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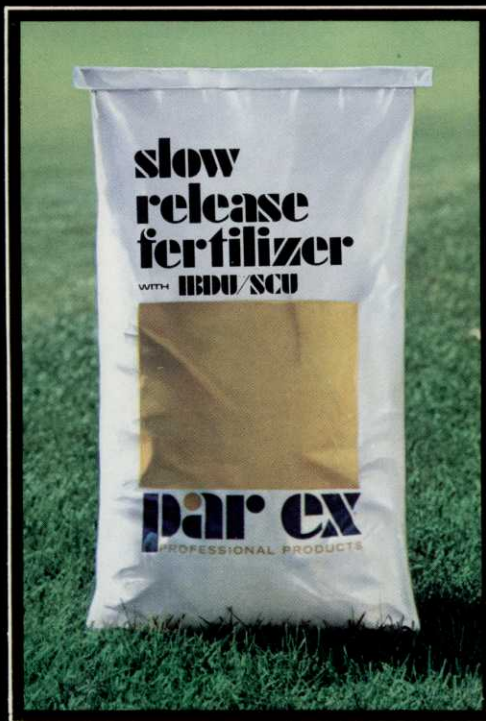
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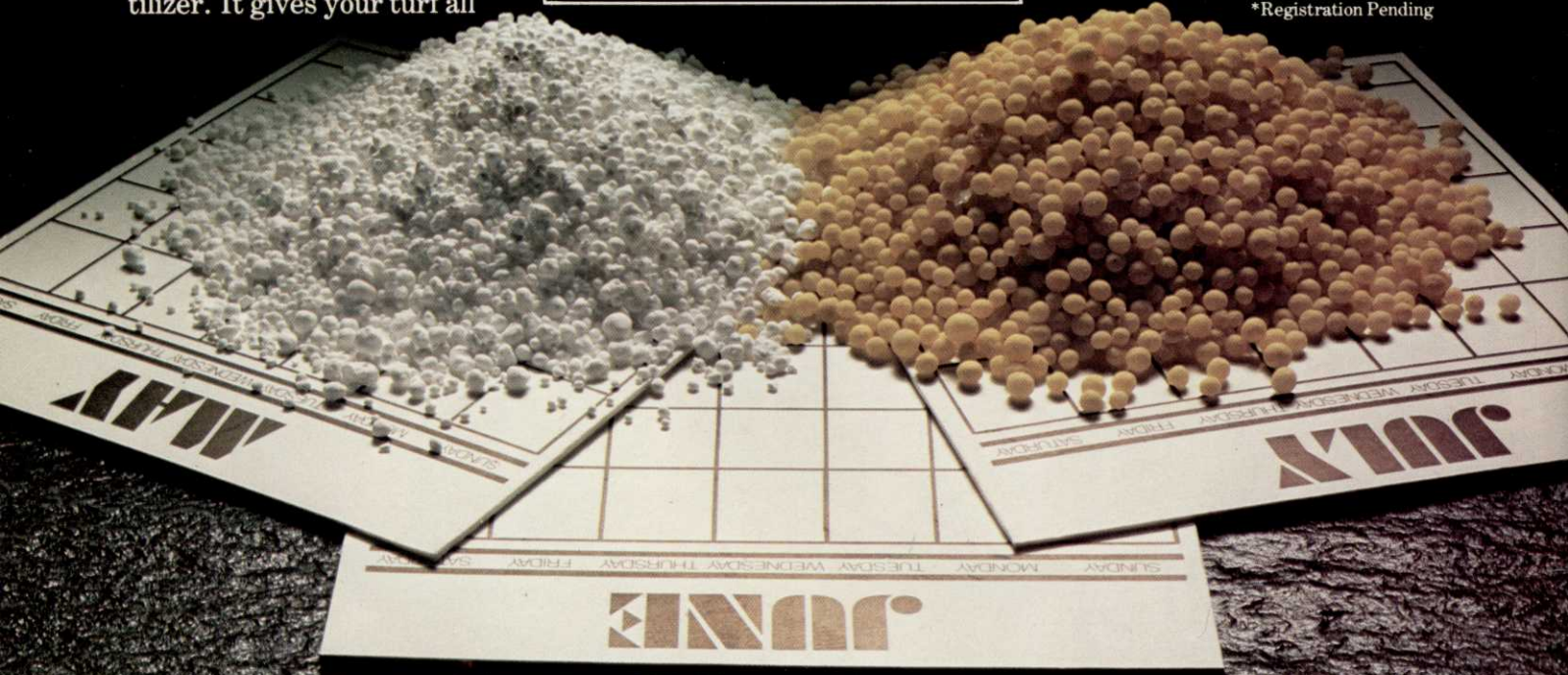
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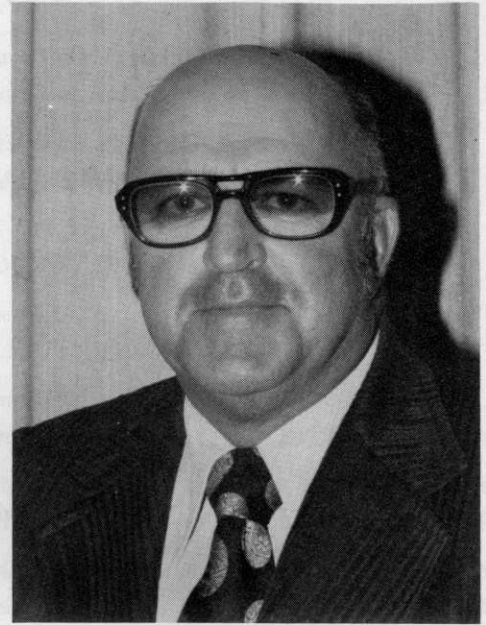
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## President's Message



