

ON THE NATIONAL SCENE

by: John P. Hayden CGCS Director, GCSAA



Time flies! I have spent a very busy summer attending to my duties at San Jose Country Club along with my responsibilities with GCSAA. Due to GCSAA's interest in Orlando I have had the opportunity to meet with Executive Director McLoughlin in person on several occasions, and with Education Director Jim Prusa occasionally. Our meetings have been very productive and have dealt with a number of issues in addition to the move. From what I have observed I can assure you that your national association has been working diligently to implement many new and progressive programs. In addition plans are being finalized for what I feel will be the finest conference ever in Atlanta. The new directory should be in your hands by the time you read this. In the coming years, with the addition of our new inhouse computer, this publication will be updated and improved so that we will be able to use it as our professional handbook.

The editor's seminar has been held and hopefully this will be one more step in the direction of keeping the members abreast of all the ideas and programs that your association is planning for the future.

One of the most critical decisions coming up at your annual meeting in Atlanta next year is the subject of dues. As you know the increase this year was a one shot deal. Next year they revert back to the old structure. I feel something must be done to give the directors the flexibility to run the association in a professional and business-like manner. I therefore believe we should give our elected directors the option to set the dues structure at a rate that would give the association fiscal stabiltiy.

The movement of our national headquarters has been narrowed down to the primary target of Orlando, Florida. This seens like a very good choice and your truly is actively helping assemble facts and figures for such a move. Bear in mind though that GCSAA is a national

organization and being an elected director I feel I should act and vote in the best interest of all our members around the world.

Although many of you are already aware of the fact, I must make a comment on the recent addition to the GCSAA staff of fellow supt. Lewis C. "Chip" Powell, CGCS. Chip and I have become close friends in the past five years since he came to Jacksonville. His main interest is in the performance and professionalism of the golf course superintendent. In this vein I think that GCSAA could not have picked a better man to help guide us and further the cause of the golf course superintendent in the next decade. I am sure Chip will want all his friends in Florida to keep him informed of all their ideas and comments about GCSAA. We are truly on the move to greater leadership in the golfing community with the dedication of young men like Chip.

Again I ask if you have any problems or ideas to benefit the association please give me a call.....I am working for you.

WELL AND PUMP INSTALLATION

Specializing in

Deep Well Turbine Pumps – Service and Repair

Maintenance Program Available

MAXSON

WELL DRILLING, INC.

3328 N. E. 11th Ave.

Oakland Park, Fla.

Phone 564-3419



Atlas Peat & Soil, Inc.



P.O. Box 867 Boynton Beach, Fla.

Call Collect

1-305-734-7300

TOPDRESSING • POTTINGSOIL

TOPSOIL

MULCH

HELPING KEEP FLORIDA GREEN

ATLANTIC

SULPHUR COATED UREA

For That Deep Long Lasting Green
Without Excessive Growth
ATLANTIC SULPHUR COATED UREA
Is the Answer!

Ask Your Atlantic Representative for the Formulations Available

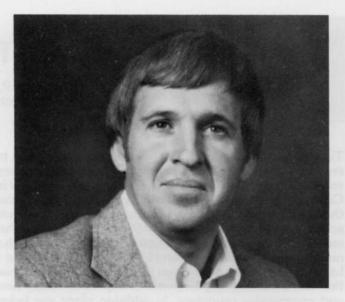
ATLANTIC Fertilizer & Chemical Co.

Homestead, Florida

In Dade 247-8800 All others 1-800-432-3413



Golf Correcting Water Usage Image



NEWS RELEASE

Standard Golf Company, Cedar Falls, Iowa, has named Steve Tyler as a sales representative to represent Standard's Pro-Line golf course accessories throughout the United States.

Tyler has been the course superintendent for Cedar Falls, Iowa, managing two municipal golf courses in that city. He has been a superintendent or assistant superintendent for 14 years.

He is affiliated with Golf Course Superintendents Association of America, the Iowa Golf Course Superintendents Association, where we was president in 1978, and the Iowa Turfgrass Institute, where he was president in 1980.

