

September/October 1988

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## PRESIDENT'S MESSAGE

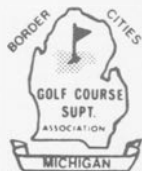
With the hot and dry months of June and July behind us; hot and wet month of August behind; we can look forward to October and November when we will be picking up leaves and having another successful Golf Day - October 4.

In August we had one of the most successful picnics that I can remember. Thanks to the donation from Ernie Fuller the Association was able to bring in the character artist and the balloon magician. I know the kids enjoyed them very much. Thank you, Ernie.

Also a big thank you to the picnic chairman Ken DeBusscher and his wife, Pam. Thanks also to Ed Heinemam and his wife Bobbie, Jay DelCamp and his wife, Mary Jane. A special thank you to Jim McGuire for the prizes and the tough golf tournament.

Last spring Clem Wolfrom was asked by the new Evans Scholar House in East Lansing to get donations and supervise the landscaping of the grounds. Clem spent a lot of time on this project by getting the irrigation donated and all the plant materials and labor. September 15, two days before the grand opening, Clem and several other superintendents went to Lansing and put in the sod and the finishing touches. Many thanks to Clem for his hard work.

Charlie Gaige



### "A PATCH OF GREEN"

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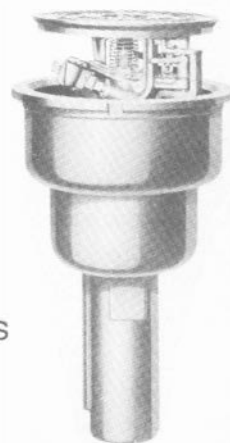
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Richard L. Parish  
Agricultural Engineering Department  
Louisiana State University Agricultural Center  
Baton Rouge, Louisiana

## Introduction

As professional lawn applicators, you want to do a good job for clients. You spend a lot of money buying fertilizers, seed and pesticides. The only way your clients will get their money's worth out of those products is for you to apply them correctly. It doesn't make any difference how much money you spend to buy good products - if you don't apply the products uniformly and at the proper rate, the customer will not see satisfactory results.

Many of you use liquid spray systems for your application, but for most of you, granular application is used for at least some of the materials you apply. You need to know some of the fundamentals of granular application if you are to use your spreaders correctly and get the best possible results.

## Drop versus Broadcast Spreaders

There are two basic types of turf spreaders, drop spreaders and broadcast spreaders. Drop spreaders have a full-width agitator and drop material uniformly out of a row of small ports across the hopper bottom. A good example is the Gandy Turf Tender spreader. Most broadcast spreaders use the rotary principle. These spreaders generally use a spinning impeller to throw material across a broad pattern. Examples include the professional rotaries sold by Scott ProTurf and Lesco. There are also broadcast spreaders which use an oscillating tube to broadcast materials. These are used on some larger turf areas. The Vicon spreader is an example of this type.

Both general types of spreaders have advantages and disadvantages. Both have a place in professional turf application. The primary advantages of drop spreaders are as follows:

- Uniform, consistent pattern with the better models
- Precise demarcation at the edges of the pattern (useful for trimming around driveways, flower beds, etc.)
- Less chance of drift

The primary advantages of rotary spreaders are as follows:

- Wide swath; fast application
- Feathering at the edges of the pattern make the patterns more forgiving of operator errors
- Lower push effort due to lack of full-length agitator
- Well adapted to use of corrosion-resistant materials (the few ports on rotaries allow precision to be maintained in plastic, while multiple ports on drop

spreaders make it difficult to get precision in plastic)  
-Generally better ground clearance (less plugging of ports in wet turf)

- Generally hold calibration better than drop spreaders (less delicate rate mechanisms)

Although rotary spreaders are far more common in lawn care service use, both type of spreaders have a place. If used properly and under the appropriate conditions, both can do a good job. Keep in mind that, in general, you have to increase swath width by a factor of 3 to 4 to double the area covered per hour. In other words, a rotary spreader with an effective width of 10 to 12 feet will cover most turf areas twice as fast as a 42-inch drop spreader.

## Impeller Theory

The impeller is the key to rotary spreader pattern quality. It is helpful to understand a little about how the impeller operates. On most rotary spreaders, the material is dropped onto the rear of the impeller and then carried around to the front of the impeller while being thrown outward. The material then flies off the front portion of the impeller. Many people assume that the material leaves the impeller radially; in fact, testing has shown that the particles leave at an angle of approximately 10 to 20° from tangential, rather than in a radial direction. Note that this means the trajectory to the right of the spreader will be different from the trajectory to the left of the spreader. If the impeller rotates counterclockwise (as most professional turf spreaders do), material going to the right side of the pattern tends to come off the rear half of the impeller and material going to the left side of the pattern tends to come off the front side of the impeller. Material going to the center of the pattern generally comes from the right side of the impeller.