**Congratulations to our golf team, Dan Meyers, Robby Robbins, Fred Klauk, and Kevin Downing, for winning the G.C.S.A.A. tournament recently held in California. Dan must also be recognized for his individual win. Even more rewarding to me were the many complimentary remarks I received concerning not only the win, but the overall appearance and conduct of the quality young men who represented us so well. It is indeed a pleasure to proudly say I'm a golf course superintendent from Florida.**

Our blue blazers and crests were so well received — almost to a point of envy among some groups. Certainly they created an atmosphere of recognition and validation. Which leads me into “Dress Code”, the simple rule of appearance which, when not adhered to, tends to regulate individuals into a category unfitting of their worth. A judge or minister without the cloth of their profession certainly would detract from their mission. The President of the United States in a sport shirt and wind breaker at a U.N. Conference certainly would diminish his authority. Inappropriate comparisons — maybe so. But, like it or not, appearance is a judgement factor contributing to one's stature. Coats and ties will not make a professional but they help to identify those that are.

*Bill Wagner*

# The Florida Green

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Florida Golf Team Wins National Title. See article Page 23. Cover Photo by Larry Goldsmith.

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# ROW PLANTING

By DR. TIM BOWYER and GERRY MILLHOLEN<sup>1</sup>  
Southern Turf Nurseries

For years golf course superintendents have asked for the impossible from sod producers and golf course planters — the ability to renovate or revegetate fairways with a minimum amount of lost playing time. That question has been more than adequately answered by the process known as rowplanting.

Rowplanting is simply the use of automated equipment to open a small furrow, insert live sprigs, seal the furrow and then roll the furrow smooth (fig. 1). This process when carried out with the proper equipment, trained personnel and soil conditions, can result in little, if any, loss of play and improved fairway grass surfaces (fig. 2).

## When Is Rowplanting a Variable Alternative?

Repair of extensive turf injury to fairways can be accomplished by rowplanting. In the winters of 1976, 1977, extremes in winter temperatures caused a tremendous amount of winter kill of turf on golf course fairways. The answer to this problem in many locations was row planting.

From time to time misapplications of chemicals have caused extensive plant injury with no hope of recovery. In those situations, rowplanting can be the answer.

On golf courses with high traffic, where mechanical injury (golf carts, heavy foot traffic, etc.) is a common and everyday occurrence, periodic rowplanting can allow for resurfacing of these areas and improved playing conditions.

Finally, injury brought on by low maintenance — either because of budgeting problems of the golf course in the past or just inadequate soil management can be rectified by rowplanting with a minimum reduction in play.

In an effort to improve fairway turf quality, many clubs wish to smoothly transition from a common bermudagrass or multi-cultivar bermudagrass sod to an improved bermudagrass sod (i.e., Tifton 419, Tifton 328, Midiron x Tifton 419 blend). Automatic rowplanting when managed properly provides a smooth transition.

## Additional Considerations

There are additional considerations which need to be made if one has decided that fairway conditions necessitate rowplanting.

1. First, without an adequate irrigation system, planting live sprigs is completely impractical. The time span between placing the sprig in the ground and the first water application has to be minimal and uniform.