Steve Burrell, Vice-President of Standard Golf, said that with Tyler and present sales representative Bob "Chief" Waseskuk, the company will greatly increase its efforts to advise and assit the Pro-Line distributor organization.

Standard Pro-Line accessories include ball washers, benches, flags, flag poles, putting cups, club washers, signs, and everything else superintendents need to operate a successful golf course.



Florida Silica Sand Co.

949-3521

SINCE 1948

923-8323

- SPECIAL GOLF COURSE MIXES FOR YOUR PARTICULAR NEEDS
 - STERILIZATION ALSO AVAILABLE FLASH FLAME
- =70 TRAP SAND IS A COURSE WHITE SILICA SAND
- Pine Bark Nuggets Cypress Mulch River Gravel Log Edging





The golf tournament was played over the historic links of Riomar Country Club.



Chuck Calhoun (left) and Lee VanValkenburg (right) with Don Barth who took commercial honors.



Some of the newly elected officers are from left to right: Sid Saloman, Tom Burrows, Joe Snook, and Ross Saylor.

Treasure Coast Annual Meeting at Riomar

The Second Annual Treasure Coast Chapter Golf Tournament and Meeting was held at the Riomar Country Club and Riomar Bay Yacht Club in Vero Beach.

The tournament was won by Cliff Settergren of Dodger Pines with a 76. Defending champion, Adam Yurigan of John's Island, was runner-up. Lew Chaff, retired, took low net honors and Don Barth, Sales Representative for DeBra Enterprises, took the trophy for low gross commercial.

The Annual Meeting was highlighted by a keynote address from Joe O'Rourke, Immediate Past President of the South Florida PGA. O'Rourke commented on the working relations between the golf professional and the superintendent for better operations within the club.

Elected to office for the 1982-83 year were: President, Jim Callaghan, Riomar Country Club; Vice President - International Affairs, Joe Snook, Riverbend Country Club; Secretary, Ross Saylor, Stuart Yacht and Country Club; Treasurer, Craig Baker, Indian River Plantation; Directors, George Ord, CGCS, Piper's Landing; Sid Saloman IV, Indian Pines Golf Club; and Adam Yurigan, Jr., John's Island. Tom Burrows serves as Vice President - External Affairs for one more year.

Lonnie Stubbs, Immediate Past President, received a well-applauded hand for his outstanding services rendered to the chapter.



Cliff Settergren, left, with Sid Saloman. Settergren won the tournament with a 76.



Craig Baker, right, announcing that Joe Snook had taken high gross honors for the second year in a row.



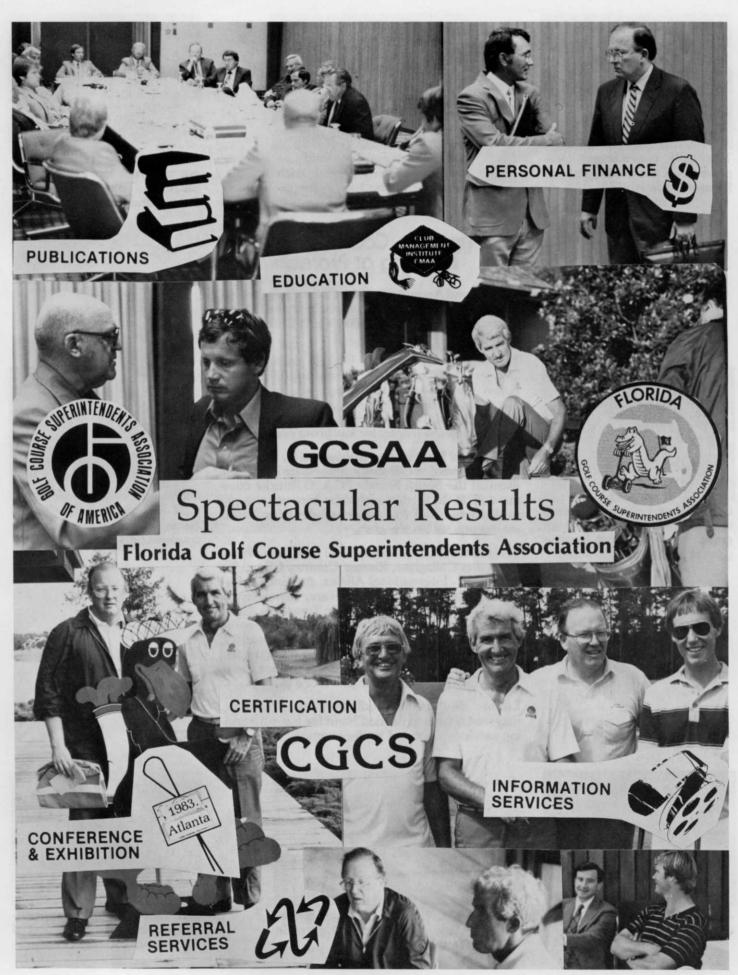
Adam Yurigan, defending champion, finished second.