## Factors Affecting Rotary Spreader Pattern

The factors that affect the pattern delivered by a rotary spreader can be divided into several categories including design factors, product factors, environmental factors and operator adjustment factors.

## DESIGN FACTORS

- Impeller diameter
- Impeller speed (spreader gear ratio)
- Impeller concavity (is impeller flat or concave)
- Impeller height

CONTINUED PAGE 18

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# Ornamental Tree and Shrub Pruning Techniques

By Sam Rivers  
Supt. of Grounds  
University of  
North Carolina - Greensboro

## I. Definition

Pruning is the selective removal of plant parts for good cultural practices.

## II. Reasons for Pruning

### A. To train the plant

1. Always remove broken branches, crossing branches, diseased and dead wood first.
2. Prune for strength, choosing wide crotches to remain, cutting out weak, narrow ones.
3. When planting new trees and shrubs, check roots and prune broken, damaged or dead ones before planting.

### B. To Restrict Growth

1. Selectively remove plant parts to keep shrub or tree in bounds.
2. At design stage, select plants that will not greatly exceed allotted space in 15 to 20 years.

### C. To Improve Quality of Flowers, Fruits and

## Foliage

1. Prune at the proper time of the year, depending on whether plants bloom on new growth, or last year's growth.

2. Azaleas and all spring flowering shrubs should be pruned right after they bloom. Pyracantha - blooms and berries on last year's growth, so all of it should not be pruned off. Crepemyrtle - should be pruned every year, during its dormant period to encourage new growth. Crepemyrtles bloom on current new growth.

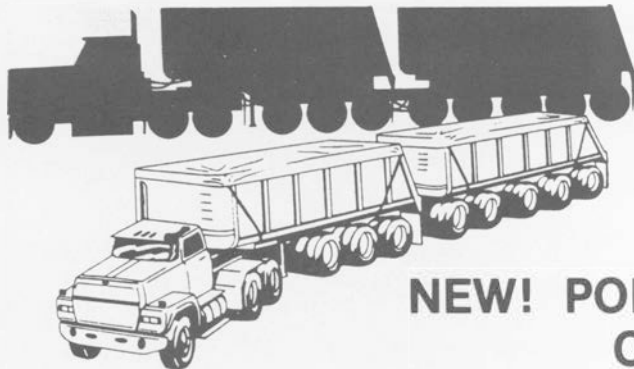
3. Thin prune from the inside out, to improve air and light circulation. This helps improve flower and fruit formation.

### D. To Maintain Plant Health

1. This relates back to cutting out dead, dying and diseased wood first.

2. Good air and light circulations helps to improve resistance to insect and disease problems.

CONTINUED PAGE 18



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## GCSAA NEWS

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### GCSAA TO MEET IN ANAHEIM

The Golf Course Superintendents Association of America (GCSAA) will hold its 60th International Golf Course Conference and Trade Show the week of February 6-13, 1989, at the Anaheim Convention Center, Anaheim, California.

"This will assuredly be the largest show in the history of the association," said John Segui, CGCS, president of GCSAA.

More than 14,000 convention attendees are expected to visit the conference and trade show, which is the industry's largest annual product and service-related exhibition. The trade show ranks in **Trade Show Week's** top 200 out of 5,000 shows rated. More than 400 manufacturers and distributors will have booths.

"We actually could sell even more space if the facility were larger," says Karyn Davis, GCSAA's manager of sales and marketing. "It's a very good position to be in. The industry continues to grow - and GCSAA continues to be the established world leader in providing the opportunity to present the most important new golf course products and ideas through our trade show."

In addition to the trade show, 34 one and two-day educational seminars will be presented to golf course superintendents and other turfgrass management professionals. Attendance at the seminars is expected to approach 2,000 persons. Fifteen educational sessions are also scheduled.

"We are very proud of the conference and show and the important role it plays in the industry," said John M. Schilling, executive director. "each year the support from manufacturers, distributors and superintendents continues to grow. It's amazing how rapid the growth has been recently."

## GCSAA MEMBERSHIP TOPS 8,000

The Golf Course Superintendents Association of America's active and visible role in golf - coupled with a vigorous and effective recruitment program - is helping to pay dividends via a dramatic increase in membership. This month, GCSAA's rolls officially exceeded 8,000 for the first time in the association's 62-year history.

Timothy Robert Sever, golf course superintendent at Sugarmill Woods Country Club of Homosassa, Florida, became the 8,000th member.

"I believe the association's high visibility within golf is one factor contributing to the growth," says John A. Segui, CGCS, president of GCSAA. "At the same time, our continued increase in membership has also allowed the association to provide more benefits and services - which in turn has steadily attracted still more members."

In 1983 GCSAA had fewer than 5,000 members. GCSAA is headquartered in Lawrence, Kansas, adjacent to Alvamar Country Club. The association annually hosts the International Golf Course Conference and Trade Show - one of the 200 largest trade shows in the United States - in various major cities across the nation.

