

Keeping it green

All playing fields can benefit from overseeding, which protects the dormant bermudagrass and enhances winter color.

by BILL KNOOP, PH. D./
Technical Editor

Bermudagrass is a great grass for the South. It is used for everything from home lawns to athletic fields. The only problem that some find with bermudagrass, and many do not consider it a problem, is that it is brown and dormant during the winter. Most of us would rather see green turf all year.

In the South, outdoor sports are played nearly all year. Play does not stop just because a bermudagrass field goes dormant. But if play continued, the field would soon be reduced to bare soil. All athletic fields, from putting greens to backyards that host the neighborhood football, benefit from overseeding. It's not just a question of looking

green, overseeding protects the dormant bermudagrass. Some spring sports such as baseball may never be played on a green field unless the field is overseeded. Any field used for late fall, winter or early spring sports should be considered for overseeding each year. A good green turf is a safer field for play than a bare field. An actively growing, overseeded field can tolerate a lot more wear and tear than a dormant field can.

Perennial ryegrasses, rough bluegrass (*Poa trivialis*), and bentgrass are often used for overseeding. Sometimes even one of the fine fescues such as red fescue may be used.

Perennial ryegrass superior

Most research projects have focused on the use of

cont. on page OS4



Slit seeders: a blade cuts through the bermudagrass turf and seed is placed at the soil surface.

Choose the right variety

To obtain the best results when overseeding, you need to choose the appropriate species and variety for your particular needs.

Over the past 20 years, perennial ryegrass has been the most popular species for overseeding warm-season turfgrasses, and for several reasons.

These include:

- quick establishment;
- attractive, dark green color;
- good wear tolerance.

Possible transition trade-off

Some of the new, prostrate growing, heat tolerant varieties, such as Top Hat, produce exceptional turf quality, particularly under close mowing regimes. There are, however, trade-offs with some of these varieties in that they may not transition out as well, especially in more northern areas. Other varieties, such as Derby Supreme, are more erect-growing and are easier to mow out in the spring.

Poa trivialis is a species that is becoming more popular for overseeding. It is used alone, primarily on golf greens, and in mixtures with perennial ryegrass for fairways and other turf areas.

Poa trivialis, unlike perennial ryegrass, can be cut very close as a seedling. The smaller seeds of *Poa trivialis* also mean that less aggressive renovation of your bermudagrass is required prior to overseeding. Another benefit of *Poa trivialis* is that it transitions quite easily. *Poa trivialis* is not the best grass to use for overseeding high traffic area, because it does not have the wear tolerance of perennial ryegrass.

Chewings fescue is another grass used for overseeding, almost always in a mixture with other species.

Chewings fescue varieties, such as Enjoy, add density to an overseeded turf. They also transition well. □

—Steve Johnson, senior research scientist, International Seeds, Inc.

cont. from page OS1

perennial ryegrasses for overseeding and, as a result, one or more of the perennial ryegrasses are commonly used.

Perennial ryegrasses produce a superior overseeding than the less expensive annual ryegrass.

