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## Paul Crawford

**Education:** Michigan State University

**Professional Affiliations:** Florida G.C.S.A. - Palm Beach Chapter; Florida Turfgrass Association; Golf Course Superintendents Association of America; Board of Directors Poinciana Day School

**Previous employment:** Michigan: Great Oaks C.C., Woverine G.C., and Stoney Creek G.C.; South Carolina: Harbour Town Links; Florida: Jupiter Hills Club and Palm Beach Country Club.

**Family:** Son, Chris (8 yrs.); daughter Kelli (6 yrs). "No matter what else I do, these guys come first!"

**Hobbies and interests:** Spending quality time with the kids. Fishing, lobster diving.



Paul Crawford

**'These are the guys who make it all happen,'**

says Crawford of his crew. From left, Byron Dennard, James Bland, Saul Gomez, Randy Mitchell, Sam McLeod, Ron Payette, Alfred Mullins, Tomas Navarro, Joe Kochis, Alberto Flores, Luis Echevarria, Dan Vazquez, Angel Negron. Kneeling in front is Paul Szlasa, assistant superintendent.

***I just want all the superintendents in Florida to come together so we can make it even better.***

take an active role and why a united voice is so important."

"Being a superintendent is one of the best professions in the world. The variety of challenges is stimulating. The number of people you meet from all phases of the industry and who play the game is unbelievable. I now have friends and contacts from coast to coast and around the world because of this business. I wouldn't trade this experience for anything. I just want all the superintendents in Florida to come together so we can make it even better."

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Managing people is like managing grass, and...

## Very rarely does just one thing kill the grass!

BY SCOTT WAHLIN, CGCS

*Don Shula's Hotel and Golf Club*

Several years ago, a buddy of mine told me a story about a superintendent who was fired because he came in at 9 o'clock on a Monday morning. My friend said that the owner of the club was running around all upset because there were worms on the greens and the person he had hired to assure the health of this investment was nowhere to be found.

I told my friend that I doubted very seriously that he was fired for only one incident. I think it is much more likely that this individual superintendent had dropped the ball on other occasions and this had made the owner finally come to the conclusion that this is it—he had had enough!

It seems to me that many times we try to fabricate easy excuses for failure when there were actually many different situations that led to our lack of success.

I personally have fired employees for being five minutes late. This may seem harsh but, believe me, there was a lot more to it than just one tardiness.

While touring the golf course in the morning, I look for many things. One thing that is easy to spot in the morning is sprinkler heads that are not turning. Normally you will have a green stripe with heavy dew while the dew in the surrounding area is slight.

If I have someone who I am trying to train, I will call them over to show them how to spot and repair a sprinkler head that is not turning. I park the cart outside the area and walk in with the trainee. I show them how to disassemble and troubleshoot the head. We then turn it on to check our work and irrigate the area.

A day or two later I take them back to

the same area to show them how the grass died in the areas where we walked. I explain that, at that point in time, the turf was so stressed that the only thing needed to kill it was the weight of our feet.

I use this story to graphically illustrate to problem employees how close they have come to failure. I do not fire people for being five minutes late, but people who work for me can put themselves in a position where coming in five minutes late will result in termination of their employment. There is a difference.

Supervising golf maintenance employees is a challenge at best.

Factors affecting proper supervision are stacked against the golf maintenance supervisor especially if you consider these against a supervisor in a factory situation: the capabilities and compensation of the employees, the variety of tasks performed, the size of the area where the work is performed and the expected standards.

Many times it is impossible to closely monitor the productivity of an individual or work crew. As a result, we have to make determinations based on what we can see.

If I check on an employee four times in a day and he is not working two of those times, this may be a coincidence. If this trend continues, I do not have the time or inclination to assume that this is purely coincidence.

If this situation occurs I give the employee an oral warning and explain the difficulties in supervising golf maintenance employees. Many times they will protest saying that I saw them the only times they stopped working. I explain that Joe is working virtually every time I see him and I never see his machine parked at the halfway house 15 minutes before lunch. I also say that this is a business like

any other and sometimes difficult decisions have to be made.

If I fire 100 employees in my career and 10 of those were actually good employees, I still got rid of 90 bad ones. How many business decisions do you get where you have a 90% chance of being correct?!

Of course there are times when one situation can kill grass, get you fired or ruin the aesthetically pleasing appearance we are trying to create. To illustrate this I create the following situation and physically show it to the crew.

