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Introducing the entirely new GradeMaster 3D Grading System. This box scraper automatically restores greens and other contoured areas to their original state, allowing you to maintain and refinish with unparalleled accuracy and efficiency.

Using Trimble machine control technology, the GradeMaster 3D allows contractors to topo the existing surface and recreate the original design once work is completed.

The GradeMaster 3D offers a comprehensive, automated process to return greens to their original design specs.

If you would like to learn more about this revolutionary grading system, click on www.laserleveling.com for more information.

800.622.5777 www.laserleveling.com



#### BIOSTIMULANT

Focus turf biostimulant from PBI/Gordon is recommended for use in all turf management situations, especially where turf is expected to perform under high-stress conditions. Focus 15G can also be used as a topdressing for ornamental landscape plantings and other flower displays. PBI/Gordon/800-821-7925

For information, circle 091 or

see www.oners.ims.ca/2084-091

#### MULTI-PURPOSE PRODUCT

Transplant 1-Step from ROOTS has everything you need all in one 4-oz package: Granular version of their organic biostimulant; organic fertilizer; mycorrhiza; and waterholding gels to carry your plants through drought. ROOTS Inc/816-254-6000 For information, circle 087 or see www.oners.ims.ca/2084-087



#### **NEW SOIL AMENDMENT**

GAME ON is a new sports field soil conditioner that is vitrified and manufactured in a rotary kiln. The lightweight, expanded shale product that absorbs more than 20 percent of its weight in water. Due to its angular shape and pore structure, GAME ON will relieve compaction and significantly increase water infiltration rates. The pores of each particle allow for increased water absorption and water holding capacity.

Hydraulic Press Brick Co./888-593-0395 For information, circle 088 or see www.oners.ims.ca/2084-088



#### **FIGHT BLACK LAYER**

United Horticultural Supply introduces BLT, an advanced greens grade granular product whose ingredients have been proven to combat black layer and its harmful effects. BLT provides an alternative to costly reconstruction, renovation, or ineffective inputs and practices. It will reduce the severity of black layer for several months after application and a regular



maintenance schedule will keep susceptible areas from recurrences. United Horticulture Supply/800-847-6417 For information, circle 086 or see www.oners.ims.ca/2084-086

## MODULAR SOCCER GOALMOUTH

### by IIGreenTech

GreenTech's patented modular system is an innovative technology that provides solutions to problems associated with the design, construction, and maintenance of horticultural and turfgrass projects. This picture is an example of the GreenTech Modular System used as a soccer goalmouth. Modular construction allows new, mature, and well-rooted turf to be installed in worn, high traffic areas, such as soccer goalmouths. It eliminates the need to constantly re-grass the area with sod that does not have time to become fully established.



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Circle 151 on card or www.oners.ims.ca/2084-151

#### **ORGANIC NEMATODE CONTROL**

Poulenger USA now has a patent for Ontrol, its new organic nematicide. Produced from 100 percent organic material, Ontrol is considered a minimum risk pesticide and is exempt from EPA registration. The product has no application limitations or restrictions. It is available as a granulated or powdered material.

Poulenger USA/866-709-8102 For information, circle 097 or see www.oners.ims.ca/2084-097



ORGANIC NEMATICIDE

#### MARKING PAINT

Pioneer's Brite Stripe athletic field marking paint produces up to 400 percent brighter than standard paints under



UV lights and 25 percent brighter in sunlight because of its formulation of Halogen 2000 and Optiwite optical brighteners, says the company. Product can be applied with any bulk paint striper and dries in less than an hour. It does not harm turf or damage equipment or uniforms. Pioneer Manufacturing/800-877-1500 For information, circle 098 or

see www.oners.ims.ca/2084-098



#### **IRON CHELATES**

For dark green, healthy plants, Becker Underwood's Sprint 330 and Sprint 138 iron chelates maintain and protect plantavailable irons in turf, trees shrubs, field-grown plants, and plants in a container. Sprint 330 performs best in slightly acidic to slightly alkaline soils with a pH

of up to 7.5. Sprint 138 is preferred in the most challenging soils, which are alkaline and calcareous, including soils with a pH greater than 7.0. Becker Underwood, Inc/800-232-5907 For information, circle 093 or see www.oners.ims.ca/2084-093

#### PREPACKAGED PUMPING SYSTEM

Flowtronex PSI has introduced a new generation of pre-packaged pumping systems that are more efficient, easier to service, and cost less, says the com-pany. The FloBoy skid-mounted, prefabricated pump and control packages for turf applications are sized and 3-50 hp at 208 and 230 volt 1 phase power. Flowtronex PSI/800-786-7480 For information, circle 100 or

#### see www.oners.ims.ca/2084-100

## Pro's Choice Select Series

For premium performance and a color that will set your field apart, choose the Soilmaster Select Series from Pro's Choice. Scientifically engineered to meet daily maintenance challenges and give your field a professional look, Soilmaster Select is the TRUE choice of groundskeepers around the league for building and maintaining winning ballfields. Available in four distinct colors, Soilmaster Select's uniform granules manage moisture and alleviate compaction to keep your field in top playing condition. Pro's Choice delivers a full line of sportsfield products for conditioning soil and infield mix, topdressing infields, quickly drying puddles and revitalizing turf.

