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.

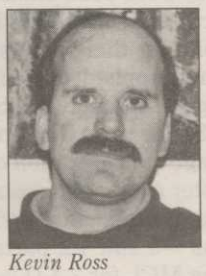
Parallel to all this progress, university scientists — many funded by the U.S. Golf Association — are discovering the impacts, or lack thereof, of golf course maintenance on water supplies, wildlife and the environment.

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

— Mark Leslie

Notable quotables

Judy Bell



Kevin Ross

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

— Judy Bell, president, USGA

● **'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

GCN JULY

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 organizations 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

Continued on page 20

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

Continued on page 17

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

GCN AUGUST

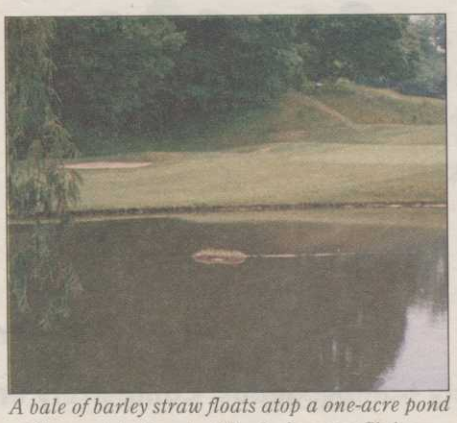
Barley straw a fatal attraction for pond algae

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.

Continued on page 19



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

GCN JANUARY

Mounted hose reels equal easy watering

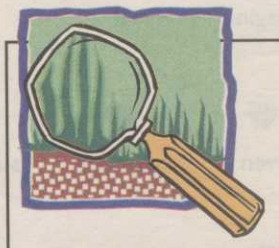
By KEVIN J. ROSS

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

Continued on page 19

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

Continued on page 15

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,

Continued on page 14

Hose reels

Continued from page 13

or break the condition of your golf course. Hand-watering has been a major part of my management program for many years and at different courses. I have tried to simplify hand-watering as much as possible. Peers who visit my facility often comment about our hose reels which have been adapted to simplify the process.

Hose reels simplify the operation of hand-watering greatly, saving both time and frustration, and many superintendents already use them. No one wants to untangle a spaghetti-like watering hose, and this is never the case with hose reels.

Many types of hose reels are on the market. We prefer to use one made by Hannay of Westerlo, N.Y. We use one base reel that comes with two options: hand-crank windup, or electric windup. Both are excellent, but the electric windup costs double.

My equipment manager, Mike Koehn, fabricates hose-reel framing that we mount inside certain utility vehicles and small trailers. We simply bolt the reels to the framing or trailers. On one end of the reel there is a 1-inch pressure swivel joint. A 1-inch or 3/4-inch hose can be used on the reel, depending on your preference.

At this point, we use a 1-inch MPT by 3/4-inch Insert fitting (we like 3/4-inch hose), threaded into the swivel joint. Then we attach a 5-foot-long section of hose with a female end and clamp it on the 3/4-inch insert side of the fitting. At the end of this hose we mount a quick-coupling key. The interior of the hose reel has a 3/4-inch FPT mounting area, where we thread a 3/4-inch MPT by 3/4-inch Insert fitting into this mount. We then clamp our desired hose length(s) to the insert side of this fitting. Make sure this hose has a male end, so you can attach additional lengths of hose and any watering nozzles you might like to use. We install 150 feet on most of our reels and that works fine. The reels we use are capable of holding 250 feet.

Using these reels is simple. Drive your vehicle close to the quick-coupling valve and attach the key end with the 5-foot section into that valve. Then pull as much hose off the reel as desired to do the necessary watering. When finished, unplug the quick-coupling valve and wind the hose onto the reel. The speed and efficiency is impressive. You can unwind or wind 100 feet of hose in about 20 seconds, and that beats any other method I know.

Barley straw

Continued from page 13

"Generally speaking, I'd say it works," said Gordon Witteveen, director of golf maintenance for the Board of Trade's five golf courses here.

Witteveen, who has two or three bales of barley straw in each of his half-dozen ponds, said, "We've implemented it and had pretty darn good success."

Two bales per acre of pond is sufficient, he said. He suggested wrapping the bale with chicken wire or fishing net to prevent its falling apart when it decomposes. The bale floats, anchored by a string tied to a cement block.

"In Canada we can't use any dye or chemicals for aquatic weed control in non-self-contained ponds. If the pond is self-contained, you can use chemicals, but you must get a permit for every application," Witteveen said. "Mechanical harvesters, or long rakes can take algae out. Fountains work well, too. This [barley straw] is another tool."

But why would barley straw rid a pond of algae?

"This is my theory," said Dr. Eric Nelson of Cornell University, who has seen this method work. "It ties up nitrogen during decomposition of the barley straw. And since it's the nitrogen in the water that promotes algal blooms, they stop.

"I have not seen any research to prove this. But it makes sense. When you mulch plants with wood chips sometimes those chips pull nitrogen right out of the plant."

One difficulty could be in finding pure barley straw to begin with. But the farmers Witteveen works with have a large percentage of barley in their fields, he said.

Meanwhile, using the bales adds a novelty to the course, right? "Everybody is talking about it on the golf course," Witteveen said. "They're asking, 'What are these bales of hay?' "