GOLF COURSE

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Public Golf Forum

The industry's annual conference focusing on publicaccess golf scheduled for Chicago in October3

Consolidation Games



NEW GRASS IN THE WILDERNESS

Assistant superintendent Charlie Riger spreads out PF-11 sprigs on a green at Wilderness Country Club. PF-11 is one of two Bermudagrasses that superintendent Paul Frank has discovered on the Florida course. See Super Focus on page 14.

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SUPPLIER BUSINESS

Stressed Out!

Superintendents and their turf living too close to the edge, say researchers

By MARK LESLIE

MONTREAL — Declaring that "pre-stress conditioning" will be the new buzz word in turfgrass management, Dr. Joseph DiPaola told Canadian superintendents here they should develop long-term agronomic plans for their golf courses.

Speaking at the Canadian Golf Superintendents Association's International Turfgrass Conference and Trade Show, DiPaola said: "Our job is very simply to grow tomorrow's turf today. We have to be in a position of putting plants in place for next month, for next summer, well in advance of stress...

"The heads-up is that we are going to be hearing more about pre-stress conditioning... We don't have all the answers right now. But we've got better answers today than we had five or 10 years ago. We can **Continued on page 24**

BIG FANS OF ATMOSPHERIC CIRCULATION Newfan technology continues to improve its effectiveness and utility. See stories, page 13.



Course taking shape atop Montana Superfund site

By MARK LESLIE

ANACONDA, Mont. — It's a legend before its own time, designed by a legend in his own time. Old Works Golf Course won't open until May 31, yet it has already made its mark: A Superfund cleanup site, which Jack Nicklaus called "one of the ugliest properties I've ever seen," transformed into a golf course that builder Chip Roe lauded as "breathtaking."

The former copper mine closed more than 90 years ago, but left behind a legacy of arsenic over its 250 acres. Turning it from a moonscape-like wasteland into a safe golf course **Continued on page 34**



HIGH-PROFILE DEBUT

After considerable ballyhoo, The Sanctuary—the first solo project from architect Jim Engh opens next month in Castle Rock, Colo. Engh spoke with GCN about the project, his career and design philosophies. See page 31.

GolfSouth finds partner and funding source in ClubLink

By HAL PHILLIPS

GREENVILLE, S.C.—To compete for today's course operations contracts, it takes more than for-profit management credentials. It takes deep pockets.

The pockets at GolfSouth LLC just got deeper follow-

ing its alliance with Canada's only publicly owned golf course company, ClubLink. ClubLink and the founders of GolfSouth - N. Barton Tuck, Jr. and Derrell E. Hunter - have agreed the Toronto-based firm will initially fund certain capital for GolfSouth through loans. The pact also gives ClubLink an option to acquire the shares held by Tuck and Hunter in exchange for ClubLink shares.

For ClubLink, which operates six private clubs in Ontario, the alliance means a toehold in the U.S. market. For GolfSouth, it means the ability to compete with the increasing number of management companies which boast built-in funding sources. Among those firms hellbent on acquisition are Santa Monica, Calif.-based **Continued on page 52**

PGA Tour, Deere ink 3-tiered deal

By HAL PHILLIPS

MOLINE, III — In a deal that impacts three distinct segments of the golf industry, John Deere has reached an unprecedented nine-year agreement with the PGA Tour to provide turf equipment to the Tournament Players Club (TPC) network of courses, assume title sponsorship of the Quad City Classic and provide 385 acres for a new TPC course development here.

The nine-year partnership — comprising three consecutive 3-year leases — was announced at an April 2 news conference at Deere's world headquarters.

Other golf industry corporations have associated themselves with professional tour events, including The Scott Company's sponsorship of The Tradition, Continued on page 55



Stressed out!

change how turf grows by what we do, and change its food reserves and rooting depths to get it in a better position to win."

A former North Carolina State University professor who is now a senior technical support specialist for a turf-product manufacturer, DiPaola said superintendents must keep the balance in favor of new shoot growth.

Saying that "to minimize stress impact we have to maximize escape, avoidance or tolerance," DiPaola said cultural practices have a strong impact on both avoidance and tolerance.

"Avoidance is one aspect we haven't spent much time thinking about and it's one that is directly impacted by some of our cultural practices," he said. "For example, if turf has a rhizome system, it is protected in the soil during times of drought, or heat or cold much more than if it doesn't have that rhizome, or if our cultural practices restricted the depth of that rhizome system. In this part of the world the use of greens covers is an example of the avoidance approach."

More knowledge about the interaction of cultural practices such as fertility, plant-growth regulators, irrigation, drainage, coring and cutting heights will help superintendents meet their goals.

The concept of pre-stress conditioning of turf was fiddled with in the 1980s," DiPaola said. "We're not there yet. But things have happened that allow us to not only individually study and use some of these parameters, but to begin to look at their interaction more closely, so that the agronomic plan can tie two, three or four cultural practices together to put the turf in a position to win. If we are going to grow tomorrow's grass today, we've got to use today to put the turf in a position to win when the stress hits.'

"If what we do will build food reserve for the plant, or build the plant's root system, it's going to enhance its positioning to win once the stress conditions develop," he said. "The bigger a root system, the better. It will delay a lot of stress—heat stress, drought stress, cold stress, desiccation, shade, on and on and on."

Superintendents, he said, need a turf management philosophy and a plan that can actually be quantified.

Working under budget, per-

sonnel or time constraints, superintendents have decided, consciously or not, at what level they will manage their turf, he said.

