Growing Pains
Terry Buchen has grown in 11 golf courses. His check-

Landmark Appraisal
The RTC has retained Casper Golf Management to

On the Green
A sump pump to drain soggy fairways? Steven Renzetti

First family of design reunited in Florida
Robert Sr., Bobby Jones collaborate

Posting & Notification
Should the chemical industry pursue a national standard?

Course owners warned of mystery medical liabilities

Members soundly defeat bylaw amendments

WEATHER-TRACKING TECHNOLOGY
This map, from a company called WeatherVector, displays

COURSE MAINTENANCE
This month's Tour of Duty
Focus on Shannon Cook of Monterey CC
Tournament preparation: Part II

COURSE DEVELOPMENT
Sarazen, Walthour & Sochal design dream
Brent Wadsworth is 1993's Ross recipient
An update on Asian development

COURSE MANAGEMENT
Military course bill introduced on the Hill
Anti-golf tax legislation defeated in N.H
Organizational changes take hold at CMAA

SUPPLIER BUSINESS
Ciba-Geigy, Rain Bird honor superintendents
Lofts Seed expands golf course division
What's new in the marketplace

COURSE DEVELOPMENT
COURSE MAINTENANCE
COURSE MANAGEMENT
SUPPLIER BUSINESS

SHOW WRAP-UP
The 64th International Conference and Show drew a near-
record 16,000 golf industry members to Anaheim. For com-

THE NEWSPAPER FOR THE GOLF COURSE INDUSTRY
A UNITED PUBLICATION
VOLUME 5, NUMBER 3
MARCH 1993

THE NEWSPAPER FOR THE GOLF COURSE INDUSTRY
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**NEWS IN BRIEF**

MARYSVILLE, Ohio — One-year results from a yard compost study conducted by O. M. Scott & Sons finds no detectable levels of pesticides, herbicides, PCBs or dioxins in the final compost. Scott is testing yard compost from several counties in central Ohio.

TAYLOR, Texas — Construction of an 18-hole golf course on 300 mostly vacant acres in Taylor's southwest section may benefit the site's contaminated soil. Results from a yard compost study conducted by O. M. Scott & Sons finds no detectable levels of pesticides, herbicides, PCBs or dioxins in the final compost. Scott is testing yard compost from several counties in central Ohio.

**METHYL BROMIDE**, the world's most widely-used pesticide, recently was declared an ozone depleter by the Parties to the Montreal Protocol, a group of nations that signed a treaty to protect the ozone layer. The group agreed that by 1995, production and use would be frozen at 1991 levels.

**BERWICK TOWNSHIP**, Pa. — The Pennsylvania Dept. of Environmental Resources is the last hurdle for a planned $1 million, 18-hole golf course here. Property owner Michael Bross said tentative course plans were submitted to Berwick Township six months ago. Bross' area is one of three in the township under a building moratorium imposed last December by DER because of malfunctioning septic systems.

**DAVIS, Calif.** — Davis has been planning for three years to expand the 18-hole Davis Municipal GC. City officials now are poised to act, but officials in Yolo County, site of the targeted 150 acres south of the course, are concerned about agricultural buffers, conservation easements and the project's possible growth-inducing aspects.

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**Feast replaces famine in once-arid California**

The fickleness of Mother Nature has never been more evident than during the past two months in California. The state had been through six years of persistent drought resulting in exorbitant water rates, cutbacks in mandatory water-use, and demand for creative irrigation plans on the part of golf course superintendents.

Even in early November the prognosis for improvement was not good, as long range forecasts called for below normal precipitation for another wet season. But all that changed in December and January, as the heavens opened in unprecedented fashion. The Los Angeles area picked up more than 13 inches of rain in January and close to 9 inches in one five-day period. In Northern California, heavy rains pelted the coast and, more important, more than 40 feet of snow fell during a 50-day period in the Sierra Nevada Mountain Range.

By the end of January the snowpack, which is critical for spring runoff that fills the state's reservoirs, stood at an average of 10 feet at the 8,000-foot level. The snows put the pack at 178 percent of normal with two months of winter weather to go.

The unusual weather impacted many courses throughout the state. At La Costa Resort in Carlsbad, superintendent Harold Vaubel had his hands full keeping the course playable for the Infinity Tournament of Champions the first week of January. San Marcos Creek grew into a 300-foot-wide lake in front of the 18th green. After the tourney it really started raining. "We had 17 inches last month alone," Vaubel said. "Last 15 of 30 bridges on the course including five major ones."

Vaubel's maintenance shed was swamped with 43 inches of water, destroy-
N.H. gravel company plans complete golf facility near former quarry sites

HOOKSETT, N.H. — Hooksett, the home of Manchester Sand Gravel & Cement Co., aspires to be known for the complete golf product rather than just the sand trap of New Hampshire.

And Manchester Sand officials are seeking product diversity. What better use than to construct a driving range, practice course and pro shop on 70 acres of wetlands off Route 3? The company owns about 3,700 acres in Hooksett, many idle or working gravel pits.

The project would cost more than $1 million and take about three years to complete.

The location would be north of Hedd's Pond near the Hooksett-Allenstown line.

The three-phase project would begin with a practice fairway or driving range that could open this summer.

A clubhouse could be built by mid-1994, and an 18-hole putting course by 1995.

The facility is planned around wetlands. The Hooksett Conservation Commission has voted unanimous support for the project.

If all went well, planners would then turn attention to a regulation 18-hole golf course.

Environmental student's report troubles city planners

BURLINGTON CITY, N.J. — Lisa Paglione's proposal for an environmental and historical center on the 420-acre Burlington Island has run afoul of some city officials who prefer a golf course, marina and resort.

Paglione outlined her proposal last year in a thesis as a senior at Albright College in nearby Reading.

She adds that the golf course idea would be damaging to the island, home to several rare and endangered plant and animal species.

She also says space does not allow combining recreational and environmental uses.

Bruce Benedetti, the city's business administrator, said he believes a golf course could be the kind of low-impact development that could protect much of the island.

At the same time, it would provide an economic stimulus to the city, he added.

El Segundo to operate course itself

EL SEGUNDO, Calif. — After mulling proposals by 80 potential golf course operators in the private sector last year, El Segundo officials have decided to try their collective hand at managing a planned nine-hole golf course and driving range.

The city will hire companies to run the restaurant, pro shop and bar, and maintain the grounds.

The executive course will be on a city-owned 32-acre parcel across Sepulveda Boulevard from the Chevron oil refinery. Design work is 80 percent complete. If construction begins in June, the course could be open by spring 1994.

The city took over the current driving range in February 1992.

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BURLINGTON CITY, N.J. — Lisa Paglione's proposal for an environmental and historical center on the 420-acre Burlington Island has run afoul of some city officials who prefer a golf course, marina and resort.

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Ohio city may consider new site for proposed muni golf course

MACEDONIA, Ohio — The grass may be greener on the other side of the street.

For more than two years, Mayor Joseph Migliorini and top aides have proposed building a golf course atop a 104-acre parcel on the north side of Ohio Route 82.

Now Council President Rosalie Koren has asked Migliorini to consider as a better site the 150-acre Longwood Park across the highway.

Permission from the state would be necessary, and recreational facilities across the street moved.

Migliorini’s plan would have the city bring in a developer who would spend his own money to build and operate the new golf course.

The city would be paid a flat rate, plus a percentage of earnings.

The city has already spent more than $8,000 in legal fees over the past two years.

Indians to appeal Kanasaskis approval

BANFF, Alberta, Canada — Stoney Nation Indians have won the right to appeal a provincial Natural Resources Conservation Board decision permitting a third golf course to be built here.

Construction is scheduled to begin next spring and finish in 1995 in the Evan Thomas Creek area of Kanasaskis Country.

It was noted that the appeal does not include any prohibition against construction.

Kan-Alta Golf Course Management Ltd., of Calgary had planned to proceed next spring.

But company president Norm Kimball said his firm won’t begin the $6.6 million project if there is any threat of the 18-hole project being overturned.

Judy McLachlin, representing the Stoneys, said the NRCB failed to exercise the full extent of its jurisdictional powers, and that the board’s ruling failed to recognize the Stoney Nation’s aboriginal treaty rights.

Environmentalists contend that conditions — including one calling for corridors through which wildlife could pass — are inadequate in addressing long-term needs.

County approves bond funding for Rocky Gap GC

CUMBERLAND, Md. — Responding to comments supporting the proposed Rocky Gap Golf Course, Allegany County commissioners approved a $5 million bond bill to construct a golf course and hotel/convention center.

Described as an asset for unemployed construction workers as well as a tourist attraction, it was argued that “people will come here because we have a Jack Nicklaus signature golf course.”

Mary Miltenberger questioned existence of a business plan, objecting to spending such money on projects lacking in information.

Michigan site goes from fries to fairways

GREENVILLE, Mich. — The former Ore-Ida potato processing plant here will be converted into an 18-hole golf course.

The Greenville City Council unanimously approved purchase. Planned is a $1.2 million facility on the 325-acre site.

New owners Dave and Kathy Klein of Rockford and Warner and Joy Bowen of Sheridan hope to complete the first nine holes in 1996, the second nine in 1999. Construction may begin in April.

The Kleins own North Kent Golf Course in Rockford. Bowen will be the course designer.

Bismarck may add third layout

BISMARCK, N.D. — The gift of 80 acres of land worth $1 million has moved Bismarck nearer to a third public golf course.

Developer Lance Wachter and wife Gail presented the earmarked land at a special meeting of the Park Board. Wachter plans to build a clubhouse and pro shop on property he owns adjacent to the proposed golf course.

Construction of the new nine-hole course could begin late in 1996.

NOW YOU CAN ELIMINATE CONTAINER DISPOSAL HASSLES SIMPLY BY ELIMINATING CONTAINERS.

With today’s strict regulations, getting rid of empty pesticide jugs can be a major problem.

A problem you can avoid altogether by using the Aeroquip made TurfPak dispensing system.

That way, there’s simply nothing to get rid of. Instead, the unit is returned and refilled with either Banner, Triumph or Subdue.

And since it’s a closed system that measures rates electronically, there is very little risk of mixing errors or worker exposure.

Which can do wonders for your turf. And for your peace of mind.
City seeks to improve 12 courses

INDIANAPOLIS — The city of Indianapolis is driving for major improvements at its 12 municipal golf courses.

The money would go for cart paths, watering systems, rest rooms and clubhouse remodeling.

Parks Director Leon Younger said the city will issue about $9 million in bonds in about six months to finance the drive. Bonds will be financed with revenue the city receives from the golf courses.

That revenue now must go into a new revolving fund that can be used only for golf purposes. The city will sign contracts with golf professionals that give the pros complete course control.

The city will pay for watering, amounting to $436,000 a year.

Pros will receive course proceeds, but must return a percentage of the profits to the revolving fund.

Previously, the city kept the greens fees of about $3.5 million annually, but paid 42 employees and maintenance costs.

Environmentalists attack exclusive Ojai Valley golf course proposal

VENTURA, Calif. — Development of an exclusive 204-acre Ojai Valley golf course is under assault from two environmental groups.

The Environmental Coalition of Ventura County and the Citizens to Preserve the Ojai allege that Ventura County Planning Commission approval permits the Farmont Golf Club to violate a county drought policy that forbids the use of domestic drinking water on courses in unincorporated areas.

Maggie Kildee of the Board of Supervisors said the county’s General Plan drought policy could be amended to allow development of the private golf course.

Farmont has agreed to use no more than 407 acre feet of water per year. That is down from the 1,009 it had rights to. The developer would also donate the firm’s remaining 1,300 acres to the Ojai Golf Land Conservancy.

Nine-hole track a prominent part of Esopus Lake project

PORT EWEN, N.Y. — A nine-hole golf course would play a prominent part in the Esopus Lake commercial/residential development project that has received favorable recommendations from town planners on an application for a zoning change.

The plan, before the town for three years, has undergone lengthy environmental review. A three-hole golf practice course would be open to the public, and wetlands on the property would be accessed by walkways.

The project would include 395 residential units, an inn, restaurant, spa and other commercial space.

If the Town Board grants the zoning change request, this largest-ever project planned in Esopus must undergo a site-plan review by town planners.

Univ. course makes way for rec center

ATHENS, Ohio — Golfers at the Ohio University course next fall are scheduled to vie for elbow room with workmen swinging carpenters and saws.

A spot on the course along South Green Drive will be the site of a proposed $20 million student recreation center. The facility would be built along the 9th fairway and driving range.

Construction will require relocating the starter house, No. 1 tee and driving range, and modifying No. 9 fairway. The course will be maintained and should be open for play during construction. Target completion date is June 1995.

Floods damage Palm Desert driving range

PALM DESERT, Calif. — Chapparal Country Club lost $64,000 in January when floods washed away work that had been completed on a driving range.

The facility had just built a driving range, seeded it, sodded the tee and installed the irrigation system.

Lestronic II was designed for today’s lighter, more efficient golf cars. It saves money regardless of fleet size by prolonging battery life, delivering more range per charge and reducing energy costs. The Lestronic II:

- Preserves battery life due to the patented electronic timer. Get the proper charge every time. There’s no overcharging for longer battery life. No undercharging for more range per charge.
- Uses 10 percent less AC power to recharge a battery that is 75 percent discharged.
- Fully automatic, eliminating operator error—just plug it in.
- Runs cooler and quieter.
- Carries UL and CSA approval.

Plug into the many benefits for the Lestronic II and watch what happens to your overhead.
P.J. Boatwright receives USGA's Bob Jones Award

FAR HILLS, N.J. — The late P.J. Boatwright, Jr., one of the game’s most respected authorities on the Rules of Golf, has been selected to receive the 1993 Bob Jones Award, given annually by the USGA in recognition of distinguished sportsmanship in golf.

John D. Reynolds, III, chairman of the USGA’s Bob Jones Award Committee, announced the selection. Boatwright’s family accepted the award at the USGA’s 99th Annual Meeting held on Saturday, Feb. 6, 1993, in Nashville, Tenn. The Bob Jones Award represents the highest honor given by the USGA. It is presented annually since 1955 in commemoration of Jones’ vast contributions to the cause of fair play both during and after his distinguished playing career.

Boatwright, who joined the Association in 1959 and remained until his death in April of 1991, served the USGA in a number of roles, first as assistant director, then executive director, and finally as executive director, rules and competitions.

At one time or another Boatwright dealt with nearly every phase of USGA work. He conducted championships, oversaw the handicapping system, and dealt with amateur status and implements and the ball.

From 1969 on, when he succeeded Joseph C. Dey, Jr., as Executive Director, P.J. had the staff responsibility for the conduct of the U.S. Open. Perhaps overshadowing all his other accomplishments, though, Boatwright was considered by everyone associated with the game as the ultimate authority on the Rules of Golf.
Downtown Chicago practice range gets go-ahead from city

CHICAGO — The city has approved conversion of now-desolate downtown area into a driving range by the spring of 1994, and a par-3 golf course in mid-1995.

The 10-acre golf course is to be built within an undeveloped 27-acre section of the Illinois Center development just south of the Chicago River and just west of Lake Shore Drive. It will be, owners say, the first golf course in the heart of a major city.

Super Rake Q
New Exclusive Sound Engineering.
Our Competition Hasn’t Got a “Q”

1. New “Q” Means Quiet. Super Rake Q is now powered by a new, super quiet, Vanguard 16 hp engine, with extra noise-dampening insulation.
2. New Single Pedal Control. Speed, forward movement and reverse are now controlled by a single foot pedal, to simplify operation.
3. New Front Wheel Cut-Off. Hand valve cuts off front wheel drive to prevent spin-out and provide 2-wheel or 3-wheel power.
4. New 3-Phase Raking System. Patented twin rake system utilizes a new pre-rake to create extra firm trap finishes. (See photo.)
5. Gasoline or Diesel Power. Select from Vanguard 16 hp gasoline engine or optional 12.5 hp Kubota water-cooled diesel engine.
6. Best Rake in the Business. We think so. Our competition thinks so, because they copy ours. Look at it now—The Super Rake Q.
Second public layout under consideration in Sonoma County's bustling Bennett Valley

SANTA ROSA, Calif. — A second 18-hole city golf course in Bennett Valley might be a boon to elbow-to-elbow players squeezed onto the city's existing 18-hole layout, the busiest in Sonoma County — but area homeowners don’t share such enthusiasm.

The city would have to allow many more homes per acre on the remainder of the developer's picturesque land, which lies outside the city limits.

Public courses consider 90,000 rounds a year heavy use. Bennett Valley racked up 113,000 rounds last year.

City officials weighed putting a course on the western side of the city, but undeveloped land there contains vernal pools — a type of federally protected wetland — and endangered species of wildflowers.

City manager Ken Blackman has approached developer Dennis Hunter, who owns land just south of the present golf course and adjacent to Galvin Park.

Hunter is weighing the city's request to consider a course on his land.

Fla. seeks more information on Dupont fungicide

The Florida Department of Agriculture wants more information on Dupont Corp.'s Benlate DF fungicide.

The Department is suing to ascertain whether the fungicide caused millions of dollars in plant damage in addition to creating health hazards.

Dupont has paid $500 million in claims nationwide, including $395 million in Florida. Dupont insists Benlate did not cause damage and has ceased all outstanding claim settlements. Only about a dozen claims nationwide covered damage to turf and ornamentals, mainly bluegrass.

Dupont released research purportedly showing Benlate does not damage plants. Florida state officials are conducting their own research to evaluate the product's potential plant and human health damage.

Local voters reject coastal Texas proposal

PORT ARANSAS, Texas — Local voters have rejected by a 452-354 count a proposed $4.5 million 18-hole municipal golf course.

Opponents coupled cost with possible environmental hazards, stressing concern about herbicides, pesticides and fertilizer entering surrounding water.

The Port Aransas City Council had approved issuing $4.5 million in certificates to pay for building the golf course and municipal pool, and had approved spending $450,000 to buy about 70 acres of land adjacent to the Corpus Christi Ship Channel.

Culinary correction

Because of a reporting error, there was a piece of misinformation in the January edition of Golf Course News. The onetime biker bar across from the I-Hop in West Hollywood is called Barney's Beanery.

Phoenix reservation system tried

PHOENIX, Ariz. — American Golf Corporation announced a pilot central reservation service for six of their resort and public golf courses in metropolitan Phoenix.

Golfers can make a tee time for any one of AGC's Phoenix-area public courses. They are: Tatum Ranch Golf Resort, Cave Creek; The Legend Golf Resort, Glendale; Superstition Springs Golf Resort, Mesa; Villa De Paz Golf Course, Phoenix; Continental Golf Course, Scottsdale; and El Caro Golf Course, Phoenix.

The system has been averaging approximately 6,000 calls per week, with more than 4,400 of those calls resulting in scheduled tee times.

Although the system offers automated access to tee times 24 hours a day, golfers can choose to speak directly with a reservation agent or any of the six golf shops.

Members also enjoy preferred tee times up to five days in advance — longer than what is available at most other courses in the area. The one-time annual membership fee is $12.
Latest Sun City gains support

ROSEVILLE, Cal. — Three nine-hole golf courses, a driving range and a senior center to be known as Roseville Sun City received unanimous support from the Roseville City Council and an articulate public. The project embraces 1,200 acres of agricultural land and oak forest. Ninety percent of the oak trees would be preserved.

First step in development is approval of an environmental report on the planned adult retirement community at Fiddlyment Road and Pleasant Grove Boulevard. Del Webb Corp. is funding and developing the project, which includes building 3,500 new homes.

Union Carbide dispute settled

BROWNVILLE, Texas — Union Carbide and developers of the dormant Playa del Rio resort have settled their differences dating back to 1987 via a "take-nothing judgment" court dismissal. Playa del Rio reportedly would have employed 20,000 persons in subdivision, condominiums, nine golf courses, theme park and beach facilities in the Boca Chica area. Environmentalists, fearing the project might be revived with financial backing from Mexico, said the resort's construction would destroy irreplaceable wildlife habitat.

Suit fails to halt Calif. project

SANTA BARBARA, Calif. — A suit filed by the Environmental Defense Center to block a Santa Barbara County Board of Supervisors vote to build a golf course near Lake Cachuma has failed. Santa Barbara Superior Court Judge Ronald Stevens said the county violated no existing policies in the board's 3-2 vote.

EDC officials said the course was proposed for a "dangerous road." The course will be located on 900 acres, a mile south of Paradise Road off Highway 154.

Construction probably will begin in 1993 and take about a year to complete.

