



THE WORLD OF MAINTENANCE IN '97

If necessity is the Mother of Invention, then greenskeeping is the Father of Invention. This is proven again and again, from the shop to the fairway. Experimenting to ease the chemical and financial pressures on maintenance, superintendents have dipped deeply at the well of invention. Among their findings: barley straw fights algae, a molasses and cane sugar mix gives turf a quick flush, and shag carpet is a superior replacement for sod on sod-wall bunkers.

Meanwhile, superintendents and their crews are better educated. There are more college-educated first and second assistants and irrigation specialists. At the same time, burgeoning mechanics programs are starting around the country.

Parallel to all this progress, university scientists — many funded by the U.S. Golf Association — are discovering the impacts, or lack thereof, of golf course maintenance on water supplies, wildlife and the environment.

The maintenance business is fairly bursting with news and discoveries. The following pages give a glance.

— Mark Leslie

OSHA targets ergonomics controls on industry

By MARK LESLIE

WASHINGTON, D.C. — Arguing that ergonomics is the solution, not the problem, the Occupational Safety and Health Administration (OSHA) ergonomics coordinator defended the agency's work to define guidelines for the workplace.

"Our Congressional mandate is to prevent injury and illness in the workplace," said Nancy Adams. "The way the debate gets framed, ergonomics is the problem. But it's not. It's an intervention strategy to prevent the injury from happening, by good engineering, good process design, fitting the job to the worker and not the worker to the job. You can't do that as one-size-fits-all."

OSHA's push into the realm of ergonomics is not new. The first ergonomist joined the agency in 1979, and talks with labor, trade associations and professional organiza-



tions began in the early 1980s. But the business and industry communities got concerned when, in 1992, an "Advance Notice of Proposed Rulemaking" targeted such items as:

- Lifting or carrying anything weighing 25 pounds without assistance more than once during a workshift.
- Using vibrating tools, which would include weed-eaters, for more than two hours.
- Working in awkward positions (such as kneeling, stooping or squatting) for more than two hours.
- Performing the same motions every few seconds.

"That's called labor," quipped one superintendent regarding the 25-pound limit. "The standard weight [for bags for various products] is 50 and 80 pounds."

Various other chores on a golf course maintenance crew

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Fathers of Invention

GCN JANUARY

Carpet-wall bunkers expected trend-setter

By MARK LESLIE

SCITUATE, Mass. — Some inventions seem to be just laying around under a bush waiting to be discovered by an innovative mind. Such was the case of the "sodwall bunker kit in waiting" — Dr. Michael Hurdzan's answer to standard, old-time stackwall bunker.

Fresh from a trip to Scotland, the home of sod-wall bunkers, Hurdzan was walking the property of what would become

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No, this is not sod, which needs repair every couple of years. It's shag rug.

GCN AUGUST

Barley straw a fatal attraction for pond algae

By MARK LESLIE

TORONTO — News flash: Folk remedy strikes at the heart of the pond algae problem.

While science and technology are striving to remove algae from ponds, some superintendents are accomplishing the task with a simple bale of barley straw.

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A bale of barley straw floats atop a one-acre pond at Toronto's Board of Trade Country Club.

GCN JANUARY

Mounted hose reels equal easy watering

By KEVIN J. ROSS

VAIL, Colo. — In all my years in golf course management, I have yet to see the perfect irrigation system. I do not believe this is due to a lack of irrigation design or equipment, but rather of agronomic science. Let's face it. No irrigation system can replace the agronomic benefits of a good hand-watering program. If you're not hand-watering on a consistent basis (when needed), perhaps you should evaluate your watering practices.

Hand-watering is a pain, but it can make

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Three types of hose reels used at Country Club of the Rockies: mounted to an E-Z-GO (left); mounted to a Kawasaki Mule (center, in use); and mounted to a fabricated trailer.



GCN MAY

Ground, surface water: Minimal impact

By MARK LESLIE

WHEATON, Md. — Preliminary findings of studies monitoring ground- and surface-water quality at nearly 40 golf courses re-enforce golf industry claims that courses are not a danger, particularly when compared to other sources of chemicals, according to Stuart Cohen, president of Environmental & Turf Services, Inc. here.

"Overall, these results show that golf courses are not having a significant impact on human health or aquatic organisms relative to other sources of chemicals in the environment," Cohen said of the study he conducted for the Golf Course

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GCN NOVEMBER

Dicamba, 2,4-D no problem on greens

By MARK LESLIE

BELLE GLADE, Fla. — A two-year study of a U.S. Golf Association-specified golf green by University of Florida Profs. George Snyder and John Cisar has found that concentrations of the herbicides 2,4-D and dicamba were low in the thatch and soil and far below federal maximum contaminant levels (MCLs) in percolate water.

