



# The Florida Green

SPRING 1982



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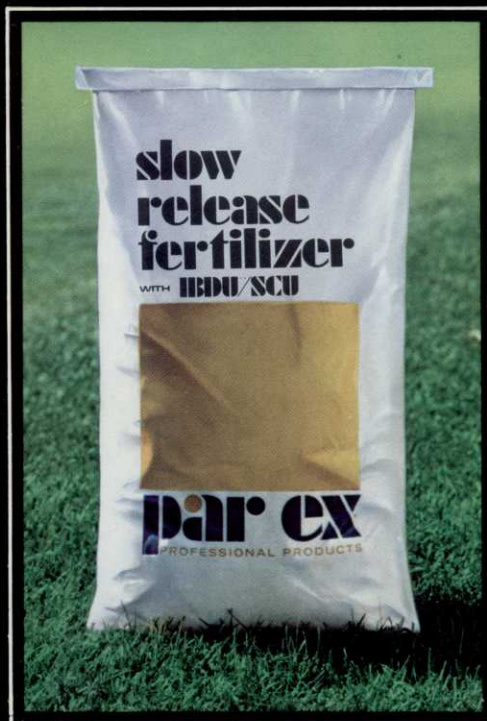
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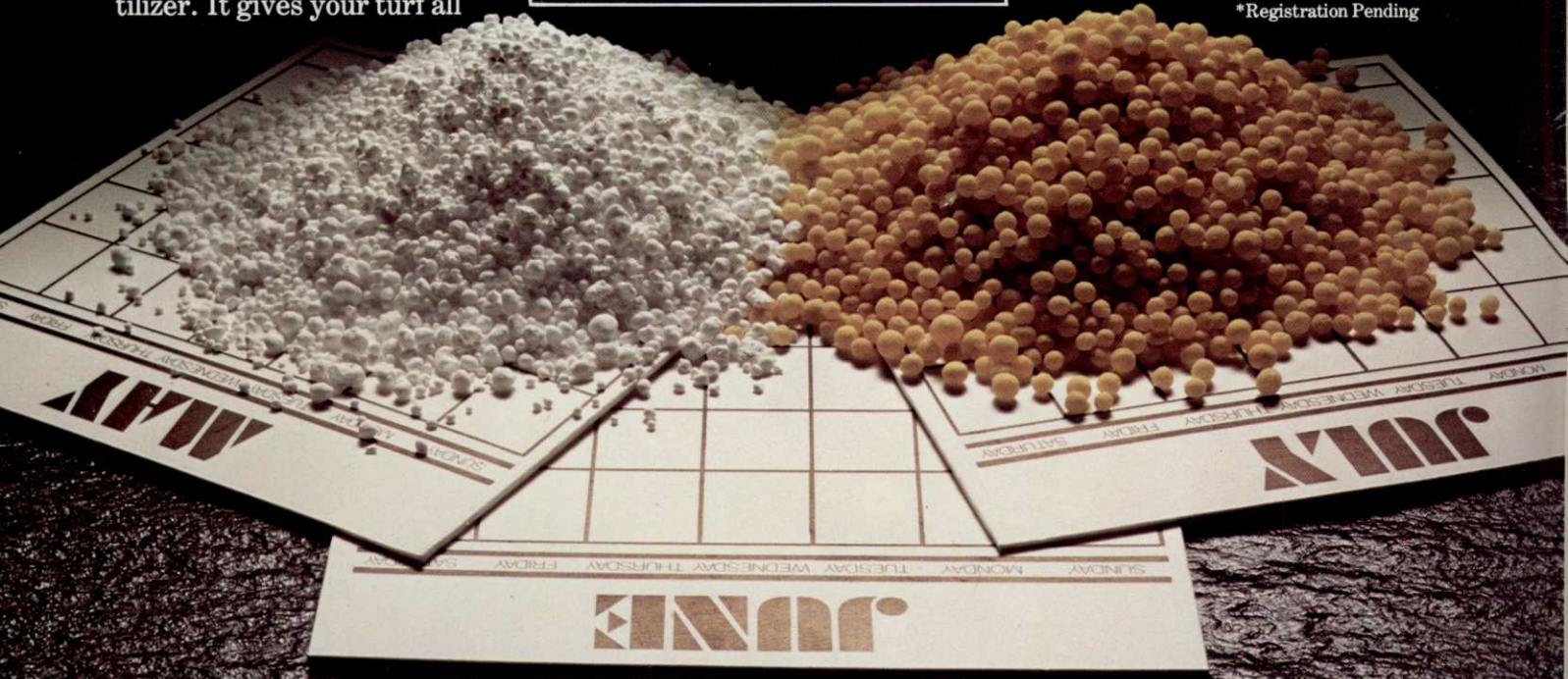
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## President's Message

Most times the subject matter for this message is difficult to come by simply because choosing the right topic is problematical. What do you say that will hold everyone's interest? What do you say that will be informative — enlightening — worthy of one's time? Today the problem is reversed — the issues are too numerous to cover properly but they are issues of such consequence that none can wait. So sit back and relax and read on — you may not like every word but, I encourage you to persist.

First and foremost, of course, is the election of John Hayden, CGCS, as a G.C.S.A.A. Director. For those who have not heard, John won with the highest number of votes ever recorded by a first time candidate. Congratulations to John, Chip Powell (John's campaign manager) and all those who helped in the action. We can feel assured that we will be represented.

Our golf team again performed as has come to be expected as they carried off the championship. Congratulations to Fred Klauk, Bill Whitaker, Dan Meyers, and Ron Hill. Not only do these gentlemen play the game of golf well, but they also serve as excellent ambassadors for our State.

Plaudits must also go to Fred Klauk and his committee which assisted in organizing and conducting the G.C.S.A.A. golf tournament. It was the largest ever (both men and women) and was acclaimed by all as a colossal success. Fred's committee was comprised of Butch Singo and Jim Ellison from the Central Chapter, Dan Meyers from the West Coast Chapter, and Kevin Downing and Tim Hiers from the Palm Beach Chapter.

Much praise is given to Larry Kamphaus for the excellent condition of the Disney World courses. No one could ask for better facilities. All would go for naught if the playing surface was inferior.

If you did not go to the G.C.S.A.A. Turf Conference and Trade Show in New Orleans you missed an excellent opportunity to learn, to view, to observe, to refresh, to acquaint, to renew, and to familiarize yourself with the past experiences of some, the future desires of others, the present state of affairs, the comparable situation of your near and far neighbors, the newest equipment and merchandise, and of course the inner workings and intricate mechanisms that make our organization tick.

The Florida Turf Grass Association is launching a drive for research funds which **MUST** and **WILL** be a success only if you understand it, get behind it, and contribute to it.

Congratulations go to Dan Jones, Dave Bailey, and all those who contribute to our award winning publication. What an outstanding year for the *Florida Green*!

And of course as this is being written (middle of February) we are in constant negotiations with the South Florida Water Management District regarding the water crisis, our impact on it and the Environment and, conversely, its impact on us. By the time you receive this article you will have been informed as to the content of their use restriction matrix.

Put this all together and what do you have? A profession that is worthy of support. A profession that places a burden on everyone. A profession that is demanding. A profession that is also rewarding and very gratifying. Unfortunately this is also a profession that provides the opportunity to garner a great deal without ever paying your dues. And I'm specifically pointing a finger at those who partake, and quite often criticize, but never reciprocate with objective participation. Sit back and enjoy the results of other labors; share the benefits of other experiences; play golf at the finest facilities, but don't be concerned about the education program; read the finest trade magazine, but don't be an active part of your association — in fact don't even belong to any superintendent's group and you still are able to reap most of the ripe harvest.

I trust I am preaching to the segment that needs chastising, but I fear these words will only reach those who already care. To those I apologize. To those who are the target, wake up; take your hands out from under your butt; pull your head out of the sand; become tuned to the action around you. The profession of golf course superintendent is making steady progress. Look what you have going for you! G.C.S.A.A. is alive and running on all cylinders. I can sense a dynamic reformation taking place. Outstanding, competent staff implementing the desired programs of elected, dedicated officers is a combination hard to beat. Your state and local associations are governed by committed fellow superintendents. This magazine is YOUR excellent communication tool. Everything is being unselfishly done for you. Why don't you respond by becoming an active part? Join your local association, the state association, the national association, and also the Florida Turf Grass Association. Florida cast a block vote of slightly over 200 in the recent G.C.S.A.A. election — there is absolutely no reason why that cannot be 300 next year. Join now and don't anyone tell me they can't afford the dues — you cannot afford NOT to be a member of all those associations. You want to share in the profits? Then share in the costs! Come out of the barn, put on a coat and tie, put down the beer can, and stand up and be counted. At the South Florida Water Management District Governing Board Meeting held on Feb. 12, 1982, Mr. Robert Clark, Chairman, referred to us as PROFESSIONALS. Please let's look the part, let's act the part, let's BE the part, and let's BE it by the members. JOIN AND PARTICIPATE.!



*Bill Wigner*

# The Florida Green

The Official Bulletin of the Florida Golf Course Superintendents Association

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### ABOUT OUR COVER

GCSAA championship golf team with tourney host Mickey Mouse. For details see page 6.

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*Atlantis Country Club  
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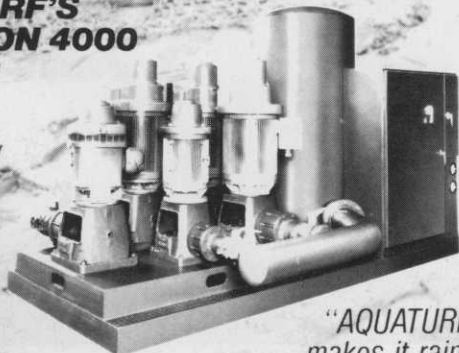
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# FLORIDA GOLF TEAM REPEATS AS NATIONAL CHAMPIONS

One of the most difficult things to do in any sport, at any level of competition, is for a defending champion to successfully retain the title. The Florida GCSA golf team did just that as they again won the GCSAA national team championship. Since the two day event was held at Disney World, Orlando, we were also the tournament host.

It was the third straight tournament in which a team from Florida came away with top honors. The 1980 champs were the Florida West Coast chapter. This year's foursome won their place on the team in three regional qualifying tournaments, and their names will be engraved on an antique silver trophy donated by the Scottish Golf Greenskeepers Association in 1972. The chapter championship, in which teams combine their three best scores, have been a GCSAA tradition since 1946. The winning team consisted of Bill Whitaker, CGCS, Palm Beach chapter; Ron Hill, CGCS, North Florida chapter; Fred Klauk, Palm Beach chapter; and Dan Meyers, CGCS, West Coast chapter.

Bill Whitaker was the first day tournament leader as his 71 paced the team to a six-stroke lead. The second day scores of Ron Hill and Fred Klauk with 74's and Dan Meyers 76 enabled the team to win by eight strokes over runnerup

Carolina GCSA. The third place honors went to the local Central Florida chapter. Their team consisted of Joe Ondo, Dennis Parker, and Jim Ellison who fired a 71 on the closing day.