Quick germination the key

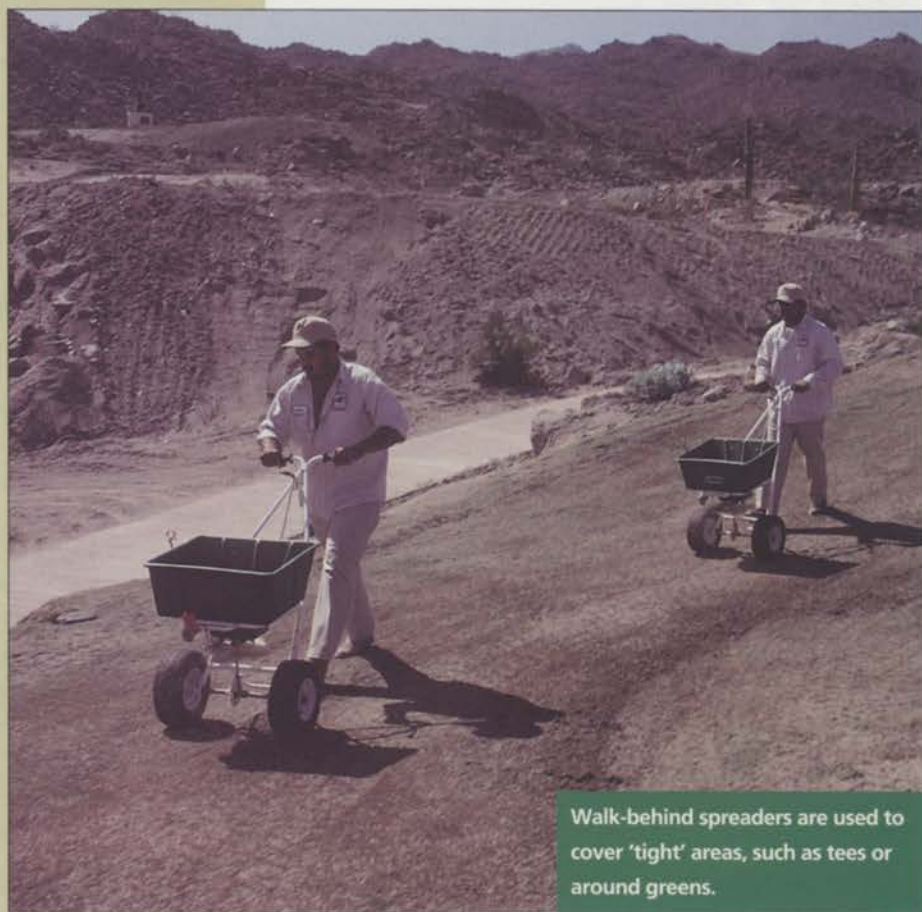
The ideal turfgrass used for overseeding germinates quickly, grows at reasonably low temperatures and then dies when the weather gets warm enough for bermuda to begin growing again.

Since the newly overseeded turf must be watered fairly frequently for good seed germination, seedling diseases may develop in warm weather. Consider using a fungicide at the time

The heavier the overseeding rate, the greener the turf, but the harder it may be to get rid of in the spring. The final seeding rate is usually based on experience.

of overseeding, or the use of seed pretreated with the proper fungicide.

The final choice of a turfgrass or of turfgrasses for overseeding is mostly based



Walk-behind spreaders are used to cover 'tight' areas, such as tees or around greens.

WINTER OVERSEEDING

| GRASS SPECIES | GREENS | TEES | FAIRWAY/ GROUNDS | ROUGHES | OUT-of-PLAY AREAS |
|--------------------|----------|----------|---------------------|----------|----------------------|
| Perennial ryegrass | 50 [250] | 40 [200] | 30 [150] | 20 [100] | 10 [50] |
| Chewings fescue | 40 [200] | 30 [150] | 30 [150] | 20 [100] | 10 [50] |
| Creeping bentgrass | 4 [20] | 4 [20] | 4 [20] | 2 [10] | 2 [10] |
| Redtop | 3 [15] | 3 [15] | 3 [15] | 2 [10] | 2 [10] |

When mixing two species with different recommended seeding rates, always choose the higher of the two seeding rates. Then, calculate the weight of each component by multiplying the seeding rate by the percentage (as a decimal) of each component. For example, if a recommendation calls for a 90:10 mix of tall fescue and Kentucky bluegrass for roughs, use the overall seeding rate of 8 lb. per 1000 sq. ft (40 grams per square meter). Next, multiply 8 lb. x 0.9=7.2 lb. of tall fescue (36 grams) and 8 lb. x 0.1 = 0.8 lb. of Kentucky bluegrass 94 grams.

Note: all seeding rates are in lbs. per 1000 sq. ft.

[number in brackets is seeding rate in grams per square meter]

on experience. The LANDSCAPE MANAGEMENT Pocket Seed Guide, published each July, contains the National Turfgrass Evaluation Program variety test results. Review these results and then select the turfgrass or blends of turfgrasses that tend to do the best. Most often, mixtures of several varieties are used.