"Dicamba and 2,4-D, particularly dicamba, are pretty mobile in sand soils, and most people don't want any in their drinking water," said Snyder, adding, "As far as I know,

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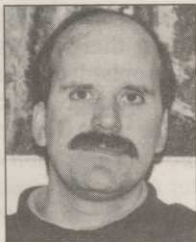
Notable quotables



Judy Bell

● "If we want perfect we can just stay at home and putt on a rug."

— Judy Bell, president, USGA



Kevin Ross

● 'You can spend a long time in a filing cabinet, or you can get a computer.'

— Kevin Ross, CC of the Rockies

● 'You've got to use common sense out there. It's like working in a fish bowl. People see what you're doing. Three or four kids edging a bunker is not acceptable.'

— Bob Feindt, superintendent retiring from CC of Rochester

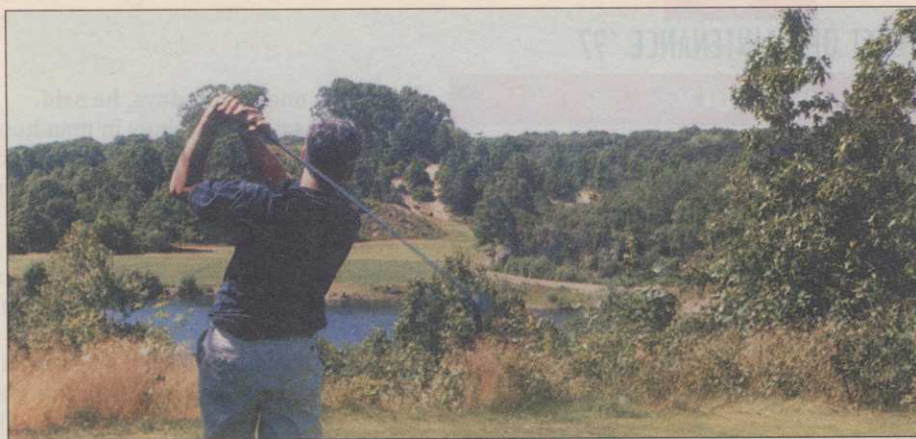
● 'We tried in the '40s, saying spikes were terrible on the turf, and that did nothing. No, the impetus for going 'spikeless' is the golfers. It has nothing to do with research, or the USGA ... or anything else.'



Jim Snow

— Jim Snow, USGA Green Section director

A golfer tees off over a pond 80 feet below on the par-4 17th hole, which exemplifies the ecological character of Widow's Walk Golf Course.



Peter Blais photo

Carpet-wall bunkers

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Widow's Walk Golf Course here — an abandoned gravel site. "He's walking along and finds this ugly carpet under a bush, and all kinds of light bulbs go off with him, and him alone," recalled Widow's Walk superintendent Jeff Carlson.

Voila! The idea of the "carpet-

wall bunker" was born.

"Maybe this will change the face of American golf a little bit," Hurdzan said. "It will add spice to a linky golf course."

"As an alternative to sod, I can't think of a better one," said Carlson. "It has the potential to really stay in the industry."

"You had to have the right client to try it," Hurdzan said. "This was the perfect opportunity because of the experimental side of the project. Now that it's done it will be a much easier sell."

"I think sodwall bunkers add such a distinct flavor to a golf course that you can't replace any other way. The problem is maintenance. They have to be replaced every three to five years. You can't get anybody in North America to do it. I'm sure that, early on, sodwall bunkers were common here because of the Scottish influence. But at some point they died out, probably because of maintenance factors."

After experimentation with 6-foot and then 3-foot lengths of carpet, Carlson settled on short pieces, which can be built into "a little curvy wall kind of like a brick wall."

The carpet is flexible and can be turned a bit like sod for rounded bunker faces, he said.

Between each layer of carpet Carlson's crews spread 1/4 to 1/2 inch of soil and then seeded it. "We wanted the grass to grow and fill in. The seed buries its roots into the next carpet and gives it some structure."

Carlson recommended carpet that is not quite deep-pile shag, because it has to have body. Earth-tone colors like brown, beige and green are good, he said, because it tends more quickly to look like dirt quicker.

"Superintendents, given this idea, will fine-tune it and make it even better," he said. "It's labor-intensive to build, but it is to build a stackwall bunker, too. And these will never have to be rebuilt."

Meanwhile, a local carpet installer gleefully dropped off his carpet remnants for Carlson initially. "Now I'm getting carpet from everywhere."

•••

Hurdzan acknowledged that for years he had searched for ways to build cost-effective sodwall bunkers.

"I've tried all sorts of things to build them: zoysia, old grass, young grass, stuff with a lot of thatch, painting the sod with lacquer so it wouldn't decay, things to try to slow down the decay of bacterium," he said. "But I concluded that organic matter decays, and so I've tried to come up with an inorganic source."

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