

BRIEFS



TALKING TURF IN AUGUST

CHANDLER, Ariz. — Turf Talk '96, the annual turfgrass seminar hosted by Garden West Distributors, Inc., will be held Aug. 14 at San Marcos Hotel and Conference Center here. More information on the full-day event is available from Garden West at 602-233-2966.



GIL COLLINS DAY

GRANDVIEW, Mo. — The Heart of America Golf Course Superintendents Association (HAGCSA) turned its annual Past Presidents Day into Gil Collins Day to honor the retiring Elmore G. (Gil) Collins. Twice a president of HAGCSA, Collins has been superintendent at Oakwood Country Club here for 31 years, following positions at Wakonda Club in Des Moines, Iowa, Molila Club in St. Joseph, and Windbrook Country Club in Parkville.

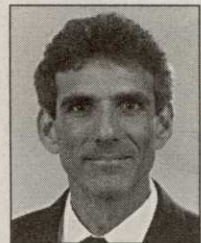
KARNOCK TWICE-HONORED

Dr. Keith Karnock of the University of Georgia Department of Crop and Soil Sciences has been named a Fellow of the American Society of Agronomy and the Crop Science Society of America. The award is the highest honor of both societies, exemplifying professional achievement and meritorious service. Karnock is the author of *Principles of Turfgrass Management*, a correspondence course of the Professional Lawn Care Association of America.



GEORGIA'S LANDRY HONORED

GRIFFIN, Ga. — The Sports Turf Managers Association (STMA) has awarded the Harry C. Gill Award to Dr. Gil Landry, a turf specialist with the University of Georgia Extension Service here. The award, honoring the STMA's Groundskeeper of the Year, denotes an individual's service and commitment of the association and its goals and standards.



Dr. Gil Landry

CLUB CORP. HIRES ANDERSON

LA PLACE, La. — Jerry Anderson is the new superintendent here at ClubCorp-managed Belle Terre Country Club. Anderson arrived via Live Oak Country Club in Rockport, Texas, where he maintained all aspects of the club's golf course operations.

Audubon hails supers' rising involvement

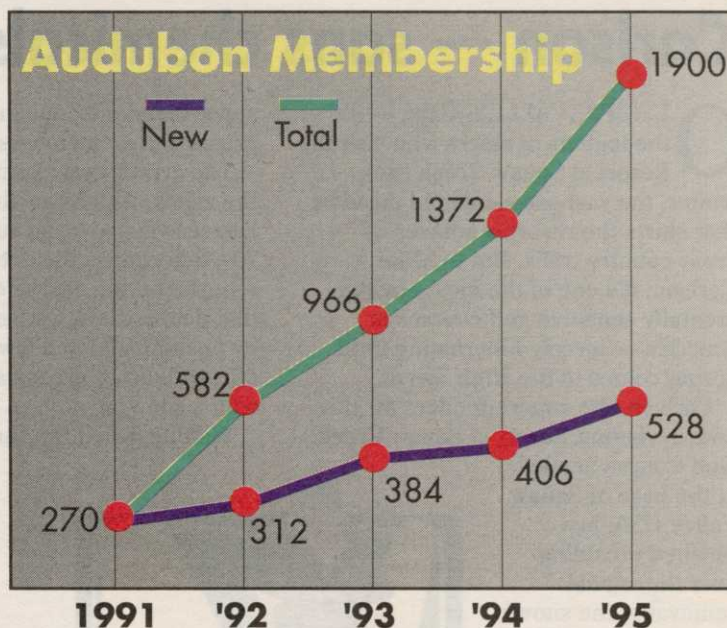
By MARK LESLIE

SELKIRK, N.Y. — Citing "dramatic results" and a growing number of golf course members, Audubon International reports its Audubon Cooperative Sanctuary System (ACSS) experienced a year of stability and strong member involvement in 1995.

"At an average of 120 or more acres per site, [golf courses] represent some of the most extensive sanctuary areas in the country," the ACSS Annual Program Report says. "ACSS members are literally transforming their courses to improve habitat, protect water sources, and reduce water and pesticide use."

"The [program's] momentum seems to be picking up more and more," said Audubon International President

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THE REPORT IS IN

Plastic spikes vs. metal and none

By G.W. HAMILTON, D.S. SINKUS, L.P. TREDWAY & A.E. GOVER

UNIVERSITY PARK, Pa. — Two studies have been conducted here at Penn State University evaluating the effects of three tread types on putting green turf wear, ball-roll distance, and ball-roll deflection.

The study found that tread types significantly affected ball-roll distance and caused an unacceptable amount of wear at certain traffic intensities on both types of root zones: all-sand and modified soil. Deflection in ball-roll was rarely statistically different for tread types.