In the net handicap division Palm Beach chapter placed second. They lost to the New Jersey GCSA because the Palm Beachers had to give away 52 strokes per day! The Palm Beach team consisted of Kevin Downing, Jack Cunningham, Mark Henderson, and Jim Watson.

Individual honors were won by Mike Apodaca, Horizon Country Club, Belen, New Mexico. His great second round of 69 left the runnerup six strokes back, and our own Ron Hill seven off the pace. Apodaca, who had been among the top finishers in the past four GCSAA tournaments, finally claimed the top prize, a silver replica of the U.S. Open Championship Cup donated in 1954 by the USGA.

Next year the tournament will be held in North Carolina during February. We will be back to defend our two consecutive titles. But if the 14th club in the bag needs to be a snow shovel we may not be the pretournament favorite. ■



*Fred Klauk fired a solid 74 on the final day.*



*Dan Meyers carded a pair of 76's to aid team.*



*Lefty Bill Whitaker posted a first day 71 for medalist honors.*



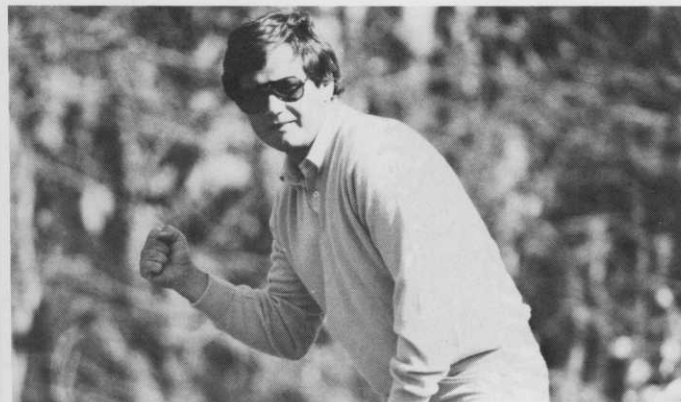
*Ron Hill carded 74-74, placing him third in a field of 270 players.*



Individual tourney winner Mike Apodaca coasted to victory with final round 69.



Ron Hill drew the attention of GCSAA headquarter staffers Diana Green and Larry Goldsmith.



Jim Ellison had the hottest putter on the final day. His 71 paced the Central Florida chapter to third place.



Fred Klauk used high finish and so did the team!

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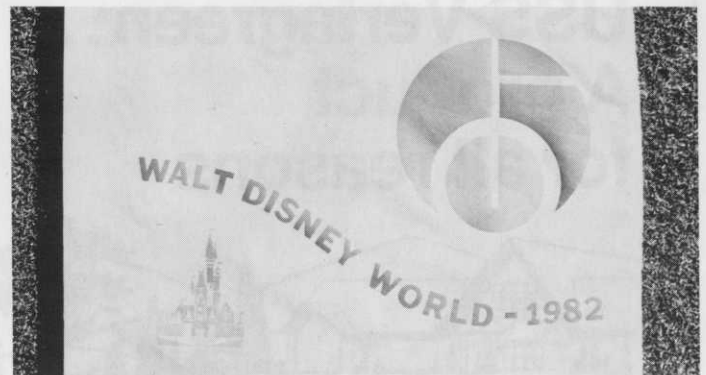
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Two time individual champ Dan Meyers will be ready in the future.

## Liquid Ag System Helps Support University of Florida Turf Program

By BRUCE J. AUGUSTIN  
Extension Turf Specialist

The University of Florida's Agricultural Research and Education Center in Fort Lauderdale has received a gift from Liquid Ag Systems Inc. to help support the turf program. Through the kindness of Max Brown and Ed Darlington, a Liquid Ag Spray applicator was donated to help keep the University of Florida's Turf Program at the leading edge of turf technology.

The Liquid Ag Spray Applicator is a portable, platform-mounted system that can be placed in a truckster for spraying. The Applicator features a 100 gallon spray tank with a centrifugal pump and 5 HP Honda engine. Almost any type of tank mix can be sprayed through the single floodjet nozzle in widths up to 20 feet.

Liquid Ag Systems Inc. will also be providing various liquid fertilizer mixes for research purposes. Drs. Snyder and Augustin are currently using a special minus nitrogen mix for a study involving irrigation and nutrient leaching.

Industry support is vital in keeping the University of Florida's Turf Program at the leading edge of Technology. Generous tax deductible gifts and grants help build a vibrant and responsive program that can meet the needs of the turf industry in Florida. ■

## Hayden Praises Florida Superintendents

Dear Fellow Superintendents,

Florida's professional image shown brightly in New Orleans. Your part in this well-oiled machine produced a resounding victory for us all.

We have just begun our recognition on a national level. Now they will know there is a place called "Florida". From the magazine article, to the golf tournament, thru the election it was a class act.

It could not have been accomplished without all of you!


Let's not let this unity die here. We need to keep in touch! Let me hear from you with your ideas and your concerns so that I might be able to help on a national level.

I appreciate the vote of confidence that you have bestowed on me. I will strive to represent you to the best of my ability.

Sincerely,

John P. Hayden, CGCS

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# 149 Golf Courses Open in 1981 13% Increase Over '80 Figure

Although the nation's economic situation remained troublesome, 149 golf courses opened for play in the United States during 1981, according to research by the National Golf Foundation.

The 149 openings reflect a 13 percent increase over the 132 reported in 1980.

There were 12,894 golf courses in the United States as of January 1, 1982, according to NGF statistics.

The leading states reporting course openings in 1981 were Florida with 26; California 10; Texas 9; Arizona and Michigan, 8 each; Minnesota and Wisconsin, 6 each; and Colorado, New York and South Carolina, 5 each.

The 10 above-named states accounted for 59 percent of the total new course openings.

For the second straight year, Florida emerges as the nation's runaway leader when combining course openings, construction starts and prospects. The Sunshine State had 84 in 1981 and 76 in 1980.

Other leading states in order are California with 30 projects; Texas 20; Colorado 15; Arizona 14; Minnesota 12; Wisconsin 11; Michigan and Georgia, 8 each; Oregon 7; and South Carolina, Idaho and Virginia, 5 each.

The only states not reporting some activity in golf course development during 1981 were Alaska, Delaware, Rhode Island and South Dakota.

A further analysis of new course development during 1981 reveals the following:

- About 78 percent of the new private course openings in 1981 were a part of planned real estate developments. Fifty-six percent of the new daily fee facilities were also associated with land development ventures.

- Almost 40 percent, or 58 of the 149 courses opening were additions to existing facilities.

- Sixteen percent (18 executive courses and six par-3's) of the openings were short courses. For some years this percentage has ranged between 12 and 15.

- Of the 118 new construction starts in 1981, 53 were additions to existing facilities. Thirteen percent were short courses.

- Forty-nine percent of the 1981 course openings were privately-owned daily fee operations, 34 percent were private and 17 percent were municipal facilities. For 1980, the percentages were 41 daily fee, 41 private and 16 percent municipal.

For more comprehensive analysis of golf course development in the United States in 1981, the information sheet "What's Happening in Golf Facility Development" (GC-1982) is available free from NGF headquarters. ■

## Ellington Joins Lakeshore Equipment

Samuel K. Ellington has joined Lakeshore Equipment & Supply Co., Elyria, OH, as seed and fertilizer manager for the central southern portion of the United States.

A graduate of Centenary College, Shreveport, LA, the Atlanta-based salesman has worked all his life in the seed industry. After serving for two years in the Air Force, he has worked in sales and management capacities for companies including Northrup-King and Sunbelt Seeds.

Lakeshore Equipment & Supply Co. markets a complete line of grass seed for southern and northern turf. Through LESCO Products and Lakeshore's subsidiary Ag Industries Mfg., Lakeshore manufactures and distributes turf fertilizers including 100% Sulfur-Coated Fertilizer, a line of controlled-release fertilizers. ■



## Your Sand Man

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# OVERSEEDING

By NEIL KALIN  
Pembroke Lakes G.C.

Here at Pembroke Lakes Golf Club, overseeding has been a tradition for the past seven years. As the cold weather invades our tropical climate, usually in December and January, those superintendents that overseeded win the hearts of their green's committee chairman, golf professionals, members, and are deemed 'heroes' in turf management. However, there is the other side of the coin when hot/warm weather persists through the so-called 'cool season', the overseeding undergoes stress and a percentage of the seed is lost. Heroes of the past are quickly turned upon and become the center of criticism around the local country clubs.

Our profession has yet to find methods to alter Mother Nature and no one can predict cold or warm weather, consequently I am left with the opinion that overseeding is an inexpensive insurance policy which guarantees a quality putting surface whether it is for the member of an exclusive private club or a visiting tourist playing at a public facility.

Winter overseeding generally takes place between November 20 and December 7 here in South Florida. The practice of overseeding is actually the seeding of cool season turf grasses into warm season turf grass species. In South Florida the warm season species is Bermuda grass. There are numerous cool season turf grass varieties and blends. As to the specific variety or blend to be used for overseeding, golf clubs generally go along with the recommendation of their superintendent and/or golf course consultant. Cool season turf grasses commonly used for overseeding include the Blue grasses, Bent grasses, Fescues, and the Rye grasses. It is important to note that each Genus has a wide range of species, all of which have varying characteristics which make them favorable and adaptable to a wide range of environmental conditions. Once a variety or blend has been selected, the amount to be used is calculated and the seed is ordered from a local seed distributor.

It is best to have the seed delivered at least 30 days prior to the overseeding date. This enables the superintendent to check seed germination, noxious weed content, etc. The seed should be stored on pallets in a cool, dry, dark room. There is a wide range of equipment used during overseeding and all equipment should be properly serviced and checked two weeks before the overseeding date.

On an 18 hole facility, remaining open for play during the overseeding, the entire procedure takes approximately 2½ days (10 hour days). Communication/coordination between the golf course superintendent, golf professional, starter and with the assistance of a productive golf course maintenance staff, overseeding is performed smoothly with little distraction to the everyday member/golfer.

The seed is spread on a green that has been previously verticut. This method allows the seed to 'get down in' and of course provides protection for the seeds. Cyclone spreaders are calibrated and used to distribute the seed in a uniform manner. The green is seeded in at least three directions so that uniform seed distribution is achieved. To avoid seeding beyond the edge of the green (collar), a drop type Gandy spreader is used on the perimeter of the green. A blend used at Pembroke Lakes dictates using approximately 30 lbs. of seed for every 1,000 square feet of putting green surface. After seeding the green, the entire surface is moderately top dressed with 70/30 sterilized top dressing. The green is then fertilized with a super phosphate fertilizer (this enhances germination). The green is now ready for drag matting. The seed, soil, and fertilizer material is drag matted in a clockwise and counter direction to provide uniform distribution of the three ingredients. Irrigation of the green follows drag matting.

Water is the single most important ingredient to a successful overseeding program. Too little water can be just as ineffective as too much water. Light syringing of the green on a regular basis during daylight hours is most important. This enables the seeds to remain moist during sunlight hours and this ultimately enhances germination. Each green is sprayed with fungicide the day after seeding to protect the new seeds from the threat of disease. After germination, the green is sprayed on a preventive maintenance program at seven to 10 day intervals.