Overseeding rates

When selecting an overseeding application rate, there are several factors to consider. There are not any absolutely ideal overseeding rates. A lot depends on the area's use. Turf that's heavily used during the winter, such as putting greens or athletic fields, will need heavier seeding rates than areas just requiring winter color. The easy answer to the question of rate is not to use any more than necessary.

Generally the higher the application rate, regardless of turfgrass variety, the harder it

may be to get rid of the following spring. The goal is to establish enough cool-season turfgrass plants to get the job done, but not so many that those plants will severely compete with the bermudagrass stand as the bermudagrass comes out of dormancy in the spring.

The larger the seed, the higher the application rates. If a perennial ryegrass or a blend of perennial ryegrasses are used, the rate used to overseed a putting green or a tee may be between 15-20 pounds per 1,000 sq. ft. The minimum rate for large areas such as athletic fields or golf

course fairways is 200 pounds per acre. More often than not, the rate may be two or three times the minimum. Home lawns, lawns around businesses and apartments usually fall into the 5-10 pounds per 1,000 sq. ft. range.

Smaller seeded turfgrasses such as that of *Poa trivialis* or bentgrass are seeded at much lower rates. The seeding rate for *Poa trivialis* is usually $\frac{1}{2}$ or less that of perennial ryegrass, and the rate for bentgrass is usually in the one to three pound per 1,000 sq. ft. range. It is not unusual for mixtures of various cool-season turfgrasses to be used. Which grasses are included in a mixture and how much of each are in these mixtures is usually based upon the experience of the user.

The heavier the overseeding rate, the greener the turf, but the harder it may be to get rid of in the spring. The final seeding rate is usually based on experience. The



Bermudagrass is close-mowed prior to overseeding.

Early/late fertility program works for Tucson manager

If there's one thing overseeded rye grass needs in Tucson, Arizona, it's lots of fertilizer. So says Murray Dew, owner of Catalina Landscape Maintenance.

Dew overseeds about 45 commercial properties every winter, including malls and apartment complexes, and the turf he produces is exceptionally thick and green. There's only one way to keep it that way: fertilize early and late.

"We fertilize every four to six weeks during the growing season," Dew says, and he starts soon after germination.



If he plants a plot early (in Tucson, that's in October) he begins to broadcast granular fertilizer right after the first mowing. If he plants late, i.e., after mid-November, he won't fertilize until after the second mowing.

"If we have an account that has a lot of shade, we overseed them early," he says, because those October plantings can occur during hot weather.

Dew likes Dis-Per-Sol with iron. He starts adding iron at about the third cutting, to give the turf a deep green color, and keep it there.

Catalina Landscape Maintenance employee Robert Chapell at an apartment complex overseeded by Murray Dew's crews. Dew plants 20 to 25 pounds of seed per 1,000 square feet.

cont. on page OS10



Harrowing bermudagrass around a golf bunker.

goal should be to use the lowest rate possible and still get the desired results.

Application timing

It is nearly impossible to pick the best time to plant an overseeding. If it's planted too early the chance of a disease may increase and competition from bermudagrass may be a problem. Planting too late could result in a complete failure because of low temperatures.

While the turfgrasses used for overseeding are cool-season turfgrass and are capable of withstanding low temperatures, they must grow to some stage of maturity before the cool temperatures arrive. While there are no guarantees, one rule of thumb to

follow is to overseed about two months before the average date of the first frost in your area. We certainly can't predict the weather two months in advance, but six to eight weeks of favorable weather for cool-season turfgrasses and unfavorable for warm-season turfgrass will allow the overseeding to mature enough to survive freezing temperatures.

No two years are alike, but your experience and the experience of others in your area will help to pin down the best time to overseed.

Preparation for overseeding

The basic goal is to get the cool-season seed down to the soil surface. As with all seedings, it is desirable to get the

Early/late *cont. from page O58*

Dew uses a couple of techniques to determine whether he needs to add fertilizer. One is to examine the grass to see if blades are thin; the other is to ask his crews to tell him if the grass is mowing too easily. Either test will alert him before the turf becomes weak.