2. Another consideration is making certain that problems such as soil fertility imbalances, pH, salinity problems or nematodes have been corrected before the rowplanting begins. Rowplanting will not successfully mask these problems.
3. If the club is considering rowplanting, it is important that they understand the need for increased fertilizer and lime applications and increased applications of weed control chemicals during grow-in.
4. Finally, the superintendent and the club must be committed to the followthrough of the grow-in program. Except in those areas which are completely bare at the time of rowplanting, complete transition of vegetated areas may take as much as 2 to 4 years. However, with a modified maintenance program — fertility and mowing practices — this commitment will pay off.

## The process

Although the process will vary from golf course to golf course, depending upon the various circumstances which surround the necessity for rowplanting, the general process will be similar to the following.

1. First should be the notification of all players that the rowplanting process is about to begin. Nothing upsets golfers more than to be up at 7 o'clock in the morning teeing up and find an automatic rowplanter busily moving up and down their intended fairway. It is true that a minimum amount of play will be lost by replanting in comparison to other planting techniques, however, there is some minor inconvenience during the actual time of planting and in all fairness to the golfer he should be alerted. In addition to being alerted, it is important that the superintendent and the pro coordinate planting and play so that there is a minimum of inconvenience.



(Continued on Page 7)

2. Approximately 2 days before rowplanting, most golf courses apply a growth retardant. Commonly applied growth retardants include MH30, Paraquat and in exceptional cases, Roundup. (It should be noted that the greatest success in rowplanting is obtained when as much competition from weeds or fairway grasses as possible is eliminated.) It is obvious in golf courses which have been planted that areas which are free of existing grass or sod cover more quickly with the cultivar being rowplanted than those areas with a healthy sod. Those areas require as much as 2 to 4 years for the rowplanted grass to predominate. It may be necessary to mow the fairways to 3/4 inch just before applying the growth retardant if this is not the normal cutting height.
3. The evening before planting, water should be applied. This insures a smoother finish and a minimum amount of damage to the fairway surface at planting. It is also a good time to find all the irrigation heads and flag them so that the rowplanter can avoid them.
4. The most important of the entire process is the planting itself. There are a number of criteria which must be met if planting is to be successful.

#### The Right Equipment

The equipment to rowplant has evolved from the use of a tobacco planter or vegetable plant planter to the modern day automated rowplanter. This rowplanter is engineered to plant the largest volume of viable sprigs in the furrows as possible and at the same time cause the least amount of damage to the playing surface.

Recent improvements on equipment which have enhanced the success of rowplanting include the use of injectors to place liquid fertilizers in the furrow just ahead of the sprigs. The use of a scientifically balanced fertilizer in the furrow accelerates growth of the grass without feeding the competing grasses between the furrow. This one to two week jump in growth many times spells the difference between success and failure.

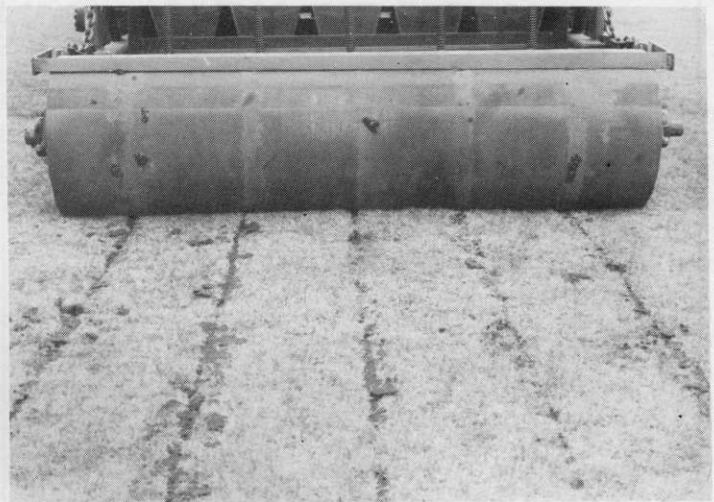
#### The Right Operator

Of course the key to any piece of equipment is the experienced equipment operator. The more experience behind the man driving the tractor the more successful the planting job will be and the less immediate damage will be observed.

#### The Best Grass

In addition to the right equipment and the right person, fresh, viable certified sprigs must be furnished to the job for planting.

5. Once the area is planted irrigation must be applied. For each portion of an hour that irrigation is not applied there is a significant reduction in plant survival.
6. Finally, before the normal maintenance program begins and just after the first irrigation — rolling the fairways with a conventional fairway roller can increase the surface smoothness.



Once planted, the grow-in or transition process begins.