I set up the hole running near the maintenance building so that there is not one leaf out of place. Just prior to meeting with the crew, I peg a styrofoam cup down to the fairway with a tee. Without fail, every golfer who drives by looks at the cup.

I explain to the crew all the work, planning and effort that went in to preparing that hole. I tell them about all the things they did to create this perfect hole. "Here we have a perfect hole with one 'wart' and what are our customers looking at?" If I am having trouble getting the crew to pick up trash on the course, I also point out how unlikely it is that every golfer will look at a piece of trash while every maintenance worker will miss it!

I bet you thought when you read the title to this that I was going to write about shade, mowing heights, nematodes and the like. And, in a way, I am except I am relating stresses to human relations.

Shade may be equivalent to poor communication, mowing heights to watching the clock, and nematodes to a general lack of vigor or attitude. When dealing with others, just like in turfgrass, it is important that we maximize the positive so that we can endure some of the negative.

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## Turf Aerator 686 (Model No. 686PT00686)

Engineered with an exclusive independent double axis design, this drop pin, tractor-drawn aerator is extremely responsive to turf undulations. Three independent coring heads follow the ground contour both vertically and horizontally over uneven turf conditions. You get deep penetration with twelve (12) 70 lb. castings spread across a 6½ foot aerating swath for those large turf area jobs. Tines are spaced 6 inches on center with a choice of five optional tines to meet your specific aeration needs. It's a simple process to change tines, too, with the inventive one-bolt tine locking system. Each tine is secured with only one bolt for easy installation and replacement of tines.



For highly compacted or unusually uneven grounds, optional rear weights are available. Unlike the traditional over-center line weight boxes used by other tractor-drawn aerators, the 686 cantilevers its rear weights behind each coring head which allows for increased penetration with less additional weight.

The Turf Aerator 686 comes standard with a hydraulic hand pump to lift the coring heads into transport position. An optional Tractor Remote Kit permits you to raise the aerator with the tractor's hydraulic system.

Choose Toro's Turf Aerator 686 for an effective, efficient means to aerate those large area turfs.



## Turf Aerator 96 (Model No. 96AER00096)

For smaller or heavily landscaped turf areas, Toro's Turf Aerator 96 will handle the job — tines down! You get deep penetration with seven (7) 70 lb. castings distributed over a 42" swath. Tines are secured with a simple, one-bolt locking system for quick and easy installation or replacement of tines. Slicing blades, closed coring tines and open spoons are the available coring options. The compact Turf Aerator 96 can be drawn by any 16-24 hp tractor with a Category 1, 3 pt. hitch.

## Turf Aerator 687 (Model No. 6873P00683)

The Turf Aerator 687 has all the design features of the Turf Aerator 686 except it is designed for use with tractors having a Category 1, 3 point hitch. This tractor-drawn aerator efficiently aerates your large turf areas at speeds of up to 10 mph while aerating a 78" swath in one sweep.

You save time changing tines with the unique one-bolt locking system which positively retains each tine. Tines are positioned every 6" on center with 8 tines per wheel. For varied aeration techniques, choose from slicing blades, closed coring tines or open spoons available in either 1/2" or 3/4" sizes.

No matter which aeration device you choose, you can be assured of deep penetration with twelve (12) 70 lb. castings. Furthermore, a patent pending coring head float system allows each set of four castings to float vertically and horizontally over undulated turf providing an effective aeration performance.

For those tough jobs, optional rear weights can be bolted at the rear of each coring head for even better core penetration.



## Optional Tines and Slicing Blades

Today, amongst turf care professionals and homeowners alike, aeration is considered a basic procedure to maintain healthy turf. Core aeration is most widely used. Core aeration uses various tine configurations dependent on soil conditions, compaction, and the specific results desired. Toro provides a choice in coring tines; both closed coring tines and open spoons in 1/2" and 3/4" sizes for all its Turf Aerators.



Another technique of aeration is "slicing". Slicing is often used as a "quick fix" for crusted soil, to break up relatively thin layers of clay and silt and to simply cultivate turf areas. Slicing permits cultivation of more difficult soil conditions, however the agronomic benefits are not as extensive as the results obtained through usual coring practices. Toro provides optional slicing blades for use with Turf Aerators 686, 687 and 96.