After overseeding, the green is mowed (without the baskets) every other day until seed germination is visible. Germination takes place from three to 21 days depending on the variety used. By hand syringing (watering) each green three to four times daily, the blend used at Pembroke Lakes Golf Club takes approximately four to six days for germination. Once germination is evident, mowing is stopped and the green is fertilized with 25 to 30 lbs. of Milorganite per 1,000 square feet. Hand watering is continued on an as needed basis throughout the entire winter season. After the initial germination, the green is cut at 3/8ths of an inch. As the grass matures and becomes 'stiff' the height of cut is lowered in increments of 1/64th of an inch. The lowest cut used at Pembroke Lakes is 15/64ths of an inch. Overseeded greens require close observation and attention and are watered, fertilized and sprayed with fungicide on a regular basis. At the end of January, the green is lightly top dressed to hide ball marker blemishes and this also helps to smooth out the mature putting surface.

Overseeding is a challenge, and there is no textbook method outlining the steps for a guaranteed overseeding program. With cooperation from Mother Nature, a good irrigation system and desire for quality putting, overseeding can be very rewarding. ■



# “Welcome to the South’s next great winter golf green.”

— Howard Kaerwer, Director of Turf Research at Northrup King’s Research Center

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When Howard isn’t in the lab he’s on the links talking to superintendents, conducting field experiments and collecting new grass samples to bring back for testing.

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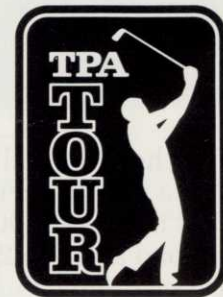
# The Palmer Overseeding Method

Arnold Palmer and Jim Ellison, Bay Hill's Superintendent, are very careful when choosing an overseeding mixture. Some of the world's top golfers have played at Bay Hill in Orlando, and they've come to expect certain standards.

To help maintain the Bay Hill image, Palmer and Ellison use Marvelgreen. And so do some other prestigious courses:

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- Hounds Lake Golf Course, SC
- Port Royal Golf Course, SC
- Augusta Country Club, GA
- Jekyll Island Golf Course, GA
- Marshwood at the Landings, GA
- Amelia Island Plantation Golf Course, FL
- Killlearn Estates Golf Course, FL
- St. Andrews of the Gulf, MS
- Eden Isle Country Club, LA

Marvelgreen is also being used at the TPA TOUR Tournament Players Club, Ponte Vedra Beach, FL, Allan MacCurrach, Agronomist; Dave Postlethwait, Superintendent.



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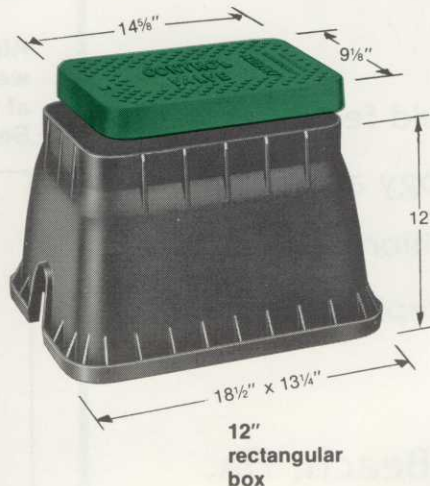
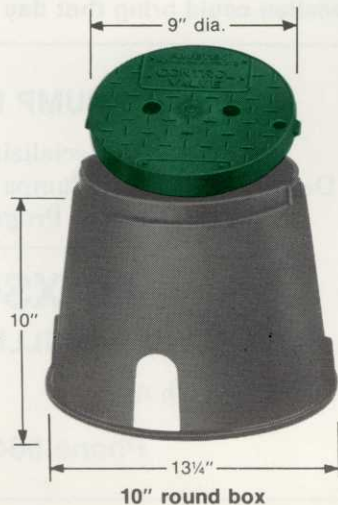
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## Permit Denial May Be Omen For Florida Golf Courses

By JAMES CALLAGHAN

The St. Johns River Water Management District has rejected the City of Sebastian's request to pump water from the Floridian Aquifer into a lake used to irrigate the city's municipal golf course. The district's main concern was that the high salt content of the Floridian water could have an adverse effect as it percolates into the shallow aquifer — the source of drinking water for many north Indian River County residents.

County Commissioner, Grover Fletcher, objected to the city's request because it was not in the public interest, nor was it a reasonable use. He further cited that the use of irrigation should not be used to foster the image of green vegetation for its own sake, be it elaborate landscaping or a golf course fairway. He said that *the game of golf should not have priority over human consumption.*

Mr. Fletcher has a valid point. And as more public officials become aware of today's water use requirements of Florida's golf courses, more water use permits may be denied. The State's denial for Sebastian's permit may indeed be an omen for golf course superintendents throughout Florida. We may have to bite the bullet and accept the fact that golf is played on grass and not the lush greenery that has become commonplace during the last two decades. And we will be responsible to educate our club's officials to this new fact of life.

The SJRWMD also noted that the city did not file a surface water management plan that shows how the golf course can be designed to trap rainwater for use in irrigation which may eliminate the need for wells. Now the newly built golf course may need to be restructured to channel surface water more effectively into irrigation lakes.

After the fallout from the recent drought, the days of high water use for golf courses in Florida may become a practice of the past. The action that the State took with the City of Sebastian could bring that day sooner than we realize. ■

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# Treasure Coast "Tide"ings

By JAMES P. CALLAGHAN  
Riomar Country Club

The unusually cold winter during the previous four years have prompted over 85% of the Golf Course Superintendents along the Treasure Coast to overseed their greens this year. The unpredictable weather patterns continued when area superintendents initiated their recent overseeding programs.

With the majority of superintendents in Martin, St. Lucie and Indian River Counties choosing the first week in December to overseed, they were confronted with a week of extremely cold weather during the germination period. In turn, the next three weeks brought unseasonably mild and humid conditions that encouraged vigorous competition from the bermudagrass and prevented a hardening off of the overseeding before the onset of the record cold temperatures that were recorded in mid-January.

By mid-February, another abnormal mild spell was into its fourth week. Many superintendents reported that since the bermudagrass was doing so well, they changed their cultural practices towards maintaining it rather than the cool season grasses.

Although the trials and tribulations induced by the weather persisted, most superintendents claimed that their overseeding programs fared relatively well. And they further commented that they would continue to overseed in the future to prevent "being caught with their pants down during cold weather."

## Ryegrasses Dominate

Most Treasure Coast superintendents rely on a blend of seed consisting predominately of perennial ryegrass in their

overseeding mixtures. Ryegrasses have proven successful in the past and many choose to stick with it. Some superintendents have incorporated bentgrasses, in part or whole, in their overseeding programs. This year they reported poor survival due to the hot and humid conditions, but stated that the bentgrasses resulted in superior putting conditions in years past.

However, the plurality of supers in this area bank on ryegrass to magnetize the golfer's eye to their greens. Today's golfer has been programed to see green and the ryegrasses seem to be the best species to transfer that actuality to his eye. Because of its extensive leaf area, adaptibility to close mowing, and disease resistance, ryegrasses have demonstrated desirable characteristics needed to insure success in overseeded greens. Ryegrasses also provide better wear properties that are not found in other cool season varieties.

## Similar Methods But Different Choices

Almost all superintendents in the Martin, St. Lucie, and Indian River County area utilize the same methods to execute their overseeding program. Greens are verticut lightly, seed is dispersed, topdressing applied, and incorporation of seed into soil profile by dragging. The first mowing takes place after the seedlings have reached better than 1/4" in height.

Although most superintendents practice the same methods in planting their overseeding, just as many have different choices when it comes to exactly what type or species of cool season grasses to use. Ross Saylor, superintendent of Stuart Yacht & Country Club reported that he applied Penncross at the rate of 4 lbs./1,000 ft.<sup>2</sup> in early November. He verticut and topdressed his greens one week prior to overseeding. Application of seed was made with no further topdressing. Greens were mowed for one full week without catching, resulting in smooth transition.

Both Sid Saloman IV of Indian Pines and Lonnie Stubbs of Sandpiper Bay Resort chose Lesco's CBS blend using 30 lbs. and reported favorable results. Lonnie overseeded two weeks earlier, around November 15, and stated germination was good since he beat December's cold snap.

Another favorable report was from Dodgertown where Bill Moolenar went with a blend of Jamestown (fescue) and Yorktown (perennial rye). Bill stated that there was good germination even during the cooler weather and is sold on the blend's outstanding appearance characteristics.

(Continued on Page 29)



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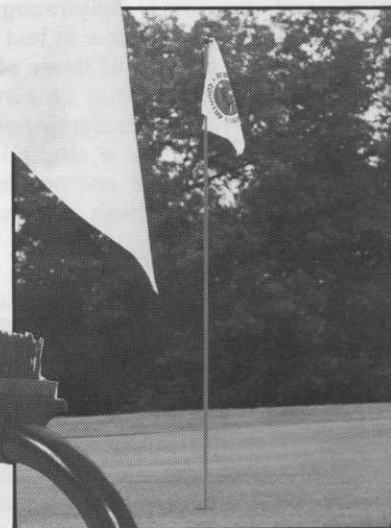
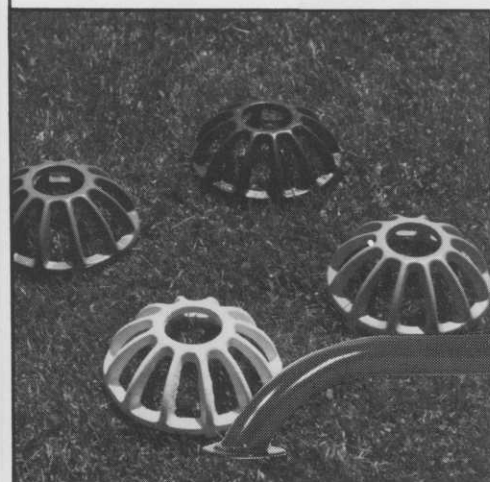
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## Study Shows Phenoxies Are Healthy

If you want to know what effects a chemical has on humans, doesn't it make sense to study a large group of people who have had close contact with that chemical for a long time?

That's exactly what has now been done to answer questions about the effects of 2,4,5-T and 2,4-D on human reproduction. Thanks to the cooperation of members of the National Agricultural Aviation Association, and members of their families, and to some fully-recognized scientists who conducted the study, we know at last that heavy, long-term exposure to either or both of those phenoxies has no effect on the incidence of abortion or birth defects. All of the details of this complete, professional study are now available. They actually show a slight improvement on both scores — live birth and normal babies — among the persons with long-term high exposure to phenoxy herbicides.

This exhaustive, scientific study stands in sharp contrast to the idiotic "investigations" at Alsea, Oregon, on which EPA based its 2,4,5-T action.

This new study has messages for all of us, the most important being: Rescind the ban on 2,4,5-T, fire anybody who had anything to do with the promotion of the Alsea fiction, especially those in EPA, and base future regulatory actions only on fact and science.

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Super showman, Al Hirt, entertained guests of Rhone-Poulenc Inc. at his Bourbon Street night club. The Rhone-Poulenc "Chipco 26019 New Orleans Jam" event took place during the GCSAA's 53rd International Turfgrass Conference and Show, held in New Orleans recently.