Council blocks Fla. development

PALM BEACH GARDEN, Fla. — Developer William Cordani's plan to build Gardens Country Club, consisting of a 27-hole golf course and 366 homes, has met opposition from City Council.

City planners objected to the manner intended to preserve environmentally sensitive areas. Cordani was told to modify his project, particularly in intended preservation of upland pine flatwoods by scattering them throughout the site.

City staffs felt wider upland areas should be left around major wetlands to preserve wildlife.

Officials back Wash. layout

RIDGEFIELD, Wash. — A proposed golf course is nearer reality since the City Council voted to extend water and sewer services for the Ridgefield Junction area.

The project had been in doubt after a firm assisting with the city growth plan was terminated.

City proposes $1 million sales tax to finance golf course

HURON, S.D. — It was cold outside, but city councilors and more than 200 spectators at a meeting Jan. 18, warmly embraced a proposal to spend more than $1 million in city sales tax funds to build an 18-hole golf course.

Commission Chairman Merle Marshall said the project, once estimated at $1.2 million, could be trimmed to $1.05 million with assistance from the airport, National Guard and sponsors.

The commission said it made sense to move forward on course construction now because four of five of the holes at Meadowbrook must be relocated to make room for an airport runway extension project.

It's getting tough to keep No one can accuse John Deere of standing still. Just ask our photographers.

Since January of 1992 we've added six new machines to our Golf & Turf Equipment family. All designed and manufactured by John Deere. A strong message about our long-term commitment to your business.

First to arrive were the 1800 Utility Vehicle and 3365 Professional Turf Mower. The 1800 brought the precision of hydrostatic drive to your work, while the 3365 was the first machine to carry John Deere ESP cutting units. Two huge steps forward in John Deere equipment evolution.

The new 6x4 and 4x2 Gator Utility Vehicles offer two more steps forward. Both feature wet disk brakes and are more stable, quieter, and carry larger (800-pound) payloads.

The 2653 Professional Utility Mower is our newest machine. A unique combination of hydraulic reel drive, exceptional...
Rains raise havoc with Western United States golf courses

Continued from page 3

ing all of his irrigation computer hardware and severely damaging his extensive machinery inventory.

At nearby Whispering Palms Resort in Rancho Santa Fe, the rains sent the San Dieguito River over its banks eroding through five fairways and closing the course for a week.

Superintendent Larry Jones also had a unique guest on his course one morning, a 500-pound sea lion.

"Over thirty inches of rain fell on Mount Palomar and the runoff forced water over the Lake Hodges Dam," Jones said.

"The seal had made its way up the river three and a half miles inland following an easy catch of fresh trout and bass that had washed over the dam."

At Temecula Creek Resort, site of nationally televised flooding, the course itself received minimal damage from the creek overflow.

"We only had damage from the runoff from Interstate 15's drainage pipes that dump near the 9th fairway of the Stonehouse nine," said Assistant Course Superintendent Bill Huss. A temporary bridge to get over the accumulated debris had to be built, but play on the course was never hampered.

"Our course was built in 1969, another wet season, and the architect, Ted Robinson, obviously learned where the flooding problems would be and how to plan for course drainage. That knowledge really showed last month," Huss said.

In fact the drought situation has forced course superintendents to work on different ways to control runoff of irrigation water and rain water in hopes of capturing the runoff.

At the Meadow Club in Fairfax, the private club has been involved in a drainage plan for the past 10 years.

"Our water came entirely from country water supplies," said Bob Bruner of the Meadow Club.

"We've been working to hold on to, and reuse, as much irrigation water as possible."

"We've been redoing our cart paths in concrete that directs runoff to collection areas for trench drains that carry the water back to a holding pond for re-use."

With the Marin County area receiving more than 30 inches of rain, the reservoirs are full. But the idea of sufficient water has not entered into the equation here.

"The restrictions that we have been under for the past few years may be relaxed, but the cost of the water will certainly not drop," said Bruner.

"We have learned first to deal with the water situation for a supply standpoint. Now we look at dealing with the water situation from an economic standpoint."

With a solid snowpack for the first time in five years, the potential for more water availability exists.

But recently passed federal water allocation laws have added another wrinkle to the water equation. More water is to be allocated for wildlife and metropolitan areas out of the enormous amounts of water controlled by the U.S. Bureau of Reclamation.

But no one in the golf industry thinks massive amounts of inexpensive water will be coming their way.

"I have already been informed by the Southern California Metropolitan Water District of future water allocations for our courses," Vaubel explained.

"In the next five to eight years our water rates will double. We will continue to work on better ways to get along with less water."

N.C. symposium studies course effects on coast

WILMINGTON, N.C. — The impact of increased golf courses on the coastal environment will be explored at a symposium March 24, at the University of North Carolina here.

Panelists will discuss issues relating to wildlife and natural habitats, coastal water quality, and community concerns. Speakers include representatives of the golfing industry and conservation groups, scientists, policy makers and environmental regulators.

Information compiled will be presented to policy makers for their use in determining adequacy of current laws and regulations relating to the siting and operation of golf courses in the North Carolina coastal zone.

For more information telephone Lauren Kolodij at 919-393-8185.

March 1993
In a market as heavily regulated as the specialty pesticide industry, it’s hard to blame companies for feeling a bit like Marge Schott at an NAACP convention in Panamaid. With all sorts of environmental groups seeking to limit and sometimes eliminate the use of certain pesticides, manufacturers have naturally taken on something of a siege mentality. With regard to the growing number of states which have instituted mandatory posting and notification regulations, the industry stance against such measures has become counterproductive.

The stance of most chemical company executives is grounded in scientific research — namely, that testing and notification are not necessary. The exorbitant cost and considerable time spent gaining approval through the federal Environmental Protection Agency should be proof enough that approved chemicals are not harmful — thereby eliminating the need to post warnings on every boundary line.

Unfortunately, this stance of dilatory fealty is running against the tide of public opinion. Twenty-three states have already adopted posting and notification statutes, and more are sure to follow suit.

Efforts to combat this trend (however malodorous and unfair it might be) will come back to haunt the industry down the road. Better to push for a federal, nationwide posting and notification statute which would preempt the state and local regulations.

Why? Well, first of all, it’s consistent with the industry stance on pre-emption with regard to banning certain chemicals. RISE (Responsible Industry for a Sound Environment) has fought and won these battles, making it a natural choice to lead a federal posting and notification crusade.

Second, the chemical industry is losing money in the coal stove by conforming to the myriad posting and notification statutes across the country. Different signs, different time considerations, different boundary requirements. Wouldn’t it be easier, and less expensive, if companies had one standard to which they adhered?

Third and perhaps most important, chemical companies could turn this whole situation into a public relations bonanza. If the industry took the lead in asking for this type of federal “safety” standard, much wind would be cleared from the sails of environmentalists.

Consider the auto industry. Years ago when consumer groups were lobbying for seatbelts, car makers fought the initiative tooth and nail. When they finally gave in, the seatbelts were cheap and clearly an afterthought. This one episode gave Ralph Nader & Co. ammunition for decades to come.

However, some in the auto industry have learned their lesson. With airbags now a viable feature, car makers are using them to their marketing advantage. In fact, Chrysler in particular has championed the

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A few highlights and lowlights from Anaheim, 1993

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So much goes unreported from such a major event as the International Golf Course Conference and Show in Anaheim. Gallery is just a sampling of my personal remembrances.

Best analogy: Golf course designer Retrofit Trent Jones Jr., speaking at the U.S. Golf Association session the final day, likened course architects to doctors and superintendents to parents.

“We are the doctors of the game. We are present at the creation, advising owners, attending government hearings, making drawings, working with contractors. Our involvement with a course extends for only a couple of years. You folks are here often for a lifetime,” Jones

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Letters

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REMOVE GOVT PARTICIPATION

To the Editor:

I read with interest your editorial titled “Daily Fee Facilities De- serve Level Playing Field (January 1993)” and, while you seem to attempt to serve your title line, the reasoning and conclusions seem to avoid the real issue.

What is that issue? Government has no business being in business of running facilities, especially in competition with private enterprise. At issue are matters of risk/reward, special interests, tax exemption/ avoidance, and government subsidization of socialism. Not at issue is the provision of recreational facilities to disadvantaged persons — a social reason — since golfers are among the most affluent people and government is merely using non-golfer funds to appear benevolent to golfers.

Let me ask a few questions: Even if government courses charged the same rates as area daily fees, wouldn’t the funds “earned” do nothing more than supplant the real estate and other taxes which would be paid by privately owned facilities? So, where’s the benefit for the taxpayers?

If private enterprise can’t figure out how to earn a profit with a golf course in a given area, what makes government think it can? Could it be the government is still paying millions of dollars to government bureaucrats to make legislation.

Most scary statement: Sen. Howard Metzenbaum, a man who once shopped in Washington, D.C., spoke of pesticide run-off from golf courses as

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FROM THE EDITOR

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Time to hop on board the P&N bandwagon

In a nutshell, government never refers to government courses? Once the door is opened to bureaucrats, there’s no such thing as a free lunch? If people and government is merely tax-payers at large are never told the “earned” golf courses, but the tax-payers at large are never told the taxes which would be paid by pri-

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Agh-h-h! Best attempt at reconciliation: Past GCSSA President John Seguin of

Waynesboro CC in Berwyn, Pa., gave the invocation at the annual banquet, calling for healing and brotherly love within the Golf Course Superintendents Association of America “despite our differences.”

Best boast entertainment: Monsanto’s master magician, expert with and humor, worked a joke pitch for Dimension and Roundup

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through his slight of hand and encore.

“Like a good parent, I’m sure I can speak for my fellow architects here and around the world: the game wouldn’t be the same without your love for golf, the playing conditions, and the experience of the fellowship the game provides for millions and millions of golfers through your great efforts.”

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Unfortunately, this continues on page 38

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Scott F. Krause Owner/Manager PGA Master Professional Muskego Lakes Country Club Muskego, Wis.
Sound construction methods prove the most cost-effective

By RICKY J. KROEGER

All new golf course entrepreneurs recognize the necessity of completing construction of their golf course with a minimum of costs. Avoiding excessive construction costs can mean that enough money remains to allow construction of a more elaborate clubhouse area, or better yet, to decrease the amount of investment necessary.

Although architectural opinion vary regarding the creative strategies and artistic values which stimulate golfers to return over the life of a course, it should not be forgotten that few will return if the course is not green and playable. The three critical physical factors affecting cost-effective maintenance—soil, drainage and irrigation—have interrelationship sufficient to confuse most investor/developers and many golf course operators. In fact, few golf course architects sufficiently recognize the agronomy and hydrology necessary to minimize operational expenses after construction. If the architect cannot explain (or the investor/developer will not agree to provide) the necessary soil, drainage and irrigation relationships for a given course, their is a real likelihood of excessive maintenance costs in the future.

Soil, drainage and irrigation problems, when built into the golf course, require the type of capital outlay that few new courses can afford after opening.

Looking back, it often becomes painfully clear that the solution was available during construction at a minimal price. Better to pay back a loan over seven years than to pay an annually increasing expense forever. Better still to avoid building in these problems from the beginning.

THE SOIL

The best soils for a golf course are not always available on the site. Be certain the architect you bring in to discuss your project has a true agronomic background. Although most soils can be managed to adequately support golf turf, the expense of doing so varies greatly. Careful consideration must be given to adapt the irrigation and drainage systems to the existing soil system. While sand may drain well, it requires very uniform distribution of water by the sprinklers to avoid dry, brown, dead areas (which is turn demand money and labor to repair). Clay, however, drains very poorly and requires very uniform distribution of water by the sprinklers to avoid wet areas (which are costly to drain later). Compaction of the soil during construction and use of the course after opening must also be considered as a significant factor which will affect the cost of maintenance.

DRAINAGE

Any one involved in a golf course construction project should recognize that nature may intervene at the worst possible times during construction and establishment. Wind and water must be considered from the initial planning of the course in order to minimize the negative financial impact of which these forces are capable. Most important, the speed with which excess water is controlled and removed from the soil significantly impacts the profitability of the project and its annual operation.

Excess water is a foe capable of eroding profits. It causes courses to choose between closing to avoid damage (disrupting cash flow) or risking the expense of repairing the damage caused by players. Unfortunately, grass does not stop growing during wet periods—on the contrary, it grows all the more. Mowing equipment used at this time causes compaction, rutting and the resulting losses in playability.

Drainage systems do not need to be expensive to work. They must, however, be well conceived and effectively built. Skimping on this vital element during construction will mean that one must eventually either

Continued on page 59

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RESIDUAL EFFECTS OF TURF WETTING AGENTS

Tests conducted by Michigan State University

| Wetting Agent | % Soil Moisture 14 months after application | Turfgrass Quality (1-10) 
<table>
<thead>
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<tr>
<td>None</td>
<td>5.4%</td>
<td>4.2</td>
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<tr>
<td>AquaGro®</td>
<td>6.7%</td>
<td>3.4</td>
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<tr>
<td>Hydro-Wet®</td>
<td>8.3%</td>
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Nicklaus turf firm expands

NORTH PALM BEACH, Fla. — Golturf, a worldwide agronomic and maintenance golf course consulting firm, has expanded its golf course services. A division of Golden Dear International, Golturf will assist in planning and development, agronomy/construction and planning, maintenance services, and golf course improvement.

"The Golturf staff has been providing the premier agronomic and maintenance in the golf course industry for 30 years," said Edward A. Etchells. "By expanding our operation, we will be able to better service new and existing clients."

Golturf's credentials include work on 10 of the U.S. Top 100 golf courses as well as sites to more than 100 professional golf tournaments around the world. Golturf's clients is Muirfield Village Golf Club in Dublin, Ohio.

Golturf, which has serviced Nicklaus-designed golf courses for more than 20 years, provides agronomic and turfgrass consulting and environmentally responsible maintenance consulting to new and established golf courses around the country. Continued on page 19

Grow-in challenges can be beaten

by TERRY BUCHEN

I have grown in 11 new golf courses and had the pleasure of working with some of the best golf course architects and builders in this country. The following checklist not only shows the many responsibilities the superintendent will endure, but also some of the unexpected duties that inevitably pop up. This checklist has a particular chronological order as each project has its own priorities and circumstances:

- Secure temporary and/or permanent electricity for irrigation pumphouse. Utility companies can take up to six months, sometimes longer. Secure electric generators as a contingency measure.
- Build turf nursery of all grasses used on golf course. If built right...

DAVID R. JOHNSON Mission Hills Country Club Rancho Mirage, Calif. LPGA's Nabisco Donah Shore March 25-28, ESPN (Th and Fr)

DAVID DUPREE Weston Hills Country Club Ft. Lauderdale, Fla. PGA's Honda Classic March 11-14, NBC

DAN DUPEE sent him from Matanzas Woods Country Club in Palm Coast to nearby Hammock Dunes. He had never prepared for a major tournament until he joined then-Day Hill Club and Lodge in 1989. Now the Lake City Community College graduate and Palmata, Fla., native is 20-2-2 and looking forward to every challenge he can face. "You don't realize what you're going through until you've finished," Kummer said. "It's exciting. And no doubt, it's a big letdown when it's over. You've got the spotlight for that week. Afterwards, it's depressing to come into the mess to clean up and base the course ready for member play on Tuesday.

WANTZ OVER IN COURSE

John Wantz has been named golf course superintendent at Due Process Stable, Inc., in Colts Neck, N.J. A Pennsylvania State University graduate and certified golf course superintendent, Wantz will oversee course construction and grow-in of the Johnny Miller track, scheduled to open in 1994.
Shannon Cook silences doubters

A star search that found Shannon Kerr Cook in a college placement booth transformed a fledgling nurserywoman into a barrier-breaking professional in golf course maintenance.

Little did Aart deVos know that when he plucked a young, then-single Shannon Kerr out of a pool of Fullerton College graduates, a star was born.

“I did not know she was going to be a golf course superintendent,” deVos said, but, “She was a very determined person. Part of my initial screening is to open the door but make it difficult. I gave her some jobs that required perseverance — really rotten jobs. I put challenges in front of her and she accepted them. That means the person has management capability.”

A dozen years later, the married-and-divorced Cook is superintendent at Monterey Country Club in Palm Desert, Calif., managing an all-male, all-Hispanic 15-member crew, and fighting blistering summertime heat and occasional floods like those in January and February that, first, carried away two bridges, then their two replacements.

“We take it all in stride,” Cook said after the second flood. “That’s what makes this job exciting and challenging.”

Exciting and challenging for one of just three female superintendents in California and perhaps 100 in the entire country.

Cook’s boss, Dennis Orsborn, said he was initially concerned about how Cook would handle the cultural barriers of her crew and being a superintendent in a male-dominated industry.

“But because of her abilities as a manager she downplayed any confrontations that might have occurred, or problems that might have developed... Therefore, it never became a problem,” he said. “You have to earn their [a crew’s] respect. She was able to do that rather quickly.”

Continued on next page

Floods push superintendent
Cook & crew to new heights

Superintendent Shannon Cook deals almost annually with minor flooding at Monterey Country Club in Palm Desert, Calif., but January and February 1993 was a time for the record books.

An area that receives three to five inches of rainfall annually got a dumping of five inches in the span of two weeks in early January, causing major flooding. After a brief respite, more than 21/2 inches fell in one day Feb. 7-8, again flooding the region.

During the January rainfall, a wash that runs through 27-hole Monterey Country Club flooded more than 10 acres, affecting the 3rd and 7th holes on the West Course, and 2nd and 7th on the South Course. The third nine-hole East Course was unaffected.

The four-foot-wide wash flooded to 30-foot dimensions and carried away two of four heavy steel bridges.

Continued on page 19
Cook 'still here'  
Continued from previous page

Orsborn, vice president of golf course operations for Sunrise Co.'s three golf facilities and president of the California Golf Course Superintendents Association, added: "She's been a pleasure to work with. She continues to grow and expand her knowledge about the business. Today, she is at a management seminar."

"You have to be tough and determined and want to do it," Cook said. "I feel, because people are watching me as a woman and they want to see what kind of job I do, I can never let my guard down and I have to work twice as hard as somebody else just to prove that a woman can do it.

"I have found that [situation] everywhere, with the exception of Florida, where I was just an irrigation and one of four women on one course."

Cook added: "People have been saying all through my career, 'She won't last here a week.' Here it is 10 years later, and I'm still here."

Indeed, when she graduated from Fullerton with a degree in ornamental horticulture, Cook had never stepped foot on a golf course and anticipated working in a nursery.

"I didn't know anything about golf. But I had the ornamental horticulture background and that was enough to convince Aart that I was trainable and could learn how to do it," Cook said.

"Aart flew me up and showed me the golf course. Having grown up in the city, the open spaces were a beautiful setting and I knew that was where I wanted to work."

After running the irrigation system for a year at Los Altos Golf & Country Club, Cook went to The Plantations GC in Crystal River, Fla. She was married, had a baby and returned in 1984 to Del Paso CC in Sacramento, where she worked on the crew and was in charge of clubhouse landscaping.

She later moved to Mission Hills CC as the foreman under the superintendent at the Old Course. She worked there two years, helping prepare the course for two PGA Tour tournaments.

She left Mission Hills in 1988 to be the assistant superintendent at Monterey Country Club and was named superintendent in 1989. Sunrise Co. operates three facilities in the desert. Cook’s is 27 holes. The others are 36-hole Palm Valley and Indian Ridge, which is under construction and will eventually have 36 holes.

"I work for a private course that holds no major tournaments and we don't bring it up to Tour standards. But it helps me know what 'tournament conditions' mean, and how it should look," Cook said.

At Monterey CC, Cook said, "I've never had trouble (gaining peoples' trust). In fact, members recommended I get the position of superintendent when the previous one left. They've always been behind me and very, very supportive. That's unusual and very surprising.

"I'm very, very happy where I am. It's like a big family."

Besides this winter's floods (see sidebar), Cook's biggest challenges have been the annual overseeding, keeping her older equipment operating and dealing with temperature extremes.

The overseeding time — in October and November — is "a pretty intense time," Cook said.

"We do 18 holes in October and nine in November.

"We only have four weeks to be closed. During that time, we have to get everything seeded and mowed. And that includes the greens. To get the greens stripdown, seeded and ready for play in that short a time is a real challenge."

In the summer, temperatures reach 115 degrees in the Palm Desert area and Cook's crews are out there mowing.

"Trying to keep everybody healthy and keep the equipment going when it gets to those temperatures is difficult," she said. "Bermudagrass loves the heat, so it keeps on growing. The tourist season is slow in the summer. Our season is not. We never have an off-season."

