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NEWS ROUNDPUP  MORE PARTICIPATION FROM USGA ..........................10
The USGA has chipped in $4.1 million more for turfgrass research for projects through 1997. The award will fund projects to be selected in plant improvement and resource management.

COVER STORY  FINE OLD CLUB GETTING MODERN ...........................16
Lake Region Yacht and Country Club in Winter Haven, established in 1924, was located where country clubs were meant to be, away from the city. After a two-phase redesign in the 80s, it's now getting computerized water control.

FGCSA SPOTLIGHT  TWO KINDS OF PROFESSIONAL .........................24
Adam Yurigan was a former professional golfer who played and won several open tournaments in 30s. Later as a club pro, he doubled as the golf course superintendent and became an expert nurturer and healer of turfgrass.

ENVIRONMENT  A PERMANENT WILDLIFE PRESERVE .......................28
Several golf courses near Vero Beach have been developed to double as preserves where endangered plants and animals can survive and thrive.

TECH REPORT  SPEED ISN'T THE ONLY MEASURE .........................35
Green speed is important, but there are other qualities that make a good putting surface. Here are some management tips for evaluating and improving your own course.

GREEN PAGES  IS EPA GIVING RIGHTS BACK TO STATES? .....................43
Is it good news or bad when an EPA report says that states have the primary responsibility for protecting groundwater from pesticide contamination?

AFTERWORDS  EFFLUENT FOR THE AFFLUENT ...........................44
Just because it sounds like a good idea doesn't mean that sewage effluent is economical or advantageous for your turfgrass. Tom Benefield, CGCS, has some insights on this important concept every superintendent should consider.

GREEN SIDE UP  I HEAR THE TRAIN A-COMING ...............................48
If you want to know which end is up in the future of golf course management, read Editor Joel Jackson's parable about everyman in the turf management business.
Turfgrass Quiz

Turfgrass area: sports field.
Location: New Jersey.
Problem: Turf under stress in large circular pattern.

Answer on Page 34
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As I write my last President’s Message, I would like to reflect back to my first one and the three goals — association growth, research, and pesticide awareness.

During my term as president, we have increased our membership from 685 to 747. We also added a new chapter, Seven Rivers, which brings us to a total of 11. I would like to thank Eddie Snipes, Membership Chairman, and all who helped in this association growth.

Our research green, now dedicated to Otto Schmeisser, has two USGA projects under way as well as fertilizer trials which will give us beneficial information. Thanks to Kevin Downing, the committee, Marcus Prevatte, and all members who made this research green a reality.

During this year we have seen the start of the Florida Golf Council. Already they are lobbying for us against the proposed water-use tax. Fellow superintendents, I cannot stress enough how important this Council can be for all in the golf industry and I urge you to support the Florida Golf Council. Hopefully, Tim Hiers will have the time and energy to stay on this Council.

If this has been a successful year, it is because of the cooperation I received from the membership who put in the extra time to make it one. Thank you.
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SEEDING RATES
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<table>
<thead>
<tr>
<th>Variety</th>
<th>Seeds/lb.</th>
<th>1000 sq. ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cypress® Poa trivialis</td>
<td>2 million</td>
<td>10</td>
</tr>
<tr>
<td>Cypress Greens® Overseeding Blend</td>
<td>7</td>
<td></td>
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<tr>
<td>Ryegrass Blend</td>
<td>265,000</td>
<td>30</td>
</tr>
<tr>
<td>Streaker Redtop Bentgrass</td>
<td>4.8 million</td>
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</tr>
<tr>
<td>Creeping Bentgrass</td>
<td>6 million</td>
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USGA commits another $4.1 million for 4-year turf research program

The USGA has extended the turfgrass research program begun in 1982 with a $4.1 million appropriation for projects to be conducted through 1997.

The money will fund research projects, still to be selected, in plant improvement and resource management. The former includes turfgrass breeding and biotechnology; the latter includes cultural practices, biotechnology and pest management.

A request for pre-proposals will be sent to university researchers next month and final decisions on projects to be funded will be made by the Turfgrass Research Committee in March.

In the final round of awards for the previous USGA program, University of Florida researchers at the Fort Lauderdale Research and Education Center received funding for two projects at the FGCSA’s Otto Schmeisser Memorial Research Green on the FLREC campus.

Pathologist Monica Elliott is looking for a “good twin” to the evil fungus *Gaeumannomyces graminis* that causes bermudagrass decline.

“It’s something like ‘king of the root’ or ‘possession is nine-tenths of the law’ or ‘I got here first!’”

Dr. John Cisar is only a few months away from beginning actual tests of pesticides on the USGA green.

Both researchers said the USGA announcement was “important news,” and both expect to submit pre-proposals to continue and expand their current projects as well as undertake new ones.

“Determine suitable levels of salinity in recycled water would be particularly appropriate for the golf industry, Cisar said, and it’s a project that interests him.

“Bermudagrass decline, and the related patch diseases up North, are root rot diseases that are extremely difficult to control,” says Elliott. “Even now, chemicals alone do not do the job. It will truly require a combination of cultural, chemical and biological control practices.”

Both researchers, professors at the Fort Lauderdale REC, said that state budget cuts have seriously hampered their work.

“They’re talking about turning off my lights,” Cisar said.

“We need funds to buy the basics like petri plates, media and chemicals,” said Elliott.

Among the objectives of the USGA’s original 10-year research program was the significant reduction of water use and maintenance costs by breeding new grasses and developing improved cultural maintenance practices.

Two improved turfgrass varieties, NuMex Sahara bermudagrass and NE 84-609 buffalograss are now available for use on golf courses and other turf areas as a result of USGA funding. Much of the background work has been accomplished with the breeding programs sponsored by the USGA and the organization expects more varieties to be released this decade.

During the next five-year phase of the program, emphasis will be placed on developing grasses and cultural maintenance practices that conserve natural resources. New grasses will be sought that require less water, pesticides and fertilizer, and that exhibit other desirable characteristics, including

- ability to survive temperature extremes
- tolerance of non-potable water
• tolerance of alkaline, acid or saline soils
• reduced need for mowing and fertilization
• resistance to diseases, insects, nematodes and weed competition
• tolerance of smog and other pollutants
• shade tolerance

By extending the funding of the turfgrass research program for a five-year period, the USGA hopes to ensure continued high standards for the maintenance of golf courses while addressing environmental concerns about the protection and conservation of natural resources.

**GCSAA donates $50,000 to USGA turf research fund**

As the USGA was announcing research plans for the next four years at the U.S. Open in Chaska, Minn., last month, the GCSAA presented the organization with grants totaling $50,000 to help fund research commitments made earlier for 1992.

“We are extremely pleased once again to offer our financial support to the committee,” said Stephen Cadenelli, CGCS, GCSAA president. “More important than money, however, is our pledge to take the knowledge gained from this research and disseminate it to those responsible for the management of America’s golf courses.”

The USGA and GCSAA have worked together on the turfgrass research program since 1983.

**GCSAA official testifies on pesticide education, limits**

“Golf and the golf course superintendent have a very real interest in reducing pesticide use,” said William R. Roberts, CGCS, in testimony before the recent Senate subcommittee hearing on toxic substances and environmental oversight. Roberts, GCSAA vice president, testified on behalf of the association.

In his testimony, Roberts highlighted GCSAA’s education programs and the association’s stance on posting and pre-notification of pesticide applications. He also reconfirmed GCSAA’s “diligence in asking the hard questions and finding the right answers which will lead to a minimalization of overall pesticide inputs to our environment.

Roberts’ testimony touched on GCSAA’s willingness to work within the regulatory process. The subcommittee was briefed on the public education/public service announcement produced in conjunction with the EPA, “Think Before You Apply,” which educates homeowners about environmentally responsible lawn care practices.

The 30- and 10-second commercials ask homeowners to “read the directions and use only the amount needed to do the job.”

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Three Floridians join Society of GC Architects

Three Floridians were among seven architects elected to membership in the American Society of Golf Course Architects.

Michael Beebe of Orange Park was elected to regular membership while James Lipe and Andrew Raugust of North Palm Beach were named associate members.