The organization also provides nearly 70 educational seminars and offers its members a variety of other services, including insurance programs, employment assistance and referral, an audio-visual lending library and an extensive line of exclusive merchandise. In addition, GCSAA publishes **Golf Course Management** magazine, the leading monthly publication in its professional field.

For more information, contact Bob Still, GCSAA media relations manager, 1-800-472-7878.

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"The trouble with being punctual is that there's nobody there to appreciate it."

- Harold Rome

## MIDWEST REGIONAL TURF CONFERENCE

In an attempt to increase attendance, provide more visibility and improve revenues for turf research at Purdue University, several changes will be made in the 1989 Midwest Regional Turf Conference.

The Board of Directors and Advisory Committee have agreed to move the conference to Indianapolis. The Adams Mark Hotel, conveniently located near the airport and interstate highways, has been chosen for the meeting because of its excellent facilities and fine accommodations. The dates chosen are January 23-25, 1989.

The conference will continue to include an educational program with timely information for all attendees. A Tabletop Trade Show will offer the opportunity to visit with suppliers to the turfgrass industry. A luncheon program with awards and an entertaining speaker will replace the evening banquet allowing flexibility for attendees to sample the offerings of the many restaurants and activities offered in Indianapolis.

These changes were made after much discussion and deliberation. Your continued support of the Midwest Regional Turf Conference will be most helpful and appreciated.

## GOLF COURSE ARCHITECTS ELECT DYE PRESIDENT

Pete Dye of Del Ray Beach, Florida, was elected president of the American Society of Golf Course Architects (ASGCA) at the group's recent annual meeting in Bermuda. The ASGCA is comprised of leading golf course architects from North America.

Dye, who has been a golf course architect for 29 years, has designed such well-regarded courses as Crooked Stick Golf Club, Carmel, Indiana; Oak Tree Golf Club, Edmund, Oklahoma; The Golf Club, Columbus, Ohio; PGA West, LaQuinta, California; and the Tournament Players Club, Ponte Vedra, Florida.

Robert Trent Jones, Jr. of Palo Alto, California, was elected vice president by the group. Other new officers are secretary Dan Maples of Pinehurst, North Carolina and treasurer Tom Clark of Wheaton, Maryland.



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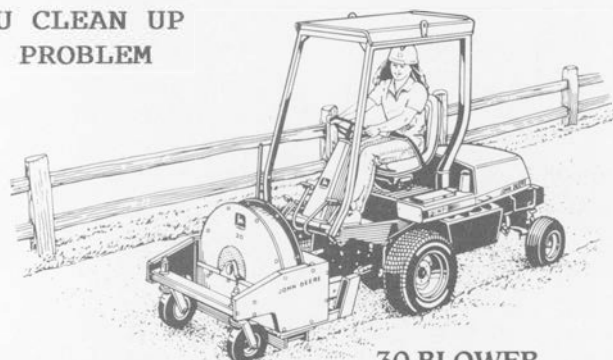
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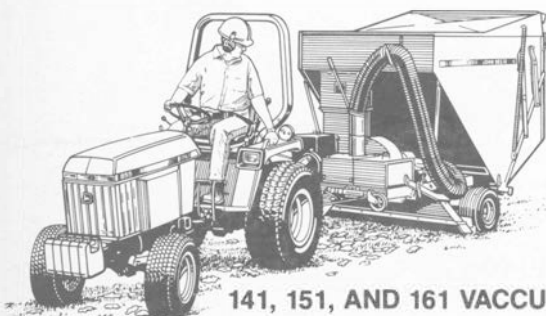
**30 BLOWER**