## "New Generation" Ryegrass Becomes Available

ALBANY, OREGON, March 1982 — Prelude a "new generation" turf type perennial ryegrass has recently been released. The announcement came from Steve Tubbs, general manager of Great Western Seed Company, a division of Lofts Seed, Inc. Bound Brook, N.J.

Developed by Lofts from breeding material obtained from Dr. C. R. Funk of Rutgers University, Prelude is part of the "new generation" in improved ryegrasses. These new varieties are a significant improvement over the top-performing varieties heretofore.

Among the improvements being shown in this "new generation" are: better shade performance, superior heat tolerance and winter hardiness, and good disease resistance to crown rust and brown patch.

One of Prelude's advantages is its superior mowing performance, particularly during hot months when other common perennial ryegrasses mow poorly. This feature makes it particularly appealing to golf course superintendents and groundskeepers. Prelude is expected to serve the overseeding market well as a low-growing, fine-textured ryegrass with a dark green color.

Prelude will be available in ample supply this fall through Great Western (503) 926-3892 or any Lofts branch or distributor. ■

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# Golf Industry Focuses On New Orleans During GCSAA Conference, Show

A near-record number of golf course superintendents, club officials, educators, industry representatives and other turfgrass professionals participated in the 53rd International Turfgrass Conference and Show sponsored by the Golf Course Superintendents Association of America here Jan. 30-Feb. 5.

Registrations for the week-long conference totaled 7,467, just slightly less than last year's record-setting conference in Anaheim, Calif. More than 19,000 visitors passed through the turnstiles of the turfgrass trade show, the world's largest display of golf course maintenance equipment, products and services, during its three-day run in New Orleans' Rivergate Exhibition Center. The 1982 Show featured more than 3-1/2 acres of displays by 212 golf - and turf-related firms.

The large turnout was especially gratifying to GCSAA officials, who noted that in a recessionary year when most national conventions and trade shows are averaging a 12 percent decline in attendance, GCSAA's activities continue to be well-attended.

The conference keynote address by golf commentator Jim McKay attracted a near-capacity audience of more than 2,000, and two innovative water educational sessions drew as many as 1,000 listeners at a time. The United States Golf Association's annual Green Section educational conference Feb. 3 also attracted more than 700 registrants.

GCSAA members elected James A. Wyllie, CGCS, superintendent of Bayview Country Club, Thornhill, Ont., to serve as 1982 GCSAA President. Robert W. Osterman, CGCS, The Connecticut Golf Club, Easton, was elected Vice President; Paul Boizelle, CGCS, The Onwentsia Club, Lake Forest, Ill., was reelected to a two-year term on the Association's Board of Directors, and John P. Hayden, CGCS, San Jose Country Club, Jacksonville, Fla., was elected to a three-year term as a Director.

Wyllie named James W. Timmerman, CGCS, Orchard Lake (Mich.) Country Club, to serve as 1982 Secretary-Treasurer, and Richard V. Slivinski, CGCS, superintendent of golf courses for the city of Phoenix, Ariz. to fill the remaining year of Osterman's term on the board.

Among the Conference highlights was the Thursday night banquet and Show. At the time, the President's gavel was formally passed to Wyllie from outgoing President Michael R. Bavier, CGCS, Inverness Golf Club, Palatine, Ill. Also honored at the banquet were outgoing Director Edward Dembnicki, CGCS, Arcadian Shores Golf Club, Myrtle Beach, S.C. and Past President Melvin B. Lucas, CGCS, Piping Rock Club, Long Island, N.Y., whose term on the board has ended.

Alexander M. Radko, who recently retired as national director after almost 30 years with the USGA Green Section, was honored during the banquet for his service to superintendents and the game of golf. Radko was presented with an engraved platter and a tam-like cap traditionally worn by Scottish greenkeepers.

Conference and Show activities concluded Friday morning with a management tour of the 95,500-seat Louisiana Superdome. The Superdome, which has housed two Superbowls, the Sugar Bowl and the Duran-Leonard World Boxing Championship under its 9.7 acre roof, was toured by more than 200 conference participants.

As GCSAA's 1982 Conference and Show passes into history, the golf and turf industries begin to focus on Atlanta, site of the 1983 Conference. The Georgia World Congress Center there will house the 1983 Show and education sessions. The Association's annual preconference golf championships will be played at Arcadian Shores Golf Club and Myrtle Beach National Golf Club, both in Myrtle Beach, S.C. ■



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# IN PRAISE OF ZOYSIA

By FRED V. GRAU

Zoysiagrass was little more than a botanical curiosity fifty years ago. Twenty years later it was featured in the August 1953 National Geographic magazine and in LIFE magazine. Public interest was phenomenal. It offered the homeowner a natural easy way to fight crabgrass in sunny lawns in the "crabgrass belt" which divides North from South turf systems.

The "perfect grass" either does not exist or has not yet been found or developed. Quite likely it will never be found. In the meantime zoysiagrass comes close to the ideal for many people and for many situations. From the nation's capital to St. Louis and Kansas City the popular Meyer (Z-52) zoysia is increasingly in use on home lawns and golf course fairways. Its ability to tolerate close mowing is in evidence at the Naval Ordnance Lab on New Hampshire Ave. (suburban Maryland) where the original putting greens that were planted to Meyer zoysia in 1950 are still in play. At one-quarter inch height of cut they provide satisfactory putting surfaces all year. In the winter the golfers putt on "browns." There are similar putting surfaces in play in the Philadelphia area. When I was asked to recommend the grass for the putting surfaces at N.O.L. in 1949 I asked, "What are your criteria?" "Low-cost maintenance, minimum water, minimum labor requirements, minimum fertilizer and growth," was the answer. When I specified zoysia many of my contemporaries scoffed. "Bent is the only grass," they railed. As a result we now have had 30 years of low-cost maintenance on satisfactory putting greens/browns. They might not pass a stimpmeter test for a major championship but people like them. They meet current specs for economy in labor, water use, pesticides and weed control. Color changes with the seasons.

Zoysia lawns in Washington, St. Louis, Kansas City and other "transition-zone cities" are conspicuous in winter. The golden brown hue is refreshing. In summer these lawns are at their best when heat and humidity take their toll and diseases and stresses render bluegrass and fescue limp and weed-infested. Zoysia is not the perfect lawngrass but it is way ahead of whatever is in second place.

Many of my golf course superintendent friends are quietly proud of their success with Meyer zoysia that provide almost perfect fairway turf for their members. The first full fairway to be planted to zoysia was done in 1950 by the Mid-Atlantic superintendents and our crew from The Green Section. Fairfax C.C. was the site. Planting methods ran the gamut from sprigs to plugs to seedlings to sod strips. It was a pioneer learning effort. Much has been learned since then. Mel Anderson at Laurence, Kansas, is pleased because he can mow it closely without fear of injury. It requires hardly any irrigation and very little fertilizer. Weeds are minimal. Golfers love it. The color changes with the seasons and turf quality is at its best when the most golf is played. The grass meets current specs for ECONOMY.

There will be other zoysia cultivars, most better in some respects than Meyer. Like Merion Ky. bluegrass, Meyer is a

pioneer. Merion is being supplanted by better bluegrass cultivars but its place in turfgrass history is secure. Thus it is with Meyer only it will take longer.

There will be zoysia turf established from seed. We grew zoysia seed at Beltsville and sent it all over the U.S. Seedlings also were shared with golf clubs and with experiment stations. Mechanical and chemical treatment will help zoysia seed produce turf faster.

Zoysia is a grass with infinite variability and tremendous potential. Japan has used zoysia for years on lawns and golf courses. We've been slow to accept it because it changes color with the seasons. As "BROWN" becomes more acceptable so will zoysia gain in acceptance. Don't sell this grass short. It has a bright future even though it isn't for everyone and every situation. It does meet ECONOMY guidelines.

The name Meyer was given to the Z-52 selection to honor Frank H. Meyer, U.S.D.A. plant explorer, who searched for grasses in the Orient and sent zoysia seeds to the U.S. His body was found in a canoe floating down the Yellow River in China. ■



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# Fire Ants Get Taste Of Amdro

For the first time since 1977 the Animal and Plant Health Inspection Service branch of USDA participated with affected states last fall in an important fire ant aerial control program. There were no control programs in the intervening years because in 1978 EPA canceled registration of the only area-wide fire ant control product available — mirex — and did not register a new product — Amdro — until August 19, 1980.

“USDA was involved in extensive field testing of Amdro and the results have exceeded all expectations,” says Bobby Smith, assistant secretary for marketing and transportation services. “We are very pleased with the 98% effectiveness of this chemical under most conditions,” he says.

Seven states originally planned to participate in the cooperative control program on a 50-50 cost-sharing basis: Alabama (135,000 acres), Georgia (376,000 acres), Louisiana (37,500 acres), South Carolina (25,000 acres), and Texas (400,000 acres). Texas and Louisiana backed out of the program because they couldn't get geared up in time or had money problems, thus keeping the gate open for the fire ant's westward move.

## Ground Applications

Two other affected states, North Carolina and Mississippi, elected to conduct ground or hand application programs. North Carolina treated 2500 acres with ground equipment and Mississippi distributed 1-pound bags of the new bait to the public. Treatments were made the last week of September through the second week of November with efficacy readings scheduled to be made eight weeks after treatment.

Smith says USDA participation in fire ant control is limited to providing relief to farmers, landowners and other residents in the infested areas. USDA matches state funds put up for fire ant control and also provides technical assistance in bait application.

The Amdro registration is, so far, conditional. It is used with soybean oil and corn grits in a bait that worker ants pick up and feed to the queen. When the queen dies, other ants in the mound soon die too.

The red imported fire ant (*Solenopsis invicta*) was introduced into the United States from Brazil between 1933 and 1945 near Mobile, Alabama. It rapidly infested other states. In 1950 the ant was primarily in Alabama and Mississippi. By 1962 it had spread into Texas and into Georgia. By 1976

the infestation included 190 million acres from North Carolina to Texas. Today, some 230 million acres are infested. The fire ant has the potential to spread into areas of the United States where the temperature does not fall below 10°F.

## Vicious Sting

The explosive spread of the fire ant was greeted with much alarm. Although it looks like an ordinary red ant, the fire ant is aggressive and has a vicious sting when disturbed. Human health reactions to ant stings range from discomfort to infection to death.

Colonies of ants build large dirt mounds in yards, playgrounds, cemeteries and pastures, making use of the land hazardous. Smith says the ants can injure livestock, their mounds damage farm equipment and farm workers often refuse to enter fire-infested fields.

In 1957 Congress enacted legislation creating provision for a joint federal-state fire ant control program.

The discovery of Amdro goes back to 1975 when American Cyanamid chemists developed a new series of compounds that were found to be slow acting stomach insecticides, according to Calvin Alvarez, marketing manager, technical chemicals, American Cyanamid Company. After evaluating more than 500 different compounds, the most promising of them were sent to USDA testing labs in Gainesville, Florida and Gulfport, Mississippi where they were tested against the imported fire ant. One compound, designated AC 217,300, was determined to be the most promising candidate, Alvarez says. It was later named Amdro.