It takes two weeks for regular fertilizer to kick in, Dew says, so he likes to keep well ahead of the curve. Yellow streaks can appear in plots—from missed broadcast applications, soil conditions or poor water penetration—and he hates that.

So he fights yellow streaks with foliar applications of Deep Green. He adds urea at one pound per 100 gallons to the foliar spray, and gets great results long before a granular fertilizer would take hold.

"It greens it up within 48 hours," he says.

Tucson is a difficult place to keep rye in good condition, says Dew, who had a landscaping business in Phoenix before he came here. Winter weather can range from cold and rainy to hot and dry. The results can be poor turf, and that is exactly what clients pay a lot of money to avoid through overseeding.

"A lot of these are high-end rental units," Dew points out, and overseeded turf has to last up to six months.

Another tip he uses to keep good rye appearance is to seed "a little heavier than most." He plants 20 to 25 pounds
cont. on page O512

seed in direct contact with soil. Any seed that germinates and is not able to extend its root into the soil will not live long. Some bermudagrasses such as the hybrids used for golf course greens tend to form a very dense surface. It might be hard to get seed down to the soil. A light thinning with a vertical mower or dethatcher might help.

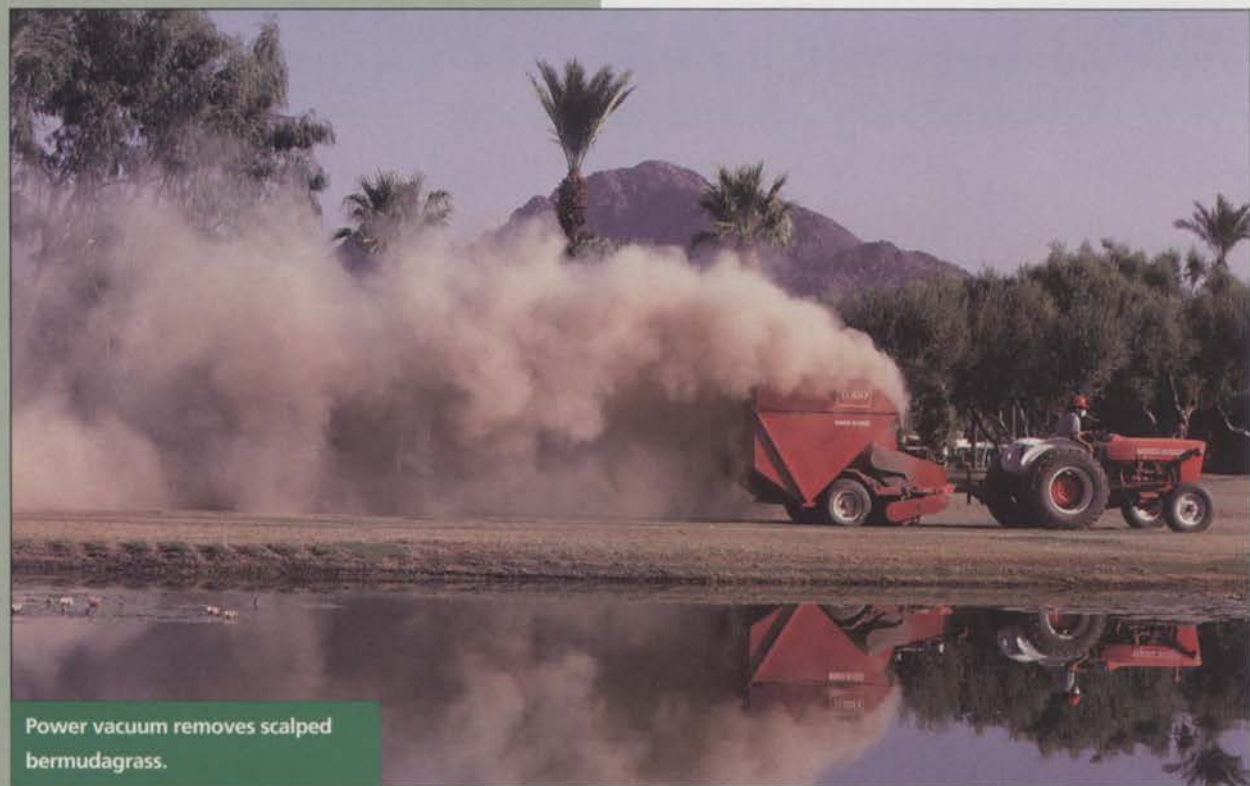
Scalping has been a technique used to reduce the density of bermudagrass greens. There is a fair amount of evidence that at least in some parts of the south this has contributed to the over-winter of bermudagrass. All in all, vertical mowing or dethatching seems to be the best way to prepare putting greens or tees for overseeding.