30 Blower attaches to front of F900 Series Front Mowers



**230 BLOWER**

230 Blower attaches to tractor category 1, 3-point hitch



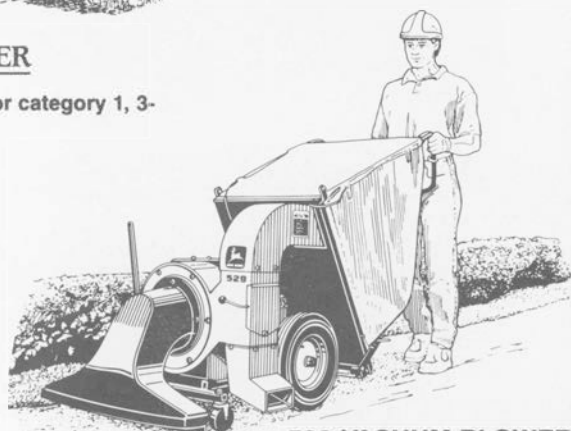
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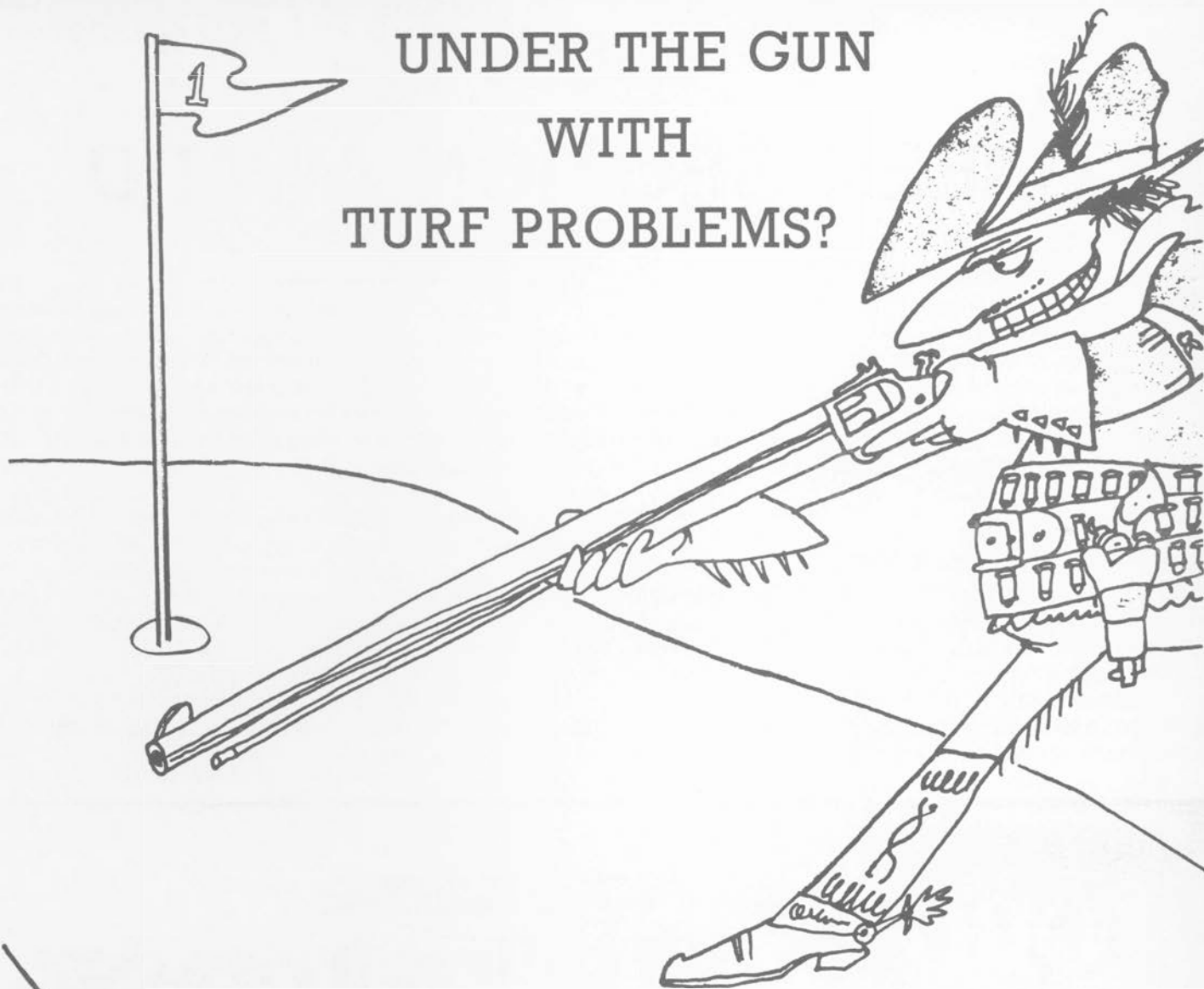
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# 1989

## GREEN SECTION AWARD

We are writing to invite your suggestions (as many as you like) as to persons to be considered for the Green Section Award for 1989. The USGA believes this is a most important award in that it recognizes the person most deserving for his or her service to golf through work with turfgrass. We earnestly and sincerely urge you to participate.

### THE AWARD

In establishing the Green Section Award, the USGA wishes to honor those persons deserving special recognition for distinguished service to golf through work with turfgrass. Such persons may be involved in any phase of work with turfgrass, i.e., research, extension, superintendence, maintenance, etc. Their achievements need not be confined to any one year.

The USGA believes that there are many such persons who have brought the game immeasurable contributions respecting the arena upon which the game is played. They include both men and women. Their contributions and service may be evidenced by their achievements over a number of years or by a single act.

In continuing to present the Green Section Award, the USGA wishes to identify, celebrate and hold up for emulation individuals who exemplify outstanding contribution and dedication to the game of golf through their work with turfgrass.

The Award will be presented at the GCSAA Annual Banquet and Show on Monday, February 13, 1989 in Anaheim, California.