Tex Ardonyo, signing in Immediate Past President, Lonnie Stubbs.



Jim Callaghan, host superintendent, is the new president of the Treasure Coast Chapter.



gold

Lewis Equipment Elanco. Soil Furnigants Glen Oak Turt Southern Mill Creek Inc Harrell's Inc North Florida Irrigation Equip Inc Pennington Seed Inc. Nematode Controllers Southern Turf Nurseries **Pursley Turf Farms** Aquatic Systems Inc Melbourne Sand Co Inc Moore Golf Construction Lantana Peat 🖋 Soil Quail Ridge Country Club Club Car Standard Golf Co Carter Seed ≁ Fertilizer Anthony Enterprises Du Cor Chemical Corp

RANSOMES

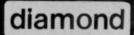
Prizes



834-5554 268-6741



SPONSORS



Florida Aquatic
Walt Disney World
Liquid Ag Systems Inc
Wesco-Zaun
Lyle Pro Plus
Lawn Equipment Center
Fore Par
Lesco
Southeast Irrigation
Andy's Plant Aids

Sunbelt Seeds Inc

Gator Pumping Modules Inc Tresca Industries Zaun Equip Inc Florida Irrigation Supply Superior Fert & Chem Co Sunniland Corp Woodbury Chemical Co Rhone' Poulenc Chemlawn Ball-Zell Supplies

Howard Fertilizer Co Inc Southeastern Turf Grass Estech Corp Supply Bruce McGonigal Irrigation Florida Turf Grass Assoc Aquatic Right of Ways Chipman Chemicals Inc The Bay Hill Club PG A Tour De Bra Turf & Ind Equip



IFAS TURF UPDATE AND FIELD DAY

By CHARLES H. PEACOCK Extension Turf Specialist, IFAS

The University of Florida was host to 350 people in Gainesville who came to the Institute of Food and Agricultural Science (IFAS) Turf Update and Field Day, May 18. Turf industry people representing sod production, professional lawn care, golf course maintenance, parks and recreation departments, and county extension programs attended the two part program to update them on current turf research and recommendations in IFAS.

Opening remarks by Dr. Ken Tefertiller, Vice-President for Agricultural Arrairs, pointed out the sizeable contribution turf industries make within the state. Dr. Tefertiller stressed the need for IFAS to continue its program in turfgrass science through the 1980's. The morning session was designated as an update from personnel involved in the turf program at the university. Dr. Ed Freeman, currently state turf coordinator, opened the session with an overview of the IFAS turf program. He recognized three individuals in the audience that helped to pioneer the turf program, Dr. Roy Bair, Dr. G.C. Horn and Mr. Ralph White. Dr. Freeman noted that the program in Florida is sizeable and that a new comprehensive technical report on turfgrass research is being published for release shortly. Dr. A.E. Dudeck followed to report on several recently completed projects, including "Effects of sodium chloride on eight bermudagrass cultivars" and the use of "Temporary grasses and mulch for warm season turfgrass establishment." The turf extension program was reviewed by Dr. Charles Peacock who stressed the need to continue to work with the professional organizations and provide area wide programs for the industry through county extension personnel.

