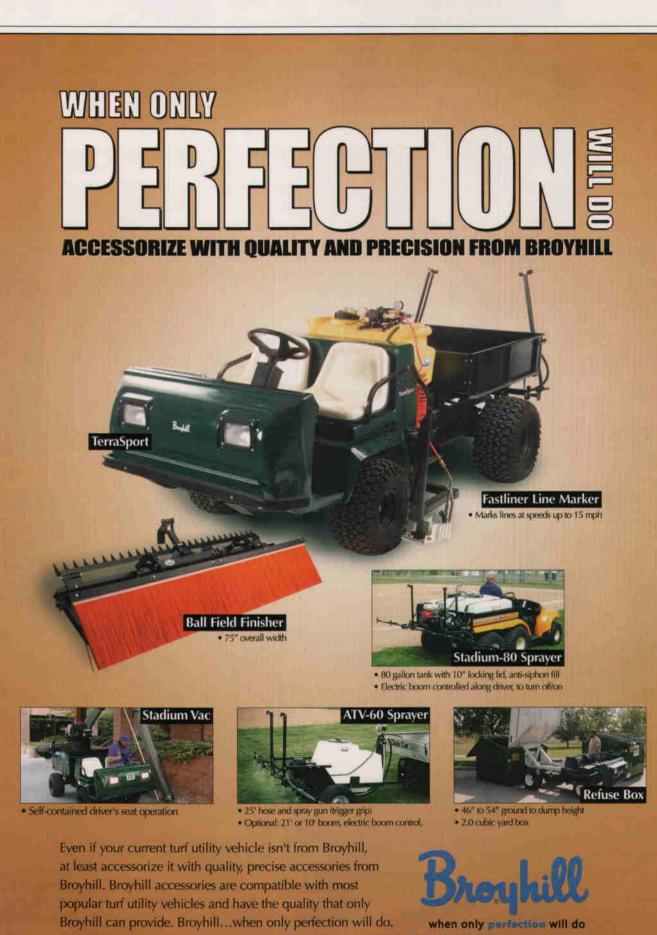
The consistency of each nozzle.
The proper amount of product to add to the mix.

* How much volume is required to cover the desired area.

The Toro Sprayer Calibration program allows you to check the performance of the sprayer and also calculate the desired application rate, product to water ratio and the amount of water needed to cover the desired area.

The tool contains numerous programs including: Nozzle Uniformity Calculator; Speed Calculator; Application Rate Calculator; Tank Mixing Calculator; Multiple Tank Mixing Calculator; Nozzle Selection Calculator; Nozzle Pressure Drop Calculator.

This information provided by Toro. Visit www.toro.com/calibrate or contact your local distributor at 800-803-8676.



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Circle 135 on card or www.oners.ims.ca/2912-135

Topdressing tips

BY SCOTT KINKEAD

opdressing, done correctly, can provide many benefits that help sports turf managers maintain a healthy, safe and highly playable field. Some of the benefits are controlling the thatch build-up, leveling playing fields, and following are some of the factors to consider when selecting topdressing material and topdressing equipment that will help you meet your particular needs.

Choosing material. The best topdressing mix may not consist of the same material that is on your field, e.g., if your field soil drains poorly and compacts easily, it makes sense to avoid using the same soil in your topdressing mix.

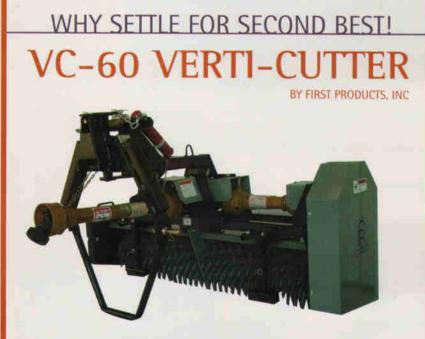
changing the soil composition to create a better growing medium that is less prone to compaction. Of course topdressing is most effective when it is integrated with other maintenance practices.