It is most important that the first 4 weeks after the planting process that golf cart traffic be kept off the playing surface. Carts should be used primarily on golf cart paths and roughs. Foot traffic from normal play is not a problem.

Fertilization to grow-in the rowplanting is site specific. Before any of the planting occurs the golf course would have already corrected any soil pH or fertility problem. To insure rapid and uniform growth from the furrows, an application of a 1-1-1 fertilizer is applied 2 weeks after planting. Then at 2 week intervals ammonium nitrate is applied. As the growth becomes adequate the fertilizer rates can be reduced to fit the management scheme of the golf course.

Mowing should begin on the rowplanted fairways approximately 2 weeks after planting. Avoid scalping but gradually bring the mowing height to approximately 5/8-3/4 inch.

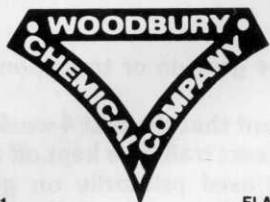
Weed control is particularly important in determining how successful the rowplanting transition will be. First, of course, be certain that the sprayer is properly calibrated and the soil is moist. The first herbicide application is usually recommended 3 weeks after rowplanting. This application should include a broadleaf herbicide such as 2,4-D and grass weed herbicide such as MSMA or DSMA. Five to seven days later an additional application of arsenic is applied. Five to seven days after that, a third application is made. If there is no damage or discoloration of the rowplanted grass after the third application and there are still some weeds the procedure can be repeated. Because of the high weed seed population just below the soil surface, any process which opens the soil will bring up seed. Weeds such as goosegrass, crabgrass, and others can be found in the furrow along with the growing bermudagrass. These grasses are competing with the bermuda and should be taken out through the proper use of the appropriate herbicides. To neglect applying these herbicides for fear of hurting the rowplanted bermudagrass can result in failure or at best a longer transition because of competition. The rowplanted bermudagrasses, although retarded by herbicide applications, can survive and become the predominant grass.

(Continued on Page 8)

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## Row Planting

(Continued from Page 7)

### Results and Comments

It is often difficult to measure how successful the row-planting has been especially into sods. However, close inspection generally indicates that complete cover from row-planting at 12-inch centers can take as few as 2 and as many as 4 or 5 years.

Rowplanting is not the answer to all problems on all golf courses. But it is an essential tool to the golf course superintendent or club which is attempting to keep its course at its peak in appearance and condition and is definitely an asset to the golfer.

1. Dr. Bowyer is Vice President, Southern Turf Nurseries, Tifton, Georgia. Mr. Millholen is Technical Representative, Southern Turf Nurseries. ■

## 195 ATTEND GCSAA PRAYER BREAKFAST

The week of January 25th, 1981 was a busy week for GCSAA members in Anaheim. Conferences, seminars, golf tournaments, business meetings, elections, equipment show, cocktail parties, tours, banquets and for good measure Disneyland just across the street.

While all of this was going on our nation received word that our ex-hostages had returned safe to American soil! What a busy time, and a time to be thankful. Thankful for what a Blessing it is to live in America and to be Americans.

Even with all of this going on plus the Super Bowl, 195 men, women and kids did find time to attend the Monday morning Prayer Breakfast. This is almost a 74% increase over last year! Not bad. We were treated to and participated in some fine music led by Demie Moore and Bert Fedor.

Our main speaker, Richard Minasian, brought a special guest, Keith Ericksen. He was an all American basketball player for UCLA and also played pro ball for the Los Angeles Lakers. Keith shared some of past life with us, pointing out that material gain and fame do not necessarily bring peace and happiness to our lives.

Richard Minasian shared with us some of his experiences as a youngster when he caddied for some of golf's greats like Bobby Jones, Gene Sarazan, and Francis Quimet among others. Even having the opportunity to play with Jones as a Jr. Champ. These great golfers inspired Minasian to take up the game and he still enjoys it today. Serving God however, supersedes even his love of golf.

If you have been too busy in the past try to take time for our Prayer Breakfast in New Orleans next year. We think you'll find it time well spent, as you share with others of our profession the Living God and experience the Power of Prayer.

John C. Ebel, Golf Course Supt.  
Barrington Hills Country Club

THE BULL SHEET, official publication of the MIDWEST ASSOCIATION OF GOLF COURSE SUPERINTENDENTS.



# Palm Beach Trade Winds



Activated charcoal has received much attention in recent years.

The varied benefits of carbon on turfgrass is not the main issue in this article. The method of application is. Did you ever apply activated charcoal via an airplane crop duster?

