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There are many varieties of turf on the market and the end-user is more confused than ever. The Evergreen staff welcomes people from all over the world for turf training sessions in Dalton, GA. Tour all phases of production and see different types of installed fields including sewn and glued installations. A mill visit can help you clearly see what goes into all the different turfs on the market.

Evergreen Synthetic Turf/706-275-0700  
For information, circle 060 or  
see <http://www.oners.ims.ca/5060-060>



### AMMONIUM SULFATE

Honeywell has developed a line of ammonium sulfate (21-0-0-24S) fertilizers for turf, marketed under the trade name Sulf-N PRO, with four grades currently available: granular, mini, micro, and soluble. The granular, mini, and micro grades are free flowing, low in dust, highly uniform and compatible with other turf fertilizers, says Honeywell. Sulf-N PRO soluble dissolves quickly into a true solution that can be sprayed directly or injected through irrigation systems.

Honeywell International/800-601-3099  
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Environmental Turf and the University of Florida have introduced four new turfgrasses: Aloha seashore paspalum, Ultimate zoysia, Pristine zoysia, and Hammock centipede. All four are designed to replace Bermudagrass (or St. Augustine on lawns) and are considered "environmentally friendly" because they require less water for irrigation, less fertilizer, and less frequent mowing.

Environmental Turf/772-460-5575  
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# Essential questions before purchasing used equipment

BY JOHN MORGAN

**A**s is the case with most business decisions, determining the who, what, where, why and how of a used equipment purchase is vital to making a sound assessment of your options. By asking yourself these five essential questions, you will be better prepared to choose the most appropriate, effective and efficient solution to your equipment needs.

Many machines that were not obtainable several years ago are readily available now, providing today's equipment purchasers with many more options than in prior years. Determining your exact equipment needs as best as possible before beginning

to shop will help you avoid letting your wants overcome your needs. By considering utilization, both in time and dollars, you will greatly reduce the risk of purchasing the wrong equipment.

If the capital required to purchase and maintain the machine outweighs the potential profit generated by its role in current and future projects, continuing to source the machine through a rental partner is the smart decision. However, contractors should make a purchase if the unit they are considering is a production machine, that is, one that makes the contractor money.

## Where can I research?

With the real-time information and technology that is available, today's equip-





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ment buyers have the opportunity to become as well versed in pricing, specifications, service and maintenance as they wish. The Internet is a great place to start. By visiting equipment manufacturers' websites, you can gather specs and option information that will help you determine your needs. (Be careful, this is where it can be tempting to let those sneaky wants creep into your decision). Many other sites offer used equipment for sale or auction. Embrace technology, because being informed is your best asset when it comes to negotiating an equipment purchase.

The number of outlets selling used equipment is as large as the equipment options are broad. Equipment distributors, rental companies, brokers, contractors and auction houses all offer used equipment. Determining from whom to purchase used equipment typically comes down to two things—trust in the seller and the machine's value.

Because most used equipment is sold as-is, you will quickly find that there are no two machines exactly alike. While two used machines may only be one serial number apart, the value of each machine can be thousands of dollars apart. The more information you can find out about the machine, the more apt you are to determine its value. If the machine's maintenance records are available, take advantage of the information. It will help you determine whether or not the machine has been well taken care of, as well as all repairs that have been performed on it over the years. The former owners' information is valuable as well. I recommend contacting each previous owner to ask which applications the machine has been used for over the years. The fuzzier this information gets, the more due diligence you must perform. It's always a good idea to perform oil tests and to have the machine inspected before you purchase.

#### How do we pay?

There is no question that used equipment transactions are much simpler in the eyes of the seller. Most transactions are as-is, where-is, and the machine is paid for before it is turned over to the buyer. Certified checks and wire transfers are the vehicles of choice for used equipment purchases, so you'll want to be prepared to make these arrangements. There are many secondary leasing companies that finance used equipment, but this needs to be arranged well in advance of the purchase. If you are buying from your local dealer or rental company, and have an open account, most times you can charge the purchase as long as your credit line supports the amount. If you purchase at an auction, a letter of credit is required by the auctioneer before bidding.

Purchasing equipment is an important decision, one that has the potential to do both harm and good for your business. Being as informed, diligent and prepared as possible before scouring the ads is my best advice. Just keep asking yourself the who, what, where, why and how, and I'm confident that you'll have a good experience. **ST**

John Morgan is a regional fleet manager for Rental Service Corporation. He is available at 502-473-7423 or [john.morgan@rentalservice.com](mailto:john.morgan@rentalservice.com).