## Complex Chemical

Amdro belongs to a totally new class of compounds known as amidinohydrazones, according to Alvarez. They're not like chlorinated hydrocarbons such as mirex and DDT. They're not like the organophosphates or carbamates either. The chemical structure is much more complex than mirex and consequently more expensive to manufacture, he says. The company's performance data show that a 4-gram-per-acre application rate (formulated on corn grit) gave an average of 92% reduction in the number of ant mounds.

Amdro is environmentally acceptable, according to Alvarez, and its rapid breakdown, insolubility in water and failure to build up in the environment are extremely important and very encouraging, he says.

(Continued on Page 25)



(Continued from Page 24)

A combined environmental assessment and final impact statement concerning 1980 Amdro treatments in the six treated states is now available. According to B. Glen Lee, staff officer for USDA-APHIS, "An environmental assessment was completed at the time the conditionally registered material, Amdro, was being tested and we found that the material would not have a significant effect on the quality of the human environment." He continues, "Analysis of the environmental components collected from areas treated with Amdro during two years of field testing as reported in the environmental assessment indicates no residue in soil or vegetation because of the application of Amdro."

According to Lee, plans for another program this year are yet to be determined. ■

## Fire Ant Pheromone Found

Identification of the pheromone that red imported fire ants lay down for trail identification may enable scientists to devise more practical controls for this pest. Scientists at Texas A&M University first identified the pheromone, called alloxanthrene, and then succeeded in duplicating it in the laboratory.

"Use of a species-specific attractant with a bait has been shown to increase the effectiveness of the bait in controlling a target species," says entomologist S. Bradleigh Vinson, Texas Agricultural Experiment Station. "We are studying control methods for *Solenopsis invicta* using this pheromone as the attractant so only this particular ant will take the bait," Vinson says. "Non-species-specific baits using chlorinated hydrocarbons have proven ineffective in controlling the spread of this species," he says, adding that "there is some evidence that such baits have even hastened the spread of this species of ant by eliminating competing species."

It was in Vinson's experiment station laboratory that Howard J. Williams, research chemist, succeeded in identifying and duplicating the pheromone. Vinson says previous research has shown that fire ants are so sensitive to the chemical scent of their pheromone that they can follow it even when it intersects other fire ant trails.

The secret to this ability is that each trail is laid down in a different concentration. While most of these fall in at about a 500 picogram (a picogram is one trillionth of a gram) per centimeter level, Vinson says that the ants can detect the chemical at even lower levels.

"This sensitivity to the trail pheromone should enable us to devise a bait that will attract this species of ant, and only this species," Vinson says.

The researchers have also identified the brood pheromone (triolein) of the fire ant and hope to devise a control that will attract the ants to the bait, which they will carry back to the nest. It will kill the ants there as well as those bringing the bait in. ■

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# Palm Beach Trade Winds



By MICHAEL BAILEY  
Boca Greens Country Club

Which came first, the seed or the egg? If it was the egg, one can sure bet the evolution was a lot easier compared to the seed. The evolution of quality overseed in the turf industry has been complex and tedious. If one only thinks of buying some grass seed and throwing it over the lawn to make it green, then it is quite simple. However, when one thinks of minimal mowing height, density, texture, disease resistance, drought and wear tolerances, color, and —oh yes — putt-ability, the seed becomes a little more complex.

Have you ever wondered where in the world do all those finute (fine and minute) seeds come from? There are few geographic locations in the United States that are climatically favorable year round for such seed research and production. An area of the country with the most consistant weather is in the northwest, generally Oregon. Their weather can best be described as a humid mesothermal climate of the marine west coast, meaning the region is blessed with cool winters and mild summers. Remembering an automobile bumper sticker that once said "cars never fade here, they just rust way", it is common for yearly rainfall to average 38 inches. This cool, moist climate with nutritious soil can readily be a heaven for such overseed demands.

Phil Gardner and Keith Longshore of Lakeshore Equipment and Supply Co. recently had the opportunity of flying over the valleys of various seed production. The most favorable of all is the Willamette Valley of approximately 80 miles wide and 120 miles long that is protected from the east and west by mountain ranges. Longshore states "I was most impressed with the breathtaking beauty of the valley tucked between the mountains with such vastness of fields upon fields of beautiful green turfgrass".

From the air the production seems so simple. However, settling down to the roots, one finds many people devoting decades to research and development. A theoretical seed of an established name and label actually has years of development tucked under its cotyledon.

The seeds of crosses are taken from parent plants of ideal characteristics. Test plots are grown on 2½ foot centers with as many as 2000 repetitions. After evaluating an entire season of growth, as little as 20 plots are then selected for continuing research. After four or five years of continually growing out the desirable plots, an evaluation is made for a possible product. Cultural evaluations consist of two primary factors. Plots are either clipped at turf heights to simulate a golf course's need, or let grow to a natural height to evaluate seed yield. A plot must not only be desirable from a turfgrass manager's point of view, but the seed yield must be great enough to economically support the cost of production. The seed yields can play an important factor relating to cost and supply of the demand. The average seed yield is approximately 400 lbs/A, however Dr. William Meyers of Turf Seed Inc. has noted the best ever yields that have almost reached 3,000 lbs/A.

The time of seed harvesting is perhaps the key to all the work of a season. In the early morning the seed is harvested much like the skill of any vegetable grower. The seed can shatter later in the day when the plant is drying from the sun. If the seed falls, all is lost. However, premature harvest of the seed will also result in less volitale seeds.

The quantity of seed yield is not as important as the quality. Yield trials are conducted of desirable plants to evaluate the product. This consists of as many as 350 "miniature fields" of a repetition. A yield trial is a row of four, with the outer two rows being the barrier or protector to the middle two rows. The inner two rows consist of more evenly dispensed sunlight and more equal amounts of fertilizer. After the plots have grown out, the stalks are cut and the seeds are then counted for quantity and quality. A germination test is conducted to test for the amount of annual flourescence within the stand. This procedure involves allowing the seedlings to germinate and initiate roots. The young seedlings are then placed under an ultraviolet light. Annual rye-grass roots will cast a pale white glow, whereas the per-renials do not cast a glow, which can prove to be an important test for the quality of your seed.

Once a yield trial has been grown and harvested, the crop is burned off to eradicate the amount of stems and accumulated thatch material. The plots are then regrown for

*(Continued on Page 27)*

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Boca Raton

(Continued from Page 26)

several seasons until the most desirable product is finally found. If a seed is believed to merit production, planting on a large scale is performed. The seeds are planted in the fall within lots which average 40 acres, but can range as high as 100 acres. The seeds are applied with a drill type machine that drops the seed into the ground. Immediately following, in the same process, a narrow strip of charcoal is sprayed over the row of soil to purify the seed from a proceeding massive application of Karmex at a rate of 3 lbs/A to eradicate all other undesirable weeds.

During the period of germination until harvest, much work is involved with hoeing of the rows and applications of herbicides. Longshore states, "I was most impressed with the cleanliness of the fields and the manner of professionalism within the crews." Round-up is applied from a large spray tank pulled by a tractor, with individual hand guns of five to six rows at a time. Employees walk through the fields to spray out any undesirables. Fertilizer applications average a total of 4 lbs of N/1,000/yr. Relatively few pesticides are applied. Mother Nature seems to be very kind to this region of the country as the weather generally provides for an ideal harvest.

The growing season comes to a climax around mid-summer as harvest usually occurs in July. The process begins with the swathing of the seed which is the cutting of the seed stalks. Timing is critical as moisture from the dew must be present in order to keep the seeds intact. This is usually done from 8 p.m. to midnight and then restarts from 6 a.m. until 9 a.m. or when the dew begins to dry just past sunrise. The combining of the seed or the picking up of the material is then performed during the dry period of the day which occurs approximately from 11 a.m. until 7 or 8 p.m.

The seed material, once harvested, begins the final process of being cleaned. This involves four (4) major processes, whereupon the final results produce bags upon bags of pure seed material. Stage one of the cleaning process involves sizing sieves or large types of screens which remove most all foreign matter. Approximately 80% of the material left is of pure seeds. An air stream process is then used for removal of dust and fragments of plant matter resulting with just only seeds to be processed. A series of indents then picks the seeds into regions of desirable and undesirable seeds. A gravity table is the final process. This consists of tables that shake the seeds of heavier and larger particle

sizes from those of lighter and smaller sizes. The final result produces the desirable material which stays in the middle.

From here, the ultimate step is the certification of the seed. Dr. William Meyers can best describe the certification as "the added insurance to the customer that he is getting the genetic quality of what the breeder developed." The certification program of the State of Oregon is one of the foremost, thorough and most respected in the country. Under the program, an average of 120,000 acres per year are monitored. Oregon produces 75% of all grass seed nationwide.

Theoretically, the seed is the beginning of all. However, if you're beginning is to start on the right track, one must employ the best research and development. We, as turfgrass professionals, must be aware of the best products available and produce the ultimate product within our means. ■

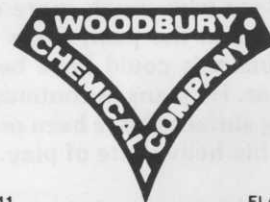
## LOGO BORROWED

We want to thank the Miami Valley Golf Course Superintendents Association for the use of their mast head. It is being used for the North Florida Chapter. "Divots" is the monthly newsletter of the Miami Valley G.C.S.A. Special thanks goes to Richard Boehm, C.G.C.S. and all the other fine folks in Ohio. ■

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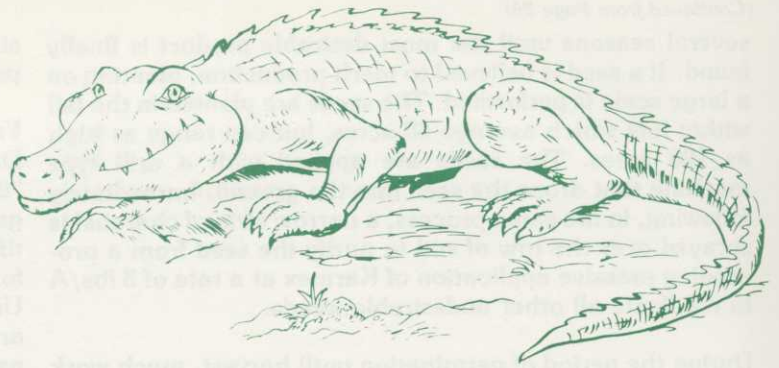
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# The Gator Growls

By DAN L. HALL JR.  
Imperial Golf Club



## **Port Charlotte C.C., Port Charlotte, FL** **Bob Sanderson, C.G.C.S., Superintendent** **Bob Yates, Assistant**

November 16, 1981:

Tifgreen greens — Triplex mowed at 3/16" daily.

Seed — 60% CBS - 40% Pennfine Koban treated at 20 lb./MSF.

Method — Pre-seeding mechanics are completed at least 60 days prior to overseeding due to extremely heavy play. Bob feels he needs some Bermuda cushion to enable his rye to survive more than 350 players per day on relatively small putting surfaces. Broad spectrum plus pythium fungicides are applied three to four days prior to seeding.

