

# Frost in Florida?

**YOU BET! AND YOU'D BETTER BE ABLE TO EXPLAIN FROST DAMAGE TO YOUR GOLFERS.**

*Editor's Note: It's that time of year. Here is some general information on the potential for turf damage when the course is having a frosty morning and comments by fellow superintendents on how they handle the necessary delays at their courses. This information can be accessed at [www.gcsaa.org](http://www.gcsaa.org).*

## How can a footprint be a killer?

When it's a footprint made on a putting surface that's covered with frost. It's hard to believe that simply walking across a golf green covered with frost can cause so much damage, but the proof will be there in a few days as the turfgrass dies and leaves a trail of brown footprints. That's why most courses will delay starting times until the frost has melted. And it's also why golfers who appreciate a quality putting surface will be patient during frost delays.

## Why does frost cause problems?

Greens are fragile. The putting sur-

face, or green, is an extremely fragile environment that must be managed carefully and professionally. Remember that every green is a collection of millions of individual grass plants, each of which is a delicate living thing. Obviously, Mother Nature never meant for these plants to be maintained at 3/16 or even 1/8 of an inch for prolonged periods. This stress makes greens constantly vulnerable to attacks from insects, disease, heat, drought, cold - and frost.

Frost is essentially frozen dew. It can form when the temperature (or wind chill) is near or below the freezing point. The ice crystals that form on the outside of the plant can also harden or even freeze the cell structure of the plant. When frosted, the normally resilient plant cells become brittle and are easily crushed. When the cell membranes are damaged, the plant loses its ability to function normally. It's not much different from cracking an egg. Once the shell is broken, you can't put it back together.

## The proof is in the prints

Although you won't see any immediate damage if you walk on frosted turf, the proof will emerge within 48 to 72 hours as the leaves die and turn brown. And, since just one foursome can leave several hundred footprints on each green, the damage can be very extensive.

## Thanks for understanding

The damage isn't just unsightly - putting quality will also be reduced until repairs are made. Those repairs are expensive and, in some cases, the green may have to be kept out of play for days or weeks until the new turfgrass is established. A short delay while the frost melts can preserve the quality of the greens, prevent needless repairs and may even save you a few strokes the next time you play.

## Super Tips - Avoiding a frosty reception

Frost delays may be among the most contentious issues a superintendent will encounter during late winter and early spring. Temporarily closing the course until frost subsides can prevent unnecessary damage to turf, but it can also anger golfers eager to tee it up and club professionals anx-

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ious to give their cash registers an early-season workout. Finding the best way to communicate the benefits of these frost delays to both golfers and other golf course personnel was the topic of some recent postings on the discussion forum in the members-only portion of this site.

*We are lucky enough to have a pro who understands that golfers cannot get on the course until we give them the go-ahead. We use radios to contact the pro with the information he needs. I have also seen signs describing the dangers of playing on frost posted in the pro shop and near the practice green or first tee. . . Enforcement of the frost policy is the superintendent's job, and educating and communicating with golfers and the pro shop staff is an important part of our job.*

*Robert Wright  
Assistant Superintendent  
Tokatee GC, Blue River, Ore.  
6-year GCSAA member*

*Each year I post a message in the club newsletter about frost and how it impacts the turf and the golfer. This notice is also posted in the locker rooms. I have a personal meeting with the pro shop and switchboard staff to explain the policy, the rationale and the procedures for making the calls. Either I or my assistants go to the point position, which may be the first tee or the pro shop to answer questions from each and every golfer. This eliminates miscommunication and gives us a chance to interface with the golfers.*

*Bruce R. Williams, CGCS  
Los Angeles CC, Los Angeles  
22-year GCSAA member*

*One thing that I have tried is to build communication between the superintendents and the golf pros. I had the opportunity to be an instructor at a golf school, teaching golf-course management. I have seen a tremendous change in the level of respect due to this educating.*

*Thomas Trammell, CGCS  
Hawks Nest GC, Vero Beach, Fla.  
11-year GCSAA member*

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Scenes of winter in New England? How about late winter early-early spring in Orlando. Granted these photos of Disney's Osprey Ridge GC were taken in March 1992, but frosts are a reality to be dealt with every year. Photo by Joel Jackson

**GCSAA Web note**

Visit the "For Your Golfers" section for information you can post on your bulletin board on frost delays.

