## BRIEFS

**FTGA ELECTS BARNES PRESIDENT**

TAMPA, Fla. — David Barnes has been elected 1997-1998 president of the 1,200-member Florida Turfgrass Association (FTGA). Elected during the FTGA's 45th annual Conference & Show here, Barnes has more than 20 years experience in golf course turfgrass management. He is vice president and general manager of the Greg Norman Turf Co. in Avon Park. He has been a member of the FTGA since 1988, serving as vice president in 1996-1997. Barnes is also involved with the University of Florida IFAS.

**MIDWEST EXPO IN JANUARY**

INDIANAPOLIS, Ind. — The 1998 Midwest Turf Expo will be held Jan. 20-22 at the Indiana Convention Center here. A pre-Expo Golf Course Superintendents Association of America (GCSAA) seminar entitled "Design, Construction and Maintenance of Chemical Storage Facilities" will be held on Jan. 19. Registration and exhibitor information is available by calling Beverly Bratton at 765-494-8039.

**IMG INKS FOUR CONTRACTS**

LAKELAND, Fla. — International Golf Management has signed golf course maintenance contracts with The Blueberry Plantation Golf and Country Club in Alma, Ga., and with three golf facilities in Florida — Heritage Greens, Pelican Strand in Naples and Delray Country Club in Delray Beach. Heritage Greens is an 18-hole course scheduled to open in January. Pelican Strand is a semi-private 27-hole facility whose final nine holes will open in mid-January.

**FREE BALLS? YES ... AT THAYER CC**

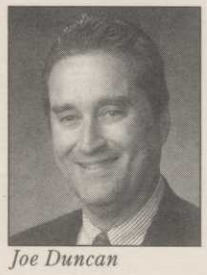
THAYER, Mo. — No, that is not a misprint. Thayer Country Club has devised a plan to east the "fall foliage frustration" that strikes golfers each autumn. You know: Great drive, down the middle, but unfindable because of tree leaves. Thayer's new policy won't find those lost balls for its golfers, but it gives them the chance to replace them. Using the honor system, golfers can just take the balls they lost that round from a collection of those found throughout the year by superintendent Tom Benyo. "I've never heard of a course replacing lost balls, but why not?" said Benyo. "After all, these balls came from the golfers. Let's give them back."

# Ohio show hits hot buttons

## President stresses green 'marriage'

By MARK LESLIE

COLUMBUS, Ohio — Calling the relationship of the state's golf course superintendents, sports turf managers and lawn-care operators "a beautiful marriage," new Ohio Turfgrass Foundation (OTF) President Joe Duncan said the different groups are learning more and more from each other as time passes.



*Joe Duncan*

"That relationship has existed for a long, long time, but we depend on each other more than ever before," said Duncan, owner of Evergreen Lawn Care Inc. in Troy, who succeeded Hank Chafin at the OTF Conference and Show here, Dec. 8-11. "We're learning that everything we do is an integral part of each other's work. Things that happen on sports turfs and on golf courses, and the research they are fostering, affect us all."

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## Prof. pushes more biological control

By MARK LESLIE

COLUMBUS, Ohio — Questions abound in the arena of turfgrass soil ecology and biology, but Dr. Michael Boehm pointed to a future where biological care plays an equal role in maintenance with chemical and cultural care and the turfgrass' genetic resistance.

The Ohio State University (OSU) assistant professor of plant pathology painted a picture in which current maintenance practices are dominated by chemicals, and where cultural practices and genetic resistance dwarf biological controls.

"We want to get all spheres relatively the same size to give turfgrass managers the ultimate and largest arsenal to combat turfgrass diseases," Boehm told an audience at the Ohio Turfgrass Foundation Show and Conference here.

"Our goal," he said, "is the integrated management of diseases ... to push the responsible use of biorational, environmentally friendly and environmentally

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**GOLF AND THE ENVIRONMENT**



*A water sample is taken at TPC River Highlands in Cromwell, Conn.*

# Tackling unreasonable expectations

By RON DODSON

It's interesting how jobs seem to define who we are. For instance, when we ask, "What is a golf course superintendent?" we're really asking what job does he or she do, and, believe me, everyone's got an answer about what they're supposed to do.

First of all, everyone seems to agree that a superintendent's primary job is to manage the golf course (meaning turfgrass). And it follows that every golfer has an opinion about how a golf course should be managed. They've played a lot of golf, they have a lawn, they have a lot of money, and they know how their greens ought to look and play. That makes them experts on how turfgrass ought to be managed. Right?

Sometimes that's how it sounds when I talk with golfers about superintendents.