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## PROCEDURE

Anyone wishing to suggest a person for consideration as a possible recipient of the Green Section Award should submit a written statement identifying such person and setting forth reasons why they should be a worthy recipient of the Green Section Award. The statement need not be extensive; however, it should satisfy you that your candidate will receive just consideration with respect to other candidates suggested for receipt of the award.

Suggestions should be addressed to the Green Section Award Committee, Golf House, Far Hills, New Jersey 07931; deadline for receipt of suggestions is October 3.

Considerations concerning possible suggestions must be restricted to golf through work with turfgrass. Indirect or administrative contributors, Green Section Award Committee members and USGA Executive Committee members, General Counsel and staff are not eligible.

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1972 Herb and Joe Graffis  
1973 Dr. Marvin H. Ferguson  
1974 Dr. Howard B. Sprague  
1975 Dr. Fanny-Fern Davis  
1976 Dr. James R. Watson  
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1978 Dr. Jesse De France  
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The registration fee includes a luncheon on both days of the seminar and take-home reference manuals. Registrants taking and passing the examination at the conclusion of the seminar will earn two Continuing Education Units (CEUs) and a certificate of achievement from GCSAA. Space is limited and registrations will be confirmed on a first-come, first-served basis. Refunds will be allowed only for WRITTEN cancellations received at GCSAA Headquarters before October 13, 1988.

Send registration fee to:

GCSAA Regional Seminars  
1617 St. Andrews Drive  
Lawrence, Kansas 66046

Registrants requiring lodging are responsible for their own arrangements. The Sheraton Inn Lansing offers special rates of \$63/single and \$73/double (plus tax) to seminar participants.

CALL 1-800-472-7878 TO REGISTER OR FOR MORE INFORMATION.

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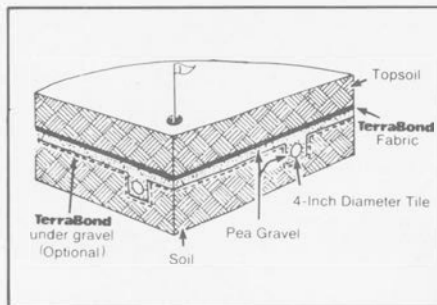
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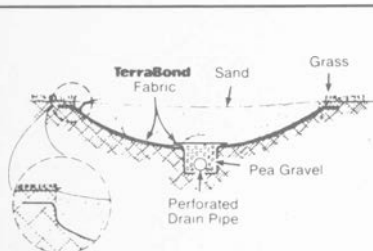
### PUTTING GREEN CONSTRUCTION



Use TerraBond as a replacement for the usual 2" coarse sand layer between the greens mix and the gravel drainfield. The fabric will eliminate downward migration of the mix into the gravel and the subsequent reduction of water flow from the green.

TerraBond's high water permeability and highly engineered uniform density and EOS (AOS) make it an ideal fabric for this use. It will not rot in the soil-water environment. Its horizontal (planar) flow characteristic moves excess water horizontally out to the sides.

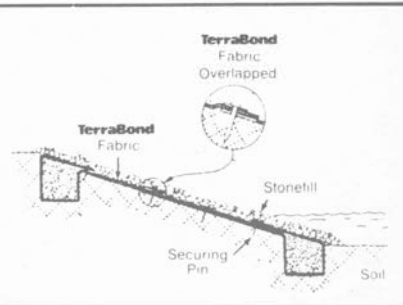
### SANDTRAP LINING



Line the entire golf sand trap with TerraBond, including 6" under the surrounding sod. The sod's roots will knit the fabric to the soil beneath. Clay and rocks will be totally restricted from moving up into the sand.

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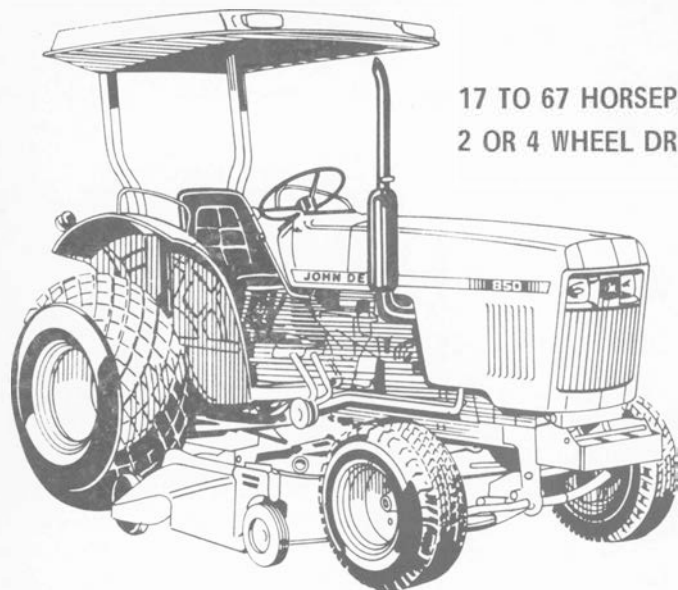
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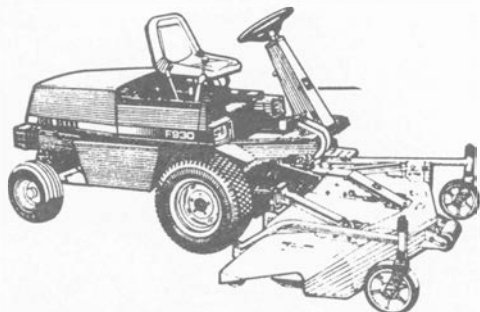
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# THE GOLF TEE