# Turf Aerator Specifications\*

## TURF AERATOR 686 (MODEL NO. 686PT00686)

|                        |   |
|------------------------|---|
| <b>FRAME</b>           | Heavy duty tubular steel.   |
| <b>CAST WHEELS</b>     | 3 sets of 4, each set moves vertically and horizontally. 70 lbs. (32 kg), 13" (33 cm) dia.  |
| <b>AERATING SWATH</b>  | 78" (198 cm)  |
| <b>TINES</b>           | Choice of 1/2" (12.7mm) or 3/4" (19 mm) Open or Closed tines, 4" (10 cm) slicing blades.  |
| <b>PATTERN</b>         | 6" (15 cm) on center, 8 per wheel.  |
| <b>HITCH</b>           | Drop pin, tow type with hydraulic cylinder for lift, hand pump std.   |
| <b>OPERATING SPEED</b> | 1-10 mph, (1.6-16.1 km/h)   |
| <b>LENGTH</b>          | 78" (198 cm)  |
| <b>WIDTH</b>           | 90" (229 cm)  |
| <b>HEIGHT</b>          | Approx. 40" (102 cm)  |
| <b>OPTIONS</b>         | Weights: 35 lbs. (16 kg) each, 2 maximum per coring head; set of 6 — Model No. 688WS00688, Tractor Remote Kit, Model No. 68-608-3521. |
| <b>SHIPPING WEIGHT</b> | 1420 lbs. (644 kg)  |
| <b>WARRANTY</b>        | 1 year limited warranty. (See owners manual for further warranty details.)  |

## TURF AERATOR 687 (MODEL NO. 6873P00683)

|                        |  |
|------------------------|--|
| <b>FRAME</b>           | Heavy duty tubular steel.  |
| <b>CAST WHEELS</b>     | 3 sets of 4, each set moves vertically and horizontally, 70 lbs. (32 kg), 13" (33 cm) dia. |
| <b>AERATING SWATH</b>  | 78" (198 cm)   |
| <b>TINES</b>           | Choice of 1/2" (12.7 mm) or 3/4" (19 mm) Open or Closed tines, 4" (10 cm) slicing blades.  |
| <b>PATTERN</b>         | 6" (15 cm) on center, 8 per wheel.   |
| <b>HITCH</b>           | 3 pt., Category 1.   |
| <b>OPERATING SPEED</b> | 1-10 mph, (1.6-16.1 km/h)  |
| <b>LENGTH</b>          | 48" (122 cm)   |
| <b>WIDTH</b>           | 82" (208 cm)   |
| <b>HEIGHT</b>          | Approx. 40" (102 cm)   |
| <b>OPTIONS</b>         | Weights: 35 lbs. (16 kg) each, 2 maximum per coring head; set of 6 — Model No. 688WS00688  |
| <b>SHIPPING WEIGHT</b> | 1290 lbs. (585 kg)   |
| <b>WARRANTY</b>        | 1 year limited warranty. (See owners manual for further warranty details.)                 |

## TURF AERATOR 96 (MODEL NO. 96AER00096)

|                        |  |
|------------------------|--|
| <b>FRAME</b>           | Heavy duty tubular steel.  |
| <b>CAST WHEELS</b>     | 7, 13" (33 cm) dia., 70 lbs. (32 kg), 3" (7.6 cm) thick; easy mount roll pin every other hole. |
| <b>AERATING SWATH</b>  | 48" (122 cm)   |
| <b>TINES</b>           | Choice of 1/2" (12.7 mm) or 3/4" (19 mm) Open or Closed tines, 4" (10 cm) slicing blades.      |
| <b>PATTERN</b>         | 6" (15 cm) on center, 8 per wheel.   |
| <b>HITCH</b>           | 3 pt., Category 1.   |
| <b>OPERATING SPEED</b> | 1-10 mph, (1.6-16.1 km/h)  |
| <b>LENGTH</b>          | 35" (89 cm)  |
| <b>WIDTH</b>           | 48" (122 cm)   |
| <b>HEIGHT</b>          | Differs with vehicle.  |
| <b>SHIPPING WEIGHT</b> | Approx 600 lbs. (272 kg)   |
| <b>WARRANTY</b>        | 1 year limited warranty. (See owners manual for further warranty details.)                     |

\*Specifications and design subject to change without notice. "Toro" is a registered trademark of The Toro Company, 8111 Lyndale Avenue South, Minneapolis, Minnesota 55420.

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# Computer helps ask the right equipment questions... and gives interesting answers

BY NORMAN ROBERTS

*Superintendent, South Course  
Sun City Center*

An earlier article by Steve McGinnis on computer-aided golf course maintenance scheduling indicated that a new element of the management program was being developed to help with equipment issues. He has moved up to manage the Big Cypress facility in Lakeland and I am now using the computer system he described, which now also helps to manage our equipment.