Beebe, employed by McCumber Golf, has designed Marsh Creek in St. Augustine, The Vineyards in Naples, and Edmonton Petroleum Club in Alberta, Canada.

Lipe, a senior designer with Jack Nicklaus Golf Services, includes Melrose Golf Club on Daufuski Island, S.C.; St. Mellion GC, Cornwall, England; and Pinehurst (N.C.) National GC among his credits.

Raugust, an associate at Golden Bear International, is credited with courses in California and Hawaii as well as Canada, France and Finland.

Also elected to regular membership were Michael Gleason of Pinehurst, N.C.; David Moote, Brampton, Ontario, Canada; and Gregory Muirhead, Montclair, N.J. Thomas Johnson of Braselton, Ga., is a new associate member.

Noting the international work of the new members, newly elected ASGCA President Tom Clark sees continued growth of the golf course construction industry.

"The demand in the Pacific Rim is so strong that many golfers fly to other countries, even as far as the U.S., to play," said Clark, a partner in Ault, Clark & Associates. "This strong demand, plus locally available financing, suggests the Asian arena will promote new construction for the next few years.

"Spain and other European countries are developing courses almost as quickly as the Asians," said the veteran architect.

Many overseas projects are managed by American architects, he noted.

In addition to building courses in their own countries, foreign investors, including the Asians, Arabs and Swiss, are providing financial backing for many domestic projects.

Many overseas groups have invested in firms that finance, own and operate golf courses for municipalities and developers, paying a monthly fee for the privilege. These organizations are gaining popularity, according to Clark, because they offer the advantage of financing up front.

Clark sees more courses being integrated in commercial spaces such as industrial parks.

"To build an industrial complex, the developer has to perform the same environmental and wetlands research done for a golf course," he said. "Commercial developers know a course makes a property much more attractive to potential clients... so why not put a nice greenbelt around the site?"
**Golf eligible for Olympic Games in year 2000**

The International Olympic Committee has recognized the World Amateur Golf Council, which comprises the national governing bodies of golf in 66 countries, as the sole international federation for golf, making it possible for golf to become part of the Olympic Games.

According to IOC rules, the earliest golf could be included in the games would be the year 2000, for which a site has not yet been selected. The 1996 Olympic Games are scheduled for Atlanta.

Joint chairmen of the WAGC are Gordon B.B. Jeffrey and C. Grant Spaeth, respectively the chairman of the General Committee of the Royal and Ancient Golf Club of St. Andrews, Scotland, and the president of the USGA.

The WAGC shares a telephone number and mailing address in Far Hills, N.J. with the USGA.

Golf had been part of two Olympiads in this century — Paris in 1900 and St. Louis in 1904.

The WAGC, which was founded in 1958 to conduct international championships for men and women every other year, decided to pursue recognition by the IOC in response to the wishes of many of its member federations.

If the IOC places golf on the program of future games, the WAGC will determine the format of the competition and the rules of eligibility of individual golfers under IOC rules. The WAGC will determine, for example, whether the competition will be limited to amateurs.

---

**Ross Award winner warns against standardization, unqualified ‘architects’**

Golf course developers should be leery of inexperienced individuals trying to pass themselves off as designers, according to Michael Bonallack, secretary of the Royal and Ancient Golf Club of St. Andrews and 1991 recipient of the Donald Ross Award from the American Society of Golf Course Architects.

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public awareness of the importance of golf course architecture to the game of golf.

"Many people have set themselves up as golf course architects without any form of qualification, apart from having been good golfers," said Bonallack in his acceptance speech in Broughton Park, England, at the Society's annual meeting earlier this year.

"That is similar to calling yourself a building architect because you are a skilled bricklayer or carpenter."

Bonallack, one of Britain's all-time great amateur golfers, shared his ideas on the ingredients of a good golf course.

"First, courses should be scenically and naturally beautiful," he said. "Second, courses should not require unusually long tee shots or penalize non-experts with hazards."

The award winner also said the best-designed courses make the player think.

"Half the fun of playing a classic course for the first time is determining what the architect was trying to make you do on a

---

Michael F. Bonallack, center, secretary of the Royal and Ancient Golf Club at St. Andrews, accepts the 1991 Donald Ross Award presented by the American Society of Golf Course Architects. From left, ASGCA Vice President Tom Clark, Secretary Art Hills, President Dan Maples and Treasurer Jerry Matthews.

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specific hole and what snares he laid for those who do not think,” he said.

Bonallack suggested that fairway bunkers should be used sparingly and strategically placed as close as possible to the perfect line of play, so that by just missing a bunker, the golfer is left with the ideal second shot.

The growing concern with standardization of courses threatens to take the uniqueness and challenge out of a hole, according to Bonallack.

“All greens do not have to be the same speed and all fairways the same width and cut to the same length,” he said. “And the rough does not have to be uniformly graded.”

Bonallack called on golf’s governing bodies to promote individuality in golf course design and construction.

“The distinctiveness of holes and courses is part of what makes golf great,” he added. “Unlike other sports’ playing grounds, every golf course is different and has its own special attractions which can leave a lasting image on the mind.”

**USGA intern program to honor P.J. Boatwright**

The USGA Regional Internship Program will be perpetuated in memorial tribute to P.U. Boatwright, Jr., in honor of the significant contributions made to golf by the late USGA Executive Director of Rules and Competitions.

The program to assist state and regional golf associations hire interns to help conduct operations benefiting junior golf, public golf and tournament administration was inaugurated this year as a test.

“The introduction of minorities to golf administration and management also remains a prime concern of this program,” says the USGA news release.

Requests for 1992 internship grants must come from a state or regional golf association that functions as a non-profit service organization. Students may not apply directly to the USGA.

All requests must be made in writing.

Donald Spencer, director of the USGA Foundation, is coordinating the program.
Lake Region Country Club
Winter Haven
Number 5

Photos by Brian Everhart
Lake Region
Yacht & CC

Picturesque country club enters the computer era

BY PHILIP PETTUS

Tall pines, a scenic lake, wildlife wandering to and from the surrounding woods — they all contribute to the natural tranquility of Lake Region Yacht and Country Club, near Winter Haven.

No houses, no interstate highways in the horizon, no businesses, no street sounds. Except for the club’s buildings and facilities, there’s just flora and fauna and a peaceful lake surrounding you.

“This country club is like country clubs were meant to be in the beginning, a place to get away from the city,” said Lake Region Golf Course Superintendent R. Alan Puckett.

“There are no reminders of the city as you walk around the course,” he said. “I’ve seen foxes, alligators, otters, bobcats, cranes, herons, eagles, hawks and owls,” Puckett said. He said that when someone comes out for the first time, most often as a guest, “they usually have an experience they remember.”

A private club in Central Florida that dates back to 1924, the LRY&CC boasts a total of 960 members, including 550 golfing families. The 83
people on the waiting list can expect to wait up to five years to join, he said.

At one time, sailing and regattas were a part of the club’s activities, hence the word “Yacht” in the name. Presently sailing is not a major activity and the club is focused on golf, tennis and swimming as major activities. But the club president is still called the Commodore.

The 200-acre stand has about 110 acres of turf, Puckett said. Overseeing a crew of 17, he is responsible for all the “growing” assets of the club. In addition, Puckett and his crew do just about anything that requires manpower.

“If they (other departments) have something to move, and no one else is available, then we’re the ones they call. That’s pretty normal for private clubs,” he said.

“If there’s a ball to be picked up and carried, then we do it.”

While engaged in summer maintenance projects, such as deep-tine aerification to alleviate soil compaction, Puckett said a major upgrade is taking place with the irrigation system. Lake Region is a test site for a Network LTC irrigation system that will have the first-ever computer-controlled loop system by Toro.

“This will be a state-of-art system,” Puckett said. “The new wave of golf course management is going to computerized irrigation controllers,” he said.

Toro has another very extensive and sophisticated system but the one being tested at Lake Region is a simpler version that requires a PC computer. It will operate Lake Region’s older electrical irrigation system (rather than the newer type of hydraulic systems).

Puckett said Toro selected Lake Region because it had the electrical system and because the area is prone to a high incidence of lightning. These circumstances will give a stern test for reliability and durability. The irrigation end was installed in April and the central controller is scheduled to arrive in August. It will control all irrigation for the entire golf course from Puckett’s office.