Another general observation: Metal spikes, because of the creation of the hole in the turf, made the traffic much

more noticeable. Although the holes make the traffic more apparent, the effect on ball-roll may not be as significant as the effect on turf visual quality.

The study did show that shoe tread type does affect turf wear and ball-roll distance and deflection. However, the amount of thatch present, the root-zone soil texture, and amount of traffic can also significantly influence which type of shoe tread would be best for daily use.

...

The objectives of the first study were to evaluate the effects of tread type on turf wear and ball-roll distance. It was conducted at the Valentine Memorial Turfgrass Research Center here. Two

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Superintendent Paul Latshaw Jr. checks on one of his new greens at Merion Country Club, along with one of his grounds crew members.

Latshaw's poa attackus plan at Merion

By MARK LESLIE

ARDMORE — While his dad has been tackling major greens woes at Congressional Country Club, Paul Latshaw Jr. has faced obstacles of his own at Merion Country Club here and has made major strides in conquering *poa annua* problems.

The Merion superintendent said a combination of gassing the greens last September with methyl bromide, covering the greens and applying heavy dormant feeding through the winter, and using a four-cultivar blend of bentgrasses had his putting surfaces looking "pretty decent" for the May 18 opening. Now Latshaw and his crew are faced with the real chore: keeping *poa annua* from



ON THE GREEN

again invading this famous golf course.

His plan? A multidimensional approach that will include hand-picking this first year, a possible pre-emergent herbicide application in the fall to prevent *poa* from germinating, a future use of plant growth regulators to inhibit *poa* seed-head production, and a move to plastic-spiked golf shoes.

PHASE ONE

Latshaw credited much of the success in the grow-in phase of his greens renovation to extensive fumigation.

"There are a lot of things in our favor because we fumigated so far out," he said, explaining that crews not only fumigated the greens but also at least 30 feet out into

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Q & A

Robert L. Green
U-Cal Riverside

U-Cal research shedding light on water use

Robert Larson Green, Ph.D., is the turfgrass research agronomist in the Department of Botany and Plant Sciences at the University of California, Riverside. Green provides leadership for a growing research program involving turfgrass stress physiology and cultural practices. He has bachelor's, master's and doctorate degrees from the University of Florida and has authored 70 scientific journal papers, technical reports and scientific abstracts. Golf Course News spoke with Green as part of its ongoing question-and-answer sessions with leading turfgrass researchers.

Golf Course News: What research have you and other UC-Riverside researchers undertaken in the area of water use and what are your findings?

Robert Green: We have conducted considerable research irrigating below reference water use (ETO) via procession irrigation field plots. The goal is to save water by expanding the time between irrigations while maintaining representative, functional turfgrass. The rooting aspect is one of the most important plant traits that enables us to irrigate below ETO and save water.

Recent research shows a defined irrigation amount, say 80 percent ETO, statistically higher turfgrass quality and soil water content within the root zone can be achieved by irrigating two times per week versus four times per week. Turf researchers have known the benefits of the practice of deep, infrequent irrigations for many years and our data supports this economic principle.

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Q&A: Green notes irrigation progress

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The take-home message for superintendents is, if they wish to conserve water, their focus should be on managing the turfgrass for rooting, irrigation to replenish water in the root zone and extending the time between irrigation events.

GCN: Has there been any less emphasis on conserving water in California now that rainfalls are back to normal or even above-normal amounts?

RG: Yes and no. Yes, water is available and I am not currently aware of situations where water availability is a limiting factor for the maintenance of golf courses.

However, even during these "good times," the environmental horticultural industries, including the golf industry, are working with water districts and local and state water agencies to define fair and responsible water use.

Working together for the good of all, and the respectful communication process is an important step, along with general agreement that water allocations should be on the basis of ETO and land area.

Fortunately for California, we have a statewide system of weather stations that determines ETO for most major locations in the state.

The expanded use of effluent is also noteworthy in terms of conservation.

GCN: Can you describe the work you are doing on summer stress on bentgrass and bluegrass varieties on Southern California courses?

RG: Our research focuses on the major factors involved in the summer decline of creeping bentgrass and annual bluegrass putting greens: long-term exposure to air and soil temperatures above the optimum range for growth, with the most serious result being root dysfunction; the lack of control of the root-zone soil, air and water relationship with the most serious result being poor soil water infiltration/percolation and soil aeration; and the more situational factors, such as diseases, nematodes and insects that attack weakened, stressed-out greens, salt accumulations within the root zone due to limited soil water drainage or improper leaching practices and cultural practices that are not helpful to the plants' ability to tolerate summer stress syndrome.

GCN: You studied wood alcohol as a possible carbon source to help putting surface plants survive under harsh growing conditions. What were the results?

RG: We did not observe positive nor negative effects, in terms of visual turfgrass quality or clipping yields, when methanol solutions were applied on a

creeping bentgrass putting green during the summer in Palm Springs. It would be unfair to conclude carbon fertilizations have no merit.

