

EQUIPMENT

Lesco gets rights to mixing system

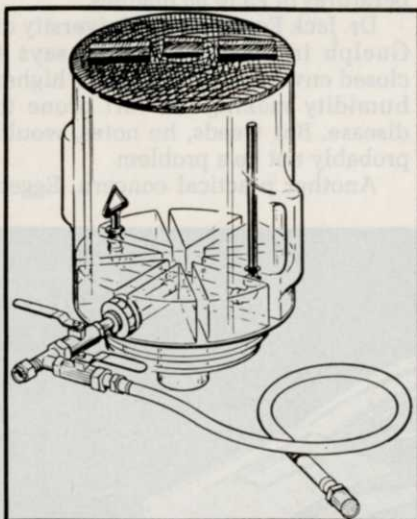
A Closed Mixing System for use with pesticide containers and wettable powder bags has been obtained by Lesco, Inc., Rocky River, Ohio.

"This system minimizes pesticide exposure during the most critical period, spray tank loading," notes Dr. Bruce Augustin of Lesco, who refined a design of Bob Brock, a golf course superintendent in the Washington, D.C. area.

The system mixes bagged pesticides into spray tanks without opening the bag. The rinsing action of the system efficiently empties wettable powder bags. The system is completely portable, allowing it to be used on any spray tank.

Wettable powder bags are opened by thrusting them on top of an arrowhead-shaped knife mounted on a spray nozzle. A water valve is opened, and the Closed Mixing System does the rest. All the operator needs to do is remove and dispose of the bag and triple-rinse the containment vessel by turning the valves back on three times.

A hole in the bottom of the containment vessel allows all product



and water to run directly into the spray tank.

"We use 3/4-inch pipe, which gives maximum pressure for a quick wash-out," notes Augustin.

The vessel can also be used for washing out one- to five-gallon containers, which are placed upside-down over another, taller nozzle.

Lesco hopes to have the Closed Mixing System on the market soon. For more information, call Dr. Augustin at (800) 321-5325 nationwide, (800) 362-7413 in Ohio.

ATHLETIC TURF

Real grass in a dome?? Maybe, say Toronto fans



Rose Marie Branson: tired of living in a plastic world

It was a meeting of the minds...Some of the best in turf science. And, a meeting of emotions...some of the best Blue Jays fans in Toronto. Together, it made for an historical day in the athletic turf industry: The first time that a North American city has seriously looked at putting natural grass in a new dome stadium.

Well, some skeptics might point out that years ago Houston tried it in the Astro Dome, but the grass died. No one has dared discuss the issue since.

Things have changed. The turf industry has changed. "The technology is available although it may not have been applied previously," says Dr. Jim Watson, vice president of Toro. "There are new construction techniques which were not available five to seven years ago. There are new management techniques. We know far more today than previously."

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"In case of accident..."

This is a common phrase, but in the case of pesticide storage and use, it can be backed up by some valuable information.

Roger Cagle, superintendent at Indian Hills Country Club, Marietta, Ga., gave attendees at the GCSAA show some tips on surviving chemical accidents and—just as important—preventing them.

If an accident occurs, he says, the worst thing to do is to attempt to cover it up. Do the opposite:

- Inform everyone affected by the problem, including the greens committee chairman, the club pro and manager and members.

- Take action. Develop a plan to deal with the problem, keep a high profile and keep unaffected areas of the course in good condition.

A good prevention plan can reduce the possibility of accidents, Cagle says.

1. Store chemicals properly.

- Store chemicals in their original containers and keep them labeled.

- Isolate higher-risk chemicals.

2. Use proper application techniques.

- Train employees properly on equipment and chemicals.

- Clean spray equipment thoroughly after use.

- Calibrate the equipment frequently to ensure proper application rates.

- Maintain good records. If a problem does occur, good records can go a long way toward diagnosing them.

3. Color code the chemicals. This can be done by manufacturer or type. Doing so reduces the chances of mistakenly using the wrong chemical for a job.

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The day of grass education was organized by Blue Jays fan Rose Marie Branson who says she's tired of living in a plastic world. The *Toronto Star* sponsored the seminar.