"You establish that plateau, and as long as you're on it, you are meeting your goals," DiPaola said. "But you move left or right on the plateau based on the options you employ. If you decide you will have various pieces of equipment, you will put your labor force on in May as opposed



Everyone should know why you are doing things a certain way. You're trying to avoid the risk and maximize the benefits.' – Dr. Joseph DiPaola to April, you will walk-mow as opposed to triplex mow, etc., you begin to make moves" toward lower- or higher-end maintenance."

In terms of turfgrass stress management, he said, the real challenge is that every operation brings a set of risks and of benefits. "That's a good negotiating stance — for you with your crew and with your directors and greens committee," he said. He suggested superintendents list the things they expect to gain and risk by a certain practice. For instance, coring can cause better rooting and air exchange, or a change in soil temperature for the good. On the other hand, it's a drying process.

"Everyone should know why you are doing things a certain way," DiPaola said. "You're trying to avoid the risk and maxi-Continued on next page

A CERTAIN DAREDEVIL SOARED 15 SECONDS OVER SNAKE RIVER CANYON BEFORE PARACHUTING

TO SAFETY 600 FEET BELOW



THE AVERAGE BASKETBALL PLAYER IS AIRBORNE A FRACTION OF A SECOND DURING A SLAM DUNK.

WHAT GOES UP MUST COME DOWN. UNLESS, OF COURSE, IT'S BANNER® MAXX, THE FUNGICIDE THAT WON'T SETTLE OUT. PETROLEUM SOLVENTS OR ODOR. EVEN BETTER, IT CONTROLS 18 TURF DISEASES, INCLUDING DOLLAR SPOT AND SUMMER



Optimize, DiPaola urges supers

Continued from previous page mize the benefits. That's helpful [to know] for those you are working for and those who are working with you to get the job done."

Calling superintendents to implement a turfgrass agronomic plan, he said: "We need the long-range look, and the interactive look, that we haven't quite put together in turf man-

agement."

Such a plan, he said, identifies the turf areas of the course and the goals for each. "This is novel for some folks," DiPaola said. "What is it that you're trying to do with the greens, tees, roughs and fairways, and are you getting there? In this agronomic plan we have fixed constraints: schedules for major tournaments, club policies about when certain cultural practices can be done, and contractual constraints particularly for resort facilities where they're promising people that certain things won't happen while they're playing golf."

The goals will vary with each turf area.

Optimizing course conditions, he said, is not a good goal "unless you can measure your suc-

APPARENTLY,

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NOTHING STAYS IN A

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cess." Maximizing the uniformity of greens and minimizing local dry spots, for instance, can be measured. So, also, can soilinfiltration rates, crown health, standard density and Stimpmeter speeds.

Contingency plans should also be established for cases when the winter is twice as cold as normal, or the summer is twice as hot, or the irrigation system goes down.



"Keep the plan useful," he said. "Refer to it regularly. Adjust to your successes and failures. Particularly keep good records of what you can't figure out. And measure the progress toward your goals.

"Let your employees know they helped you get there. And let the management of the club know that you've made the difference."

Winter covers

Continued from page 22

10 inches of straw.

"We use flax straw because there's no seed. It also won't blow away like wheats or barleys will," Morrison said.

Using large rolls of straw instead of bales, his crews can bed down a green in about four hours, he said. The covers are nailed down every two feet and tires are used as anchors.

Palmer uses wood-shaving mats and Astrofoam on top of the covers instead of straw. A 6foot-wide, 300-foot-long roll of Astrofoam costs \$125. The package costs 74 cents a square foot, he said. He complained, however, that the Astrofoam "tears easily and is difficult to put down."

In the spring the timing of removal of the covers is crucial, the three agreed. Thus they monitor the green temperatures. Palmer suggested putting the covers back onto the greens at night until mowing begins.

Morrison uses a Toro with a blade to clean off the greens, while Palmer's crews use leaf blowers.

Morrison's crews also Verti-Drain the greens around May 10-12, an action which he said "gains us about 12 days."

On the negative side, Palmer said: "I am disappointed that most times the covers seem to split at the seams. I feel if manufacturers could use a heavier material and, if possible, without seams, they could make a better product."

Kirkpatrick added that breathable covers "didn't do much for us against crown hydration."

Morrison said his experience shows that 6 inches of snow will give the same insulating factor as two tarps and straw.

With the heavy snow of this past winter, he said, "I may have wasted my money."

On the other hand, if there had been no snow and he had not covered his greens, the results could be deadly.

THE RECORD FOR AN ASTRONAUT FLOATING IN SPACE IS ONE YEAR, 22 HOURS, 39 MINUTES, AND 47 SECONDS.

OF "WHO SHOT J.R.?" KEPT THE WORLD UP IN THE AIR FOR SIX MONTHS IN 1980.

THE QUESTION

new good yoth angunation of IPM, ben is, an importantion of IPM, acticularly from a divence perspective, is hand-watering. We said. Not putting on the were you're got a high spot that may need more water, or a low aper that needs loss water. We generally don't have disease problems where things are dry.

"I drather spend my ilme and whe my crew the responsive lies of good hund watering restthan riding the sprayer specsoruting.

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Preventive Autoricides are important to fight post-arrange prevident root pathoges probleme I se light frequent mightion — 1/10th of an inch every day. Also, collect elipnings fineing the growing seasons at told charges are not lerion the growing



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