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- Synthetic Sports Turf Groomer works with all fill material currently used, in both wet and dry conditions.
- Patented brush design lifts turf fibers leaving them in a plush, upright position. Brushes move fill to low spots or depressions left after play.
- Synthetic Super Duty Blue Brushes retain their original shape, resist wear, and will not rot.
- GreensSlicer Spring Tine Rake consists of 3 rows of 28 tines spaced 7/8 inch apart for thorough coverage.
- Each row of tines may be adjusted to the desired level of aggressiveness.
- The GreensSlicer combs through the fill material, relieving compaction and assuring a soft, level playing surface.



Synthetic Super Duty Blue Brushes Resist wear and will not deteriorate from moisture.



GreensSlicer Spring Tine Rake 3 rows of 28 tines.





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888-298-8852 Fax 317-298-8852 www.greensgroomer.com GreensGroomer WorldWide, Inc., Indianapolis, IN Copyright © 2003 GreensGroomer WorldWide, Inc. All rights reserved. U.S. Patent No. 5833013. Other Patents Pending. Circle 164 on card or www.oners.ims.ca/2084-164



#### SOIL AMENDMENT

Caltrisal soil amendment overcomes salinity issues in soils by solubilizing calcium in the soil and moving dessicating salts away from the rootzone quickly and efficiently. Caltrisal can be sprayed or injected, and can be applied in conjunction with

liquid fertilizers, making application a snap. Aquatrols/856-751-0309 For information, circle 089 or see www.oners.ims.ca/2084-089



#### ASSIST NATURAL PROCESSES

Floratine products assist natural soil processes to deliver turf what it needs. Maxiplex is a carbon rich, low fulvic humic acid. CalpHlex is a proprietary, extra strength, cyclic acid chelated calcium product. Grofax 33 is a premier organic base microbial food source. Floratine/901-853-2898 For information, circle 096 or

see www.oners.ims.ca/2084-096



The Klacon family of soil conditioners combat compaction, enhance turf drainage, promote safe play, provide consistent and truer bounce, as well eliminate puddles and standing water fast. From the makers of Klawog mound and batter's box products. Wessco Inc/330-745-9322 For information, circle 092 or see www.oners.ims.ca/2084-092

#### SOIL AMENDMENT

Eagle Picher Minerals has created AXIS, made exclusively of soil grade diatomaceous earth. An incorporation of 10% AXIS by volume to a depth of 6 in. will permanently improve plant growth and reduce water requirements by 30 percent in most native soils. Eagle Picher/800-366-7606 For information, circle 090 or see www.oners.ims.ca/2084-090





#### **REDUCE WILT**

AAdvanced Water Management says its Hydrozone water-absorbing polymer significantly reduces wilt on high-stress days. A study at Michigan St. showed turf grown with the product was able to go longer periods without watering. The root system also established faster and had greater mass and density. AAdvanced Water Management/877-994-3494 For information, circle 099 or see www.oners.ims.ca/2084-099

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26 October 2003

(continued from page 14) tion and quality control process. Stockpiled materials are tested before shipment to the project site to ensure they meet project specifications. The turf manager or some other owner's representative should be present during any construction materials sampling event.

To aid in sampling, a 2.5 inch schedule 40 PVC pipe about 45-50 inches long should be cut at a 45 degree angle at one end. The pipe acts as a sample collection tube. It is also useful to have a rubber mallet to tap samples out of the pipe.

At least eight sampling locations should be randomly selected for a 1,000-ton stockpile. The locations should vary from the top to bottom and all around the pile. At least half of the samples should be taken from the lower third of the stockpile. Brush away the outer 6 inches of the pile and push the clean pipe as far as possible into the stockpile. Pull the pipe out and tap the sample into a clean bucket. Thoroughly mix the material after all samples are taken. Remove one gallon out of the bucket to fill a zip-lock bag. Label the composite sample appropriately with a permanent marker, and indicate from which stockpile the sample was taken.

