

# TOPDRESSERS:



## IMPROVING THE ODDS FOR SELECTION AND APPLICATION SUCCESS

*By Matthew Trulio*



Increased recognition of topdressing benefits has spawned a host of equipment options.

**Y**ou would be hard-pressed to find an informed sports turf professional or golf course superintendent today who doesn't realize the value—both agronomic and aesthetic—of topdressing his field or course religiously. What started as a cultural practice limited to golf greens has moved to fairways, athletic fields, and other large turf areas. Greater acceptance has translated to improvements in topdressing technique and technology, and spawned a host of equipment choices.

"We started building topdressers specifically for athletic fields about 10 years ago," recalls George Bannerman of Gordon Bannerman Limited, "and people were telling us we were crazy to get into that market. Turf managers were saying they really wanted a sports field topdressing unit, but hardly anyone was topdressing sports fields."

### Basic Benefits

Topdressing, applying material such as sand or soil over the "top" of the turf—and ensuring it gets to the soil surface—has long made sense on golf course greens from appearance and playability standpoints. The applied material smooths uneven surfaces. However, from a turf management point of view, benefits of the practice go far beyond aesthetics. Topdressing is a powerful weapon for thatch control.

"Topdressing helps control thatch development," explains Dr. Jim Murphy of Rutgers University's Extension and Crop Science Department. "A lot of people contend that by adding soil or sand to the turf area in question, you increase its microorganism content, allowing the microbes to break down dead or dying matter. That's true to a certain extent, but the most important aspect of topdressing is that it changes the physical nature of the thatch layer. Instead of consisting of exclusively organic matter, it becomes a mix of organic matter and soil—you make the environment better for degradation [of thatch] to take place. And in changing the physical nature of the thatch layer, you change the moisture, heating, and cooling aspects of it. The fluctuations of these aspects aren't nearly as dramatic when you topdress."

The nutrient status of the thatch layer, Murphy contends, is also improved through topdressing. Often roots growing in this area have "little contact with the growing media."

## "THE MOST IMPORTANT ASPECT OF TOPDRESSING IS THAT IT CHANGES THE PHYSICAL NATURE OF THE THATCH LAYER."

"The thatch layer is a very porous area," says Murphy. "By adding topdressing and making sure it gets beyond the blades of grass, you're getting soil in contact with whatever roots may be growing in this area, and getting nutrients to them."

### Tips On Technique

Topdressing has its own set of application considerations including material selection, application rate and frequency, and "working in the material." While these will vary widely from situation to situ-

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## Topdressers

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ation, there are some constants within these fundamental aspects of the practice.

**Material Selection.** Before you begin topdressing, you have to determine what you're going to topdress with. These materials can range from pure, USGA-specification sand, to soil, to organic material, to various combinations of these and more. Costs vary from material to material, from region to region. The choice, says Murphy, depends on the type of problem you're trying to address.

"But unless you're trying to physically change your soil, I am a firm believer in maintaining a consistent soil profile—matching your topdressing to the soil below it," he asserts.

"Get in touch with your local agronomist or extension agent," suggests George Kinkead of Turfco, Inc. "They're usually very willing to come out to your field and they can talk to you about what kind of material to put down. Remember that a topdresser is just one part of the process. The material itself has a cost, and that has to be factored in to the whole equation."

**Application Rate And Frequency.** These two elements of topdressing are so closely connected that it's next to impossible to mention one without discussing the other. Just like in mowing, where the general rule of thumb is never to remove more than one-third of the grass blade per cutting, you never want to "go overboard" in a single topdressing application. While opinions on topdressing rates vary, the rule of a maximum of 1/4 inch of material per application seems the most generally accepted.

"Dumping, for example, one inch of material at one time on the turf is worse for it than not topdressing at all," Bannerman asserts.

Murphy agrees. Instead, he says, frequent applications with less material are ideal.

"Try to put down topdressing as frequently as you can, so you don't develop layers and stratification," he suggests. "You don't want to bury a thatch layer. That would inhibit the flow of air and water through the soil profile by creating an interface. Topdressing applications that create layering can also affect the rooting of the turf."

"The rate at which you apply material should match the rate of development of thatch in the turf," he continues. "If you're fertilizing and watering a lot—practices that, however necessary, can promote thatch—then you probably should be topdressing frequently. Topdressing frequency is very much controlled by your other turf management practices. It's also affected quite a bit by the type of grass you're maintaining. Creeping bentgrass, for example, tends to form thatch faster than annual bluegrass."