One quasi-crew member Cook will never have to regain the trust of is her 10-year-old daughter Tina. Life as a superintendent was difficult at first, she said, especially finding a babysitter for 5 a.m.

"But I've always managed to get along. Now Tina's 10 and she loves to stay out on the golf course with me. She can't wait to be old enough to play there... She knows how to probe a green and use a Stimpmeter."

As for Cook hiring other women, "I've never had a woman apply," she said. "They're encouraged to enter the field, but very few actually go through the [college] program."

"Some women have gone to work at other clubs but they don't survive past the first summer. They have to work from the ground up, and it's tough to be out there raking sand traps and things like that when it's 100 degrees. If they're not motivated enough, they don't stick around."

"Plus, they have to deal with the response from the male coworkers and some of the managers. It's tough. You have to put up with a lot. I put up with a lot but I'm a very easy-going person. I still get a lot of teasers and jokes, but it doesn't bother me. You have to have a very broad sense of humor."

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Tips to help overcome challenges of course grow-in

Continued from page 15

enough, the sod can be used to repair erosion, fertilizer and chemical testing, employee
training, etc.

- Design/build maintenance
buildings, stores and secure
materials and maintenance
equipment. Should be accom-
plished early on or at least
secure temporary storage while
building is under construction.

- Secure burning permits, if
necessary.

- Arrange for irrigation water
source, i.e., wells, domestic,
effluent, runoff water rights,
etc.

- Have wetlands commission
and/or Army Corp of Engineers
give the “green light” before
construction begins, in writing.

- Contact state Soil
Conservation District Office for
topsoil, subsoil, history, maps,
topographical mapping, etc.

- Hire engineering firm to
provide data for architect/contractor. Surveyors are usually a division of the engineering firm.

- Have all native topsoil areas
tested for atrazine levels —
especially if it has been farmed
recently prior to construction.

- Secure burning permits, if
applicable.

- Work with golf course arch-
itect on final construction spec-
fications with common goals/
objectives/budgets in mind.

- Coordinate the moving of
trees, while clearing greens/tees/fairways/roughs to other areas of course while watering/
sinking/saucering accordingly.

- Have green and tee root-
zone soil mix tested per new
USGA specifications. Monitor
testing during blending without
causing any undue construction
delays. Determine if methyl bromide will be needed. Have
subsurface gravel tested also per
USGA specs. New USGA Greene
specifications standardized testing will determine if the intermediate sand layer
(choker) is needed so be pre-
pared to send sample for testing.

- Have all native topsoil areas
for fairways, roughs and natural
areas tested for nutrient levels,
pH, minor elements, etc. Have
green and tee root zone soil mix
tested for nutrients also.

- Have maintenance supplies
on hand, plenty early, to handle
water/sod mix maintaining nur-
series, water/stake trees; and
anything else that comes up.

- Stake off “natural” areas of
property that are “off limits” to
construction and maintenance
vehicular traffic.

- Help design rainshelters,
restrooms, pumphouse, etc.
with building architect. Provide
all utility hookups.

- Prepare grow-in main-
tenance budget. Provide sub-
sequent routine maintenance
budget.

- Prepare “Big 5 Capital
Budgets”.

Maintenance Equipment
a. Shop Equipment/Land-
scape Tools
b. Office/Lunchroom/
Locker room Equipment
d. Irrigation/Drainage
Equipment
e. Golf Course Accessories
• Contact other golf course
superintendents that have gone
through the “grow-in”. Growing
in a golf course is directly op-
positive of routine maintenance
regarding fertilizer and pesticide
applications.
• Help determine grassing
delineations with architect/contractor.
• Coordinate security force
(sometimes off-duty police)
guarding against vandalism/theft
for all areas on property.
• Secure permanent telephone
numbers for entire club opera-
tion. Make sure listing are in
white/yellow pages when
desired.
• Mark all greens/bunkers
• Drainage flushouts with railroad
locations with architect/contractor.
• Take as-build progress
photographs for owners perman-
ent record. Videotaping all pro-
gress is a viable option.
• Take advantage of the inter-
view process because you will be
hiring an entirely new staff. Be
even more selective on employ-
ees attitude/ability to be a mem-
ber of your team.
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Grow-in tips

Continued from previous page

Amur fish, where applicable.

Continue to grow-in Amur fish, where applicable. Use fertilizers and schedule delivery as they are needed.

Order grow-in fertilizers/pesticides and schedule delivery when needed with temporary/permanent storage capacities in mind.

• Have bunker sand tested and make recommendations to owner/architect. Put out sand samples for key golf people to hit shots from, if applicable. Bunker sand must follow USGA recommendations.

• Protect/mark off all tree locations susceptible to construction damage to roots or soil elevation changes.

• Coordinate silt fencing/hay bale locations with architect/contractor around catch basins and all other areas susceptible to erosion onto sensitive areas.

• Irrigation system should be flushed out and fully tested well before grassing commences.

• Consider hiring your irrigation technician and have him work with/for the irrigation contractor during all irrigation installations. He careful: This can be a sensitive area for employee relations.

• Contractor will sometimes ask for your guidance and approval of all seeding rates and equipment calibration. Work together for this very important common goal.

• Measure golf course yardage and sprinkler head yardage with laser distomat. Local golf association can do it, hire a private contractor to do it, or rent a laser distomat ($50-$150/day) and do it yourself.

• Mark all irrigation equipment with white pizza pans or white large kitchen trash bags for color irrigation as-built aerial photograph. Scale of photograph is usually 1 inch = 200 feet, 1 inch = 100 feet, or ultimately 1 inch = 50 feet; little budget allows. Overlay as-built can be made of topographical, drainage, and underground utilities as well.

• Order all golf course accessories, i.e. ball washers, cups, flagsticks, etc. one month prior to opening.

• Irrigate only during daylight hours. It is much cooler in the morning, put it to bed late each night. Consider using field controllers only and have one employee/move around to check up on the work being done. Use a wash every year, but not to this extent, Cook said. "We have a wash every year, but not to this extent," Cook said. "They're probably buried somewhere under the turf."

Crews replaced the lost bridges with two old ones, so that a second nine holes could be opened up. The back side of the course was closed about two weeks and opened Jan. 22 before the Feb. 7-8 rainstorm repeated the terror and carried away the two replacement bridges.

"We have a wash every year, but not to this extent," Cook said.

Her crews worked out the rainy season, then hire an earthmover to level sand out and grade it. Her crews will then seed it. Until then, all four affected holes will have modified tees.

The entire operation was exacerbated because crews had to trailer equipment around to the other side of the golf course to mow the greens and tees there. It was a 45-minute drive to the neighboring town to reach a bridge.

Yet, through most of the ordeal, Cook kept 18 holes open — nine holes on the East Course and another nine between the South and West courses.

The two floods were Cook's biggest challenge in her career, she said. Yet, every day, she said, "I get a lot of satisfaction in looking over the golf course and seeing what great things the crew has done. We've all worked together to make it very playable and very beautiful. I get a lot of satisfaction out of that."
Major capital, energy investments at stake in pump stations

By DAVID THRAIKILL and BILL SAVELLE

Course operators deal with restrictive resource, energy and environmental controls by immersing themselves in the new pumping station technologies.

"New water systems can represent a third of a new course budget. Systems decisions that were less than $300,000 before, are now approaching $1 million," says Dale Winchester, irrigation consultant for Palmer Course Design Company. "I know of more than one new course project that is 'dead in the water' because no one anticipated the cost to bring power to a poorly positioned pump station."

According to Gary Cozart, superintendent of Chardonnay Golf Club in Napa, Calif., "We're expecting water costs to double by '95. Energy and operating costs will not be far behind. Pump station design could make or break systems of the future." No one expects the course owner and operator to become technical gurus, but a few decision-making guidelines may help avert disaster, or excessive system operating and maintenance costs later. "Most developers in the U.S. know the value of keeping everyone in the loop — from design through construction," says Erik Larsen, golf course architect for Palmer Design.

At Chardonnay an old site-built pumping station is still in operation on one of its two 18-hole courses, each on 160 acres. "I say old, but it was installed just five years ago," Gary says. "Ongoing maintenance costs running 40 to 50% higher than those from our new system which irrigates about the same acreage. The new Shakespeare course is controlled by a new station and the operating cost differential is marked because the new system irrigates an additional 70 acres of vineyards, too."

A good pumping system uses state-of-the-art technology to:

- reduce overall irrigation system wear and tear
- minimize maintenance
- slash energy use
- better handle alternative water sources
- accommodate future system expansion with minimal expense and effort.

Who benefits?

From an architect's perspective, "The ability to exactly specify performance to a given course need in advance, and to have it waiting on site when construction begins, is a tremendous start-up timing advantage," according to Larsen. "That way, work can begin from a pond, and the system used in irrigation, can be blown out and tested as the course is being built. Germination can begin right away. By the time you've built the last hole, you're grown in!"

Not unlike the irrigation contractor, who is mainly concerned with putting a trouble-free pipe system in the ground, the superintendent must be assured adequate factory support. Superintendents introduced to new pumping technology have a healthy respect for both the system capabilities and their own obligations and limitations in maintaining them.

Experienced installers have long recognized the increased responsibility that comes with system advances. According to Tom Tanto, "New pumping systems and technology simplify installation, but manufacturer support is now more critical than ever." For 24 years, Tom Tanto's Murrysville, Penn. firm, Tanto Construction, has installed irrigation systems up and down the Eastern seaboard and in Europe.

"Newer pumping systems are better able to handle effluent and brackish water while reducing overall irrigation system stress," he says. "But their complexity mandates excellent support and service beyond the scope of course personnel. We are way beyond the simple electro-mechanical systems on a clock where the biggest concern was a broken pipe."

A general comment from the pump station manufacturer, "The Eastern seaboard and in Europe.

"Newer pumping systems are better able to handle effluent and brackish water while reducing overall irrigation system stress," he says. "But their complexity mandates excellent support and service beyond the scope of course personnel. We are way beyond the simple electro-mechanical systems on a clock where the biggest concern was a broken pipe."

FACTORY STANDARD COMPONENTS

A packaged pumping system is the sum of its parts. Compare UL listed, ETL tested, performance and safety standards with local codes. Look for a complete pumping system design plan which details pump, driver, controller, power supply, fittings, suction and discharge connections for final system approval. Note the operating instructions, component markings and schematics pro...
**Course owner/operator pump station selection list**

To get the most pump station for your dollar, be prepared to address all of these issues with system suppliers:

<table>
<thead>
<tr>
<th><strong>TYPE OF STATION</strong></th>
<th><strong>CAPACITY</strong></th>
<th><strong>ELECTRICITY</strong></th>
<th><strong>MECHANICAL OPTIONS</strong></th>
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<tr>
<td>Vertical Turbine</td>
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<td>Variable Frequency Drive</td>
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<td>Ft. Water Lift</td>
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<td>Individual Pump Isolation Valves</td>
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<td>System Relief Valve</td>
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<td><strong>Wye Strainer, Automatic or Manual</strong></td>
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<td>Dual Backflush Pilot Assembly</td>
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**ELECTRICAL OPTIONS**

- Lake Screen
- PLC
- NFMA Rating: 3R or 4
- Non-Fused
- Fused
- Circuit Breaker
- System Relief Valve
- Individual Pump Isolation Valves
- Wye Strainer, Automatic or Manual
- Can Filter Screen
- PLC
- NFMA Rating: 3R or 4
- Non-Fused
- Fused
- Circuit Breaker
- System Relief Valve
- Individual Pump Isolation Valves

**SYSTEM OPTIONS**

- Motor Fault Protection
- Fuses Only
- Fused Disconnect with Handle Through Door
- Breaker Internal
- Breaker with Disconnect Handle Through Door
- Type of Starter (Required For Motors)
- Across the Line, Full Voltage
- Part Windings
- Wye Delta
- Other

**SAFETY ALARMS**

- High System Pressure
- Low System Pressure
- Low Level
- Low Suction Pressure
- High Flow Rate
- Pump Failure
- Pump High Temperature
- Flow Meter and Totalizer
- Auxiliary Power Zone
- Station Lighting Package
- Remote Transfer Pump controls
- Building Heater
- Common Alarm Light: Remote or Station
- Computer Monitoring Package

---

**While golfers sleep, you don’t.**

Because a superintendent doesn’t just work from nine to five. Your course is a 24 hour concern.

We see things your way. So we don’t measure the performance of Toro equipment solely in terms of horsepower and rpms. We measure it in your terms. Consistently superb quality of cut. For example, we know that your climate, terrain and turf are unique. That’s why Toro offers a complete range of fairway mowers.

That’s why Toro offers a complete range of fairway mowers.

So you can choose the one that best keeps your fairways strikingly beautiful and eminently playable.

No better way to enjoy your morning drive.

---

**Water quality report sheds important light**

WASHINGTON, D.C. — The Council for Agricultural Science and Technology’s (CAST) report, “Water Quality: Agriculture’s Role,” presents information on agriculture and the nation’s water quality and provides a basis for diverse groups to come together and agree on policy measures to address current problems.

“This report should be read by all those on Capitol Hill who will be involved in the reauthorization of the Clean Water Act,” said The Fertilizer Institute President Gary D. Myers. “The report recognizes the complexity of water-quality problems and that solutions must be local and site-specific and must address many factors.”

The report, Myers said, demonstrates the strides made by agriculture in minimizing environmental impact.

There is one notable omission in the report. The chapter entitled “Risk/Benefit Considerations” contains no discussion of the benefits from agriculture.
Denver — Two Coloradans received major awards at the Rocky Mountain Golf Course Superintendents Association’s recent 39th annual Conference and Trade Show.

Don Tolson, superintendent at Fox Hollow in Lakewood, a 27-hole course scheduled to open for play this spring, received the Turf Professional of the Year Award.

Dr. Jim Feucht received the 1992 Distinguished Service Award. He has been Professor of Landscape Plants/Extension Specialist at Colorado State University since 1966. Feucht has contributed to more than 60 publications, and is a contributing and consulting editor to many magazines, handbooks and texts.

In constructing Fox Hollow, Tolson was strongly opposed by a local group over environmental issues. He surmounted these obstacles by demonstrating that his plans were in fact environmentally friendly.

Tolson also received the Environmental Stewardship Award from GCSAA at the national convention in Anaheim.

ROCKY MOUNTAIN HELPS STUDENT

David Calder of Colorado State University received the $1,600 Jim Haines Scholarship awarded by the Rocky Mountain golf course superintendents.

Other scholarship recipients were Jason Aerni, Brett Lockard, Scott Phelps, Tom Harston, Ty Churchwell, Abby McNeal and Hannelore Weidman, all CSU; Kevin Delohery, Front Range Community College, and Ed Rubin, Northeastern Junior College.

The educational program consisted of 54 technical sessions and 30 speakers.

Dr. Elliot Roberts, recently retired turf scientist, gave the keynote address. He shared the benefits of turf in our environment and the scientific research which explains and documents these benefits.

HORIZON DONATES EQUIPMENT

Horizon Turf of Phoenix, on behalf of Jim McGahey, recently donated five pieces of equipment to the University of Arizona Turfgrass Program.

The equipment consisted of a Jacobsen 3-wheel diesel truckster with dump body; Jacobsen 22" walk-behind greens mower; Turfco power sprayer for the truckster; Jacobsen top dresser for the truckster; and Jacobsen rotary mower.

TOLSON, FEUCHT HONORED

PHOENIX, Ariz. — New officers elected to the Las Vegas chapter of the Southwest Section of the PGA of America were announced this week, according to Dave Engleking, executive director of the Phoenix-based section. They are:

Craig Smith (Angel Park) — President, Dave Barnhart (Legacy Golf Club) — Vice President, Rich Fite (Nellis AFB Golf Club) — Secretary, Doug Anderson (Sun City Summerlin Golf Club) — Treasurer.

Engleking also announced the annual chapter award winners. They are: Orrin Vincent (Angel Park) — Professional of the Year, Ray Norvelle — Person of the Year, Eric Exbanes (Legacy Golf Club) — Player of the Year, Tom Jefferson (Sabara Country Club) — Senior player of the Year, Keith Flatt (Las Prados Golf Club) — Low Stroke Average.

The Southwest Section of the PGA, composed of 950 members in Arizona and Las Vegas, is one of 41 sections in the PGA of America.

QUECHEE, Vt. — The Vermont Golf Course Superintendents’ Association has elected its board of directors for 1993.

Officers are Dave Berard, Dorset Field Club, president; Tim Madden, Mount Snow Golf Club, vice president; Joe Chabonneau, Glen Eagles CC, treasurer.

Manchester, treasurer, and Mark Fedolfi, Lake St. Catherine Golf Club, secretary.

Other members are Dave Clement, Woodstock CC; George Brothers, Crown Point CC; Springfield; Tom Morris, Stratton Mountain Golf Club; Karl Larson, Rutland CC; Ken Lallier, The Quechee Club; Ed Stumpf, Hart Seed Company, and Mike O’Connor, Environmental & Turf Services.
It's important to note that our attendance count of 8,644 is a verified total," says Donn W. Sanford, Mid-Am's managing director. "We have our registration system set up so we can verify how many people attended versus how many people registered.

The total number of people who registered for the show was 9,600.

"Everything went smoothly," says Peter Grathoff, Mid-Am's president. "We celebrated our 20th anniversary in style. Our exhibitors and attendees couldn't have been happier.

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Mid-Am is sponsored by the Illinois Landscape Contractors Association, the Illinois Nurserymen's Association and the Wisconsin Landscape Federation. The show is endorsed by the Iowa Nursery & Landscape Association and the Nebraska Association of Nurserymen.

For more information, contact Mid-Am at 1000 N. Rand Road, Suite 214, Wauconda, Illinois. Phone: 708-526-2010; Fax: 708-526-3993.

Drs. Bert McCarty and Al Dudeck of the University of Florida updated Central Florida Chapter FGCSA members in their fields of expertise at a recent meeting at Interlachen Country Club.

McCarty, turfgrass coordinator at the Envirotron Facility, said ground-breaking took place last March. Construction begun in December may be near completion in August.


Most promising, he noted, was Flortox Bermudagrass, a 1954 introduction from Africa. It has exhibited low N requirements, drought resistance and deeper rooting, and is touted as an excellent replacement for 419 Bermuda.

Other species discussed were FHB-135, a vigorous Bermuda similar to Tifdwarf, and MBA-1, a bahia grass that features a shorter seedhead than found on Pensacola bahan.

FIELD DAY SET AT TIMACUAN
The Central Florida Chapter FGCSA is scheduled to return to Timacuan CC, Lake Mary, for the 1993 CFC turf field day and chapter championship golf tournament on June 9.

VANDERCOOK HONORED
ST. CHARLES, Ill. — Peter Vandercook of Illinois Lawn Equipment, Orland Park, received the Illinois Turfgrass Foundation's Distinguished Service Award at the recent North Central Turfgrass Exposition here.

Vandercook, Illinois Turfgrass Foundation president in 1975-76, for 30 years has been respected for his knowledge in the field and leadership within the turfgrass industry.

NEARLY 9,000 ATTEND
Attendance at the 1993 Mid-America Horticultural Trade Show totaled 8,644 growers, landscape professionals, suppliers, retailers and others. The show was held Jan. 14-16, at the Hyatt Regency Chicago, in Chicago, Ill.

The 1993 attendance (which does not include students and instructors) surpassed last year's attendance by 70.

It stopped short of breaking the all-time attendance record (the 1991 show) by only 14.

In a separate count, a total of 119 students and instructors attended Mid-Am, many attracted by Mid-Am's Career Center.

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by Terry Buchen

The purpose of these Tour conditioning guidelines is to help the golf course superintendent and sponsors provide a course that tests the players' skill, is fair to all contestants, and one that has consistent playing conditions in all areas of the course.

The following guidelines cannot apply to all courses because of grass types, design and the time of year certain events are played.

Yet, since players of all caliber enjoy and benefit from playing under tournament conditions, adhere to these guidelines as much as possible during the rest of the year as well as during the event. Some changes will of course be necessary because of weather and membership demands, but usually when this is done the membership enjoys the improved playability of the course. Maintaining near-tournament conditions also makes preparation for the following year's event much easier.

Overwatering of fairways must be avoided at all cost. Providing a firm, uniform playing surface over 18 holes is difficult, but if the superintendent selectively irrigates only those areas needing water for turf survival, a more consistent fair playing golf course will be the result. Superintendents and irrigation technicians should practice programming their irrigation systems to achieve these conditions well before tournament week.