Bermudagrass, such as common, that tend to be more open in their growth

The worst enemy of an overseeded bermudagrass green is a long, cold, wet spring. Its best friend is an early, hot summer.

form may not need any special preparation before overseeding.

All types of seeders have been used to overseed. Rotary spreaders cover a large area fairly quickly but when it's desirable to have a straight edge between the seeded and the unseeded areas, drop spreaders are used. Slit seeders which use a blade to cut through the bermudagrass turf so the seed is placed at



Power vacuum removes scalped bermudagrass.

Early/late cont. from page OS8

of seed per 1,000 square feet. He has to charge a little more for the extra seed, but his clients like the results.

Irrigation is a constant worry too, Dew says. That's particularly true around apartment complexes that have contrasting plots of shaded and open turf.

"It's a tough call there," he says of those jigsaw plots of turf. His crews program the irrigation controllers at most properties, and they are taught to give sunny plots double the water that shady plots receive.

That amounts to four or five irrigations a week on sunny turf. Because Dew relies on great looking turf to keep his business up in a highly competitive field, he will actually irrigate to suit the cool plots and then hand-water the hot plots to bring them up to where they need to be.

"We've got to constantly check it after we mow," says Dew, who employs about 50 people. His crews are alert to weather changes, because Tucson can go from 40 to 85 degrees in a day's time. That can dry out rye grass very quickly.

Another problem that can develop is that if an area is oversprinkled, the extra water will leach fertilizer out of the root zone. This can destroy Dew's first principle for good overseeded turf, so he is very conscious of how water scheduling is affecting his fertility program. □

—Don Dale

the soil surface have been found to be very effective. Another effective overseeder is a machine that uses a series of air streams to direct the seed down into the turf. The speed of the air stream drives the seed down to the soil surface. This type of machine is shielded so that a straight line is produced and because of its design, overseeding can even be accomplished during a rain storm if necessary. There are also machines that can apply dry seed and mulch at the same time. Their small size makes them ideal for seeding home lawns.