We do not have sufficient data and I would be interested in conducting similar research.

GCN: Can you briefly describe your work involving varying concentrations of iron and water injection aerification methods?

RG: The iron fertilizations and summer cultivations with a Toro Hydroject have a common theme: practices to help alleviate root-related problems associated with the summer decline of creeping bentgrass/annual bluegrass putting greens.

Though it is not new, we have shown iron applications are beneficial for increasing the visual turfgrass quality of a bentgrass putting green located in Palm Springs during summer. This was especially true for foliar applications of iron, which may support the concept of root disfunction and uptake during hot summers.

There was a solid trend for increased root mass density and turfgrass stand persistence during summer due to iron applications and/or biostimulants.

The Hydroject work is aimed at maintaining soil water infiltration and percolation and soil aeration. Constant high soil water levels in the vicinity of the plant crowns can indirectly weaken and kill plants.

Scientific reports suggest increased soil aeration may help roots compensate for high soil temperatures. We completed one study.

Unfortunately, field infiltration rates and soil aeration porosity were too good to improve via summer cultivations.

We will initiate a two-year study on a more representative location and the irrigation water will have a relatively high salt content.



GCN: What have you learned from the three UC-Riverside bent-grass evaluation plots scattered around Southern California?

RG: Last fall, we established the same, three-year creeping bentgrass culti-

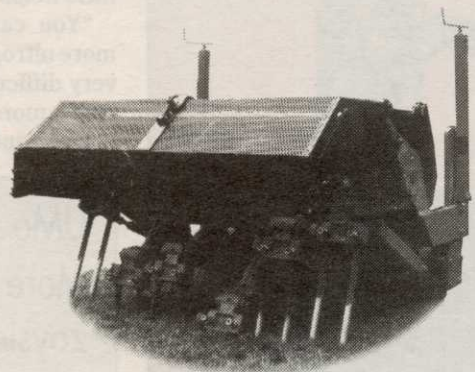
var putting green trials at The Springs Club in Rancho Mirage (desert location), Industry Hills Golf Course (midland location) and Rancho Santa Fe Golf Club (coastal location).

We are evaluating 20 of the same creeping bentgrass genotypes and/or blends in the desert climate where heat is the major issue and there is generally no annual bluegrass; in a midland climate where most putting greens are a mixture of creeping bentgrass and annual bluegrass, which suffers greatly in summer; and coastal climate where most greens are a mixture of creeping bentgrass and annual bluegrass and superintendents can manage annual bluegrass because of the mild climate.

The data are too preliminary to report, but it will be interesting to observe the genotype x environment interactions which may lead to location-specific creeping bentgrass cultivar and/or blend recommendations.

GCN: What other research are UC-Riverside researchers involved in?

RG: We are doing additional research on best-management practices for groundwater protection for both putting greens and fairways; NTEP trials for bermudagrass, zoysiagrass and buffalograss; N product evaluations for fairway bermudagrass; improved practices for transitioning overseeded bermudagrass putting greens; physiological investigations involving Primo applications; the molecular, physiological and whole-plant basis for leaf-firing resistance due to drought among bermudagrasses; and research involving weed, disease, insecticide and nematode management and control.



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Zoysiagrasses the emphasis of UCal-Riverside scientists

The University of California, Riverside has been one of the leading universities in turfgrass research with particular emphasis on zoysiagrass, according to Turfgrass Research Agronomist Robert Green.

Environmental Horticulture Extension Specialist Dr. Vic Gibeault and Superintendent of Agricultural Operations Steve Cockerham are primarily responsible, Green said, for the evaluation and release of two new patented, hybrid vegetatively propagated zoysiagrass cultivars, DeAnza and Victoria, Green said.

Dr. Vic Younger, a former UC Riverside researcher, was responsible for the original cross and progeny and selected for fall color retention and a desirable leaf texture.

Gibeault and his associates recently evaluated 28 zoysiagrass genotypes at Riverside and Irvine for fall color retention. DeAnza and Victoria rated highest along with DALZ 8052, according to Green.

DeAnza and Victoria have poten-

tial to be used on fairways and tees and should possess a lower overseeding requirement than bermudagrass (where overseeding is practiced).

DeAnza and Victoria management requirements will most likely be similar to the management requirements typical of Zoysia spp.

Cockerham and his associates are doing additional research, subjecting turfgrass to sports traffic under light restrictions such as shade.

Perennial ryegrass is the cool-season grass and zoysiagrass the warm-season grass with the highest combination of durability and shade tolerance, Green said.

New UC-patented zoysiagrasses have high potential with the needed growth rate necessary for recovery from sports traffic injury to go along with the shade tolerance, according to Green.

Research is continuing on the optimum culture and management of turf for use in light-restricted sports situations.