During tournament week all irrigation schedules must be discussed with the Rules officials on a daily basis. Mowing heights for Bermuda and Zoysia fairways should be as close to 3/8 inch as possible. For cool-season grasses 3/8 to 1/2 inch are required.

The trends toward lightweight mowing have produced improved surfaces wherever it is part of the maintenance program. One possible drawback is the possibility of increased thatch development. Fluffy fairways should be avoided for the health of the turf and for playability considerations. If thatch is a problem, vertical mowing and aeration should occur in time for complete healing of the fairways before the tournament.

The smaller lightweight fairway units allow more frequent cross mowing of fairways throughout the golding season. This practice reduces surface grain and allows existing depressions to be mowed more cleanly. Fairway depressions including sunken irrigation or drain lines should be repaired as part of the regular maintenance program. Many superintendents maintain the white lines put down by the rules committee after the tournament and the areas can be repaired. It is discouraging to have to mark the same areas year after year on a tournament golf course.

Daily mowing should begin Monday of Advance Week, including the week end before the tournament.

To improve bunker conditions:
• Have all new sand in place at least 90 days before the tournament.
• Ensure that there is a uniform settled depth of 4 to 5 inches throughout the bunker floor. Bunker faces are part of the design, these areas should have no more than 2 inches to prevent buried lies.
• When sand is redistributed to maintain constant depths, or is necessary after heavy rains, make sure that these areas are compacted. Tamping and/or hand watering is usually necessary.
• If mechanical bunker rakes are used on a regular basis, avoid using the "down pressure" feature at least one month prior to the tournament.
• Before buying new sand, send samples from suppliers for testing.
• Rakes such as Accuform, Standard Tour Smooth, Lesco, Rake-Rite and Innovative Products provide smooth bunker surfaces. Please use one of these or a similar rake which has been approved by the Tour.
• Generally, grass bunker slopes should be closely mowed to prevent hanging lies.

An ideal sand may not be available in all areas of the country, but every effort should be made to find the best possible material. Color should be a secondary consideration to playability, not only for the Tour players, but also for the general membership.

The trend in Tournament conditioning is away from standardization of playing conditions and toward a program of treating each course on an individual basis. This will protect the design intent and allow the course set-up to take advantage of each course's strong points.

Golfers appreciate beautiful turf. And from fairway to green, Putter Creeping Bentgrass from Jacklin Seed offers great looks. But the real test is on the green. Putter offers a true-line putting surface that outperforms the best. Superintendents and irrigation technicians should practice programming their irrigation systems to achieve these conditions well before tournament week. Bunkers

Find out more about how Putter can improve your game. Call your Jacklin Seed marketing representative at 800-688-SEED and we'll send you a free, information-packed booklet and a half pound sample of Putter for you to test on your own. Call today!
**Bermudagrass ‘revolution’ predicted**

By MARK LESLIE

New seeded varieties that will “revolutionize” the Bermudagrass marketplace are on the near horizon, according to...that he claims will rival the industry-standard vegetative-propagated Tifway 419 for golf course fairways.

Dr. Arden Baltensperger of Farmers Marketing in Las Cruces, N.M., and formerly of New Mexico State University, said a seeded Bermudagrass acceptable for golf greens may be bred within five to seven years.

To help, SyncroFlo has written a check list of issues to address before deciding.

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(or constant speed, centrifugal or vertical turbine, or simply upgrade the pump station you have?)

There isn’t a single pump station solution. Depending on your choice, you can save time, money, energy and even your reputation. To help, SyncroFlo has written PUMP STATION SELECTION REPORT, a practical guide that reviews pumping system basics. It also has a check list of issues to address before deciding.

We don’t just make pump stations, we provide irrigation solutions. The SyncroFlo line of EAGLE pump stations is among the most extensive in the world. You’ll find our stations have more standard features than other manufacturers offer as options. All are backed by the best guarantees and support in the industry, not the least of which are total system, third party performance and safety certifications.

Yours for calling 1-800-886-4443:

**THE CUTTING EDGE**

**OF PRECISION CONTROL**

Continued on page 28
SOLVANG, Calif. — Creating protected subsurface seed pockets is the secret to successfully overseeding a new generation seeded Bermudagrass, according to a superintendent who has done so.

Scott Buley, who successfully overseeded fairways at The Alisal Guest Ranch here, said, "The key is to precisely place the seed at a regulated depth to control moisture and protect the young emerging seedling from play, golf cart and maintenance equipment traffic, and desiccating wind."

Buley, the director of golf maintenance at the two-course facility, has experimented the last three years with several techniques to fill in a uniform warm-season grass base in this transition area of summer play. At the 40-year-old Alisal course, his challenge was to grow Bermudagrass where kikuyugrass had not yet spread. To complicate matters, Bermudagrass must be seeded in warm weather—June through August—in the middle of summer play. So Buley had to overseed while maintaining play.

With mild to warm spring and summer temperatures, the overseeded ryegrass fairways held up well until midsummer. With summer temperatures fluctuating from the 50s to over 90 degrees, kikuyugrass islands thatched up; poa annua burned out; and the ryegrass transition suffered.

Buley's normal fall ryegrass overseeding program provided a good fairway surface until mid-July. Warmer temperatures gave the more aggressive kikuyugrass the growing advantage, and it thatched up unevenly amidst cool-season grasses, perennial ryegrass and poa annua. This stand of all three grasses was difficult to water and verticut uniformly, and cultural practices differed for all three.

USGA Green Section agronomists Larry Gilhuly, Paul Vermeulen and Pat Gross recommended overseeding with Bermudagrass.

Buley decided on one type for its drought tolerance and ability to hold up at fairway heights under heavy wear conditions. Because few turf managers had successfully seeded the new generation Bermudagrass into existing stands of turf, Buley first tried implementing his system for overseeding winter ryegrass.

But it was difficult to maintain correct seed rates with the finer Bermudagrass seed in the seeder slicers. Maintaining play during overseeding was difficult as the Bermudagrass seed needed to be uniformly moist through germination, while golfers wanted drier playing conditions. Golf carts sealed and compacted the surface when the soil was moist enough for germination to take place.

In hot weather, seeder slits tended to split open, desiccating seed and/or seedlings if the ground was allowed to dry at all. Finally, any seed that entered aeration holes greater than 1/2-inch deep failed to emerge or was buried as seed holes shut.

Buley seeded a practice tee and trial plots on fairways around the course during this first experimental year. Results were...
Bermudagrass overseeding made possible

Continued from previous page

generally disappointing, but he did notice that where the plug holes were shallower due to hard ground, the results were better.

BACK TO THE DRAWING TABLE

In the spring of 1991, Buley visited the Sports Turf Research Institute and Royal Birkdale Golf Links in England and observed an aerifying machine that he, too, had recently bought.

The machines, Sisis Varicore aerators, were equipped with an aeration tine used for thatching prior to overseeding. It used a 7/8ths-inch-diameter "jumbo thatching tine" that pulls a shallow plug, 1/2-inch deep, on extremely close spacings.

The cam-driven aerifer creates shallow holes with perfectly vertical sidewalls, so they don't break down as fast as those used by conventional rolling aerifiers, Buley said.

In June 1991, Buley experimented with planting Bermudagrass, using several different aerifiers and seeders. Only the Varicore left a consistent light blue polka-dot pattern of thriving Bermudagrass.

Wherever he had aerified deeper, the stand was absent, and where it was shallower, the stand was thin. The best combination seemed to be a two-by-two-inch to two-by-one-inch spacing, 3/4-inch deep, he said.

After "thatching" with the Varicore to this depth, the plugs and thatch were ground up with a reel mower which put about 1/4-inch of loosened soil/thatch mixture back into the aeration holes. The Bermudagrass seed was broadcast and/or spike seeded over the top of these holes, placing it 1/2-inch deep.

Buley found that plug holes should be farther apart in a sandy soil than in a clay soil, due to varying soil strengths to maintain a strong seed pocket side-wall. The 7/8-inch-diameter seed pocket also seems to reduce competition from already established grasses.

Similar techniques have attained excellent results when overseeding creeping bentgrass into greens that had a high percentage of poa annua. Greens were core aerated and sand top dressed before seeding with spikesenders and/or slicers. After completing the greens overseeding, the maintenance crew overseeded all fairways in late August and early September.

In October "a superb stand of Bermudagrass covered all 18 fairways," Buley said. "These fairways were then carefully overseeded with ryegrass in November. Spikesenders were used to avoid thatching out the tender young Bermudagrass seedlings."

Based on the results at the original course, golf course architects Jack Daray and Steve Halsey approved planting The Alisal's new River Course with the Bermudagrass.

The late-summer seeding was accomplished by broadcasting the Bermudagrass and following it up with a pass of perennial ryegrass using a spiker seeder. This served to lightly cover the Bermudagrass and put up a thin initial stand of ryegrass that acted as a nurse-crop for the Bermudagrass.

It reduced erosion, quickly stabilized the seedbed surface, and made it much easier to maintain adequate moisture throughout germination of the Bermudagrass seed.

The Bermudagrass-ryegrass mix worked well. The two grasses filled in, and the Bermudagrass density showed up in strength when it went into fall dormancy, Buley said.

Buley said his River Course superintendent, Mike Scott, then successfully spike-seeded additional ryegrass over the Bermudagrass.

Their crew now use a far finer spike seeder and specially adapted autoseeder-slicer in conjunction with the jumbo tines. Buley said many turf managers have gotten new generation seeded Bermudagrass varieties up in overseeding situations, only to have them die out soon afterward.

The brand now states on all labels that the seed must not be covered more than 1/4 inch and that moisture must be adequate through germination, but should be cut back after seedlings emerge.
International market for Bermudagrass is booming

By MARK LESLIE

It may be called "hooch" in Australia and "cooch" in India, but United States seed growers call Bermudagrass a money-maker — internationally.

"There is a substantial international market for Bermudagrass seed," said Dr. Charlie Taliaferro, a plant pathologist at Oklahoma State University. "Many of the [U.S.] seed companies sell more overseas, basically because Bermudagrass is such a widely grown species. There are markets for it in many, many different countries that lie essentially 40 degrees latitude north and south of the equator."

Jacklin Seed Co. research director Doug Brede said Bermudagrass sales have done particularly well overseas, where "they can't get certified sod."

And Kevin Morris, director of the U.S. Department of Agriculture's National Turfgrass Evaluation Program, said: "Seeded Bermudagrass is a much more attractive option overseas... They can't just take a vegetative variety and let it grow. In five years it would have all sorts of weeds and other problems. Plus, it would be cost-prohibitive to transport it there."

Farmers Marketing President Royce Richardson acknowledged that he sold the Sonesta variety of Bermudagrass to O.M. Scott which "has tremendous distribution and can go into areas and sell where I can't."

But he added his firm does market heavily abroad, going into areas "where people want to build a golf course and [with seeded Bermudagrass] they can put in a course for one-third the cost of sod."

"That's why we're being successful in the Pacific Rim area. We're putting in courses in Rota, Guam, Saipan... It's hard to get sod into the Pacific and keep it alive. We send them seed and they can put it down and hit golf balls off it in two months," Richardson said.

Bermudagrass revolution

Continued from page 25

Bermudagrass is already a highly valued turfgrass for golf courses. Its vegetative types are in demand in hot, arid climates for golf course fairways and greens. A seed-propagated variety comparable to vegetative types would be well, a jackpot. While in all types of turfgrasses, the best vegetative types are better than the best seeded types, plant breeders are working long hours perfecting the seeded types because of the advantages of seed.

Turfgrass seed is much cheaper than sod or sprigs, and can be transported great distances and stored on the shelf for years. Kevin Morris, director of the U.S. Department of Agriculture's National Turfgrass Evaluation Program, said Bermudagrass is a favorite in warm climates because it is quick to recover, hard to kill, very aggressive, and has excellent drought, wear and salt tolerance.

Vegetatively propagated Bermudagrass is fine-textured and can be mowed closer, he said. On the other hand, Bermudagrasses are winter-tender and require higher fertility rates than some other warm-season grasses, he said.

Researchers agree with Morris' assessment that seeded Bermudagrasses will have more and more a place on golf courses. Baltensperger pointed out that while only three seed-propagated varieties were entered in the 1988-1991 national tests, the 1992-96 tests include six commercially available varieties (Gywnn, NewMex Sahara, Sonesta, Chyenne, Sundevil and Arizona Common), and 10 experimental types (two each from Jacklin and Oklahoma State University, one from International Seed and five from Baltensperger's program at New Mexico State).

Baltensperger told superintendents at the International Golf Course Conference and Show in January: "Even in the transition zone you're going to see more of these [Bermudagrasses] and you will find a greater choice than even now for density, texture, fineness, shoot elongation, and so forth."

"At this point, vegetative Bermudagrasses are finer-textured," said Jacklin Seed research director Dr. Doug Brede. "All are general purpose turf. They are ideally suited for home lawns. They are great for golf course roughs. If managed properly, they do very well on fairways. But they're not as fine-textured as Tifway 419."

POSITIVES AND NEGATIVES

But why all the hype? Bermudagrass is already a highly valued turfgrass for golf courses. Its vegetative types are in demand in hot, arid climates for golf course fairways and greens. A seed-propagated variety comparable to vegetative types would be well, a jackpot. While in all types of turfgrasses, the best vegetative types are better than the best seeded types, plant breeders are working long hours perfecting the seeded types because of the advantages of seed.

Turfgrass seed is much cheaper than sod or sprigs, and can be transported great distances and stored on the shelf for years. Kevin Morris, director of the U.S. Department of Agriculture's National Turfgrass Evaluation Program, said Bermudagrass is a favorite in warm climates because it is quick to recover, hard to kill, very aggressive, and has excellent drought, wear and salt tolerance.

Vegetatively propagated Bermudagrass is fine-textured and can be mowed closer, he said. On the other hand, Bermudagrasses are winter-tender and require higher fertility rates than some other warm-season grasses, he said.

Researchers agree with Morris' assessment that seeded Bermudagrasses will have more and more a place on golf courses. Baltensperger pointed out that while only three seed-propagated varieties were entered in the 1988-1991 national tests, the 1992-96 tests include six commercially available varieties (Gywnn, NewMex Sahara, Sonesta, Chyenne, Sundevil and Arizona Common), and 10 experimental types (two each from Jacklin and Oklahoma State University, one from International Seed and five from Baltensperger's program at New Mexico State).

Baltensperger told superintendents at the International Golf Course Conference and Show in January: "Even in the transition zone you're going to see more of these [Bermudagrasses] and you will find a greater choice than even now for density, texture, fineness, shoot elongation, and so forth."

"At this point, vegetative Bermudagrasses are finer-textured," said Jacklin Seed research director Dr. Doug Brede. "All are general purpose turf. They are ideally suited for home lawns. They are great for golf course roughs. If managed properly, they do very well on fairways. But they're not as fine-textured as Tifway 419."

Continued on next page

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Paul Latshaw holds the distinction of being the only superintendent of golf clubs hosting 3 major tournaments. With Paul's reputation, expertise and candor, he's a powerful promoter for PennLinks.

CIRCLE #125
Bermudagrass revolution
Continued from previous page

"It's taken several years of breeding, but I think we're there in terms of our program and Charlie Taliaferro's program."

Jackpot (or J91-2 in the tests), discovered by Brede in a cemetery in the state of Washington, is "very similar to Tifway 419," he said. "It's a little darker. The leaves are a little shorter. It possesses the same cold- and drought-tolerance. I wanted to come close to 419. It's been the standard for 30 years."

Brede said Jacklin's short-term goal will be to produce similar varieties to Jackpot for other companies, Brede said.

He predicted new varieties of seeded Bermudagrass will replace vegetative types, and older courses will overseed with them.

Brede and Taliaferro are trying to add more cold tolerance to Bermudagrass strains in order to grow it further north in the turf-grass transition zone.

"But I don't want to spend a lot of time trying to grow Bermudagrass in Minnesota. I want to grow it where it's supposed to grow," said Farm er's Marketing's Richardson, who has perhaps sold more Bermudagrass than anyone in the world in his 40 years in the business.

VEGETATIVE PROGRESS
Meanwhile, Taliaferro is excited about the promise of the African Bermudagrass Cynodon-Transvaalensis he is developing for putting greens.

"We have identified several very promising types that are being widely nationally evaluated at this time," he said. "None of these Bermudagrasses are in the national tests, but we have plantings in Florida, Texas, and next year in several other states."

While believing better Bermudagrass cultivars can be developed for putting greens, Taliaferro feels their use will remain in the Deep South where bentgrass is poorly adapted.

"I do not feel at this point that it would be feasible or desirable to attempt to develop Bermudagrass cultivars for greens for the upper regions of the Bermudagrass belt or transition zone where bentgrass is better adapted," he said. "Cynodon-Transvaalensis, however, has excellent cold tolerance, and we're looking at developing pure Cynodon-Transvaalensis cultivars and hybrids between the Cynodon-Transvaalensis and Cynodon-Dactylon for the transition zone," he said. "There is potential to develop Cynodon-Transvaalensis cultivars that would compete with and possibly be better than the traditional kinds of Bermudagrasses used on fairways in temperate regions."

He said OSU's research is "within four years of having some of the African Bermudagrasses released in the marketplace — if the evaluations we're doing show they are truly worthy of release."

Pioneer in Bermuda research gives tips on care

Dr. Arden Baltensperger, retired professor at New Mexico State University and the father of Bermudagrass research, hailed the plant for its easy management, but nevertheless gave a few hints to golf course superintendents.

Speaking at the International Golf Course Conference and Show on Bermudagrass management, Baltensperger suggested:

- Plant the grass only when the soil is 60 degrees or above. "The most common cause of failure is planting when the soil is below this temperature," Baltensperger said.
- Be cognizant of how the seed was processed. The seeding rate depends on if the seed was hulled, unhulled, hulled and coated, or unhulled and coated. Unhulled Bermudagrass yields 1.6 million seeds per pound and needs 1.5 to 2.0 pounds per thousand square feet. Hulled Bermudagrass yields 2.1 million seeds per pound and needs 1.0 to 1.5 pounds per thousand square feet.
- Bermudagrass is drought-tolerant but it needs adequate root-zone moisture to remain green in the summer. It will stay dormant and live for months.
- Most new varieties need four pounds of nitrogen per 1,000 square feet during the growing season.
- Use pesticides sparingly.
- Seedling improved Bermudagrass is relatively rapid, inexpensive and very satisfactory for spring renovation and damage repair.
- On large areas, use a packer seeder.

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LENGTH OF BARRICADE WG CONTROL BY ZONE

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GOLF COURSE NEWS

CIRCLE 1136
Nichols' reign begins, as GCSAA moves forward

By Peter Blais

Randy Nichols prefers to look at the overwhelming rejection of the Golf Course Superintendents Association of America's proposed bylaw changes in a positive light. "I didn't see it as a negative. As far as I'm concerned the members were saying they are happy with the way we've done things so far, so why change," said the new GCSAA president.

That mindset should stand the head superintendent of Dunwoody, Ga.'s Cherokee Town & Country Club in good stead as he leads the association into a new year. "Superintendents are conservative in nature. So am I. They want a slow, steady growth and didn't see the proposals providing that," he said. Among Nichols' other priorities are moving forward on the superintendent mortality study seeking to determine if there are any links between long-term pesticide exposure and certain diseases, and collecting data on ground water contamination studies being conducted at many courses around the country.

The new GCSAA president expects the controversial field staffing program to be instituted on a regional trial basis later this year rather than the nationwide plan originally proposed. He also looks for steady growth in Asia, where GCSAA opened a Singapore office last year and will conduct its first Pacific Rim Conference and Show in March.

Nichols said he looks forward to working with new board of director members David Fears of Blue Hills Country Club in Kansas City, Mo., and George Renault of Burning Tree Club in Bethesda, Md. "I think they'll both do very well," Nichols said. "Dave has been involved with GCSAA a long time and has spoken often at the Club Managers Association of America annual meeting. George has been very involved in the GCSAA, too."

As for the directors they unseated, Charles Passios and Joseph Hahn, Nichols said: "I have the utmost respect for both of them. They felt passing the bylaws was important. They were sort of victimized by their support for them." Nichols has hit the turf running since replacing Bill Roberts as president during late January's GCSAA Annual Conference and Show.

From Anaheim, Nichols immediately headed east for the U.S. Golf Association's annual meeting in Nashville, Tenn.

His schedule over the next two months had him going back to the Club Managers Association of America's Annual Conference and Show in Nashville, the Pacific Rim show in Singapore, GCSAA's spring board meeting in Lawrence, Kansas, and the GCSAA planning meeting at the Masters Tournament in Augusta, Ga.