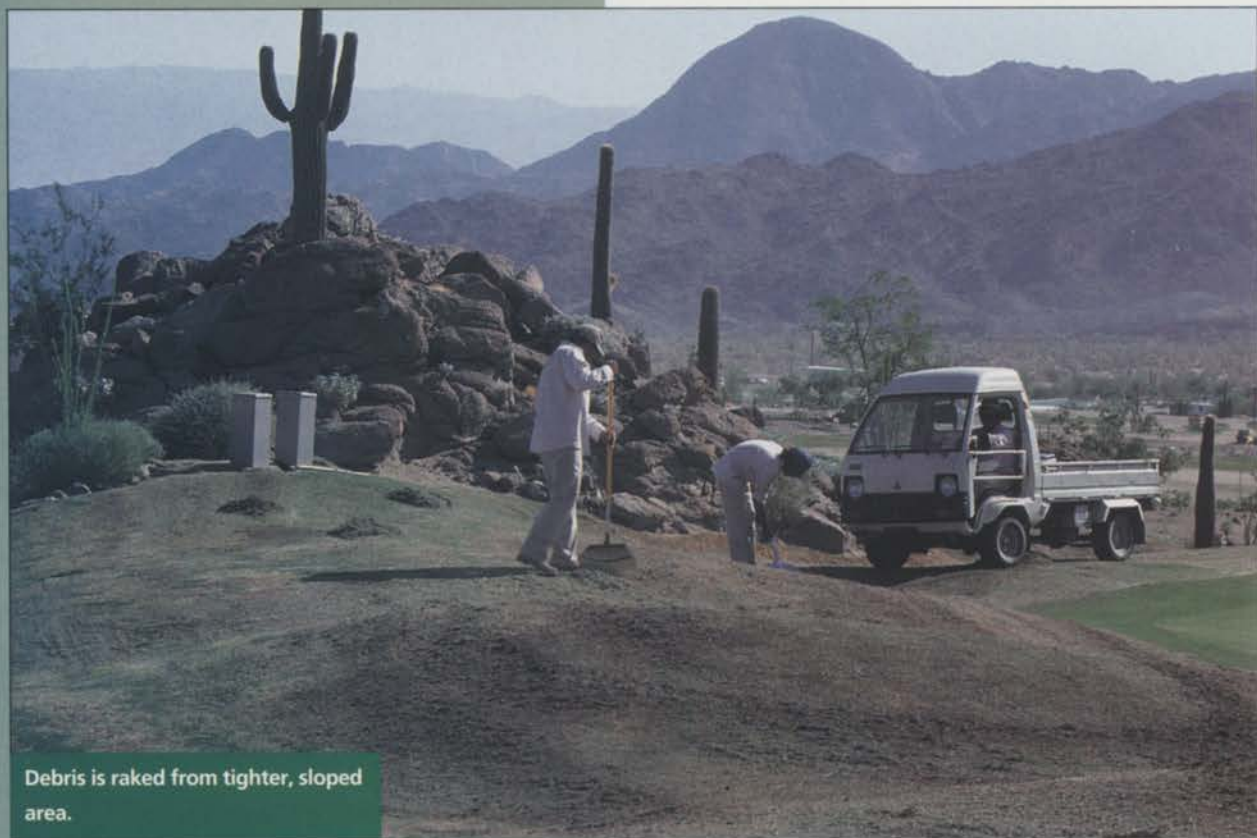
After overseeding, a good watering may help move any seed that's caught up on the grass plant down to the soil. Another post overseeding practice is that of topdressing.

After overseeding, a good watering may help to move any seed that is caught up on the grass plant down to the soil.

This is especially helpful if there's any kind of a thatch layer. It's hard for a seed to germinate and grow in thatch. Topdressing will help to provide the seed-with-soil contact.

Post seeding care

The newly overseeded turf must be watered just like



Debris is raked from tighter, sloped area.

any new seeding. The seed must be kept moist but not saturated. As the new seed germinates and begins to grow, the watering frequency is reduced. Mowing begins as the new grass reaches what will be the normal height of cut. Ideally, traffic should be kept off the overseeding until it is necessary to begin mowing. Keep heavy traffic off the overseeding until the new plants are established, perhaps after two or three mowings. Light applications of a soluble nitrogen fertilizer may begin after the overseeding is two or three weeks old.

Transition back to bermudagrass

The best transition in the spring from a cool-season, overseeded playing surface back to bermudagrass occurs when the overseeding slowly fades out as the bermuda begins to green up. Perhaps an even better transition would occur if the overseeding would die one day and the bermuda would green up the next day. It doesn't work that way.

As the warm weather begins to return to the south in early spring, the overseeded grasses begin to grow fairly rapidly. By the time it gets warm enough for bermuda to begin to grow, the overseeding is usually growing at its best. If it doesn't get hot enough quickly enough the overseeding may offer the bermudagrass some very stiff competition. When the soil temperatures get to around the mid 60 degree F range, bermuda begins to grow. The bermuda plant has been liv-



Broadcast seeders cover large areas.

IS YOUR BUSINESS SPREADING?



No more wheelbarrows! Now you can apply topdressing to lawns or mulch with ease and efficiency.

