



Mete-R-Matic LA2 large area topdresser by Turfco.

# Trends in Topdressing

By Holly Gibson

**D**eciding your goal is the first step toward a successful topdressing program. There are as many reasons to topdress as there are topdressing mixes. Determine what your athletic field or golf course needs, and develop a program to meet those needs.

The topdressing mix is a matter of preference. As a rule of thumb, topdress with a mix approximately the same as the soil mix. The corollary to this rule is you can topdress with a different mix if you plan to change the root zone mix.

Athletic field managers tend to lean toward a 3-way mix of sand, peat and organic material. For golf course greens, Jim Snow, National Director of the USGA Green Section recommends following the USGA Green Section, specifications for a sand, soil and fibrous organic greens mix. Finding a source for the mix can be difficult. "The key is to find a good source that is going to be around and stick with it," said Snow.

Particle size for the mix should fall mainly between 0.25 to 0.75 mm. However, the range can be 0.25 to 1 mm. Ten percent or less of the mix should be greater than 0.50 mm. Fine particles can cause clogging, so insist that no more than 10-percent of the mix fall below 0.25 mm. It would be best if there were no fine particles.

A set of sieves will help you make your own particle-size tests on site. Newark Wire Cloth Company (800-221-0392) is one company that sells stainless-steel sieves. A basic sieve kit would include a number 18 (to test 1-mm particles), number 35 (for 0.50-mm), number 60 (for 0.25-mm), number 140 (for 0.10) and a number 10 (for 2-mm bunker sand). Each sieve costs about \$50.

If you find a topdressing mix you are happy with, bottle a quart of it and put it in a safe place. If your supplier ever goes out of business, you can use the mix you saved to show new suppliers what you want from a topdressing mix.



Turf-Topper by Bannerman

Always run a soil test on new batches of topdressing material. This ensures that you are receiving what you ordered. It also makes sure the pH isn't too high. Make a habit of running a soil test on the topdressing material every couple of years, even if you stay with the same supplier. When a supplier switches from one source to another, he probably won't mention it to you. It will be up to you to detect differences in quality.

Concern has been raised about possible connections between topdressing and black layer formation. Snow said superintendents tend to run into black layer problems most often when they apply finer material onto coarser material. This can cause layering, which can allow black layer to develop. For example, if you have older greens that were built with soil instead of sand, you or a previous superintendent may decide to embark on a topdressing program. If you abandon the topdressing program after a year or so and drag in aeration cores, you are applying finer material on top of the sand layer. Many years of on-again, off-again sand topdressing followed by dragging in aeration cores can build layer after layer beneath the turf.

Consistency is the key. If you start a topdressing program to change the soil medium turf will be growing in, keep with it for the 3 to 5 years it will take to establish 3 to 5 inches of sand mix.

Aerate regularly and collect the cores. You can resume dragging in the cores when a soil probe shows that the topdressing program has built up a rooting medium that extends as deep as you plan to aerate. For example, if you plan to aerate 3 inches deep, the new sandy soil should be at least 3-inches deep. Then you can combine aeration and topdressing. This mix will be about the same as the sand-organic mix beneath the turf.

#### Combining aeration and topdressing

Hillcrest Country Club is built on the silty loam native soil of southern Nebraska. The soil provides a good growing environment for fairways and roughs, but it was tough going for the bentgrass greens. About 12 years ago, the superintendent decided to go with a sand topdressing program to change over from the native soil to a sand-base growing environment.

In the first few years, mason's sand was all the course was able to obtain for topdressing. For the most part, this sand worked fine except for the occasional chunks of aggregate material. Current superintendent Ron Ross, CGCS, said they

*Make a habit of running a soil test on the topdressing material every couple of years, even if you stay with the same supplier.*

were able to find a steady source for kiln-dried sieved sand about 8 years ago. Though hauling costs almost as much as the sand, he has used that supplier ever since. "For the extra money, we feel like we are getting the correct sand," Ross said.

Ross uses a Vicon spreader to apply a light topdressing to the greens every 2 weeks from May through November. The coating is as light as a dusting of sugar on a cake. Crews drag in the sand with a piece of indoor-outdoor carpeting.

*continued on page 16*

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Fifth-wheel topdresser by Cushman.

### Topdressers

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Once in May and again in late August, Ross aerifies the greens with conventional core aerators. He uses a Cushman Core Harvester to remove the cores. Then, he uses a Cushman 5-wheel top dresser to apply about a 1/4-inch thick layer of sand to fill the coring holes. He says the high-floatation tires on the top dresser help prevent the holes from compacting shut before the sand fills in. In late fall, Ross does a deep aeration with a Verti-Drain aerator. It penetrates 9-inches deep, taking 1-inch diame-

ter cores. He also collects these cores. Then, he uses a rotary spreader to apply bentgrass seed, which he drags in. Another dragging will follow in a few days if the sand isn't worked into the thatch. The combination aeration and topdressing program at Hillcrest has helped extend the life of the club's older greens, Ross said. Although the situation isn't perfect, Ross said the members are pleased with the greens play. Players at this private club tee up about 40,000 times each year, making a greens renovation project something Ross would like to keep far in the future.