First and foremost, Dr. William Lowell was a gentleman. In 1921, at the age of 60, the dentist from South Orange, New Jersey, took up golf. He was appalled by the practice of teeing the ball on a pyramid of wet sand, leaving a player with gritty hands. Instead, Lowell used his dental tools to whittle a golf tee. Although Dr. Lowell's partners referred to his tees as "suppositories for wildcats," Lowell's sons saw commercial potential in the tee, and in 1924 Lowell received a patent. His Reddy Tee was packed in boxes of 18 that sold for a quarter. Lowell imagined golfers would leave them behind and use a box per round. He even planned a biodegradable version until he realized golfers were hanging on to the little wooden spikes. The tee got a professional boost when Walter Hagen, the U.S. Open champion, pulled up to Dr. Lowell's dental office and asked where he could get more tees. Advertised as "The Tee of Champions," 70 million Reddy Tees sold worldwide in 1929. By then competition was catching up to Dr. Lowell, and his company office was closed in 1933.

-Old Farmer's Almanac, 1988

## DEFINITIONS

**Bachelor:** a rolling stone who gathers no boss.

**Bargain:** something you can't use at a price you can't resist.

**Bigamy:** having one wife too many.

**Monogamy:** see bigamy.

**Diplomacy:** the ability to take something and have the other fellow think he is giving it.

**Hors d'oeuvres:** a ham sandwich cut in forty pieces.

**Refrigerator:** a place to store leftovers until they are old enough to throw out.

**Dime:** a dollar after taxes taken out.

**Community Chest:** a plan for putting all the begs into one ask-it.

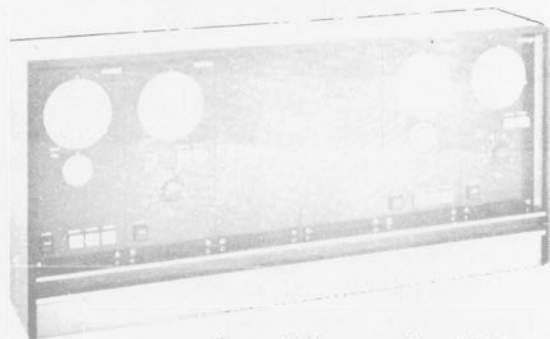
**Flood:** a river that's too big for its bridges.

**Slot Machine:** a steel trap used to catch dumb animals.

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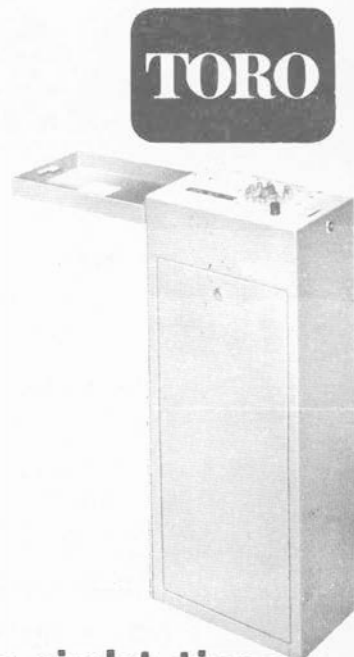
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## PRUNING, CONT.

### III. Basic Pruning Techniques

- A. Always cut back to a bud or intersecting branch.
- B. When cutting back to a bud, choose one facing the direction you want the new growth to take. Be sure the angle of cut above the bud is proper (45 degree cut, just above bud, facing away from bud).
- C. When pruning tree branches always leave the collar so that the cut will heal. Also use the three cut method when removing large heavy branches, to prevent any unnecessary damage to the tree.
- D. When pruning shrubs, always cut out the crossing, rubbing branches, dead and diseased wood first. Then prune from the inside out, selectively removing the oldest and tallest stems.
- E. Remember always: the basic natural shape of a shrub or tree is wider at the bottom than it is at the top. This is also one of the basic essentials of good air and light circulation. This is especially true when pruning hedges or screens.

### IV. Rejuvenation Pruning

- A. It is best not to remove more than one third of the total plant growth at one time.
- B. One third of plant growth could be moved in the spring, one third in the fall and the remaining third the following spring which would result in total rejuvenation.