Express Blower

- Blows mulch and compost with a range of 30 to 60 cubic yards per hour
- 300 feet of on-board hose length; 700 feet maximum capability
- Remote control operating system for "on demand" adjustments in flow rate
- Features automatic feed & dust suppression systems

Rexius
800-285-7227

ing on food reserves that it stored up the previous fall. It must re-establish its leaf system before these food reserves run out. The presence of vigorous overseeding tends to inhibit bermuda growth.

At the first signs of bermuda green up it has proven to be desirable to take some form of action to reduce any possible competition from the overseeding. The action may be chemical or it may be mechanical.

There are chemicals that can kill the overseeding without harming the dormant bermuda if they are properly applied. There are also chemicals that can stop the overseeding from growing without killing it. The two most popular mechanical methods involve very low mowing and the use of a fairly vigorous vertical mowing program.

When it is time for the bermuda to renew its growth, it has been proven that some action that harms the overseeding must be taken.

The worst enemy of an overseeded bermudagrass green is a long, cold, wet spring. Its best friend is an early, hot summer. **LM**

*Overseeding photos by
Larry Kassell.*

**THIS OVERSEEDING SPECIAL
HAS BEEN SPONSORED BY:**

Lofts Seed

P.O. Box 26223
Winston-Salem, NC 27114-6223

2325 S. Stratford Rd.
Winston Salem, NC 27103
(910) 659-5037

Pickseed West

P.O. Box 888
Tangent, OR 97389
(503) 926-8891

Greens & tees: some specifics

Uniform application of seed across the seedbed is necessary to provide an attractive appearance. This is especially important on golf greens to insure a good putting surface.

—Apply seed when the area is dry and windspeed is less than 5 mph, to prevent the tracking of seed.

—Apply half the seed while moving in one direction, and the other half while moving at right angles to the first pass.

—Dew removal can be hastened by poling or dragging a hose across the green.

—Spiking of greens in several directions just prior to seeding enhances seed-to-soil contact.

However, care must be taken to prevent seed from concentrating in the holes, which would cause a speckled appearance.

Make sure that spreaders are accurately calibrated to deliver the desired amount of seed.

Some managers pre-weigh the seed to be applied to a known area, such as a putting green, and slowly meter it out over the area.

This requires that numerous passes be made over the area to insure uniform coverage. Clearly define the margins of the overseeded area by using a drop spreader. A drop or centrifugal spreader can be used to apply the remaining seed within the margins. □

—From Turf Seed Inc.'s *Winter Overseeding Guide*/ North Carolina State University.

Turf Merchants

33390 Tangent Loop
Tangent, OR 97389
(800) 421-1735
(541) 926-8649

Turf Seed

P.O. Box 250
Hubbard, OR 97032
(503) 651-2130



Ideal Tool for Overseeding!

- High work outputs.
- Simple to set & operate
- Low hp tractor requirements
- Inexpensive to purchase & cost effective.
- No expensive mechanical wearing parts.

The LELY Thatcher is the ideal tool for overseeding and grass maintenance. The flexible spring tines vibrate their way through the grass removing moss and dead material allowing air, nutrients and water through to the roots as well as assisting drainage. A typical work output of 7 acres/hour can be achieved with the 10' model @ 7 mph.

LELY Thatchers consists of a lightweight frame with four rows of staggered, 7 mm tines which can be adjusted to nine positions without the use of tools. They are available in four sizes: 7.5' and 10' models consist of a single rigid frame, and the 15' and 20' models consist of two frames that fold up vertically to a narrow 7.5' transportation width.

THE LELY CORPORATION

P.O. Box 1060, Wilson, NC 27894-1060
Ph: (919) 291-7050 Fax: (919) 291-6183

LELY PACIFIC

P.O. Box 961, Albany, OR 97321
Ph: (503) 926-7753 Fax: (503) 967-1236

LELY SOUTHWEST

P.O. Box 1026, Temple TX 76501
Ph: (817) 938-2564 Fax: (817) 938-7204

Circle 119