Besides Watson, Dr. Bill Daniel, inventor of the Prescription Athletic Turf system and Steve Wightman, field man-

degrees, while shoots need temperatures of 75 to 85 degrees.

Dr. Jack Eggen of the University of Guelph in Ontario, Canada says a closed environment may have higher humidity making the turf prone to disease. But weeds, he notes, would probably not be a problem.

Another practical concern, Eggen

CHEMICALS

EPA, scientists call Milorganite safe to use

Researchers and federal environmental officials have stressed the fact that no link exists between amyotrophic lateral sclerosis—also known as Lou Gehrig's Disease—and Milorganite.

"You can continue to use Milorganite," says Alan Rubin, chief of wastewater solids criteria branch in the U.S. Environmental Protection Agency's Office of Water. "There has been no causal link between Milorganite and ALS," Rubin emphasizes that the cause of ALS, a rare disease that kills by slowly destroying nerves that control muscles, remains unknown.

Possible links between the disease and the natural organic fertilizer were first made in the *Milwaukee Sentinel* before quickly spreading to national media.

The link was first suggested after it was learned that three former San Francisco 49ers had contracted the fatal disease. Three out of 55 team members is an unusually higher incidence for ALS.

No one could confirm Milorganite was used on the field when the three played. But Dr. Benjamin Brooks, director of a research clinic at the University of Wisconsin-Madison, told the *Sentinel* that the fertilizer might have been the cause. Some research has suggested a link between the disease and exposure to a toxic substance in diet or environment.

In a televised interview in Milwaukee, Dr. Alfred Rimm, chief of biostatistics at the Medical College of Wisconsin, said Dr. Brooks was "out of his water"—that as a neurologist, he should stay out of epidemiology. Dr. Rimm also said there was no need for a study of Milorganite since there is no basis for the alleged link.

One television editorialist in Milwaukee accused the *Sentinel* of sensationalism in its handling of the story.

At this point, it is too early to tell if the allegations will have any effect on spring sales. Milorganite is manufactured from sewage sludge by the Milwaukee Metropolitan Sewerage District.

SEED

Turfseed supply may remain low

Though it is a bit early to tell for certain, indications are that the 1987 seed supply will be similar in quantity to



The proposed Toronto dome stadium may use natural turf.

ager at Denver's Mile High Stadium, which uses a PAT system, addressed the crowd of about 100.

The Toronto dome stadium will be built with a retractable dome. Daniel suggested leaving the stadium open most of the time, closing it only to protect people. Daniel says the underground pumps in the PAT system would help the turf to survive indoors.

"We're making a living area for roots," Daniel says. "We now have the technology to manage the root zone."

Watson says that turf variety would depend on what's available in the area, but recommended a fine-leaf tall fescue with a five to 10 percent Kentucky bluegrass.

"The most critical thing is light," Watson says. "You cannot give consideration to grass unless you're prepared to provide light."

Even if the dome is left open most of the time, lights will be necessary for those times when it is closed.

Watson says that 10,000 foot-candles of light are necessary for turf to grow at its full capacity. It can grow, however, with 2,000 foot-candles. He recommends at least 40 to 50 percent of full sunlight capacity.

The lights could be on retractable tracks, although such aspects are engineering considerations.

Heat is another consideration. Watson says roots grow in 55 to 65

points out, is an external greenhouse to grow extra sod or store the turf if it's taken out each winter so trade shows can be used in the dome. Another option is to let the turf die and re-sod each winter with new sod. Or, the stadium committee may decide to maintain the turf year-round, with a raised floor for trade shows.

Wightman says that stadiums can be used for multi-purpose events, like rock concerts. He says the use of geotextile materials, such as Warren's TerraCover, to cover the turf before laying down plywood or chairs helps distribute weight, protects the blades, and allows the turf to breathe. When he used this system for the Bruce Springsteen concert, the turf received little damage.

Mile High Stadium can be converted from football to baseball in 13½ hours, says Wightman. This conversion includes completely moving the seats.

"We have overnight versatility and yet we have not sacrificed the safety and playability of the field," Wightman says.

Safety is the prime motivating factor in going with grass. Statistics prove that injuries occur more often on synthetic surfaces.

"Technologically I have no question about our ability to grow grass in a dome stadium," Watson says.