### Moving to the fairways

Several golf courses in the Pacific Northwest are finding the magic that topdressing performs on golf greens also can transform fairways. In the Northwest, superintendents find themselves trying to cope with the twin perils of heavy soil and lots of rainfall. Larry Gilhuly has worked with many golf courses in his role as Western Director for the USDA Green Section. Northwest courses that have gone to a fairway topdressing program have noticed healthier root structures, better soil-oxygen exchange and improved drainage. These positive results came despite a wide range of topdressing techniques. "This program is a significant improvement over an extremely difficult situation," Gilhuly said.

Tom Wolff, golf course superintendent at Sahalee Country Club in Redmond, Wash., was facing just that kind of difficult situation 2 years ago when the members listed drainage as their number one concern. In the winter, it wasn't unusual for player to lose two or three golf balls in the mud and standing water on course fairways and roughs.

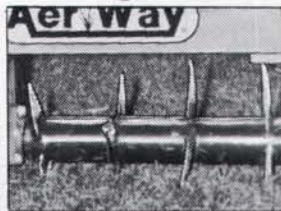
After consulting with soil and turf experts, Wolff determined that a better growing medium was necessary to solve the sogginess. He and Rich Taylor, assistant golf course superintendent developed a 5-year plan, which included an extensive fairway topdressing program.

Taylor was instrumental in implementing the aggressive plan. Crews use a Cushman GA60 to aerate the fairways twice a

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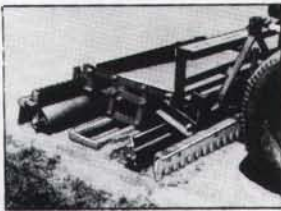
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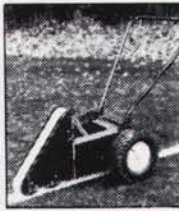
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month from May to the beginning of October. They use either a 4-ton capacity topdresser or a smaller Turfco Mete-R-Matic topdresser to apply a sand mix that matches USGA specifications. The drag in the cores and topdressing material with a tine harrow.

After almost two seasons of topdressings, Wolff said he has built up almost 3 inches of sand mixture. Last winter, when only about 1-1/2 inches were in place, he noticed a big improvement in playability and drainage. He could schedule mowings on fairways he never considered touching after a rain. This winter, he anticipates even better results.

"It has been one of the best things we've done for the golf course," Wolff said.

The program has not been without its challenges. Sand getting into irrigation heads proved a major problem. Wolff found a solution by talking with a fellow superintendent. He had a local company make plate-shaped covers that fit on the heads. Crew

*A fairway topdressing program allows you to take the golf season further into the fall and begin earlier in the spring.*

members protect the sprinklers with these covers before they begin topdressing. After they finish, they should pick up the covers. If they forget, the water will just flip off the covers.

Gilhuly advises those considering a fairway topdressing program to have a large topdresser that will hold a minimum of 3 cubic yards of material. Smaller topdressers will just take too much time to refill.

If you don't already own a topdresser this large, use what you do have on a fairway area that has a reputation for being soggy. About a 10,000-square-foot landing area is a good choice. Follow a topdressing program on this area just as you do on your greens. After a year, invite your greens committee to examine the results. This test area will help you sell a fairway topdressing program and purchase a large topdresser.

A fairway topdressing program can yield pleasing results, but Gilhuly said it is not without compromises. Members need to understand that this is a 3- to 5-year program. Once begun, it needs to continue. Crews will be applying about 1/8- to 1/4-inch of sand to the fairways every 3 to 5 weeks. Players will sometimes complain that the sand scratched their club faces. From an agronomic standpoint, the sand can cause localized dry spots. If you are willing to live with these inconveniences, the program ultimately can improve the playing quality on fairways. "It allows you to take the golf season further into the fall and begin earlier in the spring," said Gilhuly.

**Athletic fields**

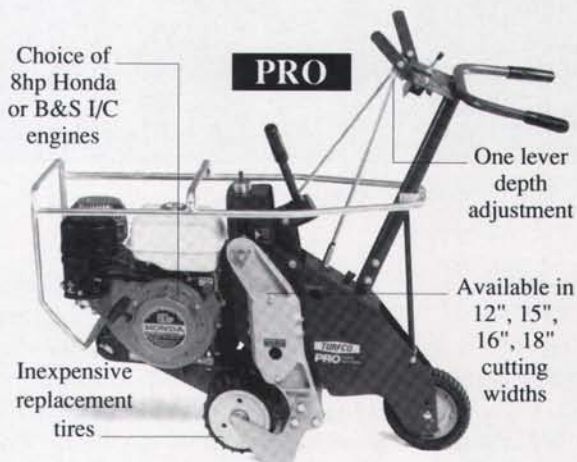
Athletic fields contain their own set of challenges. Despite months of pounding from eager cleats, the football field is expected to look sharp for late fall playoff games.