### V. Major Differences Between Proper Pruning and Shearing

- A. You should always remember that new growth responds at the point where the pruning cut was made.
- B. Good light and air circulation is needed for flower and fruit formation and insect and disease resistance. This is hard to obtain from shearing.

## SPREADERS, CONT.

- Fin shape and angle (fins may be straight or curved, forward-curved or backward curved, diametral or skewered, with or without lip on top edge)
- Impeller surface (coefficient of friction affects how fast particles slide off impeller and thus determines where they leave the impeller)

Most of the above factors are predetermined by the spreader manufacturer and are beyond your control. Some of the larger ag-type rotaries may allow you to adjust the fins. You should also be aware that dust buildup on the impeller due to humidity can affect the coefficient of friction.

### PRODUCT FACTORS:

- Shape of particles (this will determine not only how fast the particles slide off the impeller, but also the trajectory in the air)
- Size of particles (larger particles will fly farther with a given initial velocity)

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-Size uniformity (contrary to popular opinion, some variation in particle size is helpful in evening out the pattern from multiple ports - as long as different fertilizer components are not segregated by size)

-Particle density (heavier particles fly farther; size has more effect on particle weight than density)

-Critical relative humidity (each fertilizer blend has a specific critical relative humidity at which it becomes hygroscopic; below this level it stays dry, above this level it gets sticky; it is a step function, not a gradual change)

-Surface friction (the coefficient of friction between the product and impeller)

You can control these factors only by buying products formulated with good application characteristics. You can also check the pattern delivered by your spreader whenever you change products and adjust accordingly.

**ENVIRONMENTAL FACTORS:**

-Wind (speed and direction - ideally, should not make sensitive rotary applications when wind exceeds 5 mph)

-Temperature (high temperatures can increase product buildup on the spreader parts which can effect pattern)

-Humidity (critical relative humidity)

You can't control these factors, but you can decide not to apply the product if conditions are adverse. You can also compensate for some environmental problems by changing the pattern and rate adjustments on your spreader.

**OPERATOR ADJUSTMENT FACTORS:**

-Speed (how fast you are pushing the spreader)

-Radial drop point of the material onto the impeller

-Angular drop point of the material onto the impeller

-Impeller angle (are you holding the handle at the correct height to keep the impeller level?)

These are factors that you control directly. All are important. Some spreaders allow you to adjust only the radial or angular drop point, some change both simultaneously. You need to study the operator's manual for your spreader and take advantage of the adjustments available.

**Effect of Speed on Rate**

Many people assume that speed has no effect on the delivery rate of a drop spreader. In fact, some texts on the subject teach this. We performed some tests at LSU to prove that this is not true. Before going into the results, you should be aware of two terms that apply to metering:

-Volumetric metering means that a constant amount is applied per revolution regardless of speed. A good example of volumetric metering is a corn planter.

-Gravimetric metering means that a constant amount is applied per unit time. A good example of gravimetric metering is an hourglass.

The metering of common drop-type spreaders is not volumetric as often assumed; it is actually in between volumetric and gravimetric and is closer to being

CONTINUED NEXT PAGE

## SPREADERS, CONT.

gravimetric. The speed at which you push a spreader does not indeed have a major impact on the rate applied. The faster the speed, the lower the rate.

With rotary spreaders, the effect of speed on rate is even more pronounced. Rotary spreaders tend to be almost perfectly gravimetric. Not only does the rate per foot of travel change, but a change in speed also changes the effective swath width, thus multiplying the overall rate variation. Speed is very critical for a rotary spreader.

### Effect of Speed on Rotary Spreader Pattern

Changing the speed of a rotary spreader can change the effective swath width, the overall rate, the coefficient of variation and the extremes in the pattern. The coefficient of variation (C.V.) is a measure of the uniformity of an overlapped pattern. The lower the C.V., the more uniform the pattern. With a good spreader at an optimum swath width, the C.V. should be under 20%. If the speed is increased or decreased, the C.V. will increase; thus, the pattern is less uniform. In addition to the coefficient of variation, we are concerned about the extremes in the pattern - the highest and lowest stripes in the pattern. Ideally, the lowest point should be at least 80% of the mean rate and the highest should be no more than 120% of the mean. If you select a swath width and pattern setting to achieve this, then vary the speed, the extremes will become greater.

### Pattern Compensation

Let's assume now that you have made every adjustment possible on your spreader, but the pattern is still not good enough for a critical application. Prevailing wisdom says you should now cut your delivery rate in half and cover the turf area twice - with the two applications at right angles. Once again this recommendation, which is found in some applications texts, is not correct. It will help reduce the coefficient of variation somewhat but will not affect the extremes in the pattern that cause striping. This method will merely turn stripes into a diagonal checkerboard. The low and high extremes will still be there, but in smaller areas.