Dr. Phil Busey, Turf Breeder from the Agricultural Research and Education Center (AREC) at Ft. Lauderdale outlined his recent work and focused on the direction and productivity necessary from his breeding program. He stressed the need to keep Florida turfgrass needs current with improved cultivars for our unique environment. Dr. Don Short updated control recommendations on turf insects and in the absence of Dr. Jim Reinert discussed mole cricket control research. Weed control recommendations and research were reviewed by Dr. Wayne Currey and Dr. Charlie Tarjan reported on current nematode projects. Finishing up the morning session, Dr. Mike Davis from the AREC at Ft. Lauderdale reported his finding relating to the bermudagrass decline problem on golf course turf in South Florida.

The afternoon tour of the Turf Field Laboratory involved Drs. Jerry Sartain, Charles Peacock, A.E. Dudeck, Don Short, Ed Freeman, Charlie Tarjan, and Wayne Currey. Thirty-five stations were available for observation of experiments and the researchers discussed findings in various detail at most of these stops. Time was allowed and used by conferees for extensive discussion with researchers of projects. Experimental topics covered included turf fertility, weed control, renovation, sod quality, legume overseeding, shade tolerance, disease control, cultivar evaluation, nematode control herbicide application and saline irrigation studies. Plans are being formulated for an annual program in conjunction with a field day at the AREC Ft. Lauderdale for 1983 with long range plans for a field day alternating between Gainesville and Ft. Lauderdale on a yearly basis. ■



CYPRESS AULCH

Economical Bulk Loads or Convenient Bags

&

Cypress Chips Too!

Pine or Cypress Lumber

- FENCING
- PATIOS
- BEAMS

Wood Stakes

- SURVEYING
- CONSTRUCTION
- LANDSCAPING
- FARMING

DELRAY STAKE AND SHAVINGS INC.

8500 W. Atlantic Ave. Delray Beach, Florida 33446 (305) 737-6458

Rhone-Poulenc Introduces Ronstar® 50% Intermediate

According to Rhone-Poulenc Inc., Agrochemical Division, E.P.A. has approved registration of RONSTAR® 50% intermediate herbicide for blending with bulk turf and ornamental fertilizers.

"This 50% intermediate of RONSTAR® herbicide (oxadiazon) will be marketed, in 50 lb. fiber drums, to fertilizer formulators for incorporation in their fertilizer products," says RONSTAR Product Manager, Gerald Quinn. "Several large fertilizer formulators have already expressed interest in the new RONSTAR® 50% Intermediate."

Presently available in a granular formulation, CHIPCO® RONSTAR G herbicide gives slective, preemergent control of annual and broadleaf weeds in turf, woody ornamentals', vines and trees.

The RONSTAR 50% intermediate and turf fertilizer combination will enable turf care professionals to apply a long-lasting herbicide barrier against the emergence of crabgrass, goosegrass and a variety of other annual grasses and broadleaf weeds as they fertilize turf and ornamentals early in the growing season.

The RONSTAR 50% intermediate/fertilizer combination will be available to turf care professionals under various private labels.

For more information, contact Gerald Quinn, Rhone-Poulenc, Agrochemical Division, Box 125 Monmouth Junction, NJ 08852, (201) 297-0100. ■



SOUTHERN MILL CREEK PRODUCTS CO., INC.

SERVING ALL OF FLORIDA Tampa, Miami, Orlando Jacksonville

Dade 635-0321 Broward 525-0648

W. Palm 832-3311

Tampa Office 1-800-282-9115 Supplying Florida's
Turf Industry
Since 1932
With America's
Leading Power
Equipment Lines,
Parts and Service.

Distributors for:

Toro Mowers & Turf Equipment Charmglow Products Cushman Turf Care System Ryan Turf Care Equipment Roper Tractors HMC String Trimmers Power Trim Edgers Lely Spreaders McCulloch Chain Saws Standard Golf Supplies Toro Turf Irrigation Florida Turf Sprayers Broyhill Sprayers Royer Shredders

Jacksonville 1741 Hamilton St. 32210 (904) 387-0516

Tallahassee 4960 W. Pensacola St. 32304 (904) 576-4307

Orlando 11405 Rio Grande Ave. 32085 (305) 841-8460



EQUIPMENT, INC.

Central Florida and Smither Win Crowfoot Open

The sixth annual Crowfoot Open Golf Tournament was won by the host chapter, Central Florida. Held at the famous Lake Buena Vista CC, Walt Disney World, the field consisted of over 150 players.

