Great Expectations

Turf meets business training in new curriculum at Kansas State University

International Report

Sri Lanka? Oman? Golf is booming in disparate places around the globe

FOES NO LONGER: GAUNT & MARNOCH LTD.

Jonathan Gaunt (right) and Steve Marnoch, two of England’s youngest golf course architects, have decided to join forces. Their mission: To become bigger players in the global golf course design market. See Q&A page 45.

COURSE MAINTENANCE

Canada’s Meyer sets high goals
Prepping Royal Birkdale for the Open
Shop Talk: Using overhead space

COURSE DEVELOPMENT

Rulewich starts solo signature
Armchair architects eye Mackenzie Prize
Rees Jones, Redstone team in Texas

COURSE MANAGEMENT

One photo is worth about $1,000
Palmer Management pares 45 minutes
Club Corp. International’s Henner speaks out

SUPPLIER BUSINESS

Textron/Ransomes: The dust settles
It’s a greens roller roller coaster
Plant Health Care, Griffin align

Greece: Will 30 courses in 3 years be possible?

BY TREVOR LEDGER

ATHENS, Greece — The Greek Government has made a startling commitment to golf course development with its stated intention of having 30 new golf courses built in its beautiful country over the next three years.

As the rest of Europe (on the whole) leaped into the golf course stratosphere—43.9 percent increase in courses since 1990—Greece has bucked the trend by actually losing one of its five courses and leaving the country with only four.

This looks all set to change. The Hellenic Tourism Office (EOT) hosted a meeting at Wentworth last July for golf course architects, holiday companies and tourism specialists in order to out-

Purdue embarks on 5-year course research project

BY MARK LESLIE

WEST LAFAYETTE, Ind. — With the help of course architect Pete Dye, multiple donors and a group of students who built it, Purdue University on June 27 will open a golf course that will produce a major five-year study on the effects of golf maintenance on ground and surface water.

Poining out that environmentalists criticize past corporate-funded studies as biased, Dye said: “What Purdue produces should be the most unbiased report, simply because there is no reason to be biased. Good or bad, no one can argue

Continued on page 30

The Shark and Hurdzan keynote Public Golf Forum

BY MICHAEL LEVANS

PALM SPRINGS, Calif. — The Shark’s clipped fin may keep him off the PGA Tour but it’s certainly not slowing him down.

Greg Norman, golf’s premier international spokesman and all-time money winner, will kick off day two of this year’s Public Golf Forum, the Golf Course News-sponsored business conference and expo for superintendents, owners, managers and developers of public access golf facilities on October 26 & 27 at Rancho Las Palmas Marriott Resort in Palm Springs, California.

Continued on page 70

American Golf Corp.‘s Sierra Nevada Golf Club in Genoa, Nev., to open this month. See page 3.
Biological control for poa annua waiting for wide test distribution

Continued from page 1

at all harming bentgrass, ryegrass or Kentucky bluegrass, and leaving poa trivialis barely effected.

"I would parallel it with new drugs for killing cancer tumors. That is the important to me," said David Major, a certified golf course superintendent at Del Mar Country Club in Rancho Santa Fe, Calif., one of four courses testing the biological. "Poa is the biggest problem we have to deal with in the condition of our greens."

Xanthomonas campestris was first discovered 15 years ago, according to Vargas. But it wasn't until the advent of the Bioject technology from Eco Soil Systems Inc. of San Diego that it became a viable way to fight poa annua, which infests golf courses from Pebble Beach to Maine. Between then and now, Michigan State licensed the rights to the bacteria to Mycogen Corp. of San Diego. Mycogen spent years trying dry formulations, but found it too expensive, and recently turned over the license to Eco Soil.

Situated in a golf course's pump house, the Bioject System actually "brews" bacteria in a fermentation process, like a still. The brew then is normally fed to the golf course through the irrigation system. Since biological controls usually must be applied frequently in order to be effective, the advent of Bioject two years ago has opened new doors for natural control of diseases and, in this case, poa annua.

Using this system at Michigan State, Xanthomonas campestris kills the poa and leaves the bentgrass, said Vargas.

"I'm very excited about it," said Major, who is brewing the bacteria in his Bioject but spraying it only once a week from a boom sprayer, not through his irrigation system. "This is my last miracle hope to find something that will transition out the Poa and let the bentgrass fill in where poa has encroached.

"We just started applying it about two months ago and I started seeing results in a month," Vargas said.

Major expects the arrival of warm weather will deliver the killer blow to the poa annua, saying that two days of 80-degree temperatures made a significant difference.

He said that besides the Bioject and warm weather, the key to Xanthomonas campestris' effectiveness is "wounding," or mowing the poa annua. When the grass plant is cut, the bacteria enters and plugs up the tissues that conduct moisture up and down the plant. Whether he will, in the end, apply the bacteria through the irrigation system has not been decided, Major said. "It may be more effective to have a fairway-mounted tank with which you would spray while you mow," he said. "But, if you were to put it through the irrigation system, you can water before dawn, then mow first thing in the morning."