“They gave it to us and installed it and will maintain it,” Puckett said. In exchange, Lake Region will send Toro monthly reports on the weather and system use which Toro will use in future product development and design.

Thus, this “old” picturesque country club enters the computerized maintenance era. Originally established in the “old style” (meaning “pretty flat”), Puckett said the course had undertaken two major projects in the last eight years.

In 1983, the back nine was reconstructed with undulations and elevations, giving the course more challenge. In 1987, the same type of redesign by architect Dean Refram was done to the front nine and the course took on a more contemporary and challenging character.
The greens are Tifdwarf while Tifton 419 bermudagrass is used on the tees, fairways and roughs.

With such a rich trove of nature, keeping both the club members and the wildlife protected are high-priority considerations.

"We are always concerned with giving proper notification of chemical use and spraying schedules through the pro shop," Puckett said.

Puckett, a relatively young superintendent at 31, has been the superintendent at LRY&CC for 15 months, coming there from nearby Grenelefe Resort. This is his first superintendent's job, but he believes he has gotten valuable experience in a variety of jobs since he graduated from Lake City Community College's golf course operations curriculum with an Associate of Science in 1981.

Previously he has worked at World Of Palm Aire in Pompano Beach where he was irrigation technician for all of its five courses, at Walden Lake Country Club near Plant City where he was assistant superintendent, and at Greenlefe near Haines City.

"I have fun doing this job every day and I enjoy the feeling of achievement at the end of day when I see what's been accomplished."

R. Alan Puckett
Golf Course Superintendent
Lake Region Yacht & Country Cub

Age: 31
Education: Lake City Community College, A.A. in Golf course operations.
Professional Involvement: Ridge Golf Course Superintendent's Association, the Florida Golf Course Superintendents Association, the Florida Turf Grass Association and the Golf Course Superintendents Association of America. As external vice president for the Ridge association, he is a board member of the FGCSA.
Goal: Getting his GCSAA certification.
Previous employment: World Of Palm Aire (Pompano Beach), Walden Lake Country Club (Plant City), Greenlefe (Haines City).

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JULY/AUGUST 1991
Puckett said he was first enchanted with his profession when he was only 14 and worked in the cart shop and began cutting grass at ImperiaLakes Country Club in Lakeland in 1974.

I enjoy the feeling of achievement at the end of day when I see what’s been accomplished.”

As one who likes to build “family” into his work force Puckett said his crew has a “casual, comfortable, working realtionship with quality work as our goal.”

He is accustomed to 60-hour work weeks — or more — and cares about doing quality work that reflects well on himself and his crew.

"I have fun doing this job every day and

where he was superintendent of the West course.

"To have this job is a dream come true," Puckett said off his current position. "This is definitely one of the nicest and more exclusive clubs in the area."

Puckett said that while he has moved to new challenges in his career development — changing jobs about every two to three years — he wants to stay at LRY&CC considerably longer.

He is active in the Ridge Golf Course Superintendent’s Association, the Florida Golf Course Superintendents Association, the Florida Turf Grass Association and the Golf Course Superintendents Association of America. As external vice president for the Ridge association, he is a board member of the FGCSA.

He has a goal of getting his GCSAA certification. With a minimum of five years tenure as a superintendent required to qualify for certification, Puckett said he expects the next four years will teach him a lot.

As one who likes to build “family” into his work force Puckett said his crew has a “casual, comfortable, working realtionship with quality work as our goal.”

Assistant Superintendent Alan Autry helps him lead workers that range in age from 18 to 71. The crew works hard and maintains a professional, friendly and courteous relationship with the club members but can also have fun while working together, Puckett said.

Puckett said he was first enchanted with his profession when he was only 14 and worked in the cart shop and began cutting grass at ImperiaLakes Country Club in Lakeland in 1974. He told his parents while in the 10th grade that this was the career he wanted. He set his sights on Lake City Community College and got there after finishing high school. He hasn’t regretted it yet.

He is accustomed to 60-hour work weeks — or more — and cares about doing quality work that reflects well on himself and his crew.

"I have fun doing this job every day and
Adam Yurigan has been teaching all of his life. Through personal example and through years of helping young trainees through the ranks, the winner of the FGCSA’s President’s Award for Lifetime Service has taught golf course superintendents the value of honesty, hard work and professionalism.

A former caddie who turned professional as a young man and garnered several open championships, Yurigan has been both a golf professional and a golf course superintendent during his career.

“When I got out of the Army in 1945, my wife and I moved from Pennsylvania to Iowa, where I helped to renovate golf courses that had deteriorated during the war years,” Yurigan says. “After working with my father-in-law in the auto business for a short time, I decided to return to golf and went to work at the Geneva CC as a pro/superintendent. In those days, if you made $1,000 a month, it was great pay. The golf courses couldn’t afford to have both a golf professional and a superintendent, so I did both jobs. It’s a different era now,” he says.

It was at Geneva, then later at the All-Vet Center, Mason City CC and finally at Echo Valley in Des Moines that Yurigan established a program for young superintendent-trainees.

“You’d feel fortunate to cross paths with Adam
“I had a good resume and had a lot of good recommendations — something I think every golf course superintendent should have,” Yurigan says.

“One of the things I brought to Rio Pinar was my expertise in bentgrass. In the North, we had bentgrass greens and bluegrass fairways. I was the first person, to my knowledge, to plant bentgrass on Florida greens. Now all the high-class courses in Florida have bentgrass overseeding in the winter,” he says.

It was during this time that Yurigan helped found the Central Florida chapter of the FGCSA and served as its first president. "At that time," he says, "Central Florida was a one-horse area. Look at it now!"

Yurigan stayed at Rio Pinar, despite some difficult times with budget and equipment, but in the early 1970s, he heard there might be an opening at John’s Island.

"I called Mr. (Lwydd) Ecclestone and asked him about the possibility of working at John’s Island, and he hired me shortly after interviewing me. I don’t think people really knew Mr. Ecclestone. He was one of the finest men I’ve ever worked with. His door was open to me to discuss the course, and he understood that it was important that the golf course superintendent have control of what goes on at that course," Yurigan says.

With Ecclestone’s encouragement, Yurigan started the Treasure Coast chapter of the FGCSA and served as that chapter’s first president.

Lee Van Valkenburg, now superintendent at Card Sound GC on Key Largo, remembers his days as Yurigan’s assistant at John’s Island.

“When Adam took over, it was raw,” he recalls. “They were using effluent on the courses and, as a result, the ponds were so clogged the birds could walk on them. But the time we left, you couldn’t tell the ponds that held the effluent from the other ponds. They had cut our staff, and I was out there, dragging pumps around the course, working until six or seven at night. And there was Adam, manning machinery, right with us, trying to help get the course ready,” Van Valkenburg says.

“I feel fortunate to have crossed paths with Adam in my career,” he says. “I would not be where I am today if I hadn’t worked for him. He is a real teacher. He makes the assistant superintendents learn everything they can about the course. There isn’t a job we didn’t learn. He let us feel the pressure of the job, he made us lead our crew and coordinate the work and made us tie these jobs together so that there was a workable plan in maintaining that golf course. We knew he was ultimately responsible for the course, but he guided us, and made us think, and learn and understand everything that was necessary to maintain a golf course. I think sometimes superintendents keep their assistants in the dark. Adam didn’t. And because of this, all of us were confident that we knew how to run a course.

“I have never met a man who was more honest and professional and more ethical than Adam Yurigan,” Van Valkenburg says. “Even though he might rub people the wrong way sometimes, he still maintained his integrity. I miss working with him.”

Yurigan brought the expertise gained at John’s Island to the new course at Hawk’s Nest in Vero Beach, serving as an interim superintendent while the course was being constructed. By this time he was in his
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sixties and he decided to look at doing more consulting and less hands-on golf-course maintenance.

Vero Beach CC requested his services, and again he worked with the club until a superintendent could be found. “I told them they needed time and a young man to bring their course around,” Yurigan says. “I established the maintenance program for them, and was able to increase the budget and bring in new machinery to get the course in better shape. Now Roger Welker is in charge of the course and it is in better condition than when I first saw it.”

