

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.

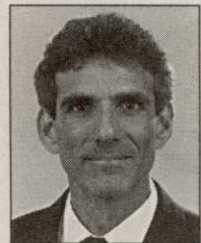
KARNOCK TWICE-HONORED

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

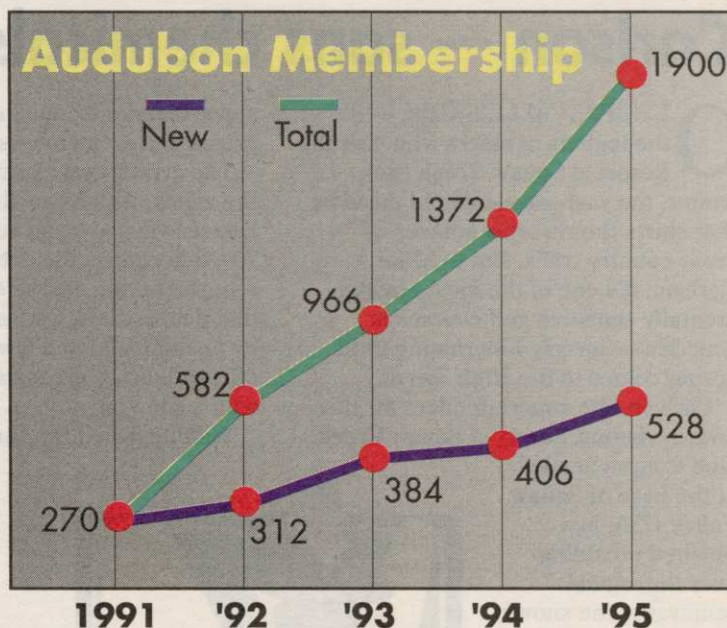
By MARK LESLIE

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

Continued on page 22



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.

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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

Continued on page 17



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

Continued on page 25



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.

Continued on page 28

Root-zone mix, thatch affect ball-roll in PSU's golf shoe tests

Continued from page 15

Penncross creeping bentgrass greens maintained at 5/32 inches were used — one featuring an all-sand root-zone mix and the other a slightly modified root-zone mix.

Individual plots were arranged in a random, complete block design with three replications. Treatments consisted of three tread types: conventional metal spikes; soft-plastic spikes; and spikeless. Traffic was applied at two intensities (100 and 200 traverses per week) by people wearing the various shoes and walking directly back and forth across the plot, without turning on the experimental area.

Traffic was started on June 12, and finished on Sept. 5 (12 weeks). Ball-roll distances for all plots were measured with a Stimpmeter on Fridays following traffic applications.

Wear was rated on a scale of 0 to 5, with "5" being full cover and "0" being bare. A cover rating of 3 or above was considered acceptable as a putting surface. Wear was rated at eight and 12 weeks.

A second study evaluated the effects of tread type on ball-roll deflection. An area similar and adjacent to the modified root-zone area was used for one plot area and a 2-year old practice putting green at Centre Hills Country Club in State College was used for the sand plot area. The practice putting green was Penncross creeping bentgrass and no thatch layer was present.

On the modified soil plot, the metal and soft-plastic spikes (at the low-traffic intensity) and the spikeless tread (at the high-traffic intensity) were the only treatments to cause ball-roll distance to be significantly less than the control. On the all-sand plot, all treatments but the soft-plastic spikes (high-traffic intensity) caused ball-roll distance to be significantly less as compared to the control.

The wear from all tread types was acceptable on both soils at low-traffic intensities (800 total traverses) at the eight-week rating. However, at the high-traffic intensity (1,600 total traverses), all tread types caused an unacceptable amount of wear on both soil types. Conventional spikes caused the most wear, and the spikeless tread caused the least.

Wear ratings for both soil textures after 800 and 1,600 traverses.

At the 12-week rating, the wear from all treads was acceptable on the modified soil at the low-traffic intensity. Only the metal spikes and soft-plastic spikes caused unacceptable wear on the all-sand root zone at the low-traffic intensity (1,200 traverses). All tread types caused unacceptable wear on both soil types at the high-traffic intensity (2,400 traverses). Again, the spikeless tread caused the least amount of wear.

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In the test for ball-roll deflection, an average of the 10 balls rolled per traffic intensity was determined and the averages of the 10, 20, 30 and 40 traverses were compared to the average of the 0 traffic intensity. This distance was considered deviation from the control.

The only effect of tread type on ball-roll deflection was on the modified root zone at the 10-traverse traffic intensity. This difference could be attributed to the thatch layer that was present on the experimental area. There were no other

effects of tread type on ball-roll deviation for any of the other traffic intensities. And the tread type by intensity interaction was not significant.

On the straight sand with no thatch layer present, the metal spikes caused the most deviation from the control. Although



there was a wide range between means at some intensities, the means and the tread type by intensity interaction were not statistically different. Also, the amount of ball-roll deviation from the control should be noted for some treatments.

Wear rating for both soil textures after 800 & 1,600 traverses

Tread type	Traverses	Wear*	
		Modified Soil	All Sand
Metal	800	3.2	2.5
Soft-plastic	800	4.2	3.5
Spikeless	800	3.8	3.7
Metal	1,600	1.7	1.3
Soft-plastic	1,600	2.2	1.8
Spikeless	1,600	2.7	2.3
Control	0	5.0	4.5
	LSD	0.4	0.5

*0 = bare, 5 = full cover. > 3 = acceptable.

Inches of deviation from the control for various traffic intensities for the all-sand root zone

Tread Type	Traverses				Avg.
	10	20	30	40	
	inches				
Metal	4.1	10.8	12.0	12.2	9.8
Soft-plastic	5.9	7.8	4.8	4.9	5.8
Spikeless	3.8	2.0	4.0	2.2	3.0
LSD	2.8	28.9	33.3	28.1	6.0

Studies have tested various effects of golf shoes

Many types of golf shoe treads have been developed to help alleviate the damage caused by conventional metal spikes.

Some types of treads may lessen the damage to the putting surface, but at the expense of stable footing.

Only a few studies have been conducted to evaluate the effects of shoe types on turf quality and ball roll.

In 1958, reporting on a study conducted by Gipson and Potts at Texas A&M College, Ferguson reported that ripple sole and rubber cleated shoes caused significantly less damage to a Seaside bentgrass turf when compared to a shoe with conventional metal spikes.

Gibeault et al (1983) evaluated metal spikes, two different types of multi-stud soles, and suction-type cleats.

This study also concluded that metal spikes caused the most damage and the suction-type cleats caused the least.

Morrow and Danneberger (1995) evaluated the effects of metal spikes and soft plastic spikes (SoftSpikes) on ball roll. They concluded that both soft plastic spikes and metal spikes caused ball-roll distance to increase.

They also said metal spikes appeared to cause more turf damage than the soft plastic spikes, although this was not quantified.



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