"Hopefully things will slow down a little bit this summer," Nichols mused. "There's a lot going on around here [Cherokee Town & Country Club], too. We're building a new clubhouse.

"It's going to take over the 10th tee, so we're rebuilding that hole. We're installing the irrigation, landscaping around the clubhouse and putting in a new pool center."

Fortunately, Nichols said he has two capable superintendents heading the club's two courses — Jim League at the Joe Lee-designed River layout and Brian Holshouser at Willard Byrd's Hills track.

Nichols also plans to touch base with many of the regional associations. Board members appeared at meetings conducted by 35 regional associations last year and Nichols expects to be among the board's representatives at an equal or greater number of meetings in 1993.

As for the annual show in Anaheim, Nichols said he was pleased with the attendance, which preliminary figures showed standing at a near-record 16,000.

"From what I saw and heard, there was a lot of interest in what was happening on the show floor," Nichols said. "Most booths had 10 to 15 people lined up every time I passed by."

"We went through a couple of years there where people didn't have as much money to spend. But if that [show] activity is any indication, things are looking up.
At odds:

Sen. Metzenbaum, Rep. Hayes differ over who is culprit in the environmental ‘mess’

By PETER BLAIS

ANAHEIM, Calif. — U.S. Sen. Howard Metzenbaum challenged the golf industry to increase its efforts to protect the environment during January’s 64th International Conference and Show.

“You can do much more than you are currently doing. I urge you to get off your butts and do more,” the Ohio Democrat told the crowd assembled at the environmental general session.

Metzenbaum said government and industry have put environmental matters on the back burner the past 30 years.

“We have created an environmental mess and it is costing us dearly,” Metzenbaum lamented.

Half the country’s wetlands have been permanently destroyed over the past 200 years, he said.

Americans are spending $115 billion annually and have doled out more than $1 trillion so far protecting and cleaning up the environment, the senator said. The annual figure is expected to rise to $160 billion by the year 2000.

“And the public wants us to spend more,” Metzenbaum said.

Metzenbaum said President Clinton’s choice of Carol Browner to head the Environmental Protection Agency shows his concern for the environment.

“She has been very tough on polluters,” he said of the former head of Florida’s state environmental agency.

“Expect to hear a lot more from Ms. Browner.”

Golf course superintendents have earned the title environmentalists through their efforts to reduce pesticide use and protect wildlife, Metzenbaum said.

“But as individuals, you can and should do more, especially for the sake of your children and their children,” Metzenbaum said.

“Hundreds of the pesticides you use have not been adequately tested. And golf courses use four to seven times as much pesticide per acre as farms. You must do your part to limit their use. Address the water shortage head on and use less water.

“You’ve taken some good steps, but more is required. Tell your customers they can live with brown spots and a few weeds. You are in a great spot to do something. Become leaders both in your clubs and communities.”

U.S. Rep. Jimmy Hayes, D-La., preceded Metzenbaum and discussed his frustration with a federal regulatory system that seems beyond control.

“You have to decide what risks are there and spend your money on the things where you can do the most good,” said Hayes.

With regulatory agencies, that isn’t always being done, he said.

Yet there is no way to hold those agencies accountable.

That is a situation he said he and other legislators hope to help change.

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CIRCLE #129
Mr. Chicago Golf," Joe Jemsek, was hailed at the Golf Course Builders Association of America banquet as a spokesman for golf and an example of outstanding sportsmanship, fair play, talent and skill.

Jemsek, who owns and operates eight public golf courses in Chicago, was given the GCBAA's annual Donald Rossi Humanitarian Award. "This is a very special honor for me. Don Rossi was a close friend," Jemsek said. "I respect his memory and will cherish this award."

Longtime friend and Ladies PGA Hall of Famer Patty Berg called Jemsek "a builder at heart — building better and better golf courses which are not only havens of lasting beauty but also great tests of skill; building better and better lives around him with his care and concern for his fellow man; building love and respect in all those who are fortunate enough to get to know him; and building a permanent place, not only in our hearts, but especially in the lasting history of golf."

Golf course designer Pete Dye, on hand for the ceremonies, said Jemsek "owns "more public golf courses in the Chicago area than anybody ever dreamed. But more than that, he has done more for the game of golf..."

Dye cited Jemsek's recent goodwill for golf course caddies. A caddy master when he was young, Jemsek hosted the recent Western Open Championship at his Dubsdread course.

"The Western Open is the second-largest scholarship fund in the world," Dye said. "Mr. Jemsek gives his golf course to the Western Golf Association for this championship so all the funds go to the caddies.

"This is a great way to reward these young men, and to put back in the game what he has taken out."

Frank Jemsek said his father "has always believed golfers recognize and deserve the things that make golf courses special... He isn't afraid to dream and take a chance," Frank added. "Joe," said Berg, "you are truly a spokesman for golf and a wonderful example of outstanding sportsmanship, fair play, talent and skill."

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Based in Palo Alto in the highly regulated state of California, Jones said: "Many of these well-intentioned people often see a golf as an elitist game enjoyed only by the wealthy. And they see it as a giant private club with privileges not being enjoyed by the populace. They see it as wasteful of land and water. They see it as a residue for toxic chemicals.

"There are obviously growing political and social misunderstandings here. And it is our mission to heal this void, bringing more true understanding to these detractors... and to make them realize that all of us are true environmentalists."

Mentioning superintendents' "absolute professionalism," Jones asked that they carry this message: "Golf may have been for the well-to-do but is now played by everyone. Take them [activists] to your local munis. Let them see the seniors play, the women, the juniors, the pee wee's, even the handicapped. Let them see the billions of recreational hours the game provides for some 30 million Americans and others around the world.

"Let them see your strict adherence to the tight regulations on chemical use... Show them how we follow the rules, how we often do better than what is regulated as standard practice."

Adding that those in the golf industry are "dedicated environmentalists and are getting better in what they do with each passing day," Jones said: "The environmental movement is here to stay and we are a part of it. We always have been... We desperately need more spokesmen. Golf is the best answer to environmental problems."

USGA Green Section National Director Joe Snow urged superintendents to speak out — at schools and to friends and social and business organizations — "not just as an individual under attack but as a service to society."

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32 March 1993 CIRCLE #130
Pate decries adverse effects of television on course care

By MARK LESLIE
ANAHEIM, Calif. — While television has popularized golf worldwide, the fact that it has taken the game into people’s living rooms has actually changed some aspects of the game for the worse, says PGA Tour pro and golf course architect Jerry Pate.

Speaking at the U.S. Golf Association Green Section meeting during the International Golf Course Conference and Show here, Pate said, "in the business world any asset — in this case, television — has its liabilities.

Pate lamented The Augusta Syndrome, in which superintendents to cut turfgrass lower, fertilize and irrigate more, and plant more flowering landscape materials to beauty courses.

Golfers everywhere see Augusta National during the Master’s and want their local courses to look the same — fast and green, he said.

"The real question here is: Can we continue to reach these high levels of turf maintenance and keep courses affordable for the courses around the world that do not hold professional championships?" Pate said.

"Low-cut fairways, green Stimping to 10-plus readings, green grass throughout the year with no weeds and perfect conditions are just a few of the demands your members and the public make for these golf courses."

Pate said television also influences professional golf course architects.

"Today the architect considers many things before he completes his design," he said, "especially for courses that are televised events. Cart path locations, their interference with television shots, water hazards everywhere, bulkheads of every type, island greens, and impossible bunker placements seem the rules rather than the exceptions.

"These things are great exposures of our work, but it causes a lot of peril to the golfers. Yes, it makes for great television. But the most obvious thing it does cause is the continuing increase in the cost of maintaining our golf courses."

Although it seems TV and golf have gone hand in hand since the beginning of the game, it wasn’t until 1953 that the first golf event was broadcast live — the World Championship at Tam O’Shanter Golf Course in Canton, Ohio.

For 400 years of this great game there was little change until we got to the television years," Pate said. "It seems today the only way you can play golf courses is through the air. For 400 years you could bump and run on natural golf course turf. I hope we don’t change the history of this game. I hope we preserve the way and run shot in our golf course maintenance and design practices.

"Let’s not let the exposure of television change the basic characteristics of the game... We must strive to protect the honor and integrity of this game. And, most important of all, we must make it enjoyable and playable for everyone."

The golf industry and its clients, he said, must address the question of design and maintenance costs head-on.

"It’s a tough task we face today... to educate the golfing members and the public of this dilemma. Do I want what I see or do I want what I can afford?" Pate said.

Dinah Shore bestows accolades on supers

ANAHEIM, Calif. — I don’t know how you do it. You make the world so absolutely beautiful and flawless," Dinah Shore told superintendents while accepting the Old Tom Morris Award at the final banquet of the International Golf Course Conference and Show here.

Described as "a great ambassador for all of golf," Shore received the honor for her continuing lifetime commitment to golf and for helping to mold the future of the game in a manner and style exemplified by Old Tom Morris. Morris was a famous Scottish greenkeeper, clubmaker, player and course designer.

U.S. Golf Association Executive Committee member Thomas W. Chisholm said Shore "has put women’s golf on the map." "I’m grateful and touched," said Shore, who has long supported the Nabiše Dinah Shore Open.

A once-avid tennis player who discovered golf at middle age, Shore said: "I don’t know anything like a golf course does. I’ve never heard anyone say, ‘There’s this tennis court in Scotland you simply have to play.’"

She added: "It’s seldom someone gets awarded for an addiction you have... I am a certified golf addict, and it’s an addiction from which I hope to never recover."

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A runner-up no longer:

Sentimental favorite Dick Stuntz captures long-sought-after GCSAA crown

By PETER BLAIS
JAMUL, Calif. — Dick Stuntz roundly won't buy it, but he expects to be a lot more relaxed when he plays in next year's Golf Course Superintendents Association of America Golf Championship.

That's because the head superintendent of Lawrence, Kansas' Alvamar Country Club finally won his first GCSAA crown after several near-misses over the past 13 years.

This year's 36-hole tourney was played at Steele Canyon Golf Club near San Diego, Calif.

"I was really tickled," said Stuntz, who had previous finishes of second, third and fourth before taking this year's crown by a single stroke over Paul Jett of Duke University.

"This has been a real goal of mine for a long time. You don't like to talk about things like pressure. But I do feel like a monkey has been lifted off my back."

Stuntz felt he was in good position after "an extremely solid first round" of 75 that saw him hit 17 greens in regulation.

Unfortunately I three-putted four times and ended up with a birdie and five bogeys. I wasn't alone with putting problems. The greens were in good condition, but very hard to read because of the mountains in the background," he said.

About a dozen golfers were in front of Stuntz after the first day, led by three-time champ (1985, '88 and '89) Dave Powell of Myers Park Country Club in Charlotte, N.C., with a 1-under-par round of 70.

Stuntz parred the first nine holes on day two. He was standing on the 10th tee when he heard the news about tourney leaders Powell and playing partner Randy Nichols that opened the door for the rest of the field.

According to Nichols, he and Powell were playing the same brand of ball. Nichols marked his with a black dot and Powell used blue. They inadvertently putted each other's balls on the 3rd green, but didn't realize it until they had both teed off on the 4th. Following the rules, they disqualified themselves.

"If we'd noticed it before teeing off on the 4th, we could have taken two-shot penalties," Nichols remembered. "I was doing OK at that point, although I probably wouldn't have won. Dave had a great shot at it, though."

"He was 1-under the first day, had another birdie to go 2-under"

GCSAA tournament's top finishers

Following are the names of the championship flight's top 11 finishers, home courses, first round, second round and total scores for the 1993 Golf Course Superintendents Association of America Golf Championship held Jan. 23-24 at Steele Canyon Golf Club in San Diego, Calif.

Richard "Dick" Stuntz 75-72-147
Alvamar Country Club
Lawrence, Kansas

Paul Jett 76-72-148
Duke University Golf Club
Durham, N.C.

P. Mac Blanchard 73-76-149
Jennings Golf & Country Club
Jennings, La.

Sam Williamson 75-74-149
Ojai Valley Inn & Country Club
Ojai, Calif.

David Buckles 74-76-150
Steele Canyon Golf Club

Clint Deeds 78-72-150
Tascosa Country Club
Amarillo, Texas

Roger Null 78-73-151
Norwood Hills Country Club
St. Louis

Michael Wilson 73-78-151
CannonGate at White Oak Golf Club
Newnan, Ga.

Mark Henderson 77-74-151
Atlantis Golf Club
West Palm Beach, Fla.

Bill Martin 74-77-151
Victoria Club
Riverside, Calif.

Michael Orren 73-78-151
El Toro Community Golf Center
Laguna Nigel, Calif.

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'A top-notch guy and a very good champion.'
Stuntz wins title

Continued from previous page
early in the second round, and was in great position to birdie the 4th hole when we realized what had happened. It was very frustrating."

Stuntz sympathized with the pair. But he quickly took advantage of the situation with an apparent birdie on the 10th after taking what he believed to be free relief from a washed out area. A later ruling (that he wasn't entitled to the relief) cost him a stroke.

Stuntz continued his journey on the Par Express, dropping everything in regulation up to the 18th.

The last hole is a short par-5 that yields many birdies, Stuntz said.

A solid drive and approach left him in good position for a 4. But two poor chips and a missed 10-foot putt left him with a bogey 6.

Instead of a 69 and a certain victory was a popular one. "Dick's a great guy. He deserved to win one," Nichols said.

New board of directors member David Fearis of Blue Hills Country Club in Kansas City, Mo., played a practice round with Stuntz at Steele Canyon prior to the tournament. "He was playing well, so I knew he had a good chance," Fearis recalled, "Dick's a top-notch guy and a very good champion."

Show reflections
Continued from page 12

Awards: Dick Stuntz was greeted with more bad news.

He hadn't been entitled to the relief he took from the wash out on the 10th hole. Another stroke was added to his score, giving him a 72.

He had to watch as the other golfers hobbled home. Jeff matched Stuntz' 72, but couldn't overcome the single stroke he'd spotted the eventual champ the first day.

Stuntz' second-day playing partner, Sam Williamson of Ojai Valley Inn & Country Club, finished two shots back and tied for third with P. Mac Blanchard of Jennings Golf & Country Club in Jennings, La.

Williamson and Stuntz were teammates at Iowa State University.

"He played as well as I did, but just missed a couple of key shots," Stuntz said of his fellow Buckeye.

Stuntz' victory was a popular one. "Dick's a great guy. He deserved to win one," Nichols said.

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What does the year 2000 hold in store?

University of Arizona's Dr. David Kopec has some educated prognostications

By MARK LESLIE

ANAHEIM, Calif. — Regional greens construction specifications, less overseeding, more natural ecosystem products and genetic breakthroughs in turfgrass breeding will be on the palette of golf course maintenance in the year 2000, according to Dr. David Kopec.

Kopec, an associate extension specialist in turfgrass at the University of Arizona in Tucson, told an audience of superintendents at the International Golf Course Conference and Show to expect major changes in their jobs due to new technologies, products and perceptions.

"In order to provide areas for wildlife — and with pesticide remuneration — the cost of golf courses is going to go up astronomically," predicted Kopec, who conducts applied field research programs in turfgrass and weed control, water use and irrigation, cultural management and germplasm evaluation for desert turfs.

"The major issues for golf courses by the year 2000 will revolve around environmental management (not just managing the golf course proper but the ecosystem surrounding the course itself), water quality and quantity, and development and changes and retaining qualified personnel," he said.

"The overshadowing issues will be ground-water and surface-water contamination potential, pesticide contamination potential, protection of the public and employees, and wildlife protection, enhancement and what we do about endangered species."

These concerns, he said, are going "to change how we operate golf courses and the size of golf courses and the ratio of turf in the golf course facility."

Kopec, who holds a PhD from the University of Nebraska and provides state and regional educational programs in turfgrass management, said wildlife providership programs have already been started. Because of this, he said the future will see:

• increase in use of courses;
• transfer of development rights (A person who wants to build a golf course may have to buy 200 acres, build the course on 120 and maintain 80 acres as a wildlife sanctuary);
• maintenance of existing species; and
• change in lake management and design.

"We will use lakes and ponds for irrigation, course features and catching runoff," Kopec said. "But I think the days of driving a golf cart to the end of a pond or lake are coming to an end. We will see laws mandating a 50- or 75-foot strip to protect surface runoff."

ENVIRONMENTAL RESPONSIBILITIES

"Doesn't the golf course superintendent have enough to do today?" Kopec asked. "I think so. He works 10, 12, 14 hours a day and is on the golf course three or four. He is in the office doing his many responsibilities."

Golf courses must ask themselves if they need an environmental plant protection specialist, and, more importantly, "Whose risk is this — the superintendent's, the owner's, the management company's, the risk manager's? These things have to be addressed."

He predicted more and continued use of effluent.

"It is a logical water source for golf courses, and it was shown 15 years ago that use of secondary [treated] water on a turf system provides tertiary water at the bottom of the system." Saline water use will increase as well, he said, adding that there are pockets of saline water in the Western United States, and the industry may see "changes in how a golf course is built for using saline water."

GREENS CONSTRUCTION

Regional specifications for greens construction also looms as a possibility, Kopec said.

"I believe we will see regional recommendations for USGA greens and on the [turfgrass] varieties that are adapted to them. A germplasm that has adapted to the arid Southwest will have different properties in a humid Southeast... For the same reason, I believe we may see regional cultural programs on different USGA greens for different purposes," he said.

He said because peat bogs may not be harvested forever, other sources of organic matter must be investigated and studied for their properties, compaction and nutrient procapabilities for a golf course system and sand greens.

New bentgrass and B-
Continued from previous page

mudagrass varieties will be growing in different places. In the future, superintendents may be responsible for collecting leachate from drain pipes on greens, filtering it and putting it back on the roughs and fairways, Kopec said.

FAIRWAYS AND ROUGHS

He predicted that Southerners be doing less overseeding because of reduced water availability and a trend toward playing on dormant Bermuda-grass. Because of the demand to maintain out-of-play areas to enhance wildlife, Kopec said he foresees decreased fairway size and the development of "transition roughs," with a primary which is playable, a secondary rough which acts more as a penalty, and a tertiary rough of native grasses. "You won't see houses butted up to the rough," he said. "You might see 75 to 80 feet between hoaing tract developments where you will see a sign posted: 'Agricultural chemicals applied.'

"I'd like to see six-foot-high grass between my property and that, and maintain the status of a golf course as environmentally safe and wildlife sensitive at the same time. It can be done."

ROOT-ZONE MODIFICATIONS

"In the next 10 years we'll see big increase in science," Kopec said, specifying sports fibers. "Research in sports turf management can be applied to our fairways."

"By the year 2000 I hope there is not a single one of you who is applying a toxic insecticide, herbicide or fungicide," he said. "If you have to, apply an agricultural chemical, apply a plant protectant... Get an IPM [Integrated Plant Management] program. And if you do have to apply a chemical, make it a plant protectant agent."

He said future products will be more species-specific, "so there is less chance of eradicating beneficial predators. They will have a shorter half-life residual because they will be used to control a short-term problem... In most cases it will be more expensive because development costs will increase and registration of these materials will as well."

The industry will also benefit from advances in using natural ecosystem products, Kopec said.

MICROCHIPS & GENETICS

Genetic engineering, he said, offers some potential for progress in genes for heat, drought and salt tolerance, insect and disease resistance, herbicide tolerance, pest insects and parasitoids. "The microchip is here to stay," he said, pointing to maintaining service records, payroll, shop inventories, irrigation system, and pesticide application equipment. "And it might be on your three-gang mowers by the year 2000," he said. "Pollution control devices may be controlled by microchip."

International trade agreements between Canada, the United States and Mexico open up some exciting possibilities. "For you as superintendents and for researchers at large, exchange of germplasm, ideas and new developments in golf with Mexico and Asia is very exciting," he said.

Kopec also suggested that superintendents be proactive and that they better reward their crews. "They might have more specialized jobs to do and you will want to keep them around," he said.

Changes galore foreseen for 2000

ANAHEIM, Calif.—University of Georgia Professor Lee Burpee told superintendents here that advances in pesticide research and disease-resistant turfgrass species and cultivars hold hope for making biological control of diseases a reality.

Speaking at a forum on the future direction of pesticide technology, Dr. Burpee said: "Unfortunately, we're only attacking the pathogen from one side. We want to attack it from all three sides... chemical controls, changing species or cultivars, and manipulating the environment."

He said superintendents can practice "biocontrol" by manipulating cultivars and environments.