Like any maintenance practice, a topdressing program requires planning and preparation before getting started to ensure that things are done right. Forty years of experience designing topdressers and working with turf professionals on topdressing programs has taught us the importance of doing the proper planning up front. Once you start a program, you want to be able to stick with it. Infrequent applications with differing material can cause more problems with your turf. The



The first and best option should be to consult with a local agronomist or a university soil testing facility to explore the different types of material available and determine which type makes sense for your field and your goals. Materials can range from 100 percent silica sand to a 70/30 mixture of sand and peat, but usually consists of high sand quantities.

A topdressing program should include consistent, routine application and a consistent mixture of material to avoid layering. Particles should be screened and typically 60-75 percent should be between .25 to .75 millimeters in size; coarser sand that measures .1mm or more should be kept to a minimum because mowers can pick up larger particles. Extremely fine sand should be kept to a minimum, as well.

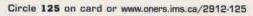


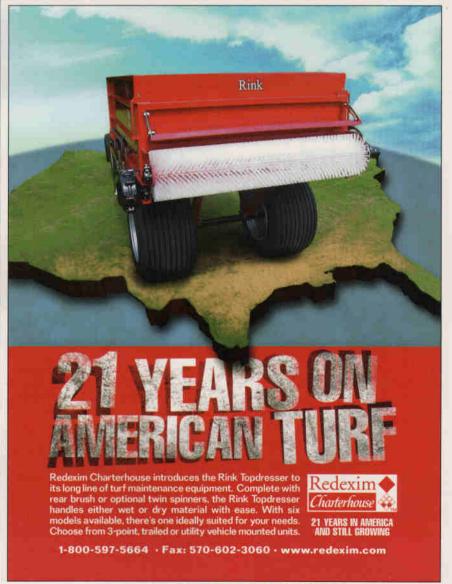
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Applying the proper rate. Topdressing applications can range from 1/32-inch for thatch control to 1/4 after aerification for leveling and changing the growing medium. Most sports fields will focus more on the heavier application two to three times a year after aerification.

Amount of material. The size of the turf area and the thickness of application will help you determine the amount of material needed.

to most standard utility vehicles or towed by a small tractor. Units with 4-cubic yard hoppers require much larger tractors. Always check the weight fully loaded with sand to the capacity of your towing vehicle.

Scott Kinkead is vice president of Turfco Manufacturing. He can be reached

Equipment options. Topdressing equipment should have features that can apply topdressing with control, uniformity, accuracy and reliability. The less uniform and consistent the spread the more man-hours spent overlapping and dragging in the material. The less accurate and consistent the application, the less benefits you will experience from the program.

The two different types of top dressers are a broadcast spreader and traditional drop spreaders. Drop spreaders generally use a hopper, a belt and a brush to deliver the topdressing and tend to be better at consistent heavier applications. Broadcast spreaders use spinners to deliver the topdressing and tend to be better for frequent lighter applications.

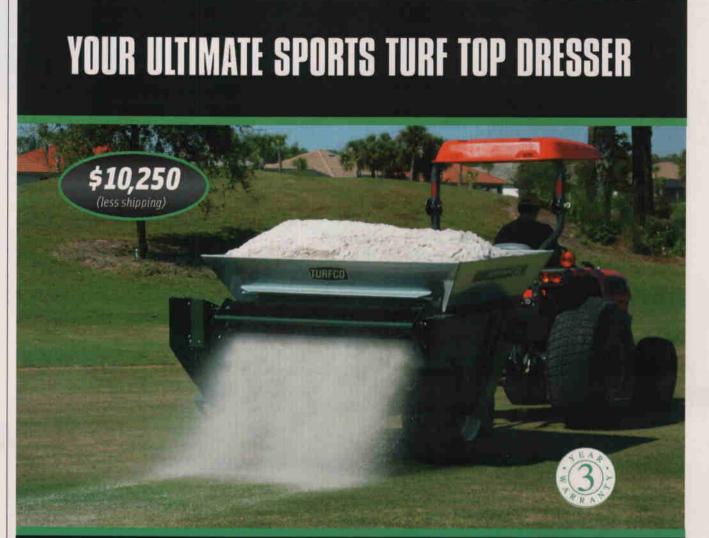
One of the important features is the ability to handle material regardless of composition or moisture content. Material with higher peat content can tend to be wetter and more difficult to spread. Chevron, or patterned belt technology with a brush, for example, allows topdressers to handle materials consistently and apply materials evenly, which results in a more efficient application. This also allows applying calcine clay to infields.

