

Don't Cry Over Spilled Chemicals

Preparation can minimize the damage caused by an accident

By Frank H. Andorka Jr., Associate Editor

Bill Spence, superintendent of The Country Club at Brookline, Mass., remembers the day the tractor tipped on the 17th fairway, spilling 700 pounds of granular Turcam insecticide.

Spence was stunned. How was he going to deal with a chemical spill that large?

"We got together with all of our workers and tried to figure out how we were going to deal with this," Spence says. "We wanted to fix the problem while causing the least amount of damage to the environment. It was a tense scene."

Spence's story could be a superintendent's worst nightmare.

With golf courses often perceived by the general public as environmental menaces, a chemical spill can quickly turn into a public relations disaster. But with a well-conceived plan and a well-trained staff, most spills aren't worth weeping over.

Designing a proper storage facility starts the plan off on the right foot (see sidebar). Nancy Richardson, director for Audubon International's Signature program, says her organization recommends storing chemicals in a separate building, away from other equipment.

The building should be constructed with concrete and sealed with an impermeable substance. Build a 6-inch berm around the edges to contain any spills. The key is to keep superintendents in control during a spill.

"If you keep all your chemicals in one building, you know where to focus your cleanup plan," Richardson adds. "It's imperative to do

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ILLUSTRATION BY DAN BEEBY

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everything you can to isolate a spill.”

You should also train staff members in proper pesticide handling, says John Kopack, superintendent of The Legacy Club at Alaqua Lakes in Longwood, Fla. But keep training simple so employees don't get confused, he says. “Everyone has to have the same understanding of what needs to be done in case of an accident so they don't panic in a crisis,” Kopack says.

Roger Barrett, superintendent at Stevinson Ranch GC in Stevinson, Calif., says it also pays to keep close supervision on what crew members are doing as they mix chemicals before they take them on the course.

Barrett says that either he or one of his assistants ensure the building is clean so there's no runoff on that could damage the environment. “Not only do we put our people through an extensive training program, we also keep fairly

close watch on what's going on,” Barrett says.

Getting local authorities involved in the planning is vital, Barrett says. The fire department in Stevinson mapped the course so it knows where the chemicals are in case of a spill, he says. Barrett is also required to report his chemical inventories to the state every month. Spence says he also works closely with the fire department and state authorities so everyone knows what chemicals The Country Club uses.

To keep track of paperwork, Barrett and Spence have one employee dedicated to keep inventories and material safety data sheets current. If there's a problem, that employee becomes the liaison between any hazardous material crews and the course. “That's a full-time job,” Spence says.

But no matter how involved your planning is, you need to know what to

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CARING FOR CHEMICALS

Here are some tips on how to build the best chemical storage facilities:

- The foundation should always be concrete. The subgrade should be properly prepared to prevent frost heaving or sinking.
- Consider building a raised concrete foundation that is 10 to 12 inches above ground level to provide more protection against flooding.
- The floor should be sealed with epoxy or another impermeable coating to prevent materials from being absorbed into the concrete and to make cleanup easier.
- The facility should have a raised, 4- to 6-inch concrete berm around the perimeter to contain liquid spills and direct the spilled material into one or more floor drains.
- The floor should slope slightly toward drains to make washdowns easier and prevent rinsed material from standing.
- The floor drains should allow for rapid sealing and/or lead to a buried tank that can hold 500 gallons or more of spilled or rinsed materials.
- The tank should be installed next to, not under, the facility to make the pumping out of the material easier.
- Vent fans are essential at all facilities. Each room within the building should be vented separately.
- Though regulations only call for a total air exchange six times per hour, an ideal air exchange should be more rapid — up to once per minute. A single, standard 20-, 24- or 36-inch vent fan should suffice.
- All electrical fixtures and wiring should be non-explosive, and a single switch should operate both lights and vent fans. Consider mounting the switch outside the facility so the ventilation system can be operating before a worker enters.

Source: Golf Course Maintenance Facilities: A Guide to Planning and Design, GCSAA.