Yurigan says he has been involved with the PGA of America and the GCSAA for more than 20 years. There have been many changes to the industry in his long career.

“Although I never went for my certification as a golf course superintendent — I was too old, I felt — I’ve told all the young men who worked with me that certification would get them in the door. There are a lot of fine superintendents who don’t have certification and are very qualified, but I think it’s a different game now and it’s much harder on superintendents than it was when I was younger.

“Members expect you to maintain the course like you do when you have a tournament. You have to work with a lot of different professionals — architects, managers, consultants — and still remind them that you are a professional who knows the course and who is the one that is ultimately responsible for the condition of that course. You need larger budgets and more people to maintain a course and all the equipment in good condition.

“I think that more than anything, a golf course superintendent needs to be truthful with people,” Yurigan says. “You have to realize that sometimes it will be difficult and you’ll have to fight to get things done right. But if you are good, you don’t have to worry about getting another job. When golf course superintendents take a stand on the creation and maintenance of a course and stop worrying about someone else taking their job, they’ll be better off.”

Adam Walsh Child Resource Center Benefit Tournament to be played Sept. 14

The South Florida GCSA invites your participation in the Seventh Annual Adam Walsh Child Resource Center Benefit Golf Tournament. The tournament will take place Saturday, Sept. 14, at the Clubs of Inverrary, Lauderhill, Fl.

Enjoy a day of golf, food, beverages and as always spectacular prizes, while supporting an organization dedicated to protecting our greatest asset, our children.

Entry forms will be mailed to members of the Everglades, Palm Beach and South Florida Chapters. Additional information may be obtained by contacting Bob Klitz at 305-733-7551 or Bill Entwhistle, Jr. at 305-435-6169. We look forward to seeing our friends from past tournaments and making new ones at this year’s tournament.

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Poa Annua Classic bothered a bit by rain; committee considers moving to earlier date

The 17th Annual Poa Annua Classic weekend was usual in combining business, education, fun and relaxation, but unusual in having to contend with an uncopporative Mother Nature.

Unseasonable morning rain plagued the Poa Annua Classic for the second consecutive year. A dejected tournament committee had to call off the tournament after nine holes due to the wet conditions, and a soggy bunch of golfers was reluctant to leave the damp but beautiful Flamingo Island Club in its debut as the Poa Annua Classic site.

Superintendent Jim Larner, had the course well prepared, but the turf could not withstand the accumulation of several days' worth of rain and remain playable.

Everglades president, Buddy Carmouche, announced that the Poa Annua Committee was considering moving the Classic to the first weekend in May to avoid the beginning of the rainy season.

On Saturday afternoon, the G. C. Horn Memorial Research Tournament held at the Naples Beach Club was also delayed by rain and lightning, but did complete all 18 holes.

Although the golf competitions may have been dampened by the wet weather, those in attendance were happy to see the drought-stricken West Coast receive the much-needed rain.

The hard work and preparations by the host Everglades Chapter were not in vain as the cordial atmosphere and gracious hospitality brightened up the weekend. The luau banquet Saturday night combined with the steel drum band gave the weekend a distinct tropical flair.

The Education Committee scored another ace with its seminar, “The Thinking Superintendent” on Sunday morning. A wide range of current critical issues was presented to a capacity crowd of superintendents seeking Continuing Education Credits for their GCSAA certification and for their own personal and professional development.

On Saturday morning the FGCSA Board of Directors held its Spring Board Meeting to conduct the business of the association. President Ray Hansen was pleased to recognize Jeff Hayden as the representative of the Seven Rivers Chapter, the 10th and newest chapter in the state association.
Dave Oliver won the Superintendent’s Division for the third consecutive year.

**Poa Annua Classic Golf Tournament results:**

**Superintendent Division**

**Low Gross:** 1st David Oliver, 2nd Lou Conzelmann, 3rd Paul Bondeson, 4th Larry Livingston.

**Low Net:** 1st Chuck Rogers, 2nd Gary Smither, 3rd Jay Gratton, 4th Ray Cuzzone.

**Team Championship**

Palm Beach Chapter-Robert Brumfield, Pat Kearney, Glenn Klauk and Jerry Redden.

**Supplier Division**

**Low Gross:** 1st Morgan Evans, 2nd Keith Longshore, 3rd Glenn Zakany, 4th Walt Shirey

**Low Net:** 1st Brad Reano, 2nd Dick Bessire, 3rd Odell Spainhour, 4th Ted Owens.

Chuck Rogers was the low net winner with a wide lead over Gary Smither.

Mark Henderson watches as Steve Cairdullo and Buddy Carouche post scores.

The Palm Beach Chapter’s minus-10 score took the Chapter Team Championship away from host Everglades Chapter at the Poa Annua Golf Tournament, May 20. Team members were (l-r) Jerry Redden, Glen Klauk, Pat Kearney and Robert Brumfield.

Photos by Joel Jackson.
Where golf courses are permanent habitat preserves

BY KIT BRADSHAW

Consider this equation. One golf course equals one permanent habitat preserve. A single golf course becomes a locale where endangered plant life, or even endangered wildlife can thrive.

John Fitzpatrick, executive director of the Archbold Biological Station, near Lake Placid, sees this concept as reality because it’s happening at a Vero Beach development called John’s Island.

John’s Island West Golf Course sits on one of the highest dunes of the Indian River/St. Lucie County area. Unlike other parts of Florida, the land is extremely well drained. This according to Fitzpatrick, makes John’s Island West unique, with ties to ancient North America. He calls the property, “a spectacular example of a coastal scrub, plant and animal community unique to Florida.”

He admits the property has changed. After all, there is a golf course there now. “But,” he says, “the important thing is that Tom Fazio took a progressive, positive approach to golf course design. He built around the native landscape using its advantages. When you walk on the course, you are walking through what old Florida used to look like.”

Tim Hiers, golf course manager at John’s Island West, said that to preserve as much of the property as possible, the construction centered around hand clearing a vast portion of the land. As a result of the careful preparation and the embellishment of wetlands, migratory and wading birds are abundant. Hiers said many other species of wildlife, such as otters and raccoons, call John’s Island West home.

Fitzpatrick said the property is “one of the rarest habitats in North America. Every square meter is precious to wildlife. There is a fairly large number of endangered species at John’s Island West, and it is now a permanent habitat preserve that also provides recreation and beauty... it is the best example of bridging these two goals together.”

In its role as a permanent habitat preserve, John’s Island West is part of the biological station’s experimental program to save the endangered plant, Lakela’s Mint.

“Lakela’s Mint is one of the rarest plants on earth, and is native to the yellow sand scrub,” Fitzpatrick said. “Unfortunately, most of this yellow sand area has been obliterated by construction along U.S. 1, with just a few small, struggling populations of the plant left in abandoned areas.

“We’ve brought more than 30 of these plants to John’s Island West, hoping the course can become, in a small way, a model of how golf courses can contrib-
Designed for wildlife

ute to conservation of nearly extinct species. Our goal is to establish a thriving population of Lakela’s Mint, which is becoming increasingly important as potential natural insect repellent.”

Many golf courses in Florida, particularly in the agricultural area of Indian River County, are built on old citrus groves. On these properties, sensitive and environmentally aware developers have an opportunity to restore the land to a more natural state.

Fred Loherer, librarian for the biological station, said when a grove is planted, “they remove all the natural vegetation, cut and burn it and then root rake it, so there’s no woody plants or shrubs that remain. The drainage is important when they put in a grove, so they create extensive ditches and lower the water table. This lowers the soil and the hydrology of the area. A citrus grove is pretty much as artificial as a lawn is.”

Two other golf course communities in Vero Beach, Grand Harbor and the nearly-completed Windsor, are located primarily on extinct citrus groves. Here, the goal was not to maintain the existing landscape, but to restore a portion of the land to its pre-citrus condition.

Windsor will open in November. This Robert Trent Jones Jr. course is on a former grapefruit grove. According to designer Gary Linn, “We are trying to put the land back into better shape than it was before.”

For Linn, this assignment provided two important aspects of course design.