There are also hydraulic driven topdressers and ground driven topdressers. Ground driven units can guarantee consistent applications regardless of speed changes. It is important to keep units that are hydraulically driven at consistent speeds as slowing your speed will thicken the spread and increasing your speed will lighten the spread.

The most important part in choosing equipment is testing the machine out before purchasing it. If a manufacturer says they can spread wet material consistently, then have them demonstrate this. Don't make your program fit the machine; the machine should fit your program.

Capacity. A larger hopper capacity topdresser means less downtime in having to load the hopper, so typically the larger the fields or greater number of fields, the bigger the top dresser should be.

Towing equipment. The smaller top dressing units can be connected

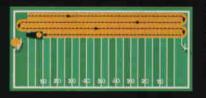


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speed. Plus, the XL features a larger, 2.25 cubic yard hopper so you get the job done fast. For more

information, a demo, or to learn more about top dressing, call 1-800-679-8201.



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DIESEL SPRAYER

Toro introduces the new Multi Pro 5700-D, the spray system with a 35.5 hp Kubota diesel engine, providing horsepower to muscle through spraying operations in hilly and undulating turf, even with a full tank. Featuring a 300-gal. tank and a dual diaphragm pump, the system delivers a constant and precise rate of application, regardless of speed.

The Toro Company/800-803-8676 For information, circle 087 or see http://www.oners.ims.ca/2912-087



DEERE SPRAYER

The John Deere HD200 Sprayer compliments the Deere ProGator UV. A sideaccess point gives you easy access to fill, add chemicals, and look inside the tank. Sparge tube agita-

tion ensures that the tank solution is well mixed. A standard personal wash system provides clean water for safety and convenience. Compatible with Gator only. John Deere/800-537-8233

For information, circle 098 or see http://www.oners.ims.ca/2912-098

SPREADER SPRAYER

The Z-Two Spreader Sprayer lets you apply products over larger areas while increasing productivity and reducing operator fatigue. The unit features a 40-gal. tank and a 125-lb. hopper. Other features include: 15-hp Kawasaki engine; 4.8 gpm @ 40 psi electric pump motor; rear-mounted, foldable boom with five nozzles. LESC0/440-783-9250 For information, circle 090 or see http://www.oners.ims.ca/2912-090

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TOPDRESSER

Redexim Charterhouse introduces the Rink Topdresser to its long line of turf maintenance equipment. These topdressers use tractor hydraulics to power the permanently, self-aligning conveyor belt, delivering the wet or dry material directly to the rotary brush or optional twin disc spinners. Choose from 3-point, trailed or utility vehicle mounted units with 1.3 or 2.5 cu. yd. hopper capacity.

Redexim Charterhouse Inc/800-597-5664 For information, circle 089 or see http://www.oners.ims.ca/2912-089



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Jacobsen has three new Lawnaire self-propelled, highspeed, core-type aerators, with upto-date styling and ergonomics. The new Jacobsen offering is completely based upon the industry's top-selling Ryan aerator brand. The new units include a 19-, 26.5- and 28-in. core-type aerators loaded with features for easy transport and operation. Jacbosen/

For information, circle 097 or see http://www.oners.ims.ca/2912-097



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The mushroom shape of these rubber plugs seal off the puncture on the inner wall while the stem expands under pressure to completely fill the hole. A turn of the Allen Wrench inserted in the Plugger pushes the plug through the

> Nozzle and into the tire. Stop & Go International Inc/800-747-0238 For information, circle 100 or see http://www.oners.ims.ca/2912-100