Seeds are applied with cyclone spreaders and top dressed with pure medium sand and matted in once by regular dragmat. Greens are syringed at 6 a.m. - Noon - 7 p.m. daily and not mowed until the seventh day. Height is raised to 5/16" for two weeks and lowered to 1/4" until Jan. 1, then down to 3/16" for the season.

No specific pythium controls except treated seed are used at seeding but weekly applications of broad spectrum fungicides plus 3 ozs. of Aqua-Gro are applied using Daconil 2787-Fore-Thiuram 75 alternately applied.

A custom fertilize mix, 8-1-7, is applied by-weekly to put down 2 lbs. N<sub>2</sub> per month. Once monthly, chelated iron is mixed with a fungicide application at 4 oz. FE/MSF. The custom mix is also high in minors and trace elements.

Bob says the addition to his seeding of the CBS has given him a better surface with much more durability than the Pennfine alone used in the past; there has also been less fungi problems, but this could have been due to weather conditions this year. He plans to continue this program next year as his putting surfaces have been more consistent than past years under his heavy rate of play.

The rye is scheduled for removal about March 15 by greens-airing and heavy verti-cutting plus topdressing; mixing the medium sand with cores and then matting in well. Water will be reduced accordingly and regular verti-thinning on a weekly basis begun. This program has been highly successful in the past on Pennfine, and Bob is anxious to see if the same results hold true for the CBS addition.

## **Cypress Lake C. C. - Ft. Meyers, FL** **David Moote, Superintendent** **Will Gordon, Assistant**

November 16, 1981:

Tifgreen greens mowed with triplex at 1/4" daily.

Method — Usual pre-seeding procedures were used prior to seeding. The green height was raised to 5/16" the week preceding and double verti-thinned and mowed at time of seeding. The seed was put down with cyclones and top-dressed with a 70/30 mix matted in together twice over with a regular steel mat.

The greens were fertilized with 2# N<sub>2</sub> from fine IBDU and syringing done three times daily at 5 a.m. - Noon - 5 p.m. for three weeks. The greens were cut daily at 5/16" during this period with walking Series V mowers. The greens were fertilized with 17-1-10 and fertigation 11-0-6 to apply 2½ N<sub>2</sub> per month, bi-weekly.

Fungicide applications are made bi-weekly using broad spectrum fungicides and no specific Pythium controls have been used to date. After 30 days, about Dec. 15, the mowers were lowered to 1/4" and on Jan. 25 to 3/16".

Due to proposed green re-building the Bent mixture will be cultivated as long as possible with the work hopefully underway by May 15.

Triplex verti-thinning will begin April 1 to maintain a desirable putting surface and David plans to reduce the usual cutting height as the Bermuda becomes the dominant greens turf.

## **Imperial Golf Course - East Course - Naples, FL** **Dan L. Hall Jr., Superintendent** **Mark Black, Assistant**

December 2 & 3 - December 28:

Tifdwarf greens - Triplex mowed daily at 5/32".

Seed — Sabre Variety - Poa Trivialis - 5 lbs / MSF - 2 split seedings.

Method — Due to severe rootrot problem, Rhiz Solani, these greens were under frequent cultivation and were being grown in as if newly sprigged. The last major aeration

(Continued on Page 34)

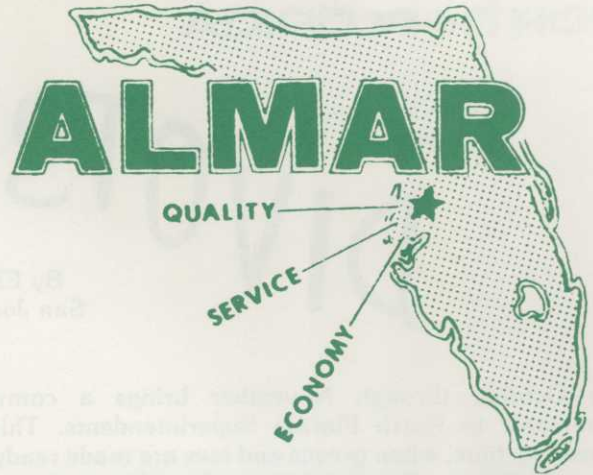
(Continued from Page 18)

At Riverbend C. C., Joe Snook commented on poor and spotty coverage with Medalist 7. He said that he heard of similar reports and would not use it again since he has received far superior results in the past with other mixtures.

Tom Burrows, superintendent of Turtle Creek Club in Tequesta, was another one of the few superintendents contacted who overseeded with straight bentgrass. Although he had excellent coverage through January, the competition from the bermuda the following month crowded out his Penneagle "drastically".

At John's Island, the south course was overseeded with 5 lbs. Sabre and 4 lbs. Emerald / 1,000 ft.<sup>2</sup> and the north course substituted Penncross for Emerald at the same rate. The team of Adam Yurigan, Lee Van Valkenburg and Chuck Calhoun reported that the bentgrasses never reached maturity and its decline is being investigated by a local research laboratory. They also commented that in order to aid germination, a heavy application of Milorganite and topdressing containing charcoal are utilized to darken greens resulting in better heat absorption on sunny days.

Most Treasure Coast superintendents agree that overseeding is here to stay as an integral part of their maintenance programs. And they have accepted the fact that a little bit of luck in timing and cooperation from mother nature are needed for successful overseedings. ■



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## NORTH FLORIDA

# DIVOTS

By EDDIE SNIPES  
San Jose Country Club



Early October through November brings a common denominator to North Florida Superintendents. This is overseeding time, when greens and tees are made ready for winter conditions. One might say that this is the most critical time of the year for a superintendent and his crew.

In order to gain an accurate insight into overseeding in North Florida, a survey was compiled and sent to 23 superintendents throughout the North Florida Chapter area. Of the 23 surveys sent, there were 17 responses. Gentlemen, I thank you sincerely for your time and effort.

The information from the survey has been put into a chart. This will enable us to compare responses and draw some conclusions that promote good overseeding programs. Responses will be listed 1-17 and questions I-VII. Here is a list of the seven survey questions:

I. When do you usually purchase your seed for

overseeding?

- II. What type of seed did you purchase for your: Greens? Tees? Fairways?
- III. What were some reasons for buying the seed you did? (price, seed characteristic, color, putting ability, etc.)
- IV. On what dates do you generally overseed and why?
- V. Was your seed tested by the state and what were the results?
- VI. Do you use any special mechanical technique during overseeding?
- VII. Any comments about your 1981 overseeding program?

### RESPONSE

	I.	II.	III.	IV.	V.	VI.	VII.
1.	Early Summer	Perennial; Common Rye; None	Price; Seed Characteristics	Nov. 1st; 1-2 weeks before Invitational	No	No	Should overseed last of October
2.	June 15	Marvel green sabre; common; none	Test	Oct. 5; beat cold weather; post pre emergence	Yes; good	No	Overseeded early; helped program; very good this year
3.	June-July	Marvel green 3+1; Premier; none	Putting quality; promptness of delivery	Nov. 1-7; Tournament dates later October	No	Verticut two ways; topdress seed; do not mow for two days	Experienced washdown of seed from bad weather. Next year overseed last Oct.

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## RESPONSE

	I.	II.	III.	IV.	V.	VI.	VII.
4.	July-August	Creeping bent grass & sabre Perennial Rye; None	Putting quality; better fall transition	Oct. 10-15; quicker germ- ination; use lower seed rate	Yes; 90% to 95% good	None	Good transition, wear tolerance below accept- able, 100 rounds a day
5.	120 days prior overseeding	CBS; Annual Rye; None	Price; recommenda- tion	Nov. 2nd week	Yes; good	Pray a lot day overseed; go to church	Worst overseeding effort
6.	1st of Summer	Premier; Lucern; None	no real difference new perennial ryes	Middle Oct. Play too heavy afterwards	yes; found poa in Lucern	Verticut heavy; cut close; seed 3 ways; top dress heavy; drag a lot; water often	Greens & tees okay; rough heavier next year
7.	June-July	Marvel green supreme; annual rye; none	price; putting quality; color; availability	Nov. 1st; ground temp dropped significantly	Yes; 90% germ	No	None
8.	October	CBS, Common; None	Good combina- tion coverage	Last Oct. 1st Nov. Good results	No	Seed 4 direc- tions; drop on cyclone spreaders	None
9.	July	Marvel green; ---; ----	mowing ability	Last Oct; better germination	Yes; as label	No	None
10.	September	Marvel green supreme; 70/30 blend perennial- annual; none	Price; recommenda- tions	Oct. 25th; good results	Yes; good	No	Very satisfactory
11.		Blend of Penn- fine, Yorktown & Manhattan; annual; none	Price; color; availability	Oct/Nov; 63 holes each course 15 days apart, before 1st frost	No	No	Drought and early cold hampered
12.	Spring	Premier/sabre; lucern; none	no real prefer- ence ryes; sabre green finer texture	Nov. 1st; fits tournament	No	Drag seed in turf close	Early bad weather, still successful
13.	June None	Marvel green 3+1; Lucern; hardiness	Price, color, general ahead of cold	Oct. 3rd week germinate  weather	No	verticut light few days before overseeding	Didn't get over- seed third week December, had to reseed some greens
14.	As soon as possible	Northrup medalist 6 brand annual/ perennial mixture; None	Like previous results	Oct 15-Nov 15; Soil 60° or below	Yes 3% above guarantee	Not cut greens 4 days before seeding	Allowing greens to grow up before seeding, prevented washing away of seed & sand
15.	Jan.-Feb.	Premier sabre; Perennial; None	Supplier provides good seed at fair price	Oct. 11-18; Plan over- seeding dates when no tournaments scheduled	Yes; good	None	First frost Nov. 14, glad went early
16.	October	Common rye; Perennial; None	Recommenda- tion from distributor	Oct. 20-Nov. 20;	No	None	Germination excellent
17.	August 1	Marvel green; Perennial; none	Fine leaf texture	Nov. 1	No	None	None

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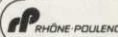


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(Continued from Page 28)

was Nov. 9th consisting of plug removal and heavy top-dressing with 3/4 yd/MSF of a medium coarse sand matted in until the 5/8" holes were filled. Bi-weekly alternating applications of Fungicides from Chipco-Terrizole and a mixture of Daconil and Dithane had been applied since Sept. 1.

On Nov. 30 & Dec. 1, the greens were verti-thinned in two directions, matted with a steel mat and mowed at 5/32" the day of topdressing with a 90/10 mix which was then matted in with a carpeted mat. After matting all greens they were fungicided with Terrizole at 6 oz. and 8 oz. wetting agent/MSF.

Seeds were applied with a Gandy drop spreader and matted into the dressing with a carpeted mat. Syringing was begun that PM with 2 or 3 heads of the 4 or 5 around each green for 1 RPM of each sprinkler. This was done daily at 6 a.m. - 10:30 a.m. - 2:30 p.m. and 6:30 p.m. No other greens irrigation was done. Greens were not mowed until Dec. 6 then at 1/4" with no baskets. We began to remove Sabre clippings on Dec. 8 and syringing was eliminated. The East 18 was closed from Nov. 30 until Dec. 10. Mowing height was lowered to 7/32" on Dec. 10.