When the grapefruit grove was created, a hammock area on this barrier island was virtually eliminated. There is a small triangular piece of hammock that remains, and the Jones design has incorporated this hammock into three of the holes.

“There was a commitment to restore the natural area here,” Linn said, “and we are transplanting 60- to 70-foot live oaks, making the native dunes and putting in palm trees to recreate the areas that were denuded when they put in the grapefruit orchard. The environmentalists like it and it’s pretty neat for golf use, because it gives instant maturity to the course.”

Water retention and filtration are also part of the course design. Water on the property is captured in a series of large lakes, according to Linn, and then moves into the drainage ways with man-made shelves that have been planted. In this way, the plants at the water level of the lakes and along the drainage canals can filter the water before it’s discharged into the Indian River.

Water is also an important part of the design of Grand Harbor courses. About 712 acres of the original 895 were citrus groves, and 73 acres were part of a mosquito impoundment system.
According to Ron Andrews, golf course manager for the complex, 712 acres of the original 895 were citrus groves, and 73 acres were part of a mosquito impoundment system.

To help restore the “old” Florida look to the property, some of the wetlands were preserved, some restored, and new wetlands were created. The mosquito impoundment areas were tied back into the Indian River, and now Andrews uses open-water marsh management to control the mosquito population.

“Historically, these impoundment areas were connected to the Indian River,” Andrews said.

“What we did was to open these two impoundments back to the river, remove some of the agricultural sediments and make the areas a viable piece of the Indian River again. It’s a new technique, and some of the people were not real sure it would work, but the Indian River Mosquito Control

“There are a fairly large number of endangered species at John’s Island West, and it is now a permanent habitat preserve that also provides recreation and beauty... it is the best example of bridging these two goals together.” — John Fitzpatrick, biologist
District says it works about as well as it did when it was impounded. They don’t have to use pesticides within the saltwater marshes to control mosquitos, any more than they did when it was impounded."

The open marsh water management system uses the tidal influences of the Indian River to penetrate all the parts of the marsh, and to insure that there is no isolated puddling that will encourage mosquito propagation. "Then, if you can get the fish there, especially in the early life cycle of the mosquito," Andrews said, "the fish will eat the very young, small mosquito larvae."

Andrews adds, however, that not every impoundment area is a candidate for this type of program.

"For one thing, it is very expensive," he said. "For another, you need some place to put the fill that comes out of the berms that were part of the impoundment areas. In addition, there is a lot of research going on right now about mosquito impoundment areas. The mosquito control districts are looking into the possibility of opening some of these impoundments part of the year. So there are a lot of things to consider concerning mosquito impoundments."

In the process of creating two golf courses at Grand Harbor, 12 acres of wetlands were filled in. Andrews said the areas filled in were not pristine, but were heavily impacted wetlands.

"And," he added, "keep in mind that the citrus grove was not native land, and there was little wildlife on that portion of the property before construction." However, as part of the permitting, 48 acres of wetlands were created to offset the in-filling.

"Basically, we rehabiliated those 73 acres of salt marsh, except for the 12 we filled, created 48 more to add to that; and rehabilitated the whole thing. In addition, we created 74 acres of freshwater wetlands. Doing the wetlands work and integrating it with the golf courses were our biggest challenges."

The River Club course was built on citrus groves, and in creating it, 28 acres of upland lakes were built. At the Grand Harbor course, the impoundments were rehabilitated and freshwater lakes were constructed. All this work has created an environment that attracts fish and birds, Andrews said.

"We filled the marshes with fiddler crab, snook and a lot of different fish," he said. "In our testing, we’ve collected a very high number of other fish. If you keep track of the fish, it’s a very good way to see the success of a created marsh. Also, I can go out on the course and see a number of birds, such as tri-color herons, ibis, blue herons and wood storks. And there is other wildlife here, such as frogs, snakes, river otters, raccoons and bunnies—we’re bunny huggers like everyone else."

"It is expensive to preserve, rehabilitate and create wetlands," Andrews said. "We probably had something in the neighborhood of $2 million in the saltwater mitigation, and about $400,000 alone in plants used in the freshwater. In addition, if you take 30 percent of a lake and make it marsh, you lose 30 percent of the fill that could come from the lake. So there is a hidden cost of mitigation, because it makes you use dirt from off the property. The only people who could afford this type of project is a developer. The value, however, is that it lets people know that mitigation can be done successfully."

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When outright preservation of the land is not possible, then the next best scenario is to work with golf courses — courses are open space by their nature — and with residential developers, because they can put money into preserving bits of the native ecosystem.

The expense of either preserving wetlands and uplands or rehabilitating these properties is extensive, but Fitzpatrick believes that environmentally sensitive development can be valuable in the preservation or restoration of Florida’s lands.

"When outright preservation of the land is not possible, then the next best scenario is to work with golf courses — courses are open space by their nature — and with residential developers, because they can put money into preserving bits of the native ecosystem," Fitzpatrick said.

"John’s Island West is clearly in the vanguard because they made a special effort to protect pieces of a native system exactly as it used to be. My genuine belief is that golf courses have a real potential for being ecologically important. They are important places for environmentally-minded people who decry any human use of the land. It is possible for development and the environment to live side by side."

Andrews agrees. "Good golf course superintendents have always been environmentalists," he said. "We spend a big part of our day on the golf courses. We’ve got to deal with the pests of nature, but we enjoy the good side of nature just as much as the next guy and we work hard to minimize the impact the golf course has. I think that often a golf course doesn’t get enough credit for the positive things it can do for the environment."
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Two from Florida win GCSAA scholarships

Two of the first 10 GCSAA Legacy Awards for outstanding scholarship have gone to Florida women.

Jennifer Jackson, daughter of Joel Jackson, CGCS, Orlando, and Melissa Marie Sohn, granddaughter of Louis Earl Trapp, Lake Placid, each have received $1,500 stipends to further their collegiate education.

Legacy Awards, financed by GCSAA Scholarship and Research fund, are available to the children and grandchildren of active and retired GCSAA members.

Candidates must be enrolled full-time at an accredited institution of higher learning with a cumulative grade point average of at least 3.0 (on a 4.00 scale), demonstrate a broad base of interests including community involvement, volunteer activities and outside work, and complete a short essay on his or her parent's (or grandparent's) involvement with the GCSAA.

"The selection committee members were very impressed with the caliber of the candidates, particularly the essays," said Pat Jones, GCSAA director of communications. "These stipends were made solely on the basis of merit under the criteria, not on the basis of need."

The selection committee was comprised entirely of educators and collegiate administrators who had no connection to the GCSAA or the golf course management industry.

Jennifer Jackson will enter Wake Forest University near Winston-Salem, N.C. this fall as a freshman. Her father, editor of the Florida Green and past president of the FGCSA, is a superintendent at Walt Disney World.

Melissa Sohn has attended South Florida Community College on a part-time basis during her junior and senior year of high school and is enrolled for the fall term at Troy State University in Alabama.

Thus, although she just graduated from Lake Placid High School, she’ll probably carry sophomore hours into Troy State. Sohn’s grandfather was superintendent at Dayton (Ohio) CC from 1935 to 1974.

Other GCSAA Legacy Award scholarship winners:

• Mary Flaherty, Berkeley Heights, N.J., daughter of Joseph R. Flaherty, CGCS.
• Amy Jo Miller, Middleton, Wis., daughter of Monroe S. Miller.
• Jennifer Jane Shermer, Folkston, Ga., granddaughter of Edwin T. Mattson.
• Vincent R. Streiff, Middleton, Ohio, son of Thomas R. Streiff III, CGCS.
• Grier Wallace, Unionville, Conn., son of Michael Wallace, CGCS.
• Ian K. Wallace, Unionville, Conn., son of Michael Wallace, CGCS.
• Ty Townsend Webb, Memphis, Tenn., son of Lee Archer Webb, CGCS.
• Laurie Ann Wilcoxen, Stillwater, Okla., daughter of Stephen N. Wilcoxen.

GCSAA forms service for international members

The GCSAA has formed a new department to develop and implement programs for international members.

Tom Akins, GCSAA director of planning, will head the department and assume the new title of director of planning and international programs.

"International requests for assistance and information have steadily increased over the last several years," Akins said. "We’re excited about the opportunity to provide tools for superintendents outside the United States.