To protect the samples during shipment, it's usually best to send the samples in a sturdy box with sufficient packing material included. Sample IDs should always be on the outside of the sample bag or container. A letter or testing request form should also be included with the sample submittal. The letter should include any pertinent sampling information, testing required,

(continued from page 18) last indefinitely), so the investment in the product is long-term. Also, manpower or equipment to install the covers can be a major limitation, in addition to the handling characteristics of the cover in wet, windy, and cold conditions. Covers differ greatly in handling characteristics. Another point to consider is the potential for leaving the cover in place for more than one day during the season. The non-woven turf blanket in this research allowed approximately 70 percent sunlight to pass through the blanket. This amount of radiation resulted in desirable turf color and appearance even when the cover was left in place days at a time. It will not always be possible (and realistically not even desirable) to install and remove a cover on a daily basis. ST

Mike Goatley and Barry Stewart are with the Department of Plant and Soil Sciences, Mississippi State University. information on how to contact you, and info on where to send the report. Follow these guidelines and you can take comfort in knowing that you have taken a good representative sample.

Sam Ferro is the president of Turf Diagnostics & Design, a physical evaluation lab and agronomic consulting company (913-780-6725). Company vice president Duane Otto also contributed to this article.

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SPORTSTURF 27

around the grounds



# DEALING

reparing your field for winter weather is a challenging task. For insight into dealing with snowy and cold conditions, SPORT-STURF magazine recently spoke with Abby McNeal, CSFM, assistant turfgrass manager at Invesco Field at Mile High, home of the NFL's Denver Broncos. Abby also is an STMA Board member.

#### ST: What steps do you take to prepare your field for winter weather before it arrives?

McNeal: We prepare our field to be a safe and playable all year round. Our field maintenance program is geared toward playing football through January. From about August on we are looking at ways to adjust our maintenance practices to make the field play consistently safe for the football season. Our field has a geo-thermal heating system that enables us to keep the field at more ideal growing conditions later in the fall. Along with the use of Evergreen grow covers, we are able to provide a growing environment throughout the



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# WITH OLD MAN WINTER

winter months.

**ST:** On a more short-term level, what plans do you make for game day if snow is forecast?

McNeal: The NFL requires us to tarp the field if there is any threat of snow 72 hours before game day. We make sure our plows are ready to go and that we have the staff needed to deploy or pull up the tarps. If there is a chance of snow during the game, we prepare our game-day crew with shovels to clear the vard lines as well as orange paint in case we are asked by the head official to paint any yard line that may be hard to see in the weather. The tractors and other equipment are prepared in case they may be needed to assist with tarp removal.

# **ST:** What is the best way to maintain a safe playing surface throughout the snowy and cold winter months?

McNeal: It is hard for me to answer this because our field was built to be played on throughout the winter months. Again, we use Evergreen grow covers and our field heating system to create a growing environment during months in which mother nature would prevent you form naturally doing so. Creating a safe playing surface is key no matter what time of the year it is. Asking other turf mangers how they prepare their field for winter play in your particular area is the best way. Taking your field into winter in the healthiest possible way is the best way to prepare for winter play.

**ST:** What is the biggest challenge winter weather presents to you from a maintenance standpoint?

McNeal: The biggest challenge that we face is the tarping policy that the NFL has that requires us to tarp the field if there is a slight chance of snow. Making the right call as to tarp or not may be the biggest thing we have to decide. Used on more fields to prevent rainouts and improve field safety

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1655 101st Avenue Northeast Minneapolis, MN 55449-4420 around the grounds

## PROPER MAINTENANCE FOR SNOW **BLOWERS**



epending on where you live, your snow blower may sit unused for 8 months or more after winter weather ends. Be sure that your snow blower is ready for the task before the snow begins to fly again.

According to John Bailey, product manager for Husqvarna, there are three steps to preparing your snow blower: a careful inspection, replacement of worn parts, and a test drive of the unit.

#### Inspection

Carefully check the frame, auger housing, and auger or paddles. Look for worn out or loose parts, including:

\*The scraper bar, which is the part that makes contact with the ground and scrapes the snow up.

\*Screws and bolts: make sure they're tight and none are missing.

\*Belts: take the belt cover off and check for wear; check any idler pulleys, and make sure the bearings are not worn or the pulley is loose.

#### Replacement

After a thorough inspection:

- \*Replace any worn out parts.
- \*Drain the old gas from the tank and refill with fresh gas.
- \*For two-cycle engines, replace the spark plug.

\*For four-cycle engines, check the oil and change it at least once a year, or following 20 hours of use.

#### Test drive

Make sure the snow blower is ready for action with a "test drive." Better to find out about any problems now instead of when the temperature is below freezing.

\*Let the unit run long enough to burn out any remaining old gas in the fuel line and carburetor.

\*After a few minutes, stop the engine, then start it again while the engine is warm. \*After several hours, try to start it again. If it still starts easily, you should be ready to go.

Bailey also recommends reviewing your owner's manual for a complete guide to maintaining your specific snow blower model. For repairs or persistent problems, contact your local certified servicing dealer.

Provided by Husqvarna