The team event is scored on the Calloway System best four man total. The Central Florida victory was by only one stroke over the Everglades Chapter. Scores for the winning team were J. Ondo - 71, J. Ellison - 71, S. Leventhal - 72, D. Parker - 72.

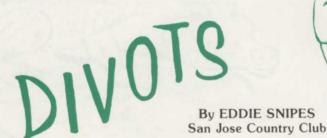
Gary Smither, superintendent at Bent Tree G&RC, Sarasota, won low gross honors with a splendid 69. The victory margin was three strokes over runner-up Fred Klauk of Pine Tree GC, Boynton Beach. Gary Smither, no new comer to the golf business, has been at his club for years. His scratch handicap is better understood when you know his brother is the professional at Bent Tree, and his father is PGA North Florida section president. Smither finished 9th last year in the GCSAA national tournament from a field of 250. This upcoming year he will be on the four man Florida GCSA team, as we try for our third national title in a row.

The winning team gross chapter was Palm Beach with a one stroke edge over West Coast GCSA. Low net superintendent was David Court of Boca Lago, Boca Raton, with a 70.

Heavy rain mid-way during the round of play made these low scores even more impressive. The course was in excellent playing condition. Larry Kamphaus is executive superintendent over all three Disney courses. Joel Jackson is superintendent at Lake Buena Vista. ■



NORTH FLORIDA





Have you ever gone to bed hungry? Waking up in the morning can be a real problem. It is very difficult to greet the new day when your body is running on empty.

Turfgrass in some cases can be equated biologically with the very people that take care of it. North Florida Superintendents don't like to think about going to bed hungry and they don't like their turfgrass to go into dormancy undernourished. Early spring green-up can be directly related to the type of fall fertility program that one has.

Fall fertility programs in turn can be affected by economics, temperature of region and desired effects for the course.

Low budget courses can not always take advantage of a good high nitrogen fertilizer application in the fall. With the turf going into dormancy a matter of a few weeks away, one may think this is the time to save money. One may save money, but in the spring, the turf may prove to be lethargic in nature from lack of fertilization.

North Central Florida reached temperatures in the teens last winter. Superintendents in that region find that increased amounts of potash in their fall fertility application helps their turf to resist cold damaging temperatures and support early spring green-up.

Resort courses in the North Florida area, because of entire course overseeding programs, continue normal fertilization practices. This is easier done for courses that are near the North Florida coastline as opposed to courses more inland. Cold temperatures and frost damage are naturally not as severe and a deep dormancy turf condition does not exist where temperatures are 5 to 10 degress warmer than inland temperatures.

(Continued on page 29)

WHEN IT COMES TO ELECTRONIC IRRIGATION CONTROLLERS, LET

MIR-2100 CENTRAL STATION, City of Los Angeles Encino Golf Course (Installed by California Engineering, Sylmoor, CA)

CHECK THESE ADVANTAGES: Flexible programming on a daily, weekly, monthly or annual basis • A complete automatic syringe cycle can be activated from the course by turning on a switch in the field unit • Easy manual operation for each station is accomplished by turning on switches located in field units • Irrigation according to the environmental conditions such as: soil moisture, temperature, pressure, etc. • Any kind of cycling irrigation available: different for greens, tees, rough, etc. • Simple design in the field:greens, tees, fairways, etc. can be connected to same field unit. Separation will be made by computer • A complete management tool keeping exact records of the irrigation process including the accumulated time each station has been irrigated. • Automatic printout of the events • Flow rate measurements and activation

of the pumps accordingly also available • Automatic injection of liquid fertilizer available • Operation is easy, simple and instructions and warranty are provided directly in the field by **Motorola**.



MOTOROLA INC.

Irrigation Dept.

Since 1928, worldwide leader in electronics

1530 E. SHAW, SUITE 102 / FRESNO, CALIFORNIA 93710 / (209) 221-8401

THE SPECIALIST HANDLE YOUR COURSE!

Motorola has a large family of electronic irrigation controllers with more than 10 years experience in the field. The MIR-2100 Golf Course Irrigation System includes: Computerized central station which has an active two-way communication with the field units.