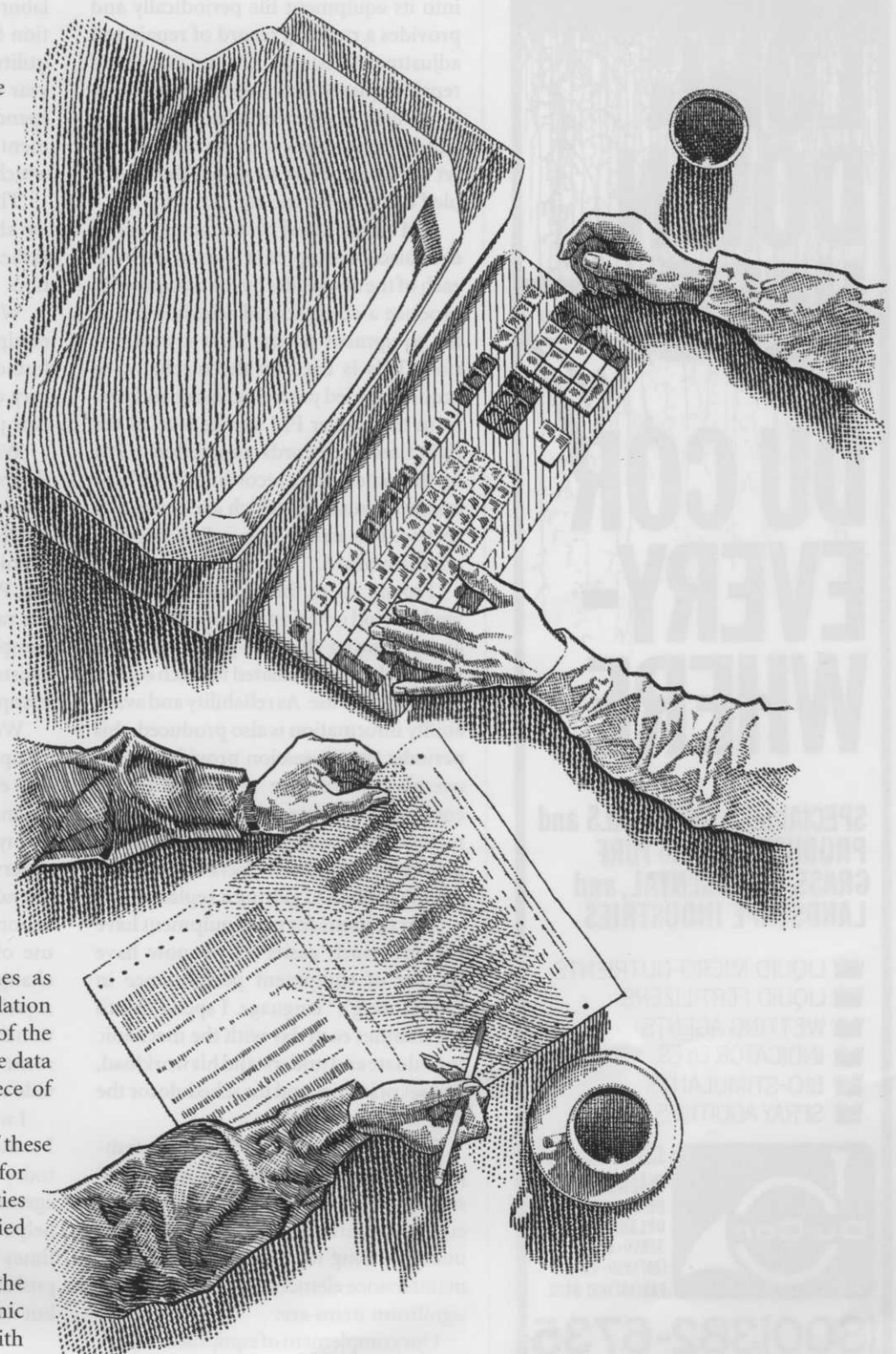
• Our consultant worked with us in gathering information about each piece of equipment we were using, such as:

- The date it was placed into service
- What we originally paid for it
- Where and how much was it used through out the year
- How much fuel did it use for an hour
- How often do we sharpen blades or replace tines
- What are the manufacturer-recommended periodic maintenances
- How much time and parts are needed to do PM
- What has been its repair history and cost.