Fungicides, both broad spectrum and Pythium controls were sprayed bi-weekly alternating the materials used. Wetting agent and liquid minor elements were added at each spraying to apply 4 oz. of each/MSF. This program continues.

At the last cultivation, 2<sup>3</sup>/<sub>4</sub> lbs N<sub>2</sub> from fine IBDU was applied and no plant food was added until Dec. 28 when Milorganite at 3/4# N<sub>2</sub>/MSF was applied with the second seeding using cyclone spreaders after lowering mowers to 3/16". The seed and Milorganite were twice matted in with a carpeted drag and greens were cut two days without baskets. Pax - Ex 17-1-10 at 1<sup>1</sup>/<sub>2</sub># N<sub>2</sub>/MSF was applied on Jan. 4 and 3/4 lb N<sub>2</sub> from Milorganite on Jan. 28. We anticipate lowering the mowers to 5/32" on Feb. 15 and greens have been double-mowed each Mon. and Tues. since Jan. 8.

We plan on reducing the Sabre by weekly verti-thinning with triplexes about March 1. The results this year indicated we must increase the Sabre to about 8 lbs/MSF this next season. Heavy play and unusually warm weather has caused the Tifdwarf to thin our Sabre in cupping areas on the smaller greens, especially so since Jan. 15. I feel the heavier rate will prevent this happening again. Since we only need the insurance for 8-10 weeks each year our opinion is the added Sabre will give us the same results, rather than adding the more costly Bents to the mix.

This has been an excellent winter on the West Coast to have skipped overseeding, but not being clairvoyant, it was a good gamble when you have Tifdwarf and/or extremely heavy play.

**Quail Creek C. C. - Naples, FL**  
**Lloyd McKenzie, Superintendent**  
**Bob Shevlin, Assistant**

**Nov. 12 & 13 1981, Greens; Nov. 16, 1981, Tees.**  
**Tifgreen - Walker mowed daily at 3/16"**

**Seed - Greens - 2# Penncross - 4# Sabre/MSF**  
**Tees - 20# Derby-Caravelle mixed**

**Method - Normal pre-seeding mechanicals were done. Greens and tees were double verti-thinned and mowed one week prior to seeding and repeated the day of seeding. Seed was put down with cyclones from two directions with each variety, and matted with a carpeted drag. Syringed for two days for five minutes per head four times daily. Topdressing was applied lightly using a 80/20 mix not matted in two days after seeding. Irrigation continues on Dec. 5.**

Fungicide was applied using Subdue at recommended rates two days prior to seeding. Both Pythium preventatives and broad spectrum preventatives were applied weekly and alternated in their applications.

A starter fertilizer was applied the week prior to seeding. Applied 1# N<sub>2</sub> from Scotts 18-24-6. Alternate applications are made with 29-3-3 and 22-0-16 to apply 1# N<sub>2</sub> one month. Minor elements have been added to all fungicide applications along with wetting agents at 1<sup>1</sup>/<sub>2</sub> oz./MSF.

Irrigation cycles since germination have depended on weather varying from 5-10 minutes per day mostly in early evenings.

Greens were not cut for five days then at 5/16" for 16 days, then to 1/4" for four days, then to 5/32" to the present.

Approximately April 15, we plan to reduce irrigation, verti-thin, reduce feeding. Then coring at 1/2" on about May 1 with heavy verti-cutting to break plugs for mixing with a sand topdressing to facilitate the complete transition.

Lloyd plans to increase the Sabre rate from 4# to 6#/MSF to establish the turf a little more quickly, plus he feels the Bent is considerably slower in giving a putting surface early in the season.

**Pelican Bay - Naples, FL**  
**Roger Whitford, C.G.C.S., Superintendent**  
**Bob Bittner, Assistant**

November 16, 1981:

Tifdwarf greens - Mowed with walkers at 3/16" daily.

Seed - Penncross Bent at 4# plus Sabre at 7#/MSF

Method - All pre-seeding mechanics were completed prior to seed time.

Kerb is applied to the slopes and collars to prevent any seed germination, and only the putting surface is seeded. Fungicides for broad spectrum and Pythium were applied the preceding week and 10 days prior an 0-20-10 at 6#/MSF was applied.

Greens were verti-thinned two directions and mowed. Seed was applied for three laps with drop spreader around the surface perimeter and with cyclone spreaders inside the laps. The greens were then topdressed with a 70/30 mix and matted twice with a carpeted mat.

The greens were syringed by hand twice daily at 10:00 a.m.

(Continued on Page 35)

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and 1 p.m. for four weeks plus one syringe cycle per night at 1/10" water/acre.

The mowers were raised to 1/4" and cut daily, then lowered to 3/16" after the third week.

Due to traffic and the warm weather a second seeding at one half the earlier rates was applied to thin areas Dec. 28 and carpet matted to achieve a uniform surface.

Plant foods have been applied along with fertigation to maintain a ratio of 2 1/4# N<sub>2</sub> and 1# K<sub>2</sub> per month since seeding.

Fungicide prevention is applied bi-weekly or oftener if conditions warrant.

Tees were seeded with a mix of 70% Annual and 30% Perennial ryes.

No special preparations made for tees except starter fertilizer Koban treated Rye seed was used.

Roger expects to begin removal of the over-seeding approximately April 15 by restricting water and triplex verti-thinning plus an application of soluble N<sub>2</sub>.

Pelican's greens since its opening have had excellent winter overseeding using the Penncross and Sabre mix and Roger's members have been extremely happy with this program; Pelican will stay with this formula for 82-83.

**Hole-In-The-Wall - Naples, FL**  
**Lou Edwards, Superintendent**  
**Ron Watson, Assistant**

November 30 and December 1, 1981:

Tifgreen — Mowed with walkers at 3/16" daily.  
Seed — Medalist VII - Koban Treated  
Application — One seeding at 25#/MSF  
Method — Greens sprayed with Pythium controls one week prior to seeding. Verti-thinned with triplex two directions. Spiked in four directions and mowed at 3/16". Seed applied with cyclone type spreader and two laps inside green with 36" drop spreader and matted with carpeted drag.

Topdressed with 80/20 soil mix at 1 1/2 cu. yds. per green - avg. at 5000 sq. ft. each.  
Greens syringed 5 mins. each cycle at 6 a.m. - 10 a.m. - 2 p.m. and 6 p.m. for 10 days. Greens were not mowed during this period.

First mowing on tenth day at 5/16" maintained at this height until Jan. 5 - 1/4" and 7/32" on Jan. 30. Will be cut at 3/16" until end of season. From approximately Feb. 15 the cut will be lowered to 5/32".

Broad Spectrum fungicides are applied every 10 days or oftener if weather indicates.

Fertilizer program is 2# N<sub>2</sub> from Milorganite per month plus

fertigation from 11-0-5. Greens were fertilized at seeding time with 2# N<sub>2</sub> from Milorganite.

Tees were done same as greens except 10 lbs. of Medalist VII was used.

Lou plans to reduce rye stand on or about April 15 by verti-thinning and water reduction.

Completely satisfied with results and is happy with Medalist VII after six years of use.

**Bears Paw C. C. - Naples, FL**  
**Tolby Strahan, Superintendent**  
**Wayne Stewart, Assistant**

November 23, 1981:

Tifdwarf — Mowed with walkers at 1/8" daily.  
Seed — Penncross Bent  
Application — 3 1/2#/MSF on seeding date  
3 lbs/MSF added Jan. 18, 1982  
Method — Usual pre-seeding practices followed.

Two fungicide applications made the week prior, one a broad spectrum and the other for Pythium control.

Greens were verti-thinned with triplex and mowed at 1/8" ahead of seeding. Seed was matted in with carpeted drag from two directions. Two # N<sub>2</sub> was applied from Nitrogen Plus and no top soil application made. A 36" drop spreader is used for seeding.

Syringes of five minutes each four times daily for nine days. Mowers raised to 3/16" and cut daily for 21 days then lowered to 1/8".

Fungicide applications are made weekly using Thiuram 75 at 4 oz./MSF. Sod webworms were treated twice with Diazinon AG 500 once and Dursban 2E once.

Fertilizers used amounted to 2# N<sub>2</sub> and 1 1/2# K<sub>2</sub> per month since overseeding and will continue until about April 1 when Bent will be gradually removed by reducing water and plant foods with bi-weekly verti-thinning using triplex units.

Excellent results were obtained but the unseasonably warm weather has encouraged the Tifdwarf and necessitated the extra seed in January. Greens now about 60% Bent and 40% Tifdwarf and putting quality is excellent. Tolby plans on using the same next year but applying 4-5# Penncross the first seeding and just touching up the thin areas as necessary.

In summary, it becomes apparent there are as many ways to seed and maintain the resulting turf as there are superintendents. The pre-seeding mechanics were about the only part of the process that was fairly standard. Heavy aerifying with 1/2-5/8 inch tines, thorough verti-cutting and mowing, heavy top-dressing and matting done at least 30 days or more prior to seeding was done by all questioned.

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An interesting factor was the use of walking mowers, especially on the newer courses. The triplexes have been relegated to tee and collar mowing plus verti-thinning. This is quite a bit different than a few years ago when the developers of new courses were the prime movers in the use of the Triplexes due to labor costs.

Significantly, the use of pre-emergence controls for Poa Annua is non-existent now where four to five years ago almost everyone used pre-emergence controls even though many materials were not recommended for putting surfaces.

The use of finer seed mixtures seems to be returning after the surge of use of the perennial rye varieties of a few years ago. The mystery is, why not more interest in the Sabre variety of Poa Trivialis?

Field tests results of Poa Trivialis for years at the Univ. of FL; Sea Island, Ga; Ponte Vedra, FL; and San Jose, C. C., Jacksonville, FL; as a one seed variety always was No. 1 in these ratings and in the top five in the two and three seed mixes, including the weed problems of European Poa Trivialis.

Correspondingly, seed companies and university tests in the South from Texas to the Carolinas still show Sabre alone as having the highest one variety stand and the mixes of Bents and Sabre in three of the top four spots, with the ryes and rye mixes in following order.

It is also interesting that most all questioned use basically the same methods for the transition from overseeding to Bermuda, with almost no variations except in the verti-cutting or verti-thinning portion of the program.

As stated earlier, this winter has been the best in many years for forsaking overseeding except where play is unusually heavy or Tifdwarf is the putting turf. Some with Tifgreen wished they hadn't seeded, but admitted sleeping a little more peacefully during our two cold spells. ■

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There are many conclusions that one could arrive at from reviewing the survey chart. Some of these conclusions that will aid in a good overseeding program are:

1. Book or purchase your seed as far in advance as possible to assure seed availability.
2. Try to get the best price on the seed that has the characteristics you are looking for.
3. Shop around for seed; perennial ryes are very similar in some respects but not necessarily price.
4. Overseeding early reduces the chance of cold weather damage to germinating seed.
5. Test your seed and make sure you are getting what you pay for and not introducing noxious weeds to your turf.
6. Plan overseeding dates in advance with your pro or club management for time that will *benefit your overseeding program!*

Overseeding in North Florida is a critical necessity for superintendents so that they can maintain good turf conditions for winter golf play. Hopefully, we have shared some knowledge and given some insight into overseeding by North Florida superintendents. ■



# South Florida Sunshine



By BRAD G. KOCHER  
Inverrary Country Club

Many superintendents agree on some management procedures. Generally speaking they mow greens every day, fairways and tees three times a week, rough at least once a week and change cups (at least in season) daily. They do disagree about overseeding. The results of a survey of four south Florida superintendents are shown in the

accompanying table. The superintendents were Kerry Son, of Colony West Country Club, Les Brown of LaGorce Country Club, Phil Amman of Bonaventure Country Club and Bob O'Connell of Pompano Beach Country Club. Two of the courses are Tifgreen 328 and the other two Tifdwarf.

