many plants on their courses can grow well with less water. "Most golf courses overwater; I don't think there's any question," he said. Dr. Nutter also told owners with poor or expensive water supplies to consider two other options; reseeding the golf course, since it is less expensive than heavy watering, and changing turf. He pointed out that some kinds of grass, such as fescue, need less water than others. Dr. Nutter and William Amick, president of the American Society of Golf Course Architects, also told owners they should consider using sewage effluent to irrigate since water supplies are becoming more scarce.

The owners also received a lesson in customer service etiquette from Pete Garcia, pro at Marriott's Lincolnshire Resort near Chicago.

Although Garcia's talk focused on merchandising goods in the pro shop, those who listened closely found his operation oozing with service. "I have a staff of 22 people," Garcia said. "Every Sunday night, there is a staff meeting. We discuss everything from a lost putter to inventory." To help push new club sales, he offers two free golf lessons on Monday night (his day off), and sold about 35 sets this year. Garcia also pursues groups for tournaments and banquets at his course and sees the head of each group a few days before the event to discuss details. He explained his reasons: "The groups will usually have a secretary to run things, but sometimes they make mistakes. If things get messed up, you look bad.

Garcia, whose Marriott pro shop took in \$400,000 in sales this year, believes good service helped him reach that figure. Others shared his idea. Frank Jemsek said his St. Andrews Country Club in Chicago has its golf cars available unless the course is nearly unplayable. "If a golfer knows that if someone spits on the ground your golf cars won't go our, they'll go play somewhere else." Jemsek has also "winterized" about 20 of his golf cars, installing plexiglass windshields, canvas roofs, and heaters to keep players hands

Cecil McKay Jr., owner of a real estate firm that sells and appraises



The newly formed Alco Battery Co., headquartered in Costa Mesa, Calif., will produce lightweight but heavy-duty batteries for golf cars. The principles are: John Anderson, vice president; Morri Kirk, chairman of the parent company, Alco Pacific; and George Collins, vice president.

golf courses, suggested that owners offer a lower rate for senior citizens to help increase play during weekday afternoons. An NGF survey of 44 courses represented at the workshop found that less than 40 percent offer a discount rate. Yet another idea on service came from Dorian, owner of the Wichita course, who advocated finding flaws in a competitor's service. "The pro at the University of Wichita course won't take personal checks. I do, and I'll bet I haven't lost \$50 in 3 years."

The National Golf Foundation and the Professional Golfers' Association of America offered the owners of each daily fee course in the country at least two ideas to improve their operations.

NFG teaching consultant Carol Johnson informed course owners that the foundation has begun a program that provides teaching pros to daily fee courses that do not offer golf lessons. The NFG is initiating the program after discovering that only 20 0f 125 courses attending a daily fee workshop 2 years ago offered lessons to its customers. The cost to golf courses is \$30 each day, plus meals for the teaching consultant. The NGF suggests, however, that at least a nominal fee be charged to customers to pay for the service. Owners and managers can begin setting up the clinic by contacting the NGF office in North Palm Beach, Fla.

The PGA is attempting to place about 100 third-year students of a professional golf management program in intern positions at courses throughout the country. The students attend Ferris State College in Big Rapids, Mich. to pursue a bachelor of science degree with an emphasis on golf management. They receive instruction in all facets of golf course operations, such as agronomy, food and beverage management, and pesticide application, and each student must have a 7 or less handicap to gain admittance into the program. The student must be under the supervision of a PGA member during the internship. Owners who would like to employ a student should contact the PGA office in Lake Park, Fla.

COMPANIES

Pinseeker stock sold to Metzger

The capital stock of the Pinseeker Corp., Pacific Grove, Calif., has been sold to Michael Metzger of Costa Mesa, Calif. The announcement was made by John Murray, Jr., who is retiring as board chairman.

It was also announced that

John Riley will continue as chief of research, development, and manufacturing.

Pinseeker manufactures a complete line of custom woods, irons, and utility clubs. The clubs are sold through PGA professional golf shops.

PESTICIDES

Fungicide chemical reviewed by EPA

The Environmental Protection Agency is reviewing the safety of cadmium, a chemical used in some fungicides used on tees and greens, after discovering it has caused prostate cancer among workers in battery, rubber, and metals smelting plants.

The EPA says the chemical may also cause mutations in human blood and in rats, mice, and bacteria. The agency further said women of child-bearing ages exposed to cadmium used in home lawn treatment products could produce children with birth defects. It says that rats, mice, and hamsters fed or injected with cadmium have borne offspring with decreased brain growth, cleft palates, and other deformities.

Cadmium is used in products that help remove dollar spot, copper spot, helminthosporium, and curvularia, said Dr. Roger Funk, of Davey Lawnscape Service in Kent, Ohio. The brand names of products containing cadmium include Caddy, Vi-Cad, Cad-Trete, Puraturf, Miller 531, and Crag Turf Fungicide 531. Dr. Funk also said that Daconil 2787, Actidione-Thiram, Dyrene, and Turfsan LSR can be used instead of cadmiumbased products.