**Working In Or Grooming.** If topdressing merely sits atop the turf and never makes it to the soil below, the application may be an exercise in futility. Yet topdressing will seldom "get down" on its own—it needs to be worked in or "groomed." This is particularly crucial in a sports turf situation, where the turf tends to be taller—hence farther away from the soil surface (increasing the distance that the topdressing must travel). To help the material make its way down, topdresser manufacturers have introduced brushes and tilling instruments.

"You definitely need some kind of spreading or grooming device to move the topdressing through the turf," says Murphy. "Everyone seems to have a different way of doing it, but it's especially important if you're applying reasonably

heavy rates of topdressing. You have to work it in—irrigation alone won't do it.

"Some people aerify, then topdress, so that the topdressing can fall into the aeration holes," he adds. "Those who do, swear by it, although there are arguments on both sides and no definitive research that I know of has been done on the subject."

### Topdresser Selection: Arm Yourself With Questions

There is enough topdresser product information, readily available through manufacturers, to fill the next few issues of this magazine—from shredding, material conveyance, and application rate control, to the rotational direction of brushes, hopper capacity, screens, ease of loading, and turf compaction characteristics and solutions. Naturally, manufacturers don't concur on all design and construction points. What they do agree on, however, is that as a buyer, you must ask many questions before making a decision.

Perhaps the first of these is: What size of an area to I have to cover? A topdresser targeted for golf greens is going to be a lot different than one designed for sports fields.

"All machines are not created equal," says Kinkead. "Most have their place, but not in all applications."

Typically, topdressers are not self-propelled. They're towed or mounted. You need to know what type and size of machine—tractor or utility vehicle—is required to use the topdresser you're considering.

That's just the beginning, says Kinkead. "As with any piece of equipment, sooner or later you'll need parts," he explains. "You need to know what are the most common parts that will wear out, how quickly you can get them, and how much they will cost. That means knowing not only *who* is supporting the product, but what kind of warranty support it has."

Kinkead adds that product demonstrations, with the type of topdressing material you'll be using, moist or dry, are a must. "You don't want a system that can't handle moist material," he notes. "That's why you should have product demonstrations done with the material you use, as opposed to material supplied by the manufacturer."

"Basically, there are four delivery systems for a topdresser or spreader. First, there's the hand and shovel—the oldest

method in the book. Two, you have spinning spreaders, like those from Vicon, which are used mostly to apply fertilizer. And then you have the drop spreaders, which pour out material by gravity. Fourth, are those with the metered belt-to-brush design, which are generally considered to have the highest application accuracy."

Manufacturers should be able to provide you with names of people in your area who are using their products. While it's not terribly likely that a manufacturer would give you the name of an unhappy, dissatisfied customer, even satisfied end-users tend to be candid when discussing products.

"You wouldn't hire a person without checking references," Kinkead concludes. "You should approach topdressers, and all equipment purchases, in the same way." □

### Topdresser Product Manufacturers

#### Bannerman

Rexdale, Ontario, Canada  
(416) 247-7875

#### Cushman

Lincoln, NE  
(800) 228-4444

#### Dakota Blenders

Grand Forks, ND  
(701) 746-4300

#### Millereek Manufacturing Co.

Bird-in-Hand, PA  
(717) 656-3050

#### Partac Peat Corp.

Great Meadows, NJ  
(800) 247-BEAM

#### Terracare Products Co., Inc.

Pardeeville, WI  
(608) 429-3402

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(612) 785-1000

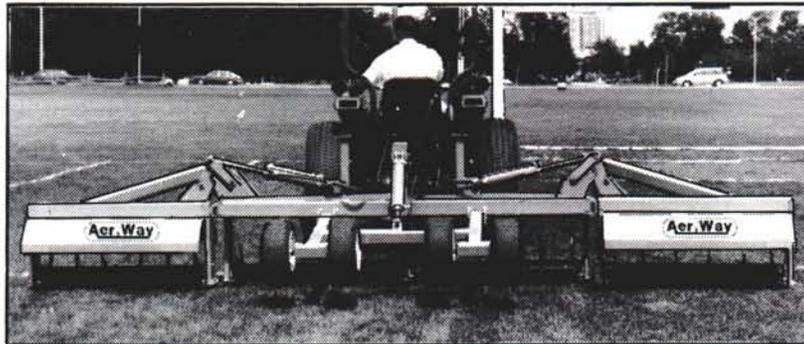
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