Typical life/depreciation times as found in the National Golf Foundation and GCSAA studies for our area of the country were stored with the above data into a computer file for each piece of equipment by the consultant.

A book containing printouts of these files was provided to our mechanic for reference regarding the PM activities needed for all time intervals specified by the manufacturer.

A simple form was provided by the consultant for the operator, mechanic or myself to record any problem with



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## HEADS UP

***We are spending 35% of the value of our equipment each year on keeping it running, which is not very cost efficient.***

the equipment and for the mechanic to record the amount of time and parts needed to repair or make adjustments. This repair information is also entered into its equipment file periodically and provides a running record of repair and adjustment history. The uncompleted repair request forms (repair backlog) are kept on an equipment scheduling board which I review daily with the mechanic to set repair priorities to match the scheduled demand for the equipment.

PM needs based on the actual use of each piece of equipment is extracted from each of the above files by the computer to produce a consolidated schedule for all the equipment we use for a 4 week period. This is used by the mechanic to acquire needed parts in advance and perform the proper PM service level at the right time. He records completion of PM on this schedule by recording Hobb's, or odometer readings which are constantly reviewed to assure proper PM intervals are maintained.

I spend about three hours each four-week period entering repair activity data and reviewing the cost-per-hour trend results which is calculated for each equipment item we use. As reliability and availability information is also produced, this periodic system session provides me an overall performance review of all the equipment we use, where I can determine when it becomes too costly to keep a piece of equipment operating and begin the process of getting a replacement.

Our requests for new equipment have become much easier as we now have records of equipment performance in "accounting's" language. I spend five to ten minutes each day with the mechanic to evaluate and understand his workload, and set priorities and his schedule for the day.

This equipment data base, the computer and the consultant have developed some interesting information about our equipment situation which brings a new understanding to managing this course maintenance element. Some of the most significant items are:

Our complement of equipment if pur-

chased new today would cost over \$500,000. If sold today we would get less than \$200,000.

Our equipment R&M parts, labor, and labor burden (Soc. Sec., benefits, vacation & holiday, management, space and utility allocations, etc.) budget for the year comes to about \$70,000. We are spending 35% of the value of our equipment each year on keeping it running, which is not very cost efficient.

There are some equipment items that we should rent or contact for service, rather than own, due to their low utilization.

We have conducted some major equipment refurbishments and have found that some of them have not been very cost-effective when compared to a new procurement.

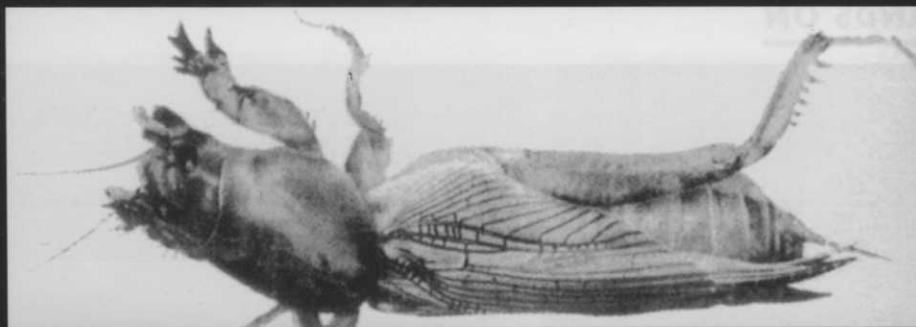
We are spending more labor hours sharpening equipment than either making repairs or doing PM.

We need just over 40 hours of mechanics' time each week to do sharpening, PMs and repairs at our present failure rates of obviously an old equipment complement. We have a mechanic and assistant on board, so we must have some manpower available.

We have used this computer-aided equipment management system for the past eight months, four months of start-up and tuning by Steve and four months by myself. As you can see from the above observations, we have a number of things to evaluate and resolve within my organization and with my management. Initial use of this system has produced some changes in my operation and educated myself and my management. An additional six months of use should firm up some answers and most likely will provide some new questions.

I was totally computer illiterate when I came on board four months ago, and today find the computer and the management system to be my friend. It is helping me get my job done in these times where we all are trying and being pushed to become more cost effective but maintain the quality of our results.