"Many countries already have established golf federations and associations that are providing quality professional development for their membership. Our desire is to work cooperatively with those associations, lending our expertise while learning from their unique methods."

Of the more than 10,800 GCSAA members, 734 live and work in 47 different countries outside the U.S.

TURFGRASS QUIZ

A new irrigation system installed by inexperienced installers. Improper spacing did not allow water to reach adjoining sprinkler heads. Installers blamed problems on fertilizer, insects, disease and mowers. They were found liable for a bad installation and had to redo it.
Despite what club members might say, there's more to a quality green than speed. Here are some management tips to keep your greens looking good.

The word fast has become synonymous with success. Fast cars, fast-track careers, even fast foods are associated with the good life. Speed also is important in sports. Baseball pitchers are evaluated on how fast they throw and football players on how fast they run the 40-yard dash.

In golf, successfully managed greens are often associated with speed. However, speed alone does not make for a good green. If a wide receiver cannot catch a football, his time in the 40-yard dash is meaningless. The same is true in golf: the ultimate fast green would be as hard as a rock, smooth as glass and void from grass. No golfer would want to play on this surface. The terms "feel" and "touch" would be meaningless since making a putt would be a function of luck.

Clearly, green speed is important, but it's not the only component of a good putting surface.

Important elements of a good putting green are uniformity, smoothness, firmness and resiliency. The first three are associated with speed while resiliency governs the green's ability to hold golf shots.

Uniformity implies that each green puts the same. Nothing is more discouraging than putting on a fast green followed by a slow one. Uniformity is often difficult to achieve.

Variables such as location, construction, micro-environments and grass species make perfect uniformity unattainable. For example, greens may dry out at different rates or greens in the shade might putt faster due to the thinner less dense turf.

Smootheness is a major factor affecting speed. The smoother the surface, the less resistance to roll. If a green is not smooth, the ball will tend to bounce, thus stop quicker.

Firmness is associated with hardness. The firmer the surface, the faster the green. For example, a ball will roll a greater distance on the floor than on a mattress. Difficulty arises in attempting to maintain greens firm enough to promote speed, yet soft enough to accept a well-struck shot. Balancing these two qualities requires and understanding of your golfers' expectations.

In addition to uniformity, smoothness, firmness and resiliency, contour also must be considered in determining proper green speed. What constitutes fast greens on one course may not be the same on another.

For example, if two greens each roll nine feet as measured by the stimpmeter, and one is flat and the other severely contoured, the latter will be much more difficult to putt than the former.

Managing greens for proper speed means achieving a happy medium. Greens that are too slow are not fun to putt. Nor are greens that are too fast so that they eliminate the skill level required of golfers.

Management Strategies

Good putting greens have a number of components. To achieve fast uniform greens, proper cultural programs need to be practiced.

Reducing the mowing height will increase the speed. Lower mowing heights promote uniform and smooth surfaces.

Often the questions is asked "How low can we mow?" A more proper question would be: "How long can we stay?" In other words, the lower the mow, the shorter the interval at which the putting greens stay healthy.

The shorter you mow greens, the more likely the turf will become susceptible to temperature and moisture stress, disease pressure and damage through wear. Putting greens cannot be maintained at championship cuts indefinitely without turf loss or spending considerable money trying to prevent loss.

Care should be taken when mowing heights are reduced from normal cutting heights. An abrupt change can result in scalping and kill the turfgrass.

If mowing heights are lowered for a tournament under non-stress conditions, return to normal height when the event is over.

Care should be taken if height is to be increased under stress conditions. Research from the West and the Southwest has shown that increasing the height increases the water use rate.

Low mowing heights can cause restricted root systems. By raising the height under stress conditions, the root system may not be able to supply enough water to the additional tissue. It may be best to leave the cut low until the stress period has ended.

Frequent mowing promotes high shoot density and vertical leaf growth, which results in smooth, consistent greens. Varying the mowing direction daily also helps pro-
mote a more upright plant. Research has shown that a break in regular mowing can result in a brief, yet significant reduction in green speed.

Research at Ohio State has found that double cutting greens — mowing them twice a day — can significantly increase green speed. If pressure exists to increase the speed of the greens, double-cutting is an option to dropping the height of cut.

Grain appears when grass plants lie in different directions. In severe cases, shoots, stolons and rhizomes orient in various directions on the surface and interfere with the golf ball’s proper roll.

Our work has shown that the difference of putting “with” moderate grain versus putting “against” the grain can vary as much as three feet. Effective grain control is a prerequisite for achieving uniform greens.

Verticutting helps reduce grain by promoting more upright growth and removing undesirable tissue. Verticutting is often done weekly during periods of active growth.

Brushing is a common practice for reducing grain. Brushing is the process whereby a stiff, bristle-type brush is placed in front of the mower. As the mower moves across the green, the brush lifts the turfgrass plant up before it is cut. Brushing is effective but can cause damage to the plant.

The best time to brush is under conditions that promote turfgrass growth. Time interval between brushing depends on the severity of the brushing and how quickly the turf recovers. Avoid brushing in the turfgrass is under stress.

Thatch plays an important role in green speed and quality. A small amount of thatch provides a certain amount of resiliency. However, excessive thatch disrupts the firmness and smoothness of the turf.

Priority should be set to control or manage thatch at an acceptable level. Vertical mowing, topdressing and coring are effective means of minimizing thatch. They should be done as a regular maintenance program.

Topdressing smooths the surface and provides a firmer base. Frequent top dressing is a positive step in providing a uniform turf.

Although topdressing and brushing may initially slow down a green, eventually they will increase its speed.

The challenge to improving green speed is knowing what practices will work for you and the same time providing a visually appealing and healthy turf.

And finally, for all practices that are available for increasing speed, the environment plays the critical role in what you can and cannot expect and do.
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Turf Industry Roundup

Marketing to Golf Course Facilities” is the title and topic of a seminar sponsored by Golf Course News Sept. 16-17 at Oak Brook Hills Hotel and Resort near Chicago.

The program will focus on the market needs of golf facilities and the development of market strategies to meet those needs.

Seminar topics will include trend data on the growth and changes in golf facilities; buying habits of golf course market segments including superintendents, developers and builders, and management company decision-makers; international marketing; successful green marketing; and result-oriented sales.

The program is designed for CEOs, sales/marketing vice presidents and directors, sales managers, and marketing communication managers in companies that offer products and services for golf course facilities.

Contact United Publications, 207-846-0600 for more information.

The Toro Co. has filed a lawsuit against Fuqua Industries, Inc., doing business as Snapper Power Equipment. The lawsuit charges that Fuqua’s use of the word “Recycling” and other variations of the word “recycle” in advertising infringes on Toro’s Recycler trademark.

“Toro’s action... is not an attempt to prevent traditional uses of the terms recycle(s), recycling, etc., in connection with the reprocessing of glass, plastic, aluminum, etc.,” says a company news release.

Lesco, Inc. announced earnings of $1.7 million on record sales of $41.6 million in the second quarter ended May 31. The sales were up nearly 20 percent from the same period last year but the earnings were down slightly from the record $1.9 million earned last year during the same quarter.

Lesco Chairman James I. FitzGibbon attributed the lower profit margins to competitive pressures.

The company announced an annual dividend of 8 cents per common share payable July 9, up a penny from last year.

Sales increased in each of the company’s product lines—fertilizers, turf protection products, seed, and turf care equipment — and in all four sales groups: golf course sales representatives, stores serving commercial lawn care operators, lawn service sales representatives and telemarketing.

F. Leon Herron, Jr., retired chairman and president of O.M. Scott & Sons, Inc. has been elected to the board of directors of Lesco.

Herron joined Scott in 1965, was elected president the following year and chairman in 1971. He held both offices until he retired in 1983.

Hertz Equipment Rental Corp. is now offering a rental purchase program that requires no down payment and enables the customer to build up to 90 percent equity.

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Busam Wagoner joined Rain Bird in 1987 and most recently served as the company's South Florida district manager.

Other personnel changes at Rain Bird include the promotions of Frank Busam to vice president for quality, Kris Freudenthaler to director of human resources, and Pamela Kratzer to advertising assistant.