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# Spreader technology: Manufacturer's Roundtable

*Editor's note: We asked representatives from four major spreader manufacturers to answer the same four questions on their latest technologies. Respondents included: Scott Kinkead, Turfco; John Bentley, Earth & Turf; Kevin Clayton, TY-CROP; and Glenn Musser, Millcreek Manufacturing.*

## Why is it important to topdress?

**Scott Kinkead:** Topdressing is an important part of any effective sportsturf program, as it can promote a healthier, more uniform and compaction resistant growing environment for the turf. It helps turf withstand environmental pressure from heavy use, heat, or other factors that can compromise turf quality. Primary benefits of a well-designed and implemented topdressing program also include:

A smoother, more level and consistent playing surface that can help reduce injuries.

Help dilute the thatch layer so you can manage it at a healthy level. Excessive thatch layers can cause turf to be more susceptible to disease, and less able to survive day-to-day issues such as temperature changes and mower scalping.

Improve soil composition - In areas where tight, compact soil conditions limit oxygen concentration and/or water infiltration, an effective topdressing program can help create a better, less compaction-prone growing medium. This can also improve conditions for new root zone development, and promotes the rooting of stolons. Topdressing is also useful for the development and maintenance of field crowns.

**Kevin Clayton:** Topdressing helps accomplish several objectives: thatch control; improved drainage; compaction correction; smoothing surface irregularities; modifying surface soil; aid renovation and overseeding; and winter protection.

Topdressing also provides the option to raise the height of cut, which can help the grass stay healthy during times of stress.

An effective sand-topdressing program has three main requirements: selecting the proper topdressing material; determining the appropriate rate of application; and adjusting the frequency of topdressing to site conditions.

Soil modification via topdressing is adequate to create the desired changes; it can be a desirable option because it does not interrupt site use.

Aeration and topdressing drastically impact your overall turf management program because the turf root mass is concentrated in the upper 6-8 inches of the soil

profile, where these practices most improve soil conditions.

Compaction can be a turf manager's nightmare. Traffic, weather conditions and normal use push soil particles closer together, reducing pore space and increasing soil density. Due to decreased air, water and nutrient movement, turf roots struggle to fill their basic needs. As a result, turf quality declines and sports fields provide less cushioning for players. Turf shows less stress tolerance and increased susceptibility to weed, disease and insect problems. Aeration and topdressing are good bets to combat compaction.

Topdressing to smooth the surface is a necessary thing! Achieving trueness of the surface is just as important for a baseball or soccer field as it is for a golf green. If the surface is not true, a player is in danger, and you are in danger, as the manager of that field. This is particularly important for baseball, soccer or football players who aren't watching their feet during play but rather the path of the ball.

On established turf, topdressing aids in thatch decomposition, promotes recovery from injury or disease. In addition, topdressing can be used to modify existing soils and to aid in overseeding.

Most errors in topdressing will not have a short-term negative effect, but it is over a period of several years that an error in topdressing will tend to have a greatest impact.

### **John Bentley:**

Topdressing serves multiple purposes and in most case it is done in conjunction with some type of aeration, depending on soil conditions. If you are looking to improve drainage in tight soils you may want to spread certain types of sand or a calcined or manufactured clay product.

Some fields need humus (compost) to granulate clay particles or help retain mois-

ture in sandy soils. In most all cases there is also a desire to make the playing surface smooth, and the topdressing when drag matted along with the core or loose soil material from the aeration process will give you a smoother surface because the drag will fill in low spots in the field.

An extension agent can be part of the process to help the field manager determine what he or she needs to do in improve the field.

**Glenn Musser:** We topdress turf for two basic reasons. First, it improves the playing conditions of the field. Second, it improves the agronomic condition, or the basic overall health of the turf. The healthier your turf is, the better it survives harsh weather and abuse, and the better it looks.

To turn grass into a playing field, it requires topdressing. You need to pay attention to the kinds of issues that require topdressing, like maintaining a smooth, level





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playing surface, controlling the thatch layer, changing the soil texture, and ensuring favorable environmental conditions for germination.

**A smooth playing field.** We all know how important that is for the safety of the players, for the roll of the ball, and for player performance. Topdressing adds soil or sand, in measured amounts, for leveling the field.

**Controlling the thatch layer.** Thatch is ordinarily our friend. But too much thatch can be our enemy. Topdressing enables us to control the thatch layer by applying soil or amendments to improve nutrient retention, or to promote biodegradation.

**Changing the soil texture.** Often a playing field won't have the right balance of clay, silt and sand. We call that a soil texture problem. Of course, you might just dig it up and replace it, at enormous expense. But instead, you can gradually modify your soil texture by repeated aerating and topdressing over time, at significantly lower cost.