WORLDWIDE LEADER IN ELECTRONICS SINCE 1928.



MIR-2100 FIELD UNIT ON CITY OF LOS ANGELES ENCINO GOLF COURSE

| Company or golf course | entitle light of the second section of the second |
|--|---|
| REPLY TO: MOTOROLA IRRIGATION DEPARTMENT | Contact NameAddress |
| 1530 E. Shaw, Fresno, CA 93710 | Phone |

The Gator Growls

By DAN L. HALL JR. Imperial Golf Club

Florida's West Course Supers are about as diversified in their fertilizer programs as they are in their over-seeding; everyone uses materials differently but accom-plish the same purpose within budgetary limitations. We will attempt to generalize the programs after discussion with many Supers from our chapter.

Basically, the following materials are those most prevalently used:

12-4-8 with and without Minors 16-4-8 with and without Minors 15-0-15 with and without Minors Ammonium Sulfate Ammonium Nitrate 8-1-4 with IBDU or UF 17-1-10 with IBDU or UF

Milorganite

Liquid Aq 8-0-8 and 12-0-6 with and without Minors

Liquid Ag produces custom blends to meet all turf needs dictated by soil and tissue tests.

Green and Tee materials are principally the 8-1-4, 17-1-10, the straight Nitrates, and of course, Milorganite along with the fertigation products. Rates of N² and 1-2lbs. of K² used by those not overseeding during the cooler season.

Both programs are using some formula of fertigation but the rates are maintained in plant foods applied. Those who rely on fertigation to maintain color and growth still apply 3-4 applications of a dry material to tees and putting greens, primarily the balanced 8-1-4 or 17-1-10 and Milorganite. Basic application criteria are set by the weather, member preferences, as well as by the budget.

Total application of N² and K² for an annual basis in our area are within the range of 14-16#, 18-24#, 24-36#, from lows to the highs. There is even one club running higher than 36# N² with 22-24# K² but this is an exception — the basic average from those I've spoken with are in the 16-30 lb. range in N2 with 12-24 lb. range of K2.

Fairways and roughs are fed over-all in late September or October with the 12-4-8, 16-4-8, and 15-0-15 mixes at rates of 300-500 lb. of the mix per acre. A repeat is made again in late November or December at approximately one-half the above rate. Those on fertigation usually eliminate this application relying on fertigation at least through March or April. In the event of extremen cold, both Supers may apply an application of the soluble nitrogen sources at 100-200 lb. rates per acre during the season. They are divided into two groups, those that apply the N² before or immediately after the cold spell.



Those with-out fertigation will usually apply another mixed good application from late February through 15th April. Recent data has shown that we should possible wait until the natural spring frowth flush is complete before we make this feeding. Feeding prior to the natural flush has a tendency to reduce root growth significantly and since this is our dry season, more harm than good can be done at this time of year. Annual N2 in our area on fairways and roughs run from lows of 4-6 lb./MSF to highs of 12-18 lb./MSF with K² again in the .75 range ration of Nitrogen.

Our area has some extreme highs in PH values, some up in the 8.4-9.0 range. Minor elements, MN, FE, Mg, S, B, and Mb are rarely in the proper ratio under these conditions while at the same time AL and CA factors could be toxic, even to the point of causing turf kill. In addition, the full benefits of the primary elements are rarely attained. Sulfur is definitely equally as essential as N2, P2O5, and K2 and thence becomes a fourth major element. These factors are easily determined by leaf tissue tests made on site. Supplementary applications can be made by incorporating the minor elements in either a separate spray mix or as part of the normal sprays. Compatability should be established before mixing materials. Side applications of Sulfur must be carefully applied and such application even more if applications of soluble Nitrates or Potashes are considered. The resulting combinations, due to the caustic Sulfur can result in extreme phyto-toxicity to vegetation.

Manganese, Magnesium, Boron, and Molybdenum deficiencies have been showing up on a number of West Coast courses. Liquid chelates of these minors applied as sprays without irrigation have shown turf responses equal to an application of a balanced plant food. Results in some instances are even superior and surely less costly. Spot spraying so-called declining areas has proven much less expensive using the minors compared to an over-all application of either fertigation or a dry mix.

