Field Notes

THE DILEMMA OF PESTICIDE DISPOSAL

By Ric Lange

Editor's Note: Ric Lange, Golf Course Superintendent at the Reedsburg Country Club, is a 1982 graduate of the University of Wisconsin — Madison with a Bachelor of Science degree in Soil Science and a Turfgrass Management Specialty. He has worked as a staff member at Blackhawk Country Club and Golf Course Superintendent at Edelweiss Chalet Country Club in New Glarus. Ric and his wife Cheryl, an audiologist for a Portage hospital, reside in Reedsburg.

As Golf Course Superintendents, we have a responsibility to our membership and patrons to keep our courses in the finest possible condition. In doing so, we all find it necessary, at one time or another, to employ chemicals to control fungi, insects and weeds in and around the swards of turf that we maintain. In addition to these responsibilities, we also need to concern ourselves with the effect of these materials on the environment.

I feel strongly that Golf Course Superintendents must assume the responsibility to insure that our use of pesticides does not contribute to the pollution of our natural resources. It is my hope that by sharing with all of you my rather limited experience with a situation of this sort that I may shed some light on the proper approach to resolving a similar problem that anyone managing a golf course might encounter.

When I started at the Reedsburg Country Club, I faced many of the challenges that every other new Golf Course Superintendent must deal with at the onset of their position — equipment maintenance, crew organization, development of pesticide and fertility programs, to name a few. I felt prepared to tackle these challenges and confident that things would fall into place. It was during my first day that I noticed a peculiar odor coming from the back of the shop, near the storage shelves. The smell was reminiscent of a phenoxy herbicide, but far more pungent. When I examined the containers on the shelves I found a startling array of pesticides in leaky cans and water soaked bags, some with labels intact, others without. I honestly did not know where to begin on this one!

After a few calls to friends and colleagues I located a specialist in hazardous waste disposal with the Department of Natural Resources. As a result of my discussions with him I learned the steps necessary to properly dispose of the wastes. The first order was to locate good quality containers to put the leaky cans into, controlling any further leakage. I had three choices of containers. Metal containers, which corrode in contact with many chemicals, were a relatively poor choie. Fiberboard (thick paper) containers that can hardly contain water were even worse. This left rigid plastic as the wisest choice. However, I had never realized how expensive plastic drums could be until I started pricing them from various manufacturers. Somehow I could not justify spending $200.00 or more for four containers that were intended for disposal. Then I recalled how, at Edelweiss Chalet Country Club in New Glarus, we had purchased large plastic drums from a local meat market and cut the tops off for use as trash receptacles. The drums I used in Reedsburg came from a meat cutter in Sauk City. They are made of a heavy plastic with tight fitting screw-on lids complete with O-ring seals.

The next step was to clear the shelves of the hazardous containers and pack them in the drums. It is important, when packing these materials, that only similar compounds are packed together (e.g., phenoxy herbicides, pre-emergent herbicides, fungicides, and so on). If you have ever seen the product of an incompatible tank mix you can well imagine the results **without** the dilution of water.

After the durms are filled with the hazardous containers, they should be filled with a loose substance, such as sawdust, to make the contents more physically stable. The drums should then be sealed and clearly labeled as "Hazardous Wastes," along with the type of waste they contain, and then they should be placed in a safe location for temporary storage. I was unable to simply clean the shelves that held the pesticides and ended up disposing of them also. During the entire clean up process I was clad in protective clothing, rubber gloves, a respirator and safety glasses. I would recommend this for anyone attempting to clean up such a mess.

With this task completed, one can rest easier knowing that the work environment is safe. But the job was only half over. At this point a waste management contractor had to be located. After some extensive legwork and an enormous phone bill I found two such firms in the state. One firm, Waste Management Incorporated in Menominee Falls, did not appear very eager to assist such a small waste generator, with less than 100 pounds of waste. The second firm, Waste Research and Reclamation in Eau Claire, was much more open to my problem. They promptly sent me an information package including educational literature and a waste generator's material profile sheet (see Figure 1) to describe the type of waste, and labels to affix to the drums. I learned from a Waste Research and Reclamation representative that our waste would be land-filled in Idaho or Arkansas. Other wastes may be incinerated, chemically destroyed or reclaimed by processing and recycled.

These are environmentally sound methods of hazardous waste disposal and do not come cheap. One drum of waste can cost up to $500.00 for disposal. On the other hand, improper disposal is dangerous, morally unacceptable and can be seen as even more costly in terms of fines and/or legal action.

Re-iterating, the proper way to dispose of unused pesticides or hazardous wastes is to:

— clean up and contain materials,

— secure and label containers,

— contact a hazardous waste management contractor to dispose of the waste.

By using sound disposal methods and a great deal of care with pesticide handling, we are protecting our environment from degradation and ourselves from legal and moral prosecution. Let us all do our share to keep Wisconsin safe to enjoy for years to come.