The EPA review allows product manufacturers and users, and health and environmental groups to comment on the risks and benefits of pesticides that may be dangerous. The agency than decides to restrict product use, remove it for sale or let it stay on the market. The product may continue to be sold and used until a decision is made.

Persons who want to express an opinion about cadmium should

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write a letter containing their comments by December 10 to the Environmental Protection Agency, Office of Pesticide Programs, Federal Register Section (WH-569), 401 M St. S. W., Washington, D.C. 20460.

DBCP test results to be known soon

Results of tests to determine the fertility of about 170 persons who have applied pesticides that contain dibromochloropropane, known as DBCP, should be completed in mid-December, according to an Environmental Protection Agency spokesman.

The manufacture and sale of products containing DBCP were halted by the federal government when male workers at plants were found to be sterile or have low sperm counts. Fumazone and Nemagon, two pesticides containing DBCP, were used to help kill nematodes by course superintendents in the southeastern United States until the ban. Some golf course workers have been included in the EPA tests.

Frank Davido, an official in the EPA's Office of Pesticide Programs, said researchers are attempting to determine the mobility, appearance, and number of sperm in persons who have been tested. The persons have been given complete physical examinations and blood samples have been taken to test for three hormones that could affect their sperm. Researchers are also compiling a medical history about their exposure to other possibly dangerous chemicals and diseases they have contracted that could affect fertility.

Preliminary data was released at a meeting in Cincinnati on October 20, but Davido would not discuss the group's findings. He said, however, that low sperm counts may not affect a person's fertility.

"What we presented there were sperm count numbers. The most important thing about fertility is not the number, but the sperm mobility."

One problem confronting the researchers is the number of per-



View from the 18th hole shows the newly expanded clubhouse at Kingsmill Golf Club, Kingsmill on the James, Va. Everything to the right of the flag is new: expanded dining and kitchen facilities, a loft cocktail lounge, and a private meeting room. The club and a 6,900-yard championship course are part of a residential-resort community.

sons who do not want to be tested since they must present a sperm sample, Davido said. He said any person who fears he may be sterile or adversely affected by DBCP should contact the Office of Pesticide Programs in Washington, D.C. They may call Davido at 202/755-2778 or 202/426-2535.

ASSOCIATIONS

Planned PGA site shown by Eccelstone

The master plan for the proposed new Professional Golfers' Association complex in North Palm Beach, Fla. won't be ready until mid-December, but developer E. Llwyd Eccelstone is busy selling his residential-recreation idea. He recently plopped a tent down on the 2,300-acre site and invited about 60 persons from all levels of government to discuss his plans, then took many of them for a helicopter ride to better visualize the land. The proposal needs approval from county, state, and U.S. Army Corps of Engineers officials before any construction can begin, and Eccelstone seems to be attempting to work with them to make the plan succeed. "He had about everybody in the world at that meeting," said the corps of engineers' Mike Slayton.

Eccelstone has also flown to California with land planner Edward Durell Stone Jr. to look at four or

five similar golf course-real estate developments, said Eccelstone's public relations agent, Fred Fetterly. And he plans to meet with the Florida Wildlife Federation at their annual meeting December 3 to work out a solution with members who say the project will destroy alligators, other wildlife, and their natural wetlands habitat.

The use of the PGA's 625 acres may also be revised, Fetterly said. Plans to build the headquarters, hall of fame, university and educational center, national golf club, library, and museum are still intact. But although the agreement with the PGA called for three golf courses, architects George and Tom Fazio of West Palm Beach are discussing the possibility of an additional 18 or 27 holes, Fetterly said.

Once the master plan is unveiled, the corps will review its effect on the wetlands. Slayton said Eccelstone gave no idea during the recent meeting where he wanted to place the PGA's buildings or other facilities. The location is the key factor to the corps' decision whether or not to issue a permit allowing construction, he said.

THE ENVIRONMENT

Architects publish golf course findings

A "white paper" that analyzes land clearing, the altering of wetlands, drainage, stream channelization, use of fertilizers and pesticides, noise pollution, and other topics has been published by the American Society of Golf Course Architects.

"Golf Courses and the Environment," prepared by Philip A. Wogan, chairman of the ASGCA environmental impact committee, also covers the positive contributions of golf courses on the environment and impediments to golf course development.

A copy of the report may be obtained by writing the society at 221 N. LaSalle St., Chicago, IL 60601.

METRICS

Tractors to be built using metric system

The use of metric weights and measures to build, operate and maintain tractors could start by next summer. Employees at Ford Motor Co.'s tractor and equipment plant in Romeo, Mich. are taking classes four times a week to learn the metric system.

The company has imported some components from overseas' countries which have used metric measurements for a number of years. But Dick Dewey, a Ford public relations specialist, says the company is stepping up its metric education since Americans will soon have to convert to the system.

"We will begin utilizing metric tools and fabrication methods early