Well, I'm here to tell you that good golf course superintendents do a whole lot more than manage turfgrass. In addition to all of the work and expertise it takes to manage turf, they manage water, and from this environmentalist's perspective they also manage wildlife, wetlands, lakes, streams, forests, landscape ecology, insects, the weather, the media, the government, their staff, and the biggest challenge of all: the unreasonable expectations of golfers.

What do I mean by unreasonable? From an economic and environmental perspective, think about wall-to-wall manicured turfgrass, both in terms of man and machine hours as well as in loss of habitat. Think about fertilized turf right down to the edge of water bodies, both in terms of cost of fertilizers, man hours to spread it, and the potential damage to water quality

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*Gathering data by GPS and GSI.*

# Computer maps offer advantages for maintenance and construction

By KEVIN P. CORBLEY

LAKEWOOD, Colo. — Computerized mapping is the future of golf course maintenance and construction. That's the direction Larry Rodgers of Larry Rodgers Design here sees the industry taking. And his clients, some skeptical at first, tend to agree.

For more than a year, Rodgers has been using Global Positioning System (GPS) and Geographic Information System (GIS) technologies to monitor and map the installation of irrigation systems his company designs for new and existing courses. When each project is completed, Rodgers' clients not only have new irrigation, they are left with a digital map of the course they can use for many purposes.

1ST OF 3 PARTS

"Digital mapping essentially replaces aerial photography in golf course mapping," explained Rodgers. "GPS and GIS are a lot more accurate and much less expensive in the long run than air photos."

Typically, an aerial photo of a course is taken after construction and has limited use as a map reference for some maintenance and future design changes. Digital mapping is conducted throughout the construction process, whether for a new course or a replacement irrigation system at an existing one. The digital map is created in layers as the project progresses and can be used to facilitate the construction itself.

"The bottom line is, this technology saves money by virtually eliminating change orders in renovations of existing courses," said Rodgers.

Digital maps give contractors an extremely accurate visual guide they can follow during construction. As a result, completed projects match very

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# Boehm: Much to learn in bio-ecology

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sound chemistry — whether it's synthetic or from a natural origin — and to better understand and increase the use of biologicals."

Composts add nutrients and micro-organisms to soil that have been shown to control or counter pathogens, he said. The focus of research at OSU and other universities is understanding how and why diseases are suppressed.

"We know that if you increase the nitrogen level on turf you can suppress dollar spot nearly 60 percent," Boehm said. "But there are still lots of issues. Is the nitrogen in the form we are applying it directly toxic to the pathogen? Or is the nitrogen giving the plant the ability to outgrow the pathogen? Or is the nitrogen somehow changing the physiology of the host, thereby making it less susceptible?

"Those are all very valid questions that we'd like to address."

From a plant pathologist's perspective, he said, mechanisms of biocontrol are:

- competition between the biological control agent, or the organism that is suppressing the pathogen for space or nutrients;
- antibiotic production, since the biological control agent produces antibiotics that are toxic to the pathogen;
- hyperparasitism, wherein the biocontrol agent uses the pathogen as a food base or energy source; and
- induced resistance — "an area," Boehm said, "we don't understand very well, but the presence of these beneficial organisms brings about a physiological, or biochemical change in the plant that renders the plant resistant." He likened this to spraying Crenshaw bentgrass, which is prone to dollar spot, with a chemical and finding it is resistant to dollar spot.


Boehm released some findings from a compost study that is in its second year.

Asking what a single application of compost does to the turf, he said it gives the turf "a huge swell in growth and clipping yield. Depending on what kind of compost you use, that lasts anywhere from six to 10 weeks. If an epidemic occurs during that period of enhanced nitrogen fertility, we see a significant decrease in the amount of dollar spot. If, however, like last summer, we make our compost application in May — even though we get nice fertility and greening effect on the turf ... we did not see any appreciable effect on disease management."

The OSU professor hopes to discover the effect of continued use of compost top dressing incorporated in spring and fall, along with spring and fall aeration, over a four-year period.

He mentioned studies at Cornell University by Dr. Eric Nelson, in which compost top dressing has suppressed pythium root diseases in sand putting greens.

In one his own projects, Boehm has established bentgrass greens to compare compost and peat in the root-zone mixes.

"It's a pretty striking difference when you look below the ground," he said, adding that, while using take-all patch as a test pathogen, he found that compost was good, peat was not.

Speaking of the U.S. Golf Association Green Section's greens construction specifications, Boehm said he would like to see, over the next several years, a section incorporated on the pros and cons of altering the organic matter in the root-zone mix from a biological and microbial standpoint.

"It might take another 20 years before we're ready to do that," he admitted, adding, "We are isolating lots of organisms, adding organisms, challenging the systems in the field and in the greenhouse, and trying to get a better handle on microbial populations that affect disease suppression."