Changing species of grass can provide biocontrol, he said, such as shifting turf on a tee from bluegrass to rye. "Kentucky bluegrass is much less susceptible to snow mold than annual bluegrasses, for instance," he said.

In the same way perennial ryegrass is more resistant to snow mold than is creeping bentgrass. "Unfortunately, we are only in the beginning stages of being able to recommend cultivars," Burpee said.

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GOLF COURSE NEWS

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CIRCLE #124

March 1993 37
Turfgrass selections changing for overseeding

By PETER BLAIS
ANAHEIM, Calif. —

Bentgrass and poa trivialis are fast overtaking perennial ryegrass as the seeds of choice for overseeding golf courses, according to Auburn University researcher Dr. Coleman Ward.

Ten years ago, 90 percent of overseedings were done with perennial rye, Ward said. Today, blends containing bentgrass or poa trivialis make up 80 percent of overseeding stock at the better courses, he added.

Ward has studied overseeding techniques for 30 years. The Alabama professor discussed other recent innovations in overseeding during January’s Golf Course Superintendents Association of America Annual Conference and Show in Anaheim, Calif.

They included the use of lower and higher mowing heights, fungicide-treated seed, lower seeding rates and strip-seeding within 10 feet of rough areas rather than entire fairways.

But most intriguing, Ward said, were the use of cool-season grasses, like bentgrass and poa trivialis in Southern climates. Superintendents are forsaking perennial rye in favor of the other two because of the superior putting surfaces they provide an increasingly demanding clientele.

Perennial rye has long been the favorite of course managers, and for good reason, Ward said. It grows in quickly, possesses great wear and frost tolerance, has high seed yields, and stripes beautifully, Ward said.

"But like anything, it has drawbacks," the university researcher said.

Perennial rye’s inability to survive sustained low cutting heights is its major flaw, Ward said.

"Its minimum cutting height is 3/16-inch for any [long] period of time. Below 5/32-inch it suffers severe physiological distress. The resulting slow putting speeds are its major disadvantage," he said.

On the other hand, bentgrass and poa trivialis can be cut consistently at 1/8-inch, yielding the 11 and 12 Stimpmeter speeds golfers prefer.

Bentgrass is ideal because it survives into late spring and early summer, Ward said. Unfortunately that can put it in competition with Bermudagrass as the warm-season grass emerges from dormancy.

Compared to perennial rye, bentgrass is less tolerant to foot traffic, has slow seed growth and is more susceptible to poa annua.

"But it [bentgrass] is unexcelled as a putting surface," Ward said.

Poa trivialis follows closely on the heels of bentgrass in putting quality, Ward explained. In addition to tolerating lower cutting heights than perennial rye, it requires less seed bed preparation, tolerates lower pH levels and stands up well to shade and excessive moisture.

On the down side, its small seed size, seed rates are much lower for bentgrass and poa trivialis than perennial rye, Ward said.

Bentgrass is applied at 3 to 5 pounds per 1,000 square feet, poa trivialis at 10 pounds and perennial rye at 30 pounds, Ward said.

Overseeding dates are tied to the first frost and vary widely from region to region, he added. For example, the mean date for first frost in Tennessee is Oct. 1. In Southern Florida it is Dec. 1.

Once every 50 years first frost comes 30 days before the first frost date. The first frost also comes 30 days after the mean date once every half-century. That leaves a 60-day window, meaning no ideal date exists.

"The best date to overseed is after poa annua germinates," Ward advised. "You want to be able to control any poa annua infestation."

Phillips comment
Continued from page 12

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March 1993
CIRCLE #133

GOLF COURSE NEWS
Most proposed GCSAA bylaw changes absorb harsh defeat

Continued from page 1

make the board really look at issues before presenting them to the membership the next time."

By wide margins at the Jan. 30 annual meeting, members rejected proposals to give the board authority to set dues in a delegate voting system with a one-person-one-vote format; change the two-thirds vote needed for passing association proposals to a simple majority; and restructure membership classes to encourage non-superintendents to join the association.

One only change passed was one altering the wording in the articles of incorporation. "The membership spoke pretty clearly. They weren't in agreement with the direction the directors wanted to take us on those issues," said Dick Stuntz, head superintendent at Alvamar Country Club in Lawrence, Kansas.

In fact, their support of the proposed bylaw changes undoubtedly contributed to the defeats of incumbent directors Charles Passios and Joseph Hahn.

"They felt passing the bylaws was important. They were sort of victimized by their support for them," said newly elected President Randy Nichols.

Maibusch agreed. "I have the utmost respect for the membership. Joe and Charlie are excellent superintendents. You've got to give them credit for standing up for what they believed in. Their defeats had nothing to do with their qualifications. They were adamant supporters of the changes and it hurt them."

Few were surprised by the one-sidedness of the vote. "After talking to a few people during the week, you knew how it was going to go," Maibusch said. Added Stuntz: "For all the controversy, when it came time to vote, there was very little discussion. It only took about a half hour."

Despite the vote, opponents and proponents agreed there was some good in the proposals. They will likely be modified and reintroduced at future meetings, they said.

For example, Maibusch speculated that a proposal giving the board power to raise dues every so often and within certain guidelines would likely receive support.

"Say the board came up with something like they could raise dues 10 percent and not more than once every three years unless the membership approved. Something like that might pass," he said.

The vote against reclassifying memberships could make it more difficult to attract new members, particularly non-superintendents, said Nichols, who predicted the defeats had "no effect on the way we've done things in the past, so why change?"

Maibusch agreed that the board did a good job trying to communicate the reasons for the proposed changes by visiting so many chapters. His main concern was the "one-sided" treatment afforded the bylaw issues by Golf Course Management magazine, which is published by the GCSAA.

"We never saw a dissenting viewpoint there," Maibusch said. "The magazine was used politically. "I know the board won't let that happen again. I have a lot of confidence in the people on the board."
MAINTENANCE

Nichols and professors highlight USGA session

TIPTON, Ga. — The USGA Green Section's 47th annual Southeastern Turfgrass Conference is due here April 12-13.

First-day social events begin with a golf tournament at Spring Hill Country Club sponsored by the Georgia Golf Course Superintendents Association. Registration should be made with Karen White, 706-769-4076.

Registration and inspection of experiment station turfgrass research plots is at 2 p.m., and barbecue dinner and putting tournament at Tifton Family Golf Course at 6 p.m.

The education program April 13, is at Abraham Baldwin Agricultural College auditorium.

Speakers include Mike Beebe of McCumber Golf Designs; Dr. Robert Dunn of the University of Florida; Dr. Wayne Hanna of the USDA-Tifton; Dr. Kimberly Erusha of the USGA Green Section; and Drs. Tim Murphy and Will Hudson of the University of Georgia.

Superintendents speaking will be new GCSAA president Randy Nichols of Cherokee Town and CC, Dunwoody; GGCSA president William Shirley, Idle Hour Club, Macon; and Dick Gray, Loblolly Pines, Hobe Sound, Fla.

Course management videos target balance with nature

ST. LOUIS, Mo. — New videos entitled Golf Course Management — In Balance With Nature are now available for use by golf course superintendents to train employees and inform the public about turf care with an environmental focus. The two-video set comes with a comprehensive eight-page training manual that provides the latest information about environmental turf management.

Intended as a tool for golf course superintendents, the videos and manual are designed to help train employees and inform general audiences about environmental turf care practices. The videos are sponsored by Monsanto Company in cooperation with GCSAA Scholarship and Research and are not product specific.

"The golf course training videos explain benefits and procedures for turf care programs that are not only effective, but also in harmony with the environment," explains Jan Budzynski, product director, Dithiopyr, for Monsanto Company's New Products Division. "Maintaining healthy golf course turf while protecting the environment can be a balancing act. These videos show how managers can balance their turf care needs and help protect the environment by learning as much as possible about how their work affects the world beyond the 18th hole."

The first video focuses on training. Budzynski says, Step One: Training introduces turf areas as valuable ecosystems, and informs workers about programs and products to care for those systems, as well as the larger environment. The video also provides tips on proper pesticide use — from choosing the right clothing and equipment to application procedures. A study guide and quiz are included for further information and discussion.

The second video is entitled Step Two: Sharing. It's designed for superintendents to show the general public that environmentally sound practices are followed in managing today's golf courses. "This second video is an excellent public relations tool for use whenever the need arises," Budzynski says. "For example, it might be included as part of a presentation to civic groups when managers are invited to speak."

"The two-video set provides an excellent all-round communication program," Budzynski concludes. Superintendents can obtain a copy of the videos and manuals by calling 1-800-323-1421, or writing to Monsanto Fulfillment, 1325 N. Warson Road, St. Louis, Mo. 63132. The videos are available, free of charge (one set per request), while supplies last.

UMass Coop Extension offers organics sessions

The University of Massachusetts Cooperative Extension System and Natural Organic Landscape Professionals Association are presenting two sessions dealing with Organic Lawn Care: Practices and Certification Standards. The sessions will be held March 30 in Auburn and April 2 in Wareham. Further information is available from the Extension office in Worcester.
Designing from memory
Three legends join forces to recreate their 18 favorite holes

BY MARK LESLIE

BRAZELTON, Ga. — Special memories. Special people. To gather, they translate into a special golf course, according to all parties involved.

Gene Sarazen, Sam Snead and Kathy Whitworth — Hall of Fame legends all — have combined their golfing memories, pleasures and partialities and designed the Legends at Chateau Elan, which will open in mid-July. Joining highly rated sister course Chateau Elan Golf Club, the new 18-hole Legends track is "the essence" of the three famed golfers' favorite holes in the world, said coordinating architect Denis Griffiths.

"Each one picked holes memorable to them," said the Braselton designer. "We wanted to provide potentially the same shot or memories to other golfers. It involves similar strategy at a similar hole, like No. 12 at Augusta National."

Sarazen loved it. Whitworth had a blast. Snead had "a lot of fun." "I've been out there quite often to look at my work because I'm anxious to see it," said Sarazen from his Marco Island, Fla., home. "I'm so glad they (owners Don and Nancy Panzo) included a woman," said Whitworth. "To be in the company of Sam and Gene was quite nice."

Kathy and I played as a team years ago on the West Coast. We played pretty well. She still plays well," Snead said, adding that working with old friends was a joy.

Snead, who 2-1/2 years ago joined architect Robert Muir Graves, was the only one of the three who had previous design experience. In fact, the 90-year-old Sarazen, who has played thousands of golf courses, had never seen one under construction.

But Griffiths, who designed the original Chateau Elan course, said working with this...
Past winners of the Ross Award

1992 — Paul Fallner, ASGCA Executive Secretary
1991 — Michael Bongirolli, Secretary, Royal and Ancient St. Andrews
1990 — John Zoller, Former Executive Director, Northern Golf, Golf Association
1989 — Dick Taylor, Editor, Golf World Magazine
1988 — Frank Hannigan, USGA, Executive Director
1987 — Charles Prato, Golf Digest Columnist, Author
1986 — Deane Beman, PGA Tour Commissioner
1985 — Peter Dabreskie, London Observer, Columnist, Author
1984 — Dinnick Sharp, Sponsor of Women's Golf Tournaments
1983 — Al Rust, Former Director, USGA Green Section
1982 — Geoffrey Cornish, Golf Course Architect, Historian
1981 — James Rhodes, Governor of Ohio
1980 — Gerald Micklem, Former Captain, Royal and Ancient
1979 — Joe Day, Former Executive Director of the USGA and PGA Tour Commissioner
1978 — Herb and Joe Quail, Founders, National Golf Foundation
1977 — Herbert Warren Wind, Golf Digest Columnist, Author
1976 — Robert Trent Jones, Founding Member of ASGCA

HNTB Corp. takes shape in K.C.

KANSAS CITY, Mo. — The architecture, engineering, and planning firm of Howard Needles Tammen & Bergendoff has announced the formation of HNTB Corp. All new business conducted by the firm will be handled by the corporate organization. Previously, the firm operated as a partnership.

Harvey K. Hammond Jr. was named chairman and chief executive officer of the new corporation. The president and chief administrative officer will be Robert S. Cona, and the executive vice president and chief operating officer will be Gordon H. Slaney Jr. Together they will make up the office of the chairman that will provide the strategic direction and decision making for the firm.

According to Hammond, HNTB has created the new organizational structure to better meet the needs of the A/E marketplace and to provide expanded growth opportunities for both the firm and its employees.

HNTB Corp. will comprise five regional divisions and one service division.
Eagle Glen: Born of grassroots ingenuity

FARWELL, Mich. — It was dream or bust for Larry Schofield. The small business owner could have sold 188 acres of rolling northern farmland to a motivated buyer and walked away richer. But he took a riskier path — to build his dream, a golf course. And now his is a dream come true — accomplished in a most unconventional way.

Although he knew nothing about building a golf course, Schofield decided to see if anyone else in the community was interested in the venture. "I talked to my wife, and asked her to give me two weeks to see if anyone else liked my idea," he said. "If I didn't get a response, we would sell it."

Joe Johnston, owner of the nearby Clare granary, responded to his friend's inquiry with, "What took you so long? Count me in." Schofield and Johnston discovered 16 others "who wanted to be a part of this," Johnston said. "Each of us committed up to $10,000 each, and started by chipping in $1,000 and see where it would go from there."

A feasibility study found that while Farwell was small in itself, it was surrounded by an excellent tourist base and other supportive communities. Two other courses nearby had an average of 36,000 and 30,000 rounds of golf per year. Several motels and hotels in the area marketed golf packages as well.

The group, deemed the Founders Club, decided to finance the building of the course through equity funding. To add revenue to the project, portions of the 188-acre parcel of land were reserved for residential lots.

The next step was selecting a golf course architect. The group interviewed five golf course designers and chose Jerry Matthews, of Matthews and Associates, P.C., Lansing, Mich.

"We selected Matthews & Associates because we got the feeling that the Matthews people would work with us," Schofield said. "Matthews understood what we were trying to accomplish, and that it could shut down at any moment. They worked out a game plan so we would have checkpoints for a no-go situation."

As plans for the site were being devised by the Matthews team, the Founders Club was busy selling stock. Instead of paying $30,000 for a prospectus, they created one themselves.

"Then, unfortunately," Schofield continued, "we began selling stock before we should have. We had to write to every stockholder, now numbering 176, and offer them their money back. Only two took us up on it, and that was only because they were unemployed."

"The DOC decided we could only sell shares in two ways — $1,000 or $10,000," said Tom Jared, Eagle Glen treasurer. "Their attitude was that a $1,000 share doesn’t hurt anyone, and for $10,000 people should know better. The large amount would buy you two lifetime memberships, and the $1,000 share would enable you to buy a membership to the golf course."

"We set a goal of selling 1,000 shares at $1,000 value. Our capitalization would then be $1 million plus if we could sell the lots. We budgeted $800,000 for the course construction. Always build on equity. Never borrow. Later on, though, our board agreed to go into debt for the clubhouse and maintenance equipment."

"Our original plan was to build nine holes, then build the second nine from revenues," said Schofield. "But, we listened to the experts who said, 'No, if you only build nine holes, the public will always think of it as a nine-hole course.' Matthews recommended we consider an 18-hole course and forgo the clubhouse for now. Thankfully, we ended up with not

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All of which gives you a big edge on turf disease. And possibly, some much needed rest.

Continued on page 61
Golfplan busy in Malaysia

KUCHING, Sarawak, Malaysia — The Golfplan-Ronald Freaim Design Group has completed conceptual planning and design studies for a 27-hole residential country club course being developed at Kuching, Sarawak, East Malaysia. Sarawak is on the tropical island of Borneo.

Playing lengths vary from around 3,300 yards to 2,500 yards for each of the par-36 nines. Golf is a new activity to Kuching, Sarawak, East Malaysia. Bermudagrass turf will be used throughout. The original site was a military storage area not far from the center of Sarawak, and a heavy use by beginners is anticipated.

Coordinated planning introduces 450 homesites into the golf courses. About 3,500 oil palms, monkey pod, flamboyan and other tropical trees are to be planted to create a lush tropical garden around the golf holes. Construction will begin after the end of the construction work. The Jack Nicklaus Academy of Golf in the Philippines, the Jack Nicklaus Golf Center, the first ever in Japan, has opened in Tsukuba through an exclusive agreement between GBI and Mitsubishi Corp., and Suntory Limited for the country. In Manila, the first Jack Nicklaus Academy of Golf opened under an exclusive agreement between Golden Bear and American Golf Centers, a subsidiary of AIA and American International Group, the New York-based insurance conglomerate and the Fil-Estate Group.

GBI opens Asia practice facilities

NORTH PALM BEACH, Fla. — Golden Bar International has announced the opening of two multi-million dollar teaching and practice facilities in Asia, the Jack Nicklaus Golf Center in Japan and the Jack Nicklaus Academy of Golf in the Philippines. The Jack Nicklaus Golf Center, the first ever in Japan, has opened in Tsukuba through an exclusive agreement between GBI and Mitsubishi Corp., and Suntory Limited for the country. In Manila, the first Jack Nicklaus Academy of Golf opened under an exclusive agreement between Golden Bear and American Golf Centers, a subsidiary of AIA and American International Group, the New York-based insurance conglomerate and the Fil-Estate Group.

Japanese debut for Graham/Panks

HAKODATE, Japan — David Graham and Gary Panks will design the new Hakodate Nikkatsu Golf Club in Hakodate, Japan.

"We have been searching for the right opportunity to make our appearance in the Japanese golf market, and now we've found it," Graham said. "The Hakodate Nikkatsu Golf Club is a great project."

The private golf club is being built by the Japanese conglomerate Nikkatsu Corp. The course is located in the historical port city of Hakodate on the southern coast of Hokkaido, Japan's northern-most island.

Construction crews are slated to break ground on the project in September clearing the land and creating the infrastructure of the golf course. Graham and Panks have begun the design work, and shaping will begin in May 1993, with an opening date set for the spring of 1995.

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   The Ransomes 350D can. It offers 15.5 mph transport, while the Toro 450-D lags behind at 12.5 mph.

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Showlow, Ariz. - Concho Valley Country Club is preparing for the opening of its new nine holes this spring.

The expansion project began in 1991 with the planning and acquisition of land enabling the nine-hole course to fulfill its master plan of 18 championship holes.

Originally built in 1971, Concho Valley was designed by golf course architect Arthur Jack Snyder in a valley area adjacent to the natural springfed Concho Lake. "From the beginning, we planned 18 holes within a unique way of phasing," Snyder said.

"To facilitate the eventual addition, five holes were worked out from the clubhouse and four designed coming in toward it. These are now the beginning and finishing holes."

In keeping with traditional golf layouts, the new par-72 Concho Valley course plays out nine holes and then back to the clubhouse for a total back yardage of 6,856 yards.

The new nine, holes 6 to 14, wind through Alligator and Utah junipers, rolling hills and a dry lake area where fairways 10 and 11 provide strategic doglegs in an almost Scottish links setting of hillocks and bogs.

Concho Valley is a residential project of Lake Investment Co.

New nine at Concho Valley nearly ready

Rees Jones' Olde Florida takes shape

Naples, Fla. - Work is progressing on construction of Olde Florida Golf Club as excavators and golf course shapers mold the Rees Jones design. The 18-hole course is taking shape on 120 acres located on 550 lush acres of tropical vegetation, including a 127-acre wildlife preserve and 30 acres of lakes.

Lynn Josephson, director of golf and one of the club's original founders, said the new and challenging 72-par golf course "is being built for golfers of all ages who enjoy the traditional and purist golfing experience."

Olde Florida will schedule no tee times and membership will be capped at 275 to avoid course congestion.

Over the past month, workers from Wadsworth Golf Construction Co., and the Phillips and Jordan Co., have been dredging six lakes and contouring the golf course under the direction of architect Jones.

Hills adding to Morgan River in S.C.

Beaufort, S.C. - Construction has begun on the second nine holes of the Morgan River course at Dataw Island.

The course was designed by Arthur Hills and is scheduled to be completed in the fall.

The front nine of the Morgan River course was opened two years ago and construction of the second nine is one year ahead of schedule, according to Dataw Island President William Cochrane.

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Continued from previous page

"I selected four great holes," Sarazen said. "Three come from Augusta National. The fourth is the postage-stamp hole (North Berwick's 13th, Redan hole)... Chateau Elan has the same terrain as Augusta National. Pine trees. Rolling land. And they all fit into that land very well."

Saying "I don't profess to be an architect at all," Whitworth shared her favorites and "gave my stamp of approval" when the course was complete.