The Scarborough Board of Education faced this problem on their football field. In this Toronto, Canada, suburb, football is popular. Teams constantly churn up the turf in center of the playing field, causing an uneven turf surface that presented an injury risk.

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Spreader-type topdresser by Hahn.

### Topdressers

*continued from page 17*

The sports turf manager decided to embark on a program of frequent topdressing. He used a Bannerman Turf Topper to apply 1/4 to 5/8 an inch of a sand-peat-organic mix. The machine spread the material in a

58-inch wide swathe. After topdressing, he used a drag mat to work the material down to the thatch. Five times a year he also overseeded the turf.

"They've learned to fill and restore the surface on a regular basis instead of once a year," said George Bannerman, Gordon

Bannerman Ltd., Rexdale, Ontario, Canada.

A good-quality topdressing mix is just as important to sports fields as it is to golf course greens. Look for a reliable source for your topdressing mix, and be sure to have a soil lab test it periodically. If you are having trouble locating a mix supplier, you can blend your own mix.

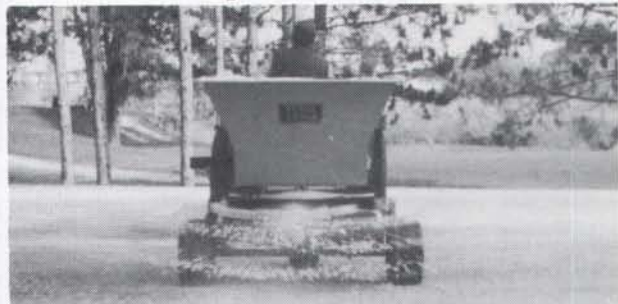
Dakota Blender, Inc., Grand Fork, N.D., is one company that makes a small soil blender. The Dakota Blender is a tow-behind machine that operates off a utility vehicle PTO. You put sand in one hopper and peat in another. By setting the meter, you determine the blend of sand and organic material. A spreader attachment is available to apply the topdressing mix in a 17-foot wide swathe.

### Selecting a topdresser

The type of topdresser you choose will depend on its application. There are two main types of topdressers—spreader-type and conventional topdressers. Spreader types apply material by feeding it down from hopper through a chute to rotating disk or impeller. The disk or impeller spreads the material in a wide swathe out the rear of the machine. These units are

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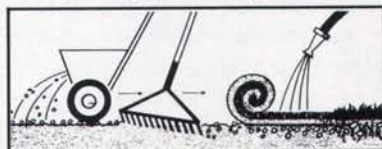
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most frequently used to spread granular fertilizer.

A spreader-type topdresser is best for making light sand applications quickly with a wide swathe. It can be easier to justify purchasing a spreader-type unit because you can also use it to apply fertilizer or deicing agents.

Conventional-style topdressers use a conveyor belt to carry topdressing from the hopper through the metering gate to the brush. A high-speed, rotating brush pushes the material down between the turf blades. The metering gate controls the flow so you can apply a sand layer from extremely fine to 1/4-inch thick. More than 1/4-inch at a time is not generally recommended because it can smother the turf.

These machines generally apply topdressing mixes in a narrower swathe than spreader types. However, the metering gate allows you to control the amount of sand the machine applies across the entire swathe width. Topdressers are primarily used for topdressing, but you can also use them to spread freshly mown grass clippings. Which type of machine you select will depend on your needs and budget. If you can only afford one machine, a conventional-style topdresser can apply both a thin coat of sand for frequent topdressings and a thicker layer for after core aeration. It would take multiple passes with a spreader to apply enough sand mix to fill aeration holes.

Another rule of thumb is to buy the biggest machine that is appropriate for your site. This is true because labor costs are so high. Scott Kaercher of Turfco Mfg. Inc. said it would take three people 8 hours each to hand-load a small topdresser and topdress 18 greens. Using a larger topdresser that one person could load with a front-end loader would take only 6 man-hours to topdress 18 greens.

Know how much topdressing material you will need to use over the course of a season. To determine the number of cubic yards, Kaercher suggests multiplying the number of square feet to topdress by the topdressing depth you need. Multiply this total by 0.0031. The result is the number of cubic yards of topdressing material.

Large areas, such as fairways, will require a large machine to move the topdressing material efficiently. As you move larger quantities, weight distribution becomes a factor. Machines primarily intended to move fertilizer will be carrying much more weight with sand. Sand weights about twice what fertilizer weighs. If you will be navi-



Model 23 topdresser by Olathe Mfg.

gating slopes, consider the machine's stability. Ask the manufacturer or distributor about the maximum payload.

If the course has much undulating turf, a good suspension system is important. You want the machine and material weight spread out as much as possible so the psi

ratings per tire are as low as possible. High flotation tires also help spread the weight over the tire surface.

Once you have evaluated your site needs and compared topdressers, the choice should come down to just a couple machines. Now, it is a matter of choice.

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