Drew Lillie has been named regional marketing supervisor for Monsanto's residential products division. A graduate of the University of Florida, Lillie will manage distributor relationships in Arkansas, Louisiana, New Mexico, Oklahoma and Texas. Patrick Quinn is a new marketing specialist for the residential products division. He will work out of the company's world headquarters in St. Louis.

Donald F. Myers has joined Nor-Am Chemical Co. as project manager for developing products for use on field crops, turf and ornamentals. He comes to Nor-Am from Maag Agrochemicals in Vero Beach, where he was manager of wood protection research.

Joining Nor-Am as a group leader for method development is Lee Williams, a native of Immokalee; Brian N. Meyer, senior chemist for environmental sciences; Kent Rupprecht, metabolism chemist for environmental sciences; Mark Christ, aquatic biologist, environmental sciences; and Christopher Leake, group leader, environmental sciences.

Tammy Dauterive has joined Sunbelt Marketing Services in Mount Dora as account executive. She formerly was marketing manager for the Florida Foliage Association. Sunbelt specializes marketing and advertising services for the horticultural and advertising industries.

Enviro-Gro Technologies, a wastewater residuals management firm based in Lancaster, Pa., has opened a product marketing division for a line of packaged commercial and re-
Control boxes for turf irrigation systems

Plymouth irrigation boxes are made of a strong, tough thermoplastic material especially suitable for underground use. They're lighter in weight, easier to handle and less brittle than cast iron or concrete boxes. And, the covers feature molded-in green color to blend-in-with rather than stick-out-of your turf. Rectangular boxes have snap locking covers; 10" round boxes have twist lock covers; and 6" round boxes have snap fitting covers. All boxes nest for simplified storage. AMETEK, Plymouth Products Division, 502 Indiana Avenue, Sheboygan, WI 53081, Phone: 414-457-9435, FAX: 414-457-6652.

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The Green Pages
A compendium of news and opinions about government, golf and the environment

Políticos propose ‘market-based’ environmental incentives

Some politicians and environmental groups are calling for a new approach to solving environmental problems. "Market-based environmental incentives" would operate by making those companies that create environmental problems bear the total cost to society through higher product costs.

Costs for waste generation by companies and individuals would be geared to the amount they produce. In the same respect, if a company produced a chemical that contaminated groundwater supplies, that company or companies that manufactured that product would pay for the total cost of cleanup.

Keep a close eye on state legislators for market-based approaches that apply to golf courses and development.

Who’s wasting it?

Water Fact: Approximately 42 percent of household water is used for landscaping, and landscapes are typically overwatered by 20 to 40 percent.

Curb chemophobia

The Natural Resources Defense Council has called for an 80 percent reduction in agricultural pesticide use.

The organization cited the recently completed EPA well water study as a source for proposing such drastic cuts.

Although the cuts are aimed at agricultural uses, superintendents should brace themselves for future demands by such organizations concerning turf and ornamental products as well.

Public information — and lots of it — is the only way to curb chemophobia.

Traces of herbicides found in rainwater

Traces of herbicides were found in rainwater samples from 23 states in a study recently completed by the U.S. Geological Survey.

The herbicides detected included atrazine, alachlor, metalachlor and a degradation product of atrazine. The main source of the herbicide pollution is believed to be agricultural pesticide use.

This is the first major study to confirm that pesticides can be transported through vaporization into the atmosphere.

Although turf applications were not believed to have contributed to the pesticides found in the rainwater samples, superintendents should be prepared to answer questions from concerned citizens and members.

More restricted pesticides likely

The Environmental Protection Agency has proposed new criteria for determining which additional chemicals should be classified as "restricted-use" pesticides.

The additional criteria, which are designed to protect groundwater supplies, use data from persistence and mobility research and actual detection in groundwater.

These additional criteria are expected to move several turf pesticides now classified for general use to the restricted-use list within three to five years.

Chemical firms face ad charges

Chemical companies as well as lawn-care providers are coming under fire for false or misleading advertising.

This scrutiny focuses on claims that products or services are "non-toxic" or "completely safe."

While FIFRA does not regulate lawn-care company advertising, it does prohibit advertisers of chemical products from making claims as part of a pesticide's distribution and sale that differ substantially from claims made on the label.

Superintendents should be knowledgeable and candid about the toxicity of golf course chemicals when talking to the media about the uses of those chemicals.

High Court OKs local pesticide laws

The U.S. Supreme Court has ruled unanimously that a local government may enact pesticide rules more stringent that federal requirements.

The June 21 decision overturned the Wisconsin Supreme Court's ruling that an ordinance adopted by the town of Casey, Wis., was illegal because it preempted the Federal Insecticide, Fungicide and Rodenticide Act.

The 1985 ordinance requires a town permit to use pesticides on public lands or to perform aerial pesticide applications on private lands.

Forum examines wetlands classification

In an environmental forum sponsored by GCSAA, John Meagher, director of EPA's wetlands office; John Studt, chief of enforcement for the U.S. Army Corps of Engineers; and Rep. Jimmy Hayes (D-La.) discussed how wetlands should be classified.

Hayes, who has introduced a bill that would classify wetlands for protection according to their ecological value, said that the current policy violates the rights of landowners.

"The Fifth Amendment to the constitution states that the landowner has the right to determine what is allowable and that government intrusion is the exception rather than the rule," he said. "If the government does intrude then it is only done under circumstances in which (1) the landowner's rights are protected and (2) if land is taken, the landowner..."
Many fail to see the humor in Ringer commercial

Perhaps you’ve seen this commercial… a pitchman, standing in front of a series of drawings, delivering a lecture:

“These are the chemicals that go into the lawn that go into the rainwater that goes into the streams that go into the lakes that go into the fish that go into the people who put the chemicals in the lawn in the first place.”

Those are the words from a recent TV spot produced by Ringer Corp., a lawn-care products company based in Minneapolis. The spot, intended to be light and humorous, publicizes Ringer’s “all-natural” Restore fertilizer.

Controversy surrounds the commercial not only because of the anti-chemical stance it implies, but because some believe the claims it makes are without scientific support. In a recent Wall Street Journal article, ChemLawn Services Corp., O.M. Scott & Sons Co., and other competitors attacked the ad, calling it “false” and “misleading.”

Although the commercial is for a home lawn-care product, some superintendents have reacted to what they describe as unfair criticism in the ad’s message. A number of GCSAA members have called headquarters after seeing the ad. GCSAA’s voice has been added to the number of corporations and organizations that contacted Ringer.

Ringer responded by saying the company’s “main motivation is to anticipate the market trends and to provide effective products,” said Scott E. Boutilier, commercial marketing director. “This objective coexists with the debate over chemical restriction but did not cause it.”

With home lawn-care products and services increasingly under the microscope, the golf/turf industry often finds itself under similar scrutiny.

In light of the harsh anti-chemical rhetoric, superintendents need to do their best to make sure that all the facts about turf chemicals and practices are made known to the public.

“Now is the time for GCSAA members to get in touch with their club members, civic groups, media and other public organizations to educate them that professional golf course superintendents are responsible individuals who respect the environment,” says Charles T. Passios, CGCS, the association’s government relations liaison.

EPA: Groundwater protection is states’ job

In a task force report and in a speech to a group of governors, the EPA has been saying that it is largely the responsibility of the states to protect groundwater from pesticide contamination. The Groundwater Task Force, which was formed in July 1989 to review the agency’s groundwater protection program and develop policies, released its report in early May.

The report noted the importance of the state role in managing and protecting groundwater, and said that such management could require decisions on groundwater allocation, land use, and pesticide restrictions.

EPA is encouraging the states to develop “generic” management plans, according to Susan H. Wayland, deputy director of the EPA’s Office of Pesticide Programs. Wayland addressed the National Governors Association’s Conference on Comprehensive Groundwater Protection Programs in March.

Given the economic crises many states are experiencing, it is unclear how these plans will be financed, managed and enforced. Superintendents will need to keep abreast of changing regulations as states develop their own groundwater protection programs.
Last summer, President Ray Hansen asked me to become involved with the South Florida Water Management District by leading a group representing golf courses on a committee that was drafting the water district’s “policy document.”