A much better approach, if compensation is needed, is to again reduce the delivery rate in half and then reduce the swath width in half. This method takes the same amount of travel over the turf area as the right-angle method, but is much more effective. Our testing has shown that you can typically reduce the extreme differences in half with this method, while also improving the C.V. more than with the right angle method.

### Pattern Testing

Every professional applicator should check the delivery pattern of his spreader routinely whenever any of the pattern factors mentioned earlier are changed. In addition, periodic checks are needed to

CONTINUED NEXT COLUMN

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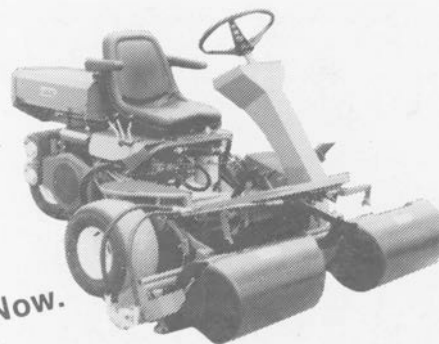
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confirm that the spreader settings are still correct and appropriate.

Most of you are aware of the general methods used in checking spreader patterns. You need to lay out a line of catch pans perpendicular to the path of the spreader, make several passes over the pans (in the same direction), collect the material and evaluate the pattern. Unfortunately, there is a potential problem here that you may not be aware of. The type of catch pan used has a tremendous effect on the results obtained. A spreader tested under identical conditions with two different types of catch pans may **appear** to have an excellent pattern with one set of catch pans and a very different and unacceptable pattern with another set of pans. This can cause a real problem if different branches of a company use different types of catch pans, or if you rely on data from a product supplier who uses different catch pans than you do.

Extensive testing at LSU has shown that for a typical spreader and product, the apparent C.V. can vary from 13% to 57% for identical test runs using different catch pans. Differences in apparent optimum swath width, delivery rate and pattern extremes are just as pronounced. At this point we have to ask which catch pan system is really predictive of results on turf. We have addressed this problem at LSU and have found that rectangular catch pans with internal subdivisions to prevent bouncing give pattern results that most closely correlate with observed turf response. We recommend that catch pans follow the criteria set forth in American Society of Agricultural Engineers standard S341.1, Test Procedure for Dry Fertilizer Spreaders.

#### **SPREADER. EZ, A Computer Program for Pattern Analysis**

If you try to conduct spreader tests as described in the previous section, you will probably encounter one problem - how to analyze the data. Collecting the data is easy, but determining coefficients of variation for overlapped patterns at several possible swath widths requires a lot of computation. Many of you have microcomputers that you use in your business. LSU has now released a computer program named SPREADER.EZ that will make these calculations for you and provide you with the analysis you need to evaluate your spreader patterns. The program runs on IBM PC or compatible computers. It requires 256K of memory, advanced BASIC and a printer.

The program is easy to use and is designed to lead you through the data entry procedure with screen prompts. It can be used with any type of spreader and with any round or rectangular catch pans on any spacing.

The computer will give four or more pages of output as follows:

Page 1 - Printout of background data on spreader, product and test conditions.

Page 2 - Graph of individual spreader pattern and a figure for degree of skewing ( % material left of center

CONTINUED NEXT PAGE

#### SPREADERS, CONT.

compared to % of material right of center).

Page 3 - Table of mean rate, C.V. and pattern extremes for overlapped patterns at a wide range of swath widths.

Page 4 - Graph of C.V. versus swath width. This allows you to select the best swath width and evaluate sensitivity to changes in swath width.

Page 5 - Optional graphs of overlapped patterns at selected swath widths.

Using this program, you can easily evaluate your pattern data, determine whether changes are needed and select the optimum width and settings.

The program is available for \$5.00 through the Louisiana Cooperative Extension service at the following address:

Darryl Rester, Associate Specialist, Engineering  
Louisiana Cooperative Ext. Service  
Knapp Hall  
Louisiana State University  
Baton Rouge, Louisiana 70803  
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#### Spreader Maintenance

This last subject is too often overlooked. A fertilizer spreader is subject to hard use under corrosive conditions. Testing has shown that proper maintenance can easily double the life of a spreader. Every spreader should be **thoroughly washed out after each day's use**. The spreader should then be lubricated according to the manufacturer's instructions. Lubrication instructions vary and many spreaders have been damaged by applying lubricant to the wrong place or using the incorrect lubricant, so follow the instructions with your spreader.

#### Conclusions

Precise application is critical to your operation. It doesn't make any difference how good the products that you are applying are, they can't do the job if they aren't applied uniformly and at the proper rate. Proper application depends on your understanding your spreader and putting this understanding into action.

Southern Turfgrass/Spring, 1987



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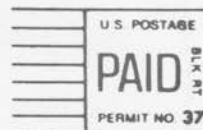
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