Fall and Winter applications of plant foods by whatever means are no longer, "just done," but are made strictly on data obtained by reliable soil and/or tissue analysis indicating specific needs. Material costs dictate the use of these instruments and they will become even more essential as budgets are becoming limited. Another vital part of plant nutrition is the use of quality products. A 16-4-8 can be made for plus or minus \$120.00/ton up to over \$350.00/ton even without the use of WIN Nitrogen sources. This concept of a fertilizer being a fertilizer is about as acceptable as a \$1.00 steak compared to a \$10.00 steak. While chemically correct, the differences are easily recognizable in the final results after application.

(Continued on page 29)

Golfers comparing courses must be made aware that the differences in color doesn't always mean the greener course is better play-wise. Problems reulting from excess feeding are too numerous and as professionals we are already aware of them. The goals and aims of the members — owners, as well as the budget, MUST be considered before player critique along this trend of thought can be valid or warranted. The present economical status will more than likely equalize the greenness of golf turf everywhere, all other factors being equal.

(Continued from page 27)

Superintendents in North Florida may not be able to agree on what particular fertilizer is best for their region and circumstances, but they do agree that some form of fall fertility is essential in bringing turf out of dormancy into a healthy condition. Remember, dormancy means "inactive" not dead, and inactive turf requires nutrients in the soil for growth stimulation.

NORTH FLORIDA CHAPTER NEWS

The North Florida Golf Course Superintendents Chapter annual meeting was held July 16, 17, and 18 at the Ponce DeLeon Lodge & Country Club in beautiful St. Augustine.

Chip Powell of Deerwood Country Club handed the gavel to new president Jeff Hayden of Turkey Creek Country Club. Jeff's tenure will be aided by Vice President Robby Robbins (Gainesville G & CC); Secretary, John Perham (U. of Florida CC); Treasurer, Tom Prescott (Timuquana CC); External V.P., John Hayden (San Jose CC). Directors for the chapter are Dick Johnson (Ponce DeLeon CC), Jim Reemelin (Zaun Equipment), Frank Sharro. Past President, Chip Powell (Deerwood CC).

Three days of tournament golf, good food, and fellowship were enjoyed by North Florida members and families. A very special thanks to Golf Course Superintendent Dick Johnson and his staff. The golf course reflected Dick's hard work and effort as the course was in excellent condition.

Dick was a superior host and we again thank him.

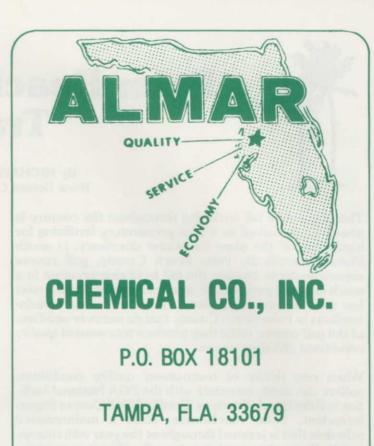


SPREAD-RITE, INC.

Custom Spreading
DOLOMITE
FERTILIZER
SULPHUR

P.O. BOX 25527 Tamarac, Fla. 33320

PHONE (305) 482-7224



get out of the water

CALL COLLECT 813-839-3363

Weeds grow all the time, even when you don't have time for them.

We specialize in aquatics. We have the people, the equipment, the know-how and the time to do it right.

When we manage your water and shoreline areas, you spend your time on more important things. You know that your lakes are in the best possible hands.

Serving golf courses and green spaces throughout Florida

FLORIDA AQUATIC

Licensed/Insured/Bonded

320 South State Road 7, Suites 3 & 4 Fort Lauderdale, Florida 33317

(305) 792-1500





Palm Beach Trade Winds



By MICHAEL BAILEY Boca Greens Country Club

The concept of fall fertilizing throughout the country is generally conceived as a final preparatory fertilizing for hardening off the plant for winter dormancy. In south Florida, specifically Palm Beach County, golf course superintendents imagine the fall fertilizing program in a much different perspective, as even compared to the next few counties just to the north. There are many superintendents in Palm Beach County that do not over-seed any of the golf course, while they produce tournament quality conditions 365 days a year.