However it is applied, most superintendents will have to wait a year or two to get it. Jeff Johnson, president of Eco Soil's ESSI Product Division, said Xanthomonas campestris will "certainly" be on the market by the year 2000. The federal Environmental Protection Agency (EPA) is fast-tracking the product through the approval process, and is expected around June to designate it as a Continued on next page
Turfgrass Management Program class of 33

Turfgrass Student as selected by fellow classmates. The award is sponsored by Lesco, Inc.

Meanwhile, Eric D. Cederstrom, Jeffrey L. Ische and Eric C. Puls won Trans-Mississippi Golf Association scholarships, and Ische, Puls, Scott E. Carrier, Arthur J. Petrone, Scott E. Pieper and Owen G. Russell were presented Pennsicro Bentgrass Growers Association scholarships.

Also, Glorioso was presented the Pennsylvania Turfgrass Council award; Dan E. Stockdale the Duff Shaw Memorial; Cederstrom the D.M. Boyd award; Ann M. Paulisch the Myles Adderly Technical Report Writing Award sponsored by Denis Griffiths and Associates; and Ann M. Paulisch the PSU Alumni Outstanding Student Award.

Penn State presents honors

STATE COLLEGE, Pa. — The Golf Course Turfgrass Management Program class of 33 graduated on March 7 at the Nittany Lion Inn. Dr. James Mortensen, associate dean for undergraduate education, addressed the graduates, while the keynote speaker was Dr. John Rogers graduate education, addressed the graduates, graduated on March 7 at the Nittany Lion Inn.

Zimmerman Memorial Award for Outstanding Student. The award is sponsored by Lesco, Inc.

Dr. James Mortensen, associate dean for undergraduate education, addressed the graduates, graduated on March 7 at the Nittany Lion Inn.

Penn State presents honors

STATE COLLEGE, Pa. — The Golf Course Turfgrass Management Program class of 33 graduated on March 7 at the Nittany Lion Inn. Dr. James Mortensen, associate dean for undergraduate education, addressed the graduates, while the keynote speaker was Dr. John Rogers graduate education, addressed the graduates, graduated on March 7 at the Nittany Lion Inn.

Zimmerman Memorial Award for Outstanding Student. The award is sponsored by Lesco, Inc.

Dr. James Mortensen, associate dean for undergraduate education, addressed the graduates, graduated on March 7 at the Nittany Lion Inn.

Penn State presents honors

STATE COLLEGE, Pa. — The Golf Course Turfgrass Management Program class of 33 graduated on March 7 at the Nittany Lion Inn. Dr. James Mortensen, associate dean for undergraduate education, addressed the graduates, while the keynote speaker was Dr. John Rogers graduate education, addressed the graduates, graduated on March 7 at the Nittany Lion Inn.

Zimmerman Memorial Award for Outstanding Student. The award is sponsored by Lesco, Inc.

Dr. James Mortensen, associate dean for undergraduate education, addressed the graduates, graduated on March 7 at the Nittany Lion Inn.

Penn State presents honors

STATE COLLEGE, Pa. — The Golf Course Turfgrass Management Program class of 33 graduated on March 7 at the Nittany Lion Inn. Dr. James Mortensen, associate dean for undergraduate education, addressed the graduates, while the keynote speaker was Dr. John Rogers graduate education, addressed the graduates, graduated on March 7 at the Nittany Lion Inn.

Zimmerman Memorial Award for Outstanding Student. The award is sponsored by Lesco, Inc.

Dr. James Mortensen, associate dean for undergraduate education, addressed the graduates, graduated on March 7 at the Nittany Lion Inn.

Penn State presents honors

STATE COLLEGE, Pa. — The Golf Course Turfgrass Management Program class of 33 graduated on March 7 at the Nittany Lion Inn. Dr. James Mortensen, associate dean for undergraduate education, addressed the graduates, while the keynote speaker was Dr. John Rogers graduate education, addressed the graduates, graduated on March 7 at the Nittany Lion Inn.

Zimmerman Memorial Award for Outstanding Student. The award is sponsored by Lesco, Inc.

Dr. James Mortensen, associate dean for undergraduate education, addressed the graduates, graduated on March 7 at the Nittany Lion Inn.

Penn State presents honors

STATE COLLEGE, Pa. — The Golf Course Turfgrass Management Program class of 33 graduated on March 7 at the Nittany Lion Inn. Dr. James Mortensen, associate dean for undergraduate education, addressed the graduates, while the keynote speaker was Dr. John Rogers graduate education, addressed the graduates, graduated on March 7 at the Nittany Lion Inn.

Zimmerman Memorial Award for Outstanding Student. The award is sponsored by Lesco, Inc.

Dr. James Mortensen, associate dean for undergraduate education, addressed the graduates, graduated on March 7 at the Nittany Lion Inn.

Penn State presents honors

STATE COLLEGE, Pa. — The Golf Course Turfgrass Management Program class of 33 graduated on March 7 at the Nittany Lion Inn. Dr. James Mortensen, associate dean for undergraduate education, addressed the graduates, while the keynote speaker was Dr. John Rogers graduate education, addressed the graduates, graduated on March 7 at the Nittany Lion Inn.

Zimmerman Memorial Award for Outstanding Student. The award is sponsored by Lesco, Inc.

Dr. James Mortensen, associate dean for undergraduate education, addressed the graduates, graduated on March 7 at the Nittany Lion Inn.