Michael Bailey, superintendent of Boca Greens Country Club, Boca Raton, uses this method. A 1977 agronomy graduate of Eastern Kentucky University in his native state of Kentucky, Michael Bailey says, "It's the only way to fly." Let's go back, step by step, and learn how he reached this level of application. First some test plots were done around newly planted trees in early November and tremendous growth was noted to trees and adjoining turfgrass. Areas were under a normal fertilizer program for their area and the temperatures were still warm, 80° to 68°. The material was applied in its straight dry form with a hand cyclone spreader. Rates were two pounds per 1,000 square feet. Michael Bailey noticed the wheel mark patterns between the trees showed up a lush turfgrass. This made him think about all the talk of activated charcoal benefits coming from "raising the soil temperature" as not being the total answer. He concluded the 4 inch width of the wheel patterns would not raise the temperature enough for this response. So seeing his classroom lectures come to life he went to his textbook.

*THE NATURE AND PROPERTIES OF SOILS* by Nyle Bracly shed some light. "The ratio of carbon to nitrogen in the organic matter of arable soils commonly ranges from 8:1 to 15:1, the median being about 11:1. The carbon/nitrogen ratio in plant material is variable, ranging from 20:1 to 30:1 for legumes to as high as 100:1 in certain strawy residues." Because this ratio is relatively constant in soils, Michael Bailey feels charcoal application lowered his ratio and gave better breakdown of the nitrogen already there. The text also concludes "as decay occurs the carbon/nitrogen ratio of the plant material decreases since carbon is being lost and nitrogen conserved." Previous studies prove seed germination is increased with activated charcoal. The text states, "new growth is better because mature residues, legumes or nonlegumes, have a much higher carbon/nitrogen ratio."

Now Michael Bailey was ready to do a larger area. His next application was with a 300 gallon spray tank using the spray boom on the Tifway 419 rough. To make the material "very flexible" only one pound per 1,000 square feet was

applied. The results were so dramatic he said, "I wanted to continue but was afraid of a paint brush effect if I continued with the spray boom. That is when I concluded that to get the consistant look I wanted, the ultimate spray method was needed, an airplane crop duster." Being located in the truck farming area, west of the turnpike from Boca Raton, this method of application is common. Bob King, Southern Crop Service, in nearby Delray Beach was selected. He was familiar with the area and saw no problem with the airplane. The golf course is ideal for such a method. Bob King needed to know, since he had never sprayed the product, would the material stay in solution to apply properly. A 24-hour suspension test showed all systems were still go.



Because such a large acreage would be done in such a short time, late afternoon when there are no golfers on the front nine holes was ideal as long as sunny, clear, and low wind conditions prevailed. An entire par 5 hole was done. The rate was again back up to the two pounds per 1,000 square feet. The entire hole was done in ten minutes. What efficient labor! Michael Bailey says, "With that test we both knew it could be done with good results."

Mid January saw the real test. Temperatures had been below ideal growing conditions for three weeks. Weather bureau data concluded the past January was the coldest on their records. Behind only the 1977 legendary freeze. The time was right to see any response. All nine green putting surfaces and complete green slopes were done on one side of the course. The rate was still two pounds per 1,000 square feet. Several days later Bob Stanley, club manager, questioned why the contrast between the different nines.

*(Continued on Page 15)*

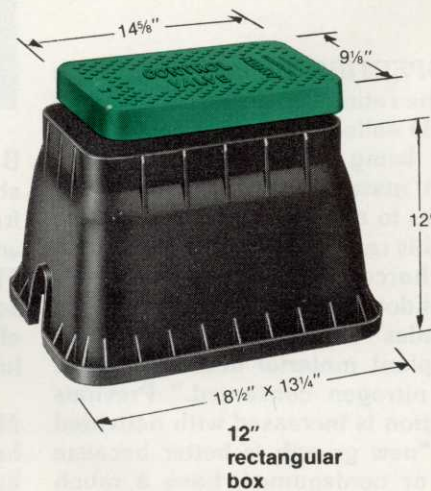
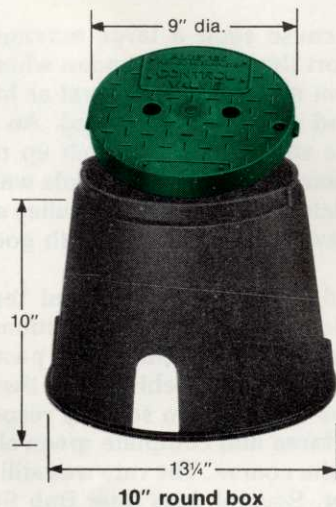


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