This document will be the blueprint for future water use. Each of Florida’s five water districts will have a similar document drawn up by the end of the year.

My involvement with the committee and my experience in using effluent water for the past seven years has led me to some specific conclusions on the merits and pitfalls of its use.

As a source of irrigation water, treated effluent has some plusses. Depending on its treatment level, it can contain a high degree of nitrogen; the water I have been getting from my local utility runs 20 milligrams per liter.

How much of this nitrogen actually gets to the turfgrass plant has not been established. The lab technicians of my local utility company estimate that 65 percent of the nitrogen is lost to volatilization during the process of dispersing it through the irrigation system.

Furthermore, the Florida Department of Environmental Regulation has set the maximum allowable limit of nitrogen in “irrigation quality effluent” at 10 mg/l.

If your turfgrass plants are getting 3.5 milligrams of nitrogen per liter of water from your irrigation system, they are not getting enough nitrogen from the irrigation to save you any money on your fertilization program. The benefit of this material as a source of nitrogen is minimal.

On the other side of the coin, effluent water does contain enough sodium to cause concern.

In the final process before entering the pipeline, the effluent must be treated by chlorine injection to kill the bacteria. We all agree this has to be done, especially since the water is to be sprayed in areas of public access.

But that process forces us to deal with sodium levels in the soil that are three or four times higher than they would be if we were using groundwater. Excessive levels of sodium not only cause turf loss; they also reduce the efficiency of other chemicals and fertilizers. We end up spending more money without getting any increase in turf quality.

In a subtropical climate such as ours, heavy rainfall during some parts of the year will help flush the sodium out of the soil, but it builds up again during the dry seasons.

And sodium isn’t my only concern. Zinc, copper and boron are all quite abundant in treated effluent. After several years of using effluent on the JDM golf courses, these three heavy metals are approaching levels of toxicity to the turf.

Furthermore, since the pH of effluent generally ranges between 7.5 and 8.5, the pH of soil irrigated with effluent will gradually increase, creating another toxic situation for the turfgrass plant.

Whatever nitrogen benefits might be derived from effluent water are more than offset by the costs of dealing with sodium, heavy metals and soil alkalinity.

An even bigger issue is the loss of turf quality that is not so easily explained to the membership and could cost some people their positions.

And of course there is the bottom line: the cost of the material to the golf course.

The re-use of wastewater is one way for utility companies to get rid of their hazardous waste. Their present methods of deep-well injection and ocean outfalls have come under so much sharp criticism from environmentalists and water conservationists that DER and the water management districts have forced the utility companies to create re-use plans.

Basically, each utility company has two years to develop a plan to begin re-use within five years and have 100 percent re-use within 20 years.

Before its plan can be accepted, a company must have signed contracts with the end users, showing daily and yearly flow projections.

Their need for those contracts gives us some leverage.

The golf course operators in each utility service area will have signed contracts with their customers which will include the amount of effluent that will be supplied by the utility company.
area should determine the fair market value of treated effluent before they begin negotiating with the utility companies.

Right now, utility companies typically pay about 40 cents per thousand gallons to build the infrastructure to dispose of their effluent. That's the maximum anyone should pay... but why should we pick up the whole tab for disposing of someone else's hazardous waste?

Collier County Utilities has one of the fairest arrangements: the golf courses on their contracts pay between 4 cents and 10 cents per thousand gallons — approximately what it would cost a golf course to operate a recharge well for irrigation.

Managers at Collier County Utilities maintain that the lion's share of the cost of disposal should be borne by the residential customer. He's the one flushing the toilet.

Forcing a golf course to pay more than the fair market value for treated effluent has the effect of placing a water tax on the only remaining greenbelt recharge areas of the urban environment.

What sense does that make?

Not only would golf courses be recharging the aquifer by re-using treated effluent, but they would be paying a tax for the right to provide this necessary community service!

The utility companies claim that the end-user should pay the whole cost of the material because the end-user is receiving the benefit.

What they don't mention is that peddling effluent to golf courses leaves more water in the aquifer for them to sell to an expanded service base.

A recycling solution utility companies won't even discuss is piping the effluent back to the residential customers who produced the material in the first place. Constructing those pipelines would cost the companies 10 times what it will cost to install lines to golf courses. And they would have no choice but to pass the cost on to the customers.

So even if the utility company absorbs the entire cost of building the pipelines to the golf courses, it is saving its customers 90 percent of the cost of the alternative.

Another reason utility companies will argue against sending treated effluent back to residential customers is that 50 percent of the potable water sold to homeowners is used for landscape irrigation. If the companies were to force residential customers to irrigate with treated effluent, they would be cutting their revenue from potable water sales in half.

So as we deal with this complicated issue over the next six months, here are some things to keep in mind:

- We are willing to make land that is worth hundreds of millions of dollars available for disposal of hazardous waste.
- We have pipelines, pump stations and sprinkler heads worth millions of dollars already in place.
- We in effect already have paid our fair share. Every dollar we have spent on land and infrastructure is one less dollar that John Q. Public will not have to shell out of his own pocket.

A representative of a utility company once told me, “We may have a moral obligation to re-use wastewater, but it is politically unfeasible to ask for rate hikes on sewer bills of residential customers to pay for it.”

On another occasion, a member of the SFWMD board of governors told me that the attitude of elected officials about who should pay for something comes down to three solutions:

A. Charge the rich and wealthy.
B. Target special interest groups
C. Charge the end user.

Our work is cut out for us. We must explain to the rule makers exactly how the golf industry fits into the water puzzle.

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once upon a time in a little village called Flog there lived an ostrich and an eagle. Of course, they had some obvious differences, but all the ornithologists in the world agreed they were indeed birds. They lived in peaceful harmony with their neighbors, the humans.

One day, the humans that shared the village with the ostrich and the eagle decided the feeding and living habits of these two birds might be fouling the forests, fields, and streams. The village elders met one night and made up a list of rules that the ostrich and the eagle must obey if they were to remain living in the village of Flog. The elders did not tell the ostrich and the eagle about the rules. They merely posted a notice containing the rules in the village square. The notice said the ostrich and the eagle had 30 days to comply with the rules or they must leave.

The next morning the eagle saw the notice, and flew over to tell the ostrich. The ostrich was too busy to talk to the eagle. He didn’t have time to discuss rules and regulations. He had work to do. So, the eagle went home to think about the new rules on his own and decide what to do. The next day the eagle went back to the ostrich’s house to get him to go with him to talk to the elders about the rules, but once again the ostrich was too busy to sit down and talk to the eagle. So, the eagle went by himself to see the elders.

The eagle reminded the elders that there were many things that he did to help the village. While he might take fish from the stream for food, he also kept mice from stealing the grain. And while he might use some kindling to build his nests he also gave warning when strangers appeared.

The elders began to understand that they might have acted hastily in making the rules, so together they wrote some new rules that both could agree upon for the good of the village.

When they were through, the eagle said, “Tomorrow, come out to the meadow and I shall show you some flying tricks that you’ve never seen before.”

The next day the elders crowded into an ox cart to go to the meadow to see the eagle fly. The way to the meadow passed by the ostrich’s house. The ostrich could hear the sound of voices as the cart drew closer. He went outside to see what was going on. When he saw the cart full of elders coming around the bend, he thought they were coming to discuss the rules with him. Being an ostrich, he did the only thing he could do in this situation. He stuck his head in the sand, and hoped that they would go away.

Just then one of the elders spied the eagle practicing some loops and dives. “Look! Look! There’s the eagle,” he cried! The cart driver was looking over his shoulder trying to see the eagle and the oxen veered off the path and trampled the poor ostrich.

Moral of the story: You can fly with the eagles or you can stick your head in the sand with the ostriches. In either case, the ox cart is coming!
At Nucrane Machinery, we see a future of unlimited possibilities in the turf industry. A strong commitment to service directs our corporate philosophy. The new age products represented by Nucrane, developed through advanced computerized technology and backed through experience, are the central core and most essential part of our success. We also realize the importance of involving “the superintendent” in all of our development decisions. Our NU beginning promises to lead Nucrane Machinery into the 21st century.
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with 0.95% Ronstar®

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