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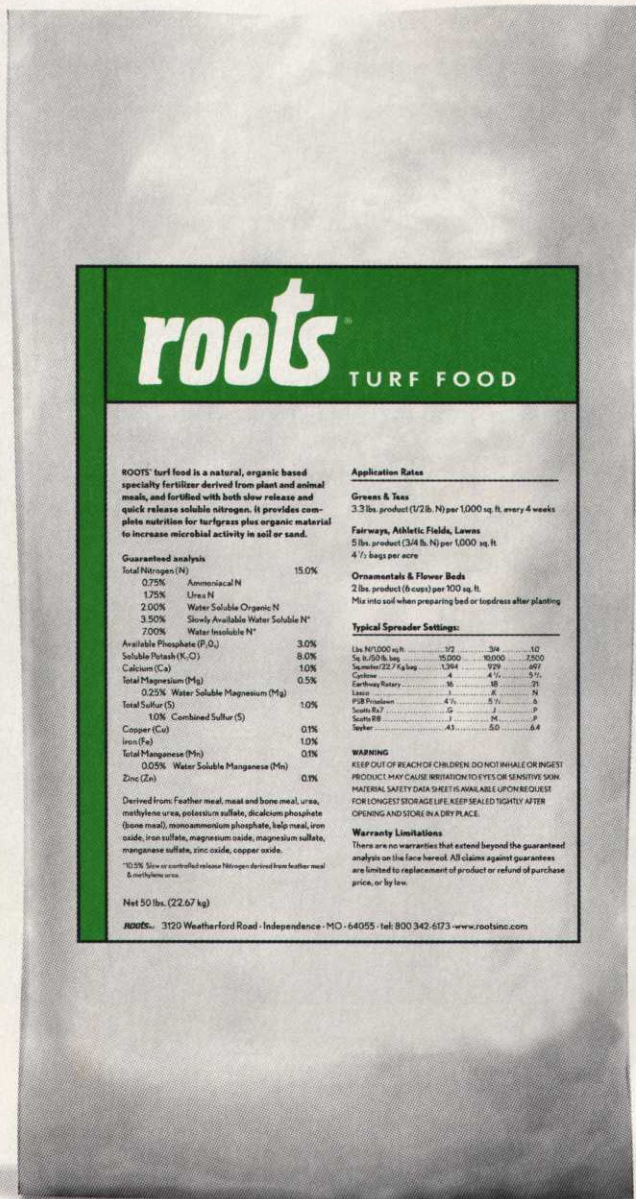
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do in case of a spill. First, contain the spill in as small an area as possible. Richardson says myriad products will help a superintendent do that, from kitty litter to “chemical pillows,” which absorb the chemicals to keep them from spreading.

Once a spill is contained, a course should call its local fire department to alert it to a spill and coordinate cleanup plans, she says. Richardson suggests a course install a pump in its storage facility that can move chemicals back into a sprayer. A sump pump installed in the floor can help with the process, she says. Barrett says his system is designed to do that.

“Our whole system is predicated on keeping it closed so that nothing can escape,” Barrett says. “We want to make sure that if anything spills, we can stop it from spreading and, when possible, use it again. Fortunately, we’ve never faced that situation.”

So what happened to that 700 pounds of Turcam that spilled at The Country Club? Spence gathered crew members together to brainstorm for a solution. Their first instinct was to water the insecticide into the ground, but Spence thought that would spread the chemical to a wider area instead of containing it.

So instead of making the problem worse, the staff modified a high-power vacuum — turning it into a wet-dry vacuum with separate chambers and filters — to suck the product off the turf. After donning protective clothing — boots, gloves and safety goggles — and rolling a portable generator out to the site to plug in the vacuum, Spence and his crew tried their solution and it worked.

“First, we scooped as much of it off with shovels as we could and put it back into the trailer,” Spence says. “Then we brought out our modified vacuum and went to work.”

He’s glad his crew knew what it needed to do and was able to execute the cleanup plan with little disruption to the course. “Cool, clear thinking prevails when you plan ahead,” Spence says. ■