When one thinks of tournament quality conditions, golfers can easily associate with the PGA National facilities in Palm Beach Gardens. Certified Golf Course Superintendent, John MacKenzie, finds a maintenance schedule that is jammed throughout the year with tournaments. Renovation work is extremely difficult to perform. However, projects must be performed within the prescribed time, as the show must go on. For example, during my interview, I was able to catch John at the turn during the PGA Junior Championship.

John MacKenzie is employing a fall fertilizing program that will make everyone happy in the clubhouse. The program actually is a two-stage process that begins in August. Summer renovation in May and June, along with a high pressure insecticide injection for mole crickets during July reveals August to be the ideal month for the fall fertilizing to begin. Soil tests reveal deficiencies in potash to be the major problem, while a 1-0-1 relationship proves to be the most beneficial for proper growth and recovery. A 15-0-15 with 1/3 slow release Nitrogen and the balance of sulfate of ammonia is paralleled with Potassium, all being sulphate of Potash. Minor elements are included with one unit of Iron. This blend is applied on fairways and rough at a rate of 450 lbs/A. McKenzie feels the August fertilizing aids in the development for better root structure, which in turn, proves beneficial during the stress of winter.

The second phase of the fall fertilizing is continued during mid-October. Again, the same product is applied. However, this time results will allow for the plant to maintain a level of consistency, which is the key word in McKenzie's program. Because of the fact of year round tournament conditions, the courses must always be kept up to par. Since turf growth is not viewed with levels of peaks and valleys, the consistency does not bring about a need for overseeding. Management of the greens is primarily with a 17-1-10 every 18 to 21 days at a rate of 1 lb of N/1000 square feet. As there is an interest in the color of the greens, mowing heights will vary with temperature. During the severest of cold stress, heights are raised to one

quarter inch on 328 Bermuda. At this time, charcoal is applied at a rate of 2 lbs/1000 square feet via a 100 gallon centrifugal pump with a flood jet nozzle. McKenzie states, "This I believe in plant growth by the result of increased ground temperature."

The major problem for McKenzie is time. Since time is of the essence, a spreader service is employed for bulk applications. A course is closed at noon, while a spreader truck begins applications at 1:00 P.M. and follows play. Within four hours, all is applied, resulting in little down time for the golf course. Obviously, time is so much of a critical factor at the PGA, for McKenzie must look good year round.

Another golf course that always looks good and up to tournament specifications is Pine Tree Golf Club in Boynton Beach. Golf Course Superintendent Fred Klauk, a scratch golfer himself, is well qualified to produce superb conditions year round.

Unlike the PGA, Pine Tree's program begins a little later because play is not as heavy during the summer. Klauk's fertilizer program tapers off during the summer and is kicked in gear around October. Soil tests show a deficiency again of potash, while a 15-0-15 proves to be the most beneficial analysis. When night time temperatures approach 60° F, a nitrogen source of IBDU slow release at a rate of 350 lbs/A for fairways and rough are incorporated into the blend. This program is continued again about eight weeks later in December. The rough will not be covered at this time.

Some of the most respected greens found anywhere are maintained at Pine Tree. A meticulous program again reveals consistency. Beginning November 1, a 7-3-7 with 70% ammonium sulfate and 30% sludge is applied every two weeks at a rate of ¾ to 1 lb/1000 sq. ft. When night time temperatures dip below 55° F, the rate is increased to 1½ lbs/1000 sq. ft. Putting speed consistency is the primary goal at Pine Tree as green color is not judged as the factor for good play. Mowing heights are adjusted by the means of a stimp meter, as 8 to 8.6 feet is the general average. Hand walk mowers are used beginning the 1st of November, while mowing heights are adjusted accordingly to accommodate for the consistency.

The additional aid to consistency is a result from periodical top-dressing. A 90/10 mix of medium to fine sand matches existing basic soil structure. This, in addition to an application of IBDU, at a rate of 1 lb/1000 sq. ft. combine to overstimulate the turf. Charcoal is not applied, as the topdressing instead, provides the means of stimula-