"A lot of the holes Gene and Sam picked were certainly ones I would like the opportunity to play again," she said. "We generally agree that a lot of the holes we selected or liked were not necessarily hard holes, but there was something unique we liked about them... Maybe they were a driving hole or a precision hole. A finesse type hole, or the par-5 at Augusta's 13th where you have the chance to go for it in two if you have a nice drive. The challenge was there and the rewards good if you had a really good drive. So it was a fun hole to play." "What I like about a hole is, if it is up to me to decide how I want to play it. I'd rather it be my decision than the golf course architect's," she said. "The penalty is so severe on some of the courses today that it's not a lot of fun."

Snead sees every new course design as an opportunity to help the average "poor shooter."

"The guy who pays the freight [plays the courses every day] can't play these hard courses that have been built the last few years," Snead said. "The deep traps and gullies, the 175-yard carries over canyons scare him to death."

Sarazen's favorite of all was the Redan — a middle-iron par 3 with a long green that falls off sharply to the left.

"It's one of very few Redan holes," Sarazen said. The original Redan was "much more tragic" than the one designed by Charles Blair Macdonald at the National Golf Links in Southampton, Long Island, and Sarazen set out to design a hole "that you could play. It doesn't have the steep slant on the green. You don't need a trap on the right because it's already so difficult."

"Would they do it again?"

"Yes, it would be fun," said Whitworth. "It was fun to see it come from the rough edges."

"No," said Sarazen. "I'm not interested in a new career."

But Griffiths told about ground breaking day when "we were in the middle of the property and Gene was walking up to the photo spot. He turned and said: 'Don, I don't need to be here today. There's nothing to build.'"

For those closely involved in the project, an encore sounds terrific. Bishop, whom Sarazen said is "one of the finest pros I've ever met, said 'It's been a thrill.'"

The Carmel Valley Ranch in Carmel, Calif. is a good example of 'enviro-golf.'

Hills: 'Enviro-golf' is here to stay

"A decade ago there were occasional sites that required sensitive environmental treatment, while today every potential golf course site must have a series of environmental impact studies, explains Art Hills, president of the American Society of Golf Course Architects.

Hills acknowledges the impact environmentalists had in alerting the golf industry that many sites required special treatment, and accommodation should be made for birds, fish and other wildlife. Ronald G. Dodson, president of the Audubon Society of New York, says that from his perspective, America's 14,000 golf courses provide the equivalent of nearly 1,500 square miles open space.

"We've had to accommodate butterflies and owls in California... gila monsters in Arizona and salamanders in Massachusetts," said Hills, who noted that the industry now has the capability to regularly engineer, design and construct complex solutions to the most difficult ecological problems. "And that technical ability will multiply year by year."

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Casper to handle Landmark assessments

VIENNA, Va. — Billy Caper Golf Management, Inc. announced it has been awarded a contract to analyze and determine the market value of 24 golf courses in five states on behalf of the Resolution Trust Corp. The golf facilities are part of a $1.7 billion real-estate portfolio formerly owned by Landmark Land Companies which filed for reorganization under Chapter 11 in October 1991.

“The size of the portfolio and the caliber of the facilities makes this an especially challenging assignment,” said William Ochsenhirt III, vice president of operations for BCGM. “Our goal is to learn everything we can about the past, present and future of these facilities in order to establish their true market value and determine how best to package the assets for sale early this year.”

Military course legislation reintroduced

By HAL PHILLIPS

WASHINGTON, D.C. — Contrary to rumors floating around the show floor in Anaheim, federal legislation that would begin the privatization process at military golf courses is not dead.

After submitting a similar bill in June of 1992, then withdrawing it, Sen. Dennis DeConcini (D-Ariz.) resubmitted the privatization bill to his colleagues on Jan. 27, 1993. Unlike the 1992 version, which was attached to an appropriations measure, the 1993 bill stands alone.

Don’t expect this legislation to languish on the Senate floor, either. The Pentagon is considering privatization legislation this session and the Senate Appropriations Committee under Democratic leadership will consider it as well.

Meanwhile, DeConcini has made it clear he believes the military should not be in the business of running golf courses. Management companies, including American Golf Corp., are hoping for the chance to manage the 10,000 military facilities.

Mike Ambrose of the Army’s Community and Family Support Center, which manages about 300 courses, has been looking into privatizing all of them.

Advice for course owners on conforming with ADA

By PETER BLAIS

ANAHEIM, Calif. — Common sense should guide design considerations on and around the golf course in complying with the Americans with Disabilities Act (ADA), according to Gregory Jones, executive director of the Association of Disabled American Golfers.

“What accessibility means isn’t clear because the law wasn’t written with the golf industry in mind,” Jones said during the 64th International Conference and Show. “Court cases will decide what is reasonable and unreasonable.”

In the meantime, and in order to stay out of court, Jones offered a few suggestions course owners could implement to improve accessibility.

• Reserve one or two handicapped parking spaces near the bag drop rather than bunching them all next to the clubhouse.

Because it’s a new law, gray areas still abound

By KIT BRADSHAW

ORLANDO — Golf course owners who make a good faith effort to comply with the provisions of the Americans With Disabilities Act (ADA), which went into effect Jan. 26, 1992, may still find themselves in a labyrinth of conflicting rules.

Leslie King O’Neal, an attorney with McDonough, O’Neal and O’Dell in Orlando, told members of the National Golf Course Owners Association at its 1993 Conference here that the civil rights law was “very broad and in its infancy.” In some cases, the accessibility provisions of the law would conflict with local building codes. Other parts of the law are subject to different interpretations. Because the law is so young, there have not been many test cases filed to help clarify the fine points of this statute.

The purpose of the ADA is to protect the

Continued on page 50
**N.H. greens fee tax goes down to defeat**

BY PETER BLAIS

CONCORD, N.H. — The state legislature resoundingly defeated a bill that would have levied a 5 percent tax on greens fees to raise money for education. Rep. John O'Brien, D-Stratham, introduced the bill, arguing that golf was a "bourgeois" sport and that golfers could easily afford the extra levy to finance education in the cash-strapped state.

The golf industry countered that singling it out was unfair and that the plan to collect fees was not manageable.

The House Ways and Means Committee voted 17-0 in late January that House Bill 431 was "inexpedient," meaning it was not worth considering by the full legislature, according to House of Representatives Information Officer Jim Van Dongen.

The House shot down an amended version 296-41 on Feb. 10, Van Dongen added.

"It had been introduced as a broad-based tax on all recreation, it might have had a chance, although I don't think it would go," said Robert Elliott, secretary/treasurer of the New Hampshire Golf Association.

"If there was anything good in it, the Ways and Means Committee would have forwarded it to a subcommittee for further review.

But they didn't even do that," O'Brien said, 72, an avid golfer, claimed many New Hampshire courses receive easements freeing them from local property taxes, a break other recreation-based businesses don't get.

"This tax might have put me out of business. With the economy as bad as it is, I haven't raised fees the last three years, I finally had to this year. If you'd added another 5 percent tax on top of that, people might have decided they couldn't afford golf anymore and I'd be out of business. Who would that help?"

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**Casper & the RTC**

Continued from page 49

market discount rates; preparing 10-year cash-flow projections for each facility; analyzing existing financial operations; evaluating membership programs and course conditions; assessing overall club operations; and doing comparative analyses, of other golf facilities in each market.

In October 1991, the Landmark Land Companies filed for reorganization under Chapter 11. This was precipitated by the RTC placing Oaktree Federal Savings Bank under conservatorship. The company is wholly owned subsidiaries of Clock Tower Place Investments Ltd. which, in turn, is a wholly owned subsidiary of Oaktree FSB. The subsidiary assets will be marketed for sale by the RTC in conjunction with the Bankruptcy Court Subsidary Boards.

**Military courses**

Continued from page 49

operates the Army's 84 golf courses, said the players on both sides of the issue are eager to see the issue resolved quickly, one way or another.

Security is the major sticking point with military officials. If opened to the public and operated by civilian management firms, security could be compromised, they argue. Officials also claim their courses are already saturated with players.

DeConcini's office, on the other hand, believes private companies could surpass the $20 million in profits reported by military courses in 1991.

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Burden on employers

Continued from page 49

disabled from discrimination in employment and accessibility.

"As an employer," O'Neal said, "the law forbids you from refusing to hire a qualified person—a person who with or without reasonable accommodations would qualify for the position—because they are disabled. And, the law requires that you provide these reasonable accommodations, modifications in the work environment, that would enable the person to do the job."

O'Neal added that employers didn't have to undergo "undue hardship" to provide these accommodations, but the decision as to whether the employer had met with undue hardship would be decided on a case-by-case basis.

The law defines anyone who has a substantially limiting impairment as being disabled. "This means that the law goes beyond what many consider to be the disabled," she continued. "We think of disabled as those who are blind, deaf, in a wheelchair or mentally retarded.

But what about the emphysema patient or those with AIDS, or someone who is severely disfigured or a person who has cancer in remission? And, the law extends to those who have a relationship with a disabled person, a mother of a retarded child, for instance. She cannot be refused employment because the employer believes she will take off additional time to care for this child."

The law does not cover someone with a temporary disability—a broken leg, for instance—but it does include a person now on drugs, and it doesn't eliminate the employer's use of drug testing prior or during employment.

"Once hired," O'Neal said, "the employer needs to provide any reasonable accommodation for the disabled. The easiest way to find out what a reasonable accommodation would be to ask the person who needs it. It may be ramps to get to the office area, or a Braille typewriter, or a grab bar in the bathroom.

Employers need to have detailed job descriptions for all positions, and have them in place prior to advertising for the job.

Tips from Jones

Continued from page 49

Disabled golfers are as likely to bypass the clubhouse and go directly to the course as any golfer. Asking them to cross back over the entire parking lot to their bags is unreasonable.

Let the disabled take golf carts anywhere, except the green. Even courses restricting carts to the pathways will suffer little if any damage from occasional cart traffic. It is the repeated compaction caused by many carts that results in turf damage.

• Cut out spots on raised curbs so carts can pass through. Build ramps up to tees where possible.

• Provide a spot for handicapped golfers to get in and out of a bunker. Try to keep bunker grades to no more than 1 foot of elevation for every 5 feet of length.

• Install a Telecommunication Device for the Deaf (TDD) in the reservation office so the hearing impaired can make tee time reservations by phone.

"The most important things are to use common sense and let customer service prevail," Jones said. "The most important words employers can say are 'Can I help you?' That allows the golfer with a disability to communicate his needs."

While ADA may seem to present problems for course owners, it also presents many possibilities.

"There's a tremendous marketing opportunity here to reach an emerging population that has had good and bad things happen to them in other recreational activities. They are just waiting to spend money at your courses," Jones said.

"Replace the word disabled with the word senior and you can see how many of these changes would help attract more older players who would continue to play at your courses."

"This is also a selfish reason to make these changes.

"Anything you do to make your course more accessible now will help you in the long run. Twenty years from now, many of the people in this room will have had strokes, cancer or some illness that will leave them with a disability. You'll be glad your course is more accessible then."

GOLF COURSE NEWS

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CIRCLE #145
Club Managers undergo shake-up
ALEXANDRIA, Va. — The Club Managers Association of America (CMAA) has undergone organizational changes as a result of a recent strategic planning process. Those changes will include the separation of CMAA departments into two primary divisions which will both be managed by vice presidents. One division, to be headed by Dr. Bob Hassmiller, will oversee chapter services, education and certification. Vice President Kathi Pernell Driggs will oversee the other—a new club services department, legislative and regulatory resources, executive career services, communications and marketing functions as well as allied association relations. Hassmiller will return to CMAA after a brief leave of absence from his director of education position. He managed the development and introduction of the association’s Business Management Institute program. Driggs has served as CMAA’s director of public affairs for the past six years.

CMAA taps Sweeney
ALEXANDRIA, Va. — Les Sweeney has been appointed director of membership/chapter services of the Club Managers Association of America (CMAA). He replaces Steve Swafford. As Director, Sweeney will administer CMAA’s membership and chapter programs as well as student development. Sweeney had been CMAA’s manager of professional development.

Medical liabilities for course owners
Continued from page 1
themselves clinical ecologists — and who have become spokespeople for this syndrome — are regular physicians who have created this specialty, a specialty which is not recognized by any medical regulatory program.

"I see that the biggest problem for golf course owners isn't going to be from the general public, but from their employees," said Tallahassee toxicologist Dr. Bob Budinsky. "The employees who handle pesticides and herbicides could claim chemical exposure because of poor workplace practices. And even if this employee doesn't become a patient of a clinical ecologist or even claim that they have the syndrome, they may claim that chemical exposure caused them illnesses under Workmen's Compensation.

"Golf course owners, who use pesticides and herbicides to maintain the course are susceptible to litigation. This is a real serious problem."

Budinsky said in an interview that, "This is an evolving area of medicine right now. Is the syndrome real? Is it not real? We don't know. As far as the clinical ecologists are concerned, we know they are physicians, usually immunologists or allergists, but their type of medicine and their treatment program is highly questionable."

He noted the treatment could include "neutralization" techniques, whereby the patient is given a small dosage of the allergen. When a patient has been exposed to a chemical, there are guidelines to determine whether or not the problem is chemically induced. However, he added, "clinical ecologists don't have these guidelines."

"Right now," Budinsky continued, "We don't see any lawsuits involving golf courses. It is more likely that the people who claim to have the syndrome would be targeting a building, claiming the 'sick building' syndrome is causing their problem.

"To the extent possible," he said, "the owner should encourage the employee who is complaining about a possible chemical exposure problem to go to an independent doctor who treats thousands of patients, rather than going to one of these clinical ecologists."

Employers — ADA
Continued from page 31
people who are trying to get into your facility. It also means that the disabled cannot be placed in one area and those who are not disabled in another," she continued. "Your dining facility, for instance, must be accessible to everyone.

"Some of the areas that may be covered would be ramping for wheelchairs, Braille markings on elevators, widening doorways, having lower shelves for merchandising and providing grab bars in the restrooms."

The law not only covers modifications to existing buildings, but remodelings and the construction of new buildings. There is help for golf course owners who need more information, O'Neal said. West Virginia University has a "Job Accommodation Network" at 1-800-526-7254. The Building Owners and Management Association in Washington, D.C. has an ADA checklist and the Department of Justice also has ADA information. In Atlanta, there is the Southeast Disability and Business Technical Assistance Center, which has several helpful booklets. They can be obtained by calling 1-800-494-ADA.
BRIEFS

HIGH TECH TOOLS AREN'T COMING — THEY'RE HERE

By Hal Phillips

SALT LAKE CITY — WeatherWare 5.0 isn’t rain gear. It’s an on-line personal computer weather display program from Salt Lake City—based WeatherVector Corp., and another example of how the golf industry has been affected by high tech innovation.

Through the company’s WeatherBank data feed, WeatherWare provides coverage of meteorological activity as well as graphic capabilities that display weather occurrences on TV broadcast quality maps — international, national, regional and state.

WeatherWare 5.0 can generate this type of map on any IBM compatible computer.

Individual weather forecasts a reality

By Hal Phillips

WeatherWare sells for about $300 and runs on any IBM compatible PC. It requires a Hayes compatible modem, hard disk and EGA or VGA color graphic monitor and card. Connection to the WeatherBank data feed is made with a 300-9600 baud modem via two networks which can handle calls from anywhere in North America, 24 hours a day, 365 days a year.

If that last paragraph left you fumbling through your computer dictionary, you’re not alone. Many superintendents are just becoming familiar with their computer’s potential.

Continued on page 56

Physicists with straight lines or standard parts. Still, the canvas is literally as big as the all outdoors, and the infinitely variable landscape seldom deals with straight lines or standard parts. Still, in this age of information, it is inevitable that the computer will play an ever-increasing role in the architect’s job.

There are currently two areas of focus that should interest the golf course architect. Geographic Information Systems (GIS) are computer solutions targeted at the site planning professional who needs an understanding of the landscape within which a project will be designed. Site identification, watershed and ecosystem analysis, or on-shoe work are tasks where GIS is of service.

Computer Aided Design and Drafting (CADD) tools are for the architect who needs more accuracy and efficiency in landscape design and drafting, cost estimation, and many other areas. The line between GIS and CADD is blurring, though, as vendors provide seamless ability to move from GIS-oriented aspects of a project to more specific course design and engineering with CADD.

Ciba-Geigy and Rain Bird honor industry’s Environmental Stewards

ANAHEIM, Calif. — Ciba-Geigy and Rain Bird have announced the winners of the first annual Environmental Steward Awards. The companies also announced a donation of more that $12,000 to Golf Course Superintendents Association of America Scholarship & Research.

The award program was created to recognize golf course superintendents and golf courses for their work to protect or enhance their local environment. Entries were reviewed by an independent panel of judges selected for their expertise in environmental issues, turfgrass management and other areas.

Awards were given in three categories: public, private and resort golf courses. One national winner was selected in each category:

• Don Tolson, CGCS, Fox Hollow at Lakewood (public/ Lakewood, Colo.);}

Continued on page 58

March 1993 53
Irrometer Co., Inc. of Riverside, Calif., has named Hydro-Scape Products, Inc. its exclusive distributor for the Watermark Soil Moisture Control System in Southern California.

Hydro-Scape Products operates 12 branch locations throughout Southern California, and serves landscape contracting, irrigation specification and the institutional landscape industry trades throughout this geographic area. Irrometer recently introduced the newest generation of its patented Watermark Soil Moisture Control System. According to Mark Williams, national sales manager of Irrometer, "With the alliance between our company and the professionals at Hydro-Scape, we have positioned ourselves to provide the highest level of service to irrigation professionals in Southern California interested in using modern technology to manage irrigation precisely."

For more information, contact any branch of Hydro-Scape Products, or the Irrometer Co., Inc. at 909-689-1701.

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perennial ryegrass varieties with... this is why TMI developed
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varieties. But more important,
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THE BEST EXAMPLE
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Why, because golf courses around the world are choosing TMI varieties for their most challenging turf grass needs.

TMI offers the turf professional a complete selection of turf grass varieties. But more important, TMI offers varieties that have been developed specifically for the golf course market.

OVERSEEDING

Many grass seed companies have top rated varieties that perform well in overall turf quality. But when spring transition time comes they just keep on growing. Our customers wanted varieties that offered a smooth spring transition...this is why TMI developed perennial ryegrass varieties with less heat tolerance, and of unusually high quality, especially for Southern overseeding.

That's not all, Turf Merchants also offers the turf professional overseeding choices other than perennial ryegrass. If you are looking for a POA TRIVIALIS, TMI has one of the darkest green varieties available - CYPRESS. And, if you want an alternative to overseeding annual ryegrass in areas where the ultimate in quality is not the issue, TMI has a new intermediate ryegrass variety that offers improved performance over annual ryegrass, but costs less than perennial ryegrass.

PERMANENT TURF

From top rated Ryegrasses, Tall Fescues and Bluegrasses to seeded Zoysia and seeded Bermuda-grasses, TMI has a grass seed variety to fit your application. TMI has endophyte enhanced varieties, low growing, fine textured, dark green, drought resistant varieties; all with improved resistance to turf diseases. TMI was first to introduce a true dwarf turf type tall fescue - BONSAL. This unique turf grass has a shorter stature and finer leaves than other turf type tall fescues, while maintaining the drought tolerance of the species. Why does TMI offer so many alternatives? Because over the years we have listened to what our customers wanted. Turf Merchants has made every effort to provide the kind of grass seed varieties, services and marketing aids that help golf course superintendents be the best turf professionals!

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New Dimension label approved by EPA

ST. LOUIS, Mo. — Monsanto Co. has obtained approval from the Environmental Protection Agency (EPA) for an updated label for Dimension turf herbicide, which extends the revisions further define and expand application procedure information and precautions.

"Ninety-eight percent of customers who responded to our survey were satisfied with Dimension, but we want 100 percent satisfaction," explained Jim DeMatteo, Dithiopyr product director for Monsanto's New Products Division. "It is clear that more detailed use instructions, particularly on greens under stressed conditions, may help increase product satisfaction among users."

The updated label includes recommendations that Dimension not be applied to golf greens that are stressed from factors such as temperature extremes, lack of moisture, improper fertilization, soil pH imbalance, use of other chemicals, insects, disease, or mechanical operations. Best results are obtained when Dimension is applied to turf that has a well-developed rooting system using conventional liquid application equipment with flat-fan nozzles.