JACOBSEN HR-9016 TURBO

The Jacobsen HR-9016 Turbo rotary mower has a 16-ft. wide cutting path and 87-hp turbocharged diesel engine and can mow up to 161/2 acres per hour. Mower has 18-in. uncut circle turning radius and adjustable airride suspension seat and fingertip controls. The outboard cutting decks can be raised to 90 degrees for close-in trimming. Jacobsen/

For information, circle 104 or see http://www.oners.ims.ca/2912-104



TURFO TOPDRESSER

Turfco's Mete-R-Matic XL towtype top dresser features a midrange hopper capacity for larger turf areas. The unit features the proven Mete-R-Matic patented design, the patented chevron belt, a ground drive system and Turfco's 3-year warranty. Mid-range hopper capacity is 2.25 cubic yards, and it can carry a maximum load weight of 6,000 lbs.

Turfco Manufacturing/763-785-1000 For information, circle 094 or see http://www.oners.ims.ca/2912-094

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Caring for Plants in Summer Heat

BY JESSIE ATCHISON

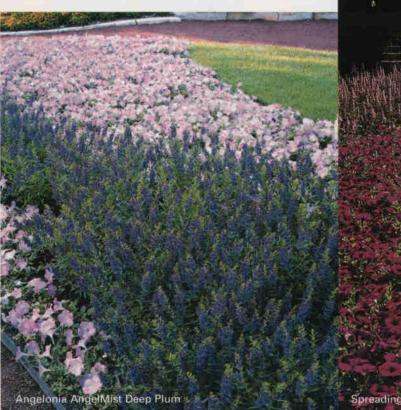
t's here: hot summer weather. Like many people, many plants don't enjoy hot temperatures and, much like an overheated left fielder, they need some extra care in order to keep them in top condition through the hottest part of the season. Follow these tips to give plants a fighting chance when temperatures rise.

Annuals

Annuals are important parts of any landscape, providing high impact color that can be changed from year to year or even season to season. However, while many annuals have tropical origins and perform well almost effortlessly in the heat, others need some extra attention during periods of high temperatures.

First, remember that good maintenance early in the season helps plants make it through the summer. Give plants plenty of water after planting to help them get established, and fertilize and water regularly throughout the spring and early summer. Good maintenance practices result in bigger, healthier plants that have a better chance of standing up to heat. Before installing anything, assess the planting site and choose plants accordingly: think about the amount of sunlight the plants will

receive (sun or shade), the type of watering system you'll use (overhead watering, drip irrigation, etc.) and whether your climate is usually dry or humid in the summer. Mulch plants during installation; a layer of mulch 2-4 inches deep will help plants retain moisture and help the roots stay cool later in the summer. (If you didn't mulch when the plants



were installed, you can still apply mulch later in the season.)

When temperatures start to soar, there are several steps you can take to keep plants healthy. Plants will require additional water because they will dry out more quickly. Avoid overhead watering in high heat and humidity if possible, because it can lead to disease problems. Water during the morning so plants have a chance to dry out. "Deadhead" plants when necessary, removing old blooms to keep the plants looking nice. Cosmos, ageratum and African marigolds are just a few of the plants that can benefit from this practice. (Some varieties, like Wave spreading petunias and Fiesta double impatiens, do not require deadheading, saving time and labor. Ask your grower to recommend varieties like these that will save time and make things easier on maintenance crews.) If plants start to look "tired," i.e., if they don't flower as profusely or if they stop flowering altogether, pinch back 1 inch of growth. Plants like heliotropes, asters, marigolds and traditional petunias will benefit from pinching, re-blooming fuller and more freely.