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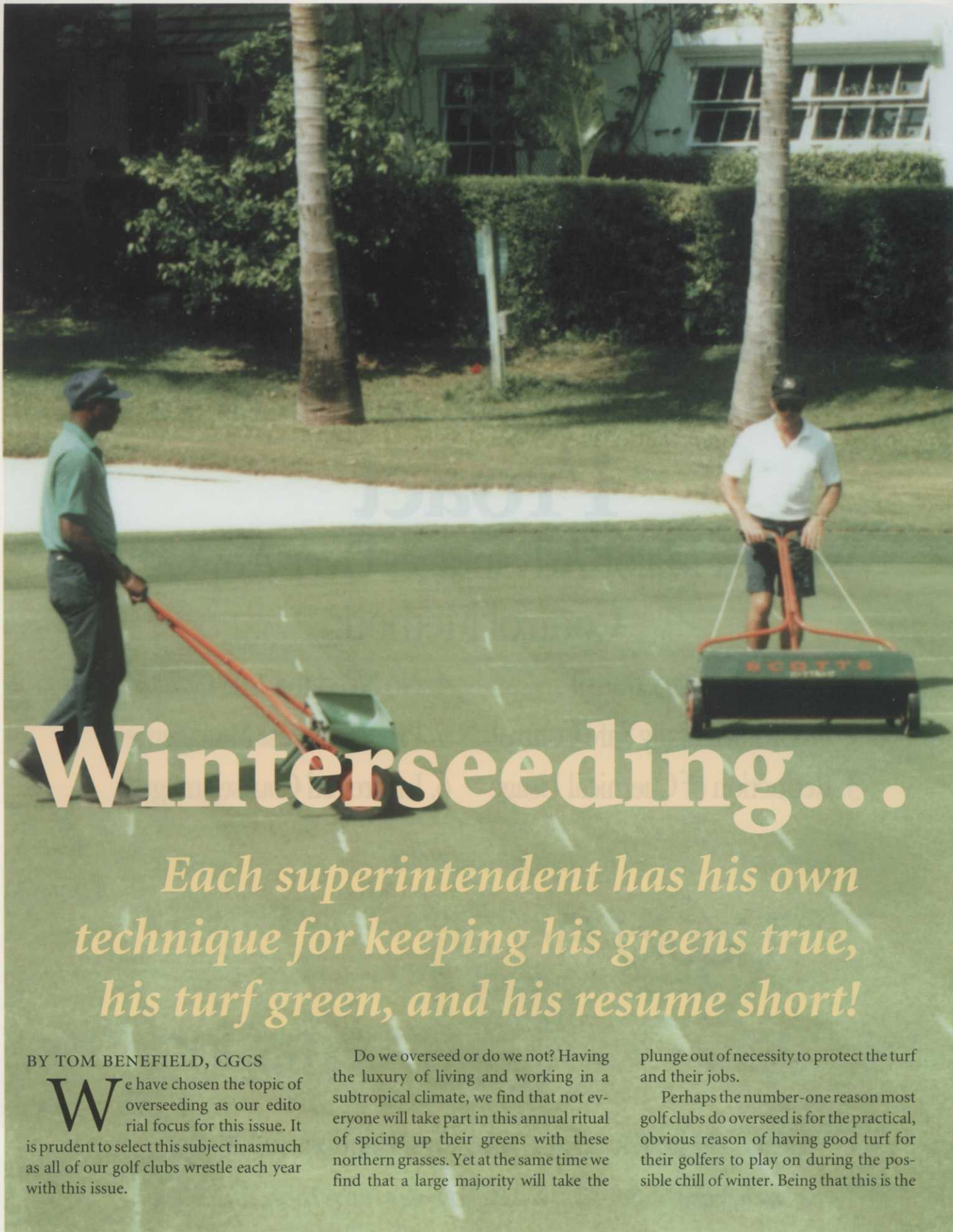
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# Winterseeding...

*Each superintendent has his own technique for keeping his greens true, his turf green, and his resume short!*

BY TOM BENEFIELD, CGCS

**W**e have chosen the topic of overseeding as our editorial focus for this issue. It is prudent to select this subject inasmuch as all of our golf clubs wrestle each year with this issue.

Do we overseed or do we not? Having the luxury of living and working in a subtropical climate, we find that not everyone will take part in this annual ritual of spicing up their greens with these northern grasses. Yet at the same time we find that a large majority will take the

plunge out of necessity to protect the turf and their jobs.

Perhaps the number-one reason most golf clubs do overseed is for the practical, obvious reason of having good turf for their golfers to play on during the possible chill of winter. Being that this is the