

# MAINTENANCE



## BRIEFS

### GRANGER HEADS TO HAWAII

**HOKULI'A, Hawaii** — Hokuli'a has named Fred Granger as superintendent of its new Jack Nicklaus signature golf course. Granger, who has worked for courses such as Turnberry Isle in Miami, previously served as a consultant for courses throughout the southern United States. Hokuli'a is a private oceanside golf community just south of Kailua-Kona on Hawaii's Big Island.

### SYNGENTA'S GREENPARTNERS POINTS GOOD FOR GCSAA SHOW

**Greensboro, N.C.** — Syngenta Professional Products has announced that golf course superintendents can now redeem GreenPartners P2 points to purchase full-pack registration to the Golf Course Superintendents Association of America Conference and Show held in Atlanta February 10 to 15, 2003. Syngenta also added GCSAA seminars, self-study courses, and several other educational opportunities to the GreenPartners reward offering. The GCSAA full conference package includes the opening session and reception, the golf general session, conference educational program, career development general session and the opportunity to visit with more than 700 exhibitors at the three-day trade show. It can be purchased by redeeming 35,900 GreenPartners points.

### VALLEYCREST SIGNS RAMBLEWOOD CC

**CALABASAS, Calif.** — ValleyCrest Golf Course Maintenance has signed a maintenance agreement with the 27-hole public Ramblewood Country Club in Mount Laurel, N.J. The addition of this facility increases the company's maintenance portfolio in the Northeast region to nine. Situated in South Jersey, Ramblewood Country Club was designed in 1962 by Ed Ault. The course features bluegrass/ryegrass tees, fairways and roughs with Poa-bentgrass greens.

## Fist attacks effluent problems at the source

By ANDREW OVERBECK

**BARRINGTON, Ill.** — With more courses using effluent water for irrigation purposes, more superintendents are being forced to irrigate with less than ideal water. Untreated effluent can cause numerous agronomic problems due to its usually high bicarbonate and sodium levels.

Superintendent Ted Fist at Wynstone Golf Club here has eased these problems in one simple step by convincing homeowners to switch their water softening agents from sodium chloride to potassium chloride.

Under the terms of the development agreement, Fist is obligated to use wastewater from the 345 homes that surround the course. Wynstone's water supply, which is drawn from five wells, is very hard and has bicarbonate levels of 370 parts per million. As a result, 88 percent of

the homes use water softeners and prior to 1999 sodium chloride was the predominant water softening agent. After the wastewater runs through a two-stage lagoon treatment system, Fist has an irrigation source that has sodium levels above 300 parts per million, resulting in base saturation levels of 48.9 percent sodium and 20.6 percent magnesium.

"These water conditions created severe infiltration and soil structure problems," said Fist. "The turf would wilt very quickly

in the summer under moderate stress conditions. Trees would defoliate. It was free water but it wasn't very good."

Back in 1990, the club installed an acid injection system to combat the bicarbonate levels, but

Fist knew more had to be done to combat the sodium levels.

He first determined that the levels on the homeowner's water softeners were set too high and worked with the Wynstone

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Fist's crew at Wynstone GC handles the delivery of 65 tons of potassium chloride to its 345 homes each year.

## GCSAA, USGA to examine wetting agents

By ANDREW OVERBECK

**LAWRENCE, Kan.** — The Golf Course Superintendents Association of America and the United States Golf Association's Green Section are teaming up on what could be the first of several comparative research projects that provide scientific evaluations of products that are widely used by superintendents but not widely tested by universities.

According to GCSAA's director of research, Clark Throssell, the first study will address the efficacy of wetting agents.

"We are in the process of sending the scientific protocol to university scientists to assess their interest in conducting an investigation," he said. "The plans are to start field evaluations in late spring 2003 and continue through 2004. The goal is to have evaluations on localized dry spot at eight

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## Klingstone protects bunker investment

By ANDREW OVERBECK

**WAYNESVILLE, N.C.** — When it comes to keeping bunker sand consistent and free of contamination, many courses are turning to liners and other materials.

One lining product recently received a patent for its unique polyurethane material that binds directly to the top layer of soil to create a barrier that eliminates contamination of bunker sand and sidewall erosion. Klingstone, which is manufactured by Green Mountain International, is applied as a liquid, allowing it to conform to any bunker shape.

"You apply it directly through a hose and once you wet out the surface it soaks in and forms a layer one-quarter to one-half-inch



Co-inventor Tim Johnson installs Klingstone at Springhill Golf Club.

thick. In 24 hours, it is dry enough to put sand in," said Dennis Galbreath. "It is a urethane polymer so it won't break down and it can take physical abuse."

While the product is more expensive up front, costing \$900 for a 55-gallon drum, Galbreath said it reduces bunker maintenance costs

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## Achieving bunker consistency is a Herculean task

By KEVIN J. ROSS, CGCS

Other than the condition of greens, bunkers are the most talked about and controversial area of the golf course. Most of the talk is from golfers, and superintendents have all heard the comments: too soft, too hard, too wet, too dry, too much sand, too little sand, too inconsistent. While bunkers are a hazard, it is up to superintendents to ensure that they are a fair hazard.

The most important part is the sand quality.

There are very few places in the United States that have natural sand deposits that meet specifications for great bunker sand. Most premium bunker sand today is manufactured in a few locations across the country. These manufactured sands, along with a few rare natural deposits, make the process of finding great bunker sands very difficult and expensive.

What makes great bunker sand? The United

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