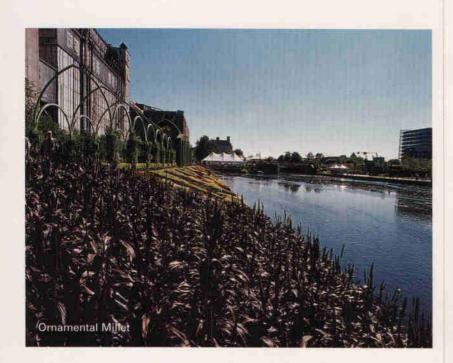
Perennials, Trees & Shrubs

Perennials, trees and shrubs, like annuals, require a little extra care during the heat to keep them healthy. Mulch perennials when you plant them, whether it's spring or fall, to reduce water loss during hot, dry periods. Some perennials like



salvia or achillea (yarrow) can be cut back when they've finished blooming; they may not rebloom, but the foliage will look much better and provide a better show in the landscape throughout the rest of the summer. Provide extra water to perennials during dry spells. While newly established trees and shrubs should be watered on a regular basis throughout the summer months, well-established plants only need to be watered during long dry periods.

The easiest way to triumph over high temperatures is to choose the right varieties from the start. If your climate is hot and humid, try varieties like Wave petunias, which don't require deadheading or pinching and will flower throughout the summer, Butterfly pentas or AngelMist angelonia. For hot, dry climates, annuals like Landmark lantana and Fairytales portulaca perform well in full sun, love the heat and are drought-tolerant. Non-flowering annuals are an easy way to provide color during summer months, and they're simple to care for because you don't have to



worry about deadheading. Magilla perilla can be planted in full sun to full shade gets huge fast (up to 3 feet tall!) and provides colorful foliage in shades of plum, green, cream and hot pink throughout the summer. Purple Majesty ornamental millet, an award-winning variety, reaches up to 5 feet tall and turns a deep mahogany-purple in full sun, with fluffy seed plumes that attract birds. Silver Falls dichondra is an excellent groundcover for hot, dry areas and can be planted in full sun to partial shade.

Whatever you plant, remember to watch for diseases; high heat, humidity and extra moisture can lead to problems like powdery mildew, rhizoctonia or root rot. Try using sturdy plants in landscape beds and placing more delicate flowers in containers for seasonal color, because containers can be easily removed or replaced if they start to look wilted. Pay attention to the care requirements for different varieties, and plant those with similar light and water needs together. This makes it easier to develop regimens for water and fertilizer, and it makes it simpler for maintenance crews to keep plants healthy. Finally, avoid planting the same annual varieties in the same landscape beds year after year; this practice can lead to the buildup of organisms that can harm a particular type of plant, making your battle with hot weather even more difficult.

If you choose the right varieties and follow good maintenance practices, your landscape plantings will shine even during the hottest summer temperatures. **ST**

Jessie Atchison is with Ball Horticultural Co., West Chicago, IL. She can be reached at jatchiso@ballhort.com. Photos courtesy Ball Horticultural Co.



Princess 77 Helps New Mexico State Develop a Strong Field for Their Team



Dr. Arden Baltensperger (left) and Dr. Bernd Leinauer, Turfgrass Specialists at New Mexico State stand on the football field 50 days after the grounds crew renovated it with Princess 77 hybrid bermudagrass from seed.

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> Requires 21% less water than Tifway (419)*
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Why Plant Princess 77?

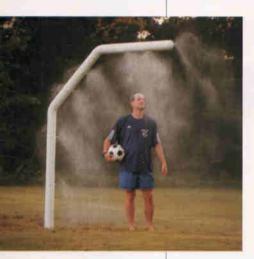
Removal of the existing ryegrass revealed an 85 - 90% loss of Tifway (419) on the field.

Following their first undefeated season at home, the New Mexico State University Aggies were looking to start the 2003 football season with their second consecutive home opening win. However, the players weren't the only people preparing for the upcoming season. The responsibility of having the field ready for play by the first snap of the ball fell on the shoulders of Bud Jones and the New Mexico State Grounds Crew.

Removal of the existing ryegrass revealed an 85 - 90% loss of Tifway (419) on the playing field. Renovation of the field using Princess 77 hybrid bermudagrass from seed solved the problem. 50 days later, the field was pronounced to be "at full density and in excellent condition." According the the grounds crew, Princess 77 held up "remarkably well" to the traffic of the first game.



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