Dimension herbicide can be applied to 'Cobra', 'Emerald', 'National', 'Pennlinks', 'Penncross', 'Pennytrio', 'Providence', 'Putter', 'SR-1020', and 'Southshore' varieties of creeping bentgrass under favorable environmental conditions. However, the new label includes a warning for application to older varieties of creeping bentgrass such as 'Carmen', 'Cohaseney', and 'Sessile', colo-nial and browntop bentgrasses, and 'Tifgreen' or 328 hybrid Bermuda grass due to potential for turfgrass injury.

Dimension is a preemergence and early postemergence herbicide designed to control crabgrass, along with a variety of annual grasses and broadleaf weeds. Dimension® is a registered trademark of Monsanto Company.

Lofts expands golf course service division

BOUNDS BROOK, N.J. — Five years ago, Lofts Seed Inc. established a company division using Lofts employees whose expertise in golf course agronomics would allow developers, architects and superintendents to tap years of combined experience in the market. Lofts' Golf Course Service and Support Division is now expanding. It will still be directed by Dr. Richard Hurley, Lofts director of research, assisted by John DeMatteo, turfgrass agronomist.

However, John Farrell and Kevin Driscoll, both of whom have served in sales capacities with Lofts for seven and eight years respectively, will now join this division to offer expanded services and support to this market. They will continue to service their sales territories but will extend their efforts to cover the golf course construction market.

"We've had a great demand for our Guide to Turfgrass Selection for Golf Course Professionals," Hurley said, "and have met with much success in working with golf course developers, architects, contractors and superintendents.

"We saw the need to expand this separate division within our company. It's a growing market and we feel our position in the marketplace allows us to provide service unlike any available from other seed companies. We can offer guidance in the selection of turfgrass varieties, help in the establishment procedures and follow through with developing a maintenance program with the superintendent."

For more information on this free service, call DeMatteo at 908-560-1590.

Lofts expands golf course service division

"Regal Crown Enhanced Roots Endure Dry Weather Better"

Randy Staton, CGCS, Superintendent at Hillcrest Country Club in Indianapolis, has been using Regal Crown for several years. Be it tees, fairways, or greens, Randy has seen Regal Crown give him healthier and more stress tolerant turf. Working with Links Group consultant Steve Frazier, CGCS, they discuss their ideas and successes on fine turf maintenance and the use of Regal Crown. The results have been there through the years, so Regal Crown is a part of Randy's program and Steve's recommendations, when it comes to a root growth stimulator.

Both men agree the larger and deeper root system with increased root mass from Regal Crown played a vital role in their being able to withstand the drought of 1988 with minimal water management.

REGAL CHEMICAL COMPANY
Home of RegalStar™ now labeled for use on Bentgrass

"Regal Star Enhanced Roots Endure Dry Weather Better"

Randy Staton, CGCS (left) and Steve Frazier, CGCS of the Links Group studying the results of Regal Crown.
Design software

Continued from page 53

Continued from page 53

The first step in utilizing GIS (and it is no small step) is to create a map, explained Ken Kinsey of Data Chromatics Inc., a land-planning firm based in Columbia, Md. Data is collected from as many sources as possible, including field crew survey, aerial photogrammetry (digital data describing the three-dimensional surface below), and existing governmental topographical and survey maps. This data is assembled into the base map, and then additional data is added such as soil and vegetation types, locations of wetlands, or rock outcroppings.

Once the information is collected, the planner can analyze the model and a go/no-go decision can be made, or more detailed analysis can be performed, said Kinsey. The site planner can use the computational power and graphics ability of the computer to manipulate the data. For example, he or she can adjust the contour lines to follow the proposed plan (interactive terrain manipulation). Kinsey said the computer can quickly perform the otherwise time-consuming earth movement calculations. This allows the designer to experiment with many different what-if scenarios, all with the goal of minimizing the costly movement of dirt.

In addition to being able to see the cut-and-fill areas on the screen, a designer can use the computer for other engineering calculations. For example, identifying areas of poor drainage by having the software color areas of low grade is a common feature. One recent development is the ability to compute herbicide/pesticide runoff based on the slope and soil/vegetation combination, said Kinsey.

WeatherWare

Continued from page 53

Continued on next page

computerized course and office operations. Is this stuff over their heads?

"I really don't think it is," explained Christopher Frame, national sales manager at WeatherVector. "It's pretty user-friendly. It's DOS-based and takes about five minutes to install. The software is set up so you just pick the weather items you want, and we have manuals to support everything.

"And they have any problems, they can just call us.

Indeed, WeatherVector's customer service department is available Monday through Friday, 8 a.m. to 5:30 p.m., Mountain Time. WeatherVector got its start in the weather information business by providing satellite pictures and data to media outlets.

"Now we're used pretty extensively in the agricultural industry, and we haven't really pursued the green industry until now," said Frame. "But we think it's perfectly applicable."

Frame is targeting the computer-literate superintendent with a need for up-to-the-minute weather bulletins. Version 5.0 includes high-resolution state radar displays which are updated every 30 minutes. This updated version of WeatherWare also includes national real-time lightning strike displays, advanced hurricane tracking, color satellite pictures, NTSC video output, IsoGraphic upper air charts and overlays of highways, rivers and streams, county lines, etc. Custom maps are available.

"Most people will download the information in the morning and use it throughout the day," said Frame. "For example, if they know it's going to rain, then obviously they won't both with some types of irrigation. The same goes for chemical application.

"We see it as a cost-saving tool. It's designed to help superintendents better justify what he uses and how he uses it, which ultimately affects his bottom line."

"Most people rely on weather reports they hear on TV or radio, and the word tells it all: broadcast. It is very broad, very general. WeatherWare is very specific."

Computer-aided drafting has many benefits for the landscape architect. The accuracy of drawings created with CAD tools help to avoid on-site construction errors and the increased quality control/speed in making revisions are big advantages, according to Daryl Byrd with the Boston-based landscape architecture firm of Morgan, Wheelock.

Creating centralized, up-to-date information is an important factor. Some small landscape architecture firms have seen a 35 percent increase in revenues, said Byrd, due mostly to the ability to generate work faster.

Byrd said a plant database can help the designer choose the most appropriate shrub, based on many different factors such as water requirements and mature height. A library of plant symbols can be accessed easily, eliminating repetitive work and reducing engineering time. Plant growth can be simulated, adding the fourth dimension of time to the 2-D or 3-D world of the landscape architect's drawings. One of the most time-saving benefits in using GIS and CADD tools is the ability to easily generate

Like everything else, good greens play comes only to those most dedicated.
Insect Seduction

Parkway Research has introduced Seduction Insect Feeding Stimulant for turfgrass, a blend of flavorings and attractants specifically designed to improve the performance of water-based or emulsifiable insecticides. Seduction will form a flexible, tacky film on plant foliage to improve adherence, while the flavoring and attracting components improve acceptance and take up by target insects. For more info, call 1-800-256-3668; or write to P.O. Box 5441 Kingwood, Texas 77325.

Ball washer, water fountain in one

To provide refreshment for golfers and to ensure that their golf balls remain clean during a round of golf, UK manufacturers of drinking water coolers and fountains, Maestro Water Coolers, have introduced the new Golfstream, a drinking fountain and golf ball washer in one. Designed to be fitted in golf tee areas, the Golfstream is a drinking fountain which has the bonus of a golf ball washing facility as an integral part of the unit.

Some golfers think that golf course superintendents have made it easy, if they only knew.

They'd be shocked to learn the demands and complexities of your profession. And amazed, for example, at how much hard work and long hours it takes to create superb greens with mowers set within a thousandth of an inch.

Toro knows. Our Greensmaster® 1000 and 3000 greens mowers were born of your dedication to keeping those greens superb.

It's another example of how we've worked as partners with three generations of golf course superintendents. To provide you with the precision engineered tools you need to create exceptional playability and beauty.

Because we share your dedication.

Separate container injection from Toro

MINNEAPOLIS — The Toro Company has introduced the Injector Pro, an advanced chemical injection application system which will be available for summer 1993. The Injector Pro is designed to separate the chemical(s) and water until the moment before the mixture is injected into the spray booms. As a result, the problems associated with over- or under-mixing materials are eliminated and operators can enjoy on-the-go flexibility by choosing products and their application rates while in the field.

The separate container system eliminates the time-consuming post-operation cleanup, and the needless exposure to rinsate and its disposal. In addition, Toro has introduced a new cab which encloses the upper half of the operator and circulates clean filtered air toward him or her. For more information, call 612-887-7949; or write Toro at 8111 Lyndale Ave. South, Minneapolis, Minn. 55420.

Teejet designed to alleviate spray drift

WHEATON, Ill. — In response to heightened concerns about drift potential, Spraying Systems Co. has announced a new Drift Guard Teejet flat spray tip to reduce drift at standard pressures of 30 to 60 P.S.I. while maintaining nozzle pattern uniformity.

DG Teejet tips are available in 80-degree and 110-degree spray angles and sizes from 0.13 gallons per minute to 0.49 gallons per minute at perforated pressures of 30 to 60 psi. All DG Teejet tips fit the self-aligning Quick Teejet nozzle body system for quick, no-tool nozzle changes and feature the VisiFlo color coding system for quick, easy identification of flow rates.

For more information call 708-665-5000; or write Spraying Systems Co., Agricultural Division, P.O. Box 7900, Wheaton, Ill. 60189-7900.

Design software

Continued from previous page

Software is also sensitive to the business needs of a landscape architect, from estimating the project cost to producing a list of required items.

As the visual impact of projects become more important for clients and public decision makers, the powerful visualization features of CADD can help. The more sophisticated tools can render 3-D views from any vantage point, with shading and texture effects, including animated drive-through or helicopter views.

It must be cautioned that there is a downside to all this computer generated work. It is possible to create impressive and technically correct drawings without giving proper consideration to other important aspects of the project. Computers are tools, not artificial intellects. They should only be used as an extension of the designer's good aesthetic sense and experienced technical judgment.

Helping You Put Quality Into Play.™
Continued from page 53

Fungicides. We’ve done our homework. What are we afraid of?” asked Fister. “What we do now is very inefficient. We go from one state to the next and each has its own way of doing things. States are asking, “What are the guidelines?” No one knows, so they make their own.

“We don’t think posting is necessary from a health standpoint, but that’s not real in today’s world. We could spread millions and never win that war. But if we came to everyone with a national standard, people would get on board.”

Not everyone in the chemical industry agrees with Fister — not even close. The Professional Lawn Care Association of America is the only green industry association to endorse nationwide P&N standards, including similar measures for homeowners.

In short, many in the chemical industry feel posting and notification delivers the wrong message and fuels the fire of environmental activism.

“Our basic position is, there is no scientific reason for posting and notification,” said Allen James, RISE executive director. “The call for it is purely an emotional response. RISE continually evaluates the posting and notification standards across the country to assess whether our position is valid. And we believe it is. There is simply no sound scientific basis for posting and notification standards.”

Ed Langley, government relations manager for DowElanco and chairman of the RISE Government Issues Committee, believes it is too late to pursue a national standard.

“The window of opportunity has passed because 23 states have already implemented different versions of one,” Langley explained. “Some folks believe that applying a national posting and notification law would provide uniformity, but that would assume that those 23 states would go back to the federal statute. I don’t think that would happen.”

“Typically, a federal statute provides the floor. The minimum. State can certainly go beyond that minimum, and I expect they would. In essence, a national standard would open the law for additional regulations.”

Fister sees industry support for a national standard as more than a regulation issue. It’s public relations, he said.

“I really think we have to take a proactive position,” said Fister. “It’s going to happen anyway. I don’t think it will damage the integrity of our industry. It will help us. We may as well guide the market, instead of letting the legislators do it.”

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**P&N standards?**

Continued from page 1

**Super Stewards**

- Bruce Cadenelli, Caves Valley Golf Club (private/Owings Mills, Md.);
- Tim Long, Barton Creek Resort (resort/Austin, Texas);
- Harold Wade, Jr., Cherry Valley Club (private/Nebraska region/Garden City, Ne.);
- Thomas Schlick, Marriott’s Golf Club at Watch Lake (resort/Northwest region/Hauppauge, N.Y.);
- Richard Boehm, Wright Patterson AFB Golf Club (private/Mid-Atlantic region/Wright Patterson Air Force Base, Ohio);

Eleven regional winners were selected this year:

- Harold Wade, Jr., Cherry Valley Club (private/Nebraska region/Garden City, Ne.);
- Thomas Schlick, Marriott’s Golf Club at Watch Lake (resort/Northwest region/Hauppauge, N.Y.);
- Richard Boehm, Wright Patterson AFB Golf Club (private/Mid-Atlantic region/Wright Patterson Air Force Base, Ohio);
- Bruce Cadenelli, Caves Valley Golf Club (private/Owings Mills, Md.);
- Tim Long, Barton Creek Resort (resort/Austin, Texas).

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Killarney Golf & Country Club (private/Mid-Continent region/Kansas City, Kan.);
• John Miller, Jr., Hindman Park Golf Course (public/West region/Anaheim, Calif.);
• John Miller, Jr., Hindman Park Golf Course (public/West region/Reno, Nev.);
• John Miller, Jr., Hindman Park Golf Course (public/West region/Stockton, Calif.);

Donations are made by Ciba-Geigy and Rain Bird to GCSCA S&R in the names of each national and regional winner: $500 for national and $50 for regional.

Kroger comment
Continued from page 13
increase the maintenance staff (with attendant increasing costs) or accept lower standards of playability and risk of income.

IRRIGATION
The demand for water is directly influenced by soil texture, soil salinity, monthly rainfall, irrigation water quality, the total irrigated turf and landscaped area, air temperature, relative humidity and grass species. The architect of the course must competently consider all of the above factors, as well as the source and availability of water at all times of the year, when designing the total watered area.

The engineering involved in designing an irrigation system includes every square meter of irrigated area on the property. It starts at the water source and does not end until the water leaving the sprinklers lands on the ground, uniformly distributed so as to eliminate wet and dry areas. The quality of the installed system is often gauged by its ability to:
- Operate efficiently using locally available skill levels of labor and supervision
- Evenly distribute water over the wide range of golf course conditions
- Accept additional sprinklers in the future
- Allow individual control for sprinklers in a specialized situation
- Operate over a given season with few repairs or maintenance costs

State-of-the-art irrigation equipment which is appropriate for the specific region may appear expensive, but it has the ability to repay the additional costs from savings generated. One such component is a fertilizer injector, which is used to inject liquid nutrients into the pipeline at the pumping station, eliminating the need for frequent trips across the course with tractors and spreaders. At US $10,000-20,000, they pay for themselves within a few years through labor savings, reduction of equipment-related damage and the shorter time period from seeding/stolonizing to opening of the course.

Typically, dollar driven reductions in the irrigation, drainage and soil systems erode future operational profits. The new golf course entrepreneur in the process of a pre-construction cost control review would do well to utilize the experience of the architect's staff agronomist, or an experienced golf course superintendent, before finalizing the construction budget.
March
4 — GCSSA spray technician training program in Aurora, Il.*
4-5 — USGA Golf Course Wastewater Symposium in Newport Beach, Calif. Contact Dr. Michael Kenna at 405-743-3900.
9 — GCSSA seminar on Computers in Turf Management in Indianapolis.*
9 — Irrigation Specialist Training Seminar in Jamnburg, N.J.*
10 — GCSSA spray technician training program in Helena, Mont.*
12-14 — Orlando Golf Show in Orlando, Fla. Contact 800-842-8832.
14-16 — Prairie Turfgrass Conference & Trade Show in Saskatoon, Saskatchewan. Contact Joe Blozko at 306-931-1982.
15-16 — GCSSA seminar on Golf Course Design Principles in Minneapolis.*
17-18 — Reinders 12th Turf Conference in Waukesha, Wis. Contact Ed Devinger at 414-786-3301.
21-24 — Forecast Golf Marketing golf range seminar at Kiawah Island, S.C. Contact 800-682-7774.
31 — — USGA Conference in Raleigh, N.C. Contact 800-421-3483.

April

May
12 — North Carolina Turf & Landscape Field Day at North Carolina State University in Raleigh.

July
18-24 — International Turfgrass Society’s 7th International Turfgrass Research Conference in Palm Beach, Fla. Contact George Snyder at 407-996-3062.

* — For more information or to register, contact the Golf Course Superintendents Association of America education office at 800-472-7878 or 913-841-2240.
**Eagle Glen project**

Continued from page 43

only a challenging 18-hole course, but also 28 half-acre residential lots. With the sale of the lots, we were able to raise another half million and do the whole thing."

In the fall of 1989, the Eagle Glen project began. “With an original budget of $1.2 million for the course and a commitment to build the clubhouse and buy maintenance equipment for $342,000, we were OK until we had a bad turf-growing season in the fall 1991,” emphasized Schofield. “At that time our board, now numbering 10, raised another $300,000 which emphasized Schofield. “At that time our board, now numbering 10, raised another $300,000

It was the people who kept us going,” said Schofield. “People in their 80s bought around the table in stock and lots to keep us afloat.”

One of those who exchanged work for shares was Paul Lapham, of Lapham and Associates, who got involved. The course needed a name. Don Ahac is another member of this community effort.”

He suggested a contest for the community, only a challenging 18-hole course, but also 28 half-acre residential lots. With the sale of the lots, we were able to raise another half million and do the whole thing."

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If it works in the basement, why not the fairway?

By STEVEN RENZETTI

Someone once said the success of a business depends on three factors: Location, location, location. Well, when it comes to golf course maintenance, the same basic principles could apply, but we would substitute the word location with DRAINAGE!

That basic thought was my battle cry during my tenure as greens superintendent at Burning Tree Country Club in Greenwich, Conn. Burning Tree was built in 1964 on what was then called a swamp — known today as wetlands. For the most part, the property is completely flat; the soil composition predominantly peat. Combining those factors, one can imagine the nightmare scenarios we had to contend with on a daily basis.

One of the first drainage problems I faced was created by the installation of a septic leaching field off the right side of the first fairway. A berm was built during the construction and it also left a low area that predictably held water. Being such a flat piece of property, draining the area wasn’t going to be easy. From my Drainage 101 class from college, I remembered water cannot flow uphill — for that matter, it doesn’t move very well over flat surfaces either.

We immediately began to brainstorm. After exhausting several different ideas, some destined to fail and some simply not feasible, the idea of a sump came to mind. We’ve all seen them in the basement, so why not the fairway? I listed my concerns and addressed them one at a time:

- Where do I get the power and how much do I need?
- How big should the pump be?
- Where do I pump the water to and how far could it be pumped?
- How deep and how should the pump be installed?
- What kind of maintenance will be required?

The power supply will be the biggest obstacle you face. Spending limitations reduced my options and forced me to splice into the power supply that ran the irrigation system. Fortunately, we had enough amperage to run both (most do not) without jeopardizing the irrigation controllers. The main power supply line ran less than 10 feet from the proposed location of the sump, eliminating the need to pull a lot of wire. By using the irrigation power supply, I did become limited to the size of pump we could handle (you don’t need a big pump to be successful). It was determined that a 3/10 HP pump requiring 8.0 amps with a 1.5” discharge pipe could be easily employed without affecting the irrigation controllers.

The closest area we could drain the water to was several hundred yards away, and it was on the other side of this newly formed berm created by the septic field. Using a vibratory plow we pulled 1.5” PVC pipe the entire distance in less than 45 minutes and, remarkably, the 3/10 HP pump had no problem transporting the water over such a long distance. How deep to put the pump was easy, considering the water table was less than 12” below the surface (for most of the year we placed it slightly above that level). Conveniently, the pump fit easily in a prefabricated 12” catch basin.

One last ingredient was needed to confirm our idea — the need for rain. As if the gods were listening, nearly two inches fell over the next 24 hours. At first it appeared the pump was just too small to handle that amount of water. But two hours after the rain stopped, the pump caught up and the area was dry. It should be noted that such a small pump cannot keep up with large rain storms, but it will expedite the process and dry out the area considerably quicker than before.

For Burning Tree, it was a perfect solution to a perennial problem. During my three years at the club, we installed three pumps in strategic areas and the results were all the same — great. Maintenance requirements are minimal. Periodically clean out the catch basin, that’s all. Low temperatures and freezing didn’t pose any problems either. The original pumps are in place, still effectively working four years later.

Some suggestions: It is recommended not to use the irrigation power supply — an independent source is the best route. A pump with a minimum HP of 3/10 HP should be used for best results. An automatic vertical-path float switch performs more reliably than the conventional arc-path switches. A non-clogging vortex impeller that allows objects up to 5/8” to pass through, and a minimum 1.5” discharge pipe make for a more efficient solution.

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