**Providing a favorable environment for germination.** Sports turf managers know one thing: activity on the playing field kills grass. To offset the damage, they overseed. With a topdresser, you provide a favorable environment for germination by applying soil or amendments that enhance seed-to-soil contact and reduce soil water evaporation.

### How is topdressing material applied using your type of equipment and technology?

**Bentley:** There are three types of application devices and they all serve the purpose from a different angle.

The spinner usually is to cover a large area with a thinner layer of material. They do well in drier materials but when material is wet their performance is reduced.

The brush is fine for putting down heavier layers in a defined pattern again the material should not be too wet.

The multispread beater will spread the widest range of materials from dry to wet and does spread wider than the belt width the material comes off of. The beater design is most tolerant of various particle sizes. For example one could spread sand or wood chips through the same unit. This gives the beater a little more versatility for people who want to spread several products.

**Kinthead:** Turfco designed and developed the first mechanized topdresser in 1961. That original topdresser had a wood hopper and a metal slat conveyor belt. Since then, our product line has evolved to include nine different models of topdressers, everything from a self-propelled topdresser to a 4 cubic yard topdresser/material handler.

Our straight-drop brush type spreaders integrate a patented chevron belt technology with our patented ground drive system. Our dual-spinner type spreader technology allows material placement flexibility.

**Musser:** There are several methods, just like there are different ways that lawn mowers cut grass. Reel blade mowers use a scissors action, and rotary mowers use a flying blade. Each type has its place. Topdressers, too, use different techniques for different purposes.

Why the differences? Well, topdressing is not just a science; it's also an art. When you come right down to it, what you're basically doing is hauling material around in a portable box and applying it to the surface or turf. Sometimes you need precision placement, for example on a golf tee or green. Other times the material is "dragged" after aeration, to fill aerating holes and turf pockets, so precision doesn't

matter; but a higher application rate does. Also, you have to consider the consistency of the material and whether it's wet or dry.

**Clayton:** TY-CROP has been a leading designer and builder of topdressers since 1985. Customers can select from a range of sizes, configurations, and prices to find the products that make the most sense for their facility, tow vehicle, and budget.

### What's your opinion on the advantages and disadvantages of the current technologies?

**Musser:** Okay. Let's do them one at a time.

**Straight Drop Brush Method.** This method gives you a spread pattern about the full width of the box, which means usually 3-6 feet. A metering gate determines how much material is delivered to a conveyor belt. At the rear discharge edge, a brush, roughly 8 inches in diameter, wipes the belt and propels the material to the turf surface. **PROS** - This is the most precise and simplest method for light applications. **CONS** - First, the spread pattern is limited to the width of the box or belt. Second, the wheels have to be underneath the box, otherwise you'd need to double-track, and that's not good for the surface. Since the wheels are underneath it, the

box has to be higher, which gives it a high center of gravity that makes it less stable. Third, it takes more trips to cover the field. Fourth, the high velocity of the topdressing can damage grass blades. Fifth, and finally, since they make them wide to maximize coverage, the wide boxes with their wheel shields are hard to get through doors.

**Dual Spinner Method.** The dual spinner method can use a narrower conveyor belt, usually 18-24 inches. The belt delivers material to the top of two spinning horizontal

disks. The disks, or wheel plates have spoke-like ridges called paddles. The paddles grab the material and throw it 12-15 feet to either side, so that it produces a 30-foot wide spread pattern. **PROS** - The spread pattern covers a lot of ground, so this method requires the fewest trips over the field. **CONS** - First, the quantity and depth are very difficult to get right. It may not matter for spreading cinders and ice melt. But treating turf, it may matter a lot. You can adjust the application rates, or the feed depth of the material delivered to the spinners. But then each of the spinners needs to be repositioned. You usually have to go through a lot of frustrating trial and error until everything is set correctly. Second, when you're trying to apply wet or damp materials with a dual spinner, you have to hope you're lucky enough that the material will flow to the correct spot on the spinning wheel plates, and that it doesn't bridge over the narrow conveyor. Compost especially has a tendency to bridge over the 24-inch wide belt. Third, this method doesn't suit for thick or deep application rates because all of the material must go through a narrow window to reach the dual spinners.

**Wide Spread Beater Method.** This method amounts to a combination of the other two. And it solves other problems neither of those methods handle well. It has a spread pattern wider than the straight drop brush units, though not as wide as the dual spinners. The spread pattern is significantly wider than the box. So even though the tires are outside the box, you don't have to double track in the field to get complete coverage. With wheels outside the box, the box can sit lower, and a low, stable center of gravity is good for loading and hauling.

Like the other types, a metering gate governs material depth. In these units, the material is dropped onto precision angled, spinning paddles or beaters that cast it in