	<b>COLONY WEST</b>	<b>LA GORCE</b>	<b>BONAVENTURE</b>	<b>POMPANO BEACH</b>
<b>Host Grass</b>	Tifdwarf	Tifdwarf	328	328
<b>Overseed</b>	Medalist 7	Penncross Bentgrass Sabre Poa Trivialis	Pennfine	50% Pennfine 50% Citation
<b>Pre-seeding Preparation</b>	Verticut- Day Before Spike-week before	Light weekly Verticutting 4-way spiking on seeding day	Light Verticut 2 days before seeding seeding	Aerified Early Nov. Verticut - 2 way before seeding
<b>Date Seeded</b>	Last week Nov.	3rd Nov.	2nd Nov.	1st & 2nd week Dec.
<b>Rate</b>	32 lbs./1000	5 lbs. Penncross 5 lbs. Sabre Poa Trivialis	30 lbs./1000	40 lbs./1000
<b>Method</b>	Cyclone & Gandy (on cleanup passes)	Drop spreader	Drop spreader	Gandy
<b>Pre-plant Fertilizer</b>	None	None	6-8-8 week before	None
<b>Topdress after seeding</b>	9-with 9-without (no difference)	Yes-heavy	Yes	Yes
<b>Watering Practices</b>	Syringe 11 AM & 3 PM Short Cycle at Night	Hand watering 3-4 times daily	Twice daily AM & PM	Light Syringe every hour during daylight 3 cycles at night
<b>Pre-plant Fungicide Applications</b>	Daconil 2787 & Dithane M-45 before seeding	Subdue 1 week before seeding	Dithane M-45 week before seeding	Acti-Dione Thiram 2 weeks before
<b>Days until Germination</b>	5 Days	Sabre-7 Bent-10	5 Days	4 Days
<b>How many days after germination do you mow?</b>	14 Days	7 Days	2 Days	2 Days
<b>Initial Mowing Height</b>	5/8"	3/8"	5/16"	3/8"
<b>Final Mowing Height at Plant Maturity</b>	9/64	5/32	1/4	1/4
<b>Will you overseed next year?</b>	Yes	Yes-Bent only	Yes	Yes

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<b>Areas Overseeded</b>	<b>Greens Par 3-Tees</b>	<b>Greens Par 3-Tees</b>	<b>Greens</b>	<b>Greens &amp; Tees</b>
<b>Did Warm weather this year cause any seed loss?</b>	Yes-75%	Yes-30%	Yes-10%	Yes-40%
<b>When do Golfers play on greens after seeding?</b>	Day after	Day after	Day after	7 Days after
<b>Fertilization Rates</b>	1½ lbs.N/1000	2 lbs.N/Month	1 lb.N/Month	1½ lbs.N/Month
<b>Topdressing Program</b>	One Time in January	Yes/Every 3 weeks	None	No-Play Prohibitive
<b>Pythium Control after seeding</b>	Yes	Yes	No	No

One can conclude from the survey that there are any number of successful methods of overseeding. The different approaches seem to be due to the individual preferences of the golf course superintendents. However, there are certain "musts" that will result in proper germination and minimum seed mortality. Watering after seeding is probably the most important. After seed is evenly distributed at whatever rate chosen, and whether or not topdressing is applied daily, frequent syringings are a must. If the seed is permitted to dry out the germination will be inconsistent and spotty. Every Superintendent felt this was one of the key ingredients in a successful overseeding program.

An area that is difficult to evaluate is golfer preference and inconvenience. Our goal should be overseeding programs that minimize golfer inconvenience and maximize golfer satisfaction. The majority of superintendents in South Florida overseed and undoubtedly it is felt by most golfers and turf managers that overseeding is a good insurance policy against the unpredictable cold snaps that occur during times of our heaviest play. Those who do not overseed

feel just as strongly about their point of view.

However, the overseeding process causes several weeks of golfer inconvenience due to daytime syringing, waiting for seed to germinate and mowing at higher than normal heights. It is during these times that we should strive to return our turf to its normal playing condition without sacrificing the results of our overseeding. By striving to keep the seed mowed at the lowest height it can accommodate without loss of seed due to stress, we will downplay the inconvenience. Additionally, light topdressing, when possible, will provide a smoother and faster putting surface even though we may be mowing at 1/4". The golfer primarily is interested in a smooth putting surface on which a reasonable putting stroke will get the ball to the hole. A golfer could really be unconcerned about the height at which we mow as long as the putting quality is present.

My thanks to those who participated in the survey and it goes with the hope that the information can be helpful when overseeding month comes upon us next fall. ■



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# Central Florida Crowfoots



By GARY MORGAN  
Spruce Creek Golf and Racquet Club

What is old Man Winter doing? We only wish we knew. The last few winters have been the most unpredictable overseeding periods we have ever seen. Each year we look at the dates on which we overseeded greens and tees and look at our stand of rye and wonder if we should go earlier or later or on the same dates.

We face a never-ending battle against "Mother Nature" and water restrictions. Our membership must share information on successful overseeding. In the case of unsuccessful overseeding, they need to know why it happened and how to correct it next year.

Here are the comments and ideas of some of our Central Florida superintendents on this years overseeding and their plans of for next year.

### **Gary Morgan, Superintendent, Spruce Creek Golf Club, Daytona Beach:**

- I. Over seeded greens Nov. 2 & 3 using PhD + Sabre (40% Derby, 40% Regal, 20% Sabre) at a rate of 30 lbs./1000.
- II. Overseeded tees Nov. 4 & 5 using Derby 100% at a rate of 20 lbs./1000.
- III. Overseeded Roughs Nov. 9-13 using Internationals-Showboat Mix (60% Derby -40% Annual Rye) at a rate of 300 lbs./A.

### **COMMENTS**

- I. Greens: excellent germination and excellent surface at present. No change for next year except possibly a smaller percentage of Sabre (10-15%).
- II. Tees: excellent surface — no change.
- III. Roughs: Poor germination due to cold weather. We had two frosts, an average low temperature of 39° and an average high of 78° from Nov. 15-19. There was a

warm spell around Christmas time that helped germinate the seed that didn't come in during November. Next year I will seed the Roughs before the greens and tees to take advantage of the warmer weather.

### **Jim Ellison, Superintendent, The Bayhill Club and Lodge, Orlando:**

- I. Overseeded greens: Nov. 2 & 3 using 60% Pennfine, 25% Jamestown Fescue and 15% Sabre at a rate of 30 lbs./1000.
- II. Overseeded Tees: Nov. 4 & 5 using Yorktown II 100% at a rate of 25 lbs./1000.
- III. Overseeded Roughs Nov. 15 using Yorktown II at a rate of 275 lbs./A.

### **COMMENTS**

- I. Greens: excellent germination and will have greens at 5/32" then 1/8". Very pleased with this year's results and have no plans to change next year.
- II. Tees: excellent germination and will not change next year.
- III. Roughs: came in slow but are in excellent shape as of February 15. Will not change next year.

### **Dwight Singo, Superintendent, Big Cypress Golf Club:**

- I. Greens overseeded: front nine Nov. 16, back nine Nov. 23 using Celebrity & Sabre (33% Derby, 33% Pennfine, 33% Regal by weight and 15% Sabre by weight at a rate of 25 lbs./1000.
- II. Overseeded tees: front nine Nov. 17, back nine Nov. 24 using Celebrity (same mix as on the greens) at a rate of 14 lbs./1000.

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**COMMENTS**

- I. Greens: some localized problems with germination. These areas are the same year to year. Greens are in excellent shape as of February 15, but germinated very slow due to cold weather from the middle of November through Christmas. Will probably use the same mix next year, but will try to seed during the first two weeks of November to take advantage of warmer weather.
- II. Tees: same conditions as greens except no localized problems. Will overseed during the first two weeks of November next year.

**Danny Aylinin, Superintendent, New Smyrna Beach Golf Club:**

- I. Overseeded greens Nov. 9 & 10 using Marvelgreen (33% Yorktown II, 33% Pennfine, 33% Diplomat) at a rate of 30 lbs./1000.
- II. Tees overseeded Nov. 16 & 17 using Common Rye 100% at a rate of 15 lbs./1000.

**COMMENTS**

- I. Tees and greens: not as successful as last three years. Slow germination due to cold weather through Christmas. Will use same seeding blend, but will probably seed in last week of October to get the help of the warmer weather and to try to beat the vacationers.
- II. Tees: good germination but slightly worn out due to over 300 Rounds per day. Will use same seed next year but will seed the first week of November.

**Joe Sagan, Superintendent, Country Club of Orlando:**

- I. Overseeded greens Nov. 16 & 17 using Marvelgreen (33% Pennfine, 33% Yorktown, 33% Derby) at a rate of 25 lbs./1000.
- II. Overseeded tees Nov. 18 & 19 using Marvelgreen (same % as greens mix) at a rate of 10-12 lbs./1000.

**COMMENTS**

- I. Greens: 50-60% germination throughout seeding period due to cold weather. Will use same seed next year but will probably seed during the last week of October for the warm weather and a Member-Guest Tournament.
- II. Tees: same germination as greens. Will use same seed as this years but will probably seed during the first week of November.

Almost everyone will be seeding earlier next year to take advantage of the warmer weather. Let's hope that it doesn't stay warm enough to keep the Bermuda growing and crowd out the Ryegrass. ■



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## **Editorial**

Our Florida climate is one of the finest in the world. We are also fast becoming the golf capital of the world. Our state now has over 700 golf courses and we will surpass 1,000 by 1990. This situation in our state is both good and challenging. Good for our economy and challenging for our resources.

How do we as Golf Course Superintendents manage these rapidly increasing acres of finely manicured turfgrass? This is a complex question with no simple answers. We must continually look for new ideas, new equipment, new chemicals and alternate water sources in order to assure the survival of a billion dollar industry.

We cannot depend on our government for the answers. We must fund our own research and come up with the answers to such problems as mole crickets, grubs, adequate water supply, disease and insect problems. New cold-hardy grasses must be developed, and on and on . . . With this in mind we are asking each golf course in the state to budget \$500.00 a year for scholarship and research. This amounts to about one dollar per golfer per year. If apathy prevails Uncle Sam will dictate which golf courses will, and will not operate because of water and other environmental problems.

We have the minds. We need the dollars. Can we count on your club to do its part? Send all donations to the Florida Turf-Grass Association, 1520 Edgewater Drive, Orlando, Florida 32804.



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