*I make sure that I or someone from my staff is around the clubhouse to keep an eye on the golfers and to address any questions that may be asked about the delay. I also make it a point to inform the pro shop staff as to why we have a delay and also point out the damage that can be*

*done. Golfers are always going to be impatient. The best thing to do is to be there to teach them why certain situations happen. I have found the more golfers know about maintenance, the more they appreciate the conditions they are given and the more tolerant they are when conditions aren't that great.*

*Steve Cronin, superintendent  
Pinecrest GC, Holliston, Mass.  
5-year GCSAA member*

Using water-soluble material to create a dry environment for pvc cement  
**Forget the Bread**

*By Dale Walters, CGCS*

Every once in awhile we all have an epiphany. A light bulb moment. A slap on the forehead - why didn't I think of this idea sooner? An idea that we feel might be original, brilliant, astounding, revolutionizing and ultimately really useful to our industry and to others.

I recently had such a thought. In July I had a 3-inch pipe line that was leaking at a tee fitting. After valving off the area, I cut the pipe and waited for the line to drain, and I waited, pulled some weeds, waited, wrote a To-Do list, waited, then I used a sump pump to remove the draining water flow. The drainage flow continued into a second day. I wanted to use pipe cleaner and pvc cement for the replacement fittings. But with the continuous flow I had to wait until it ceased to make a dry repair.

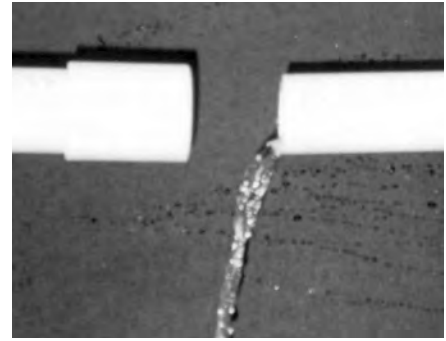
In the past, I have used bread to block the

flow but there were nearby sprinklers and I have seen them clog up from the bread. Then the heavens parted and an idea fell out of the sky. After all, I had plenty of time to think while waiting for the flow to stop. So, it was at this time that I came up with the idea of using water-soluble material to stop the flow and give me time to make a dry situation for the pvc cement.

For several years, I have been using acephate (Orthene) in a water-soluble bag. I thought about the timing it takes for the bag to break down and if I could use a similar material it would be enough time to make the repair. Using a water-soluble material would mean I would not need to be concerned about the pipe lines being clogged after the system is pressurized.

I located a distributor of water-soluble materials that are being used primarily in the medical field. After a visit with the distributor, I was given several types of product to play with. I ran several experiments in the shop to figure out which product would work best in the field.

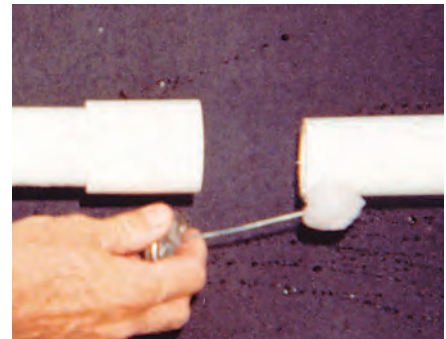
Fortunately (and unfortunately) I had several irrigation leaks shortly after receiving the material. I had one 8-inch, one 6-inch, one 4-inch, one 3-inch,



Slowly draining irrigation lines can hold up repairs to leaks at critical times.



Insert water-soluble material into pipe to block flow. The material will dissolve completely and not plug up sprinklers.



Have all fittings and materials ready-to-go. The temporary plug will provide adequate time to make a pvc cement repair.

and two 2-inch pipe leaks. Instant field testing! In each case I was successful in using the water-soluble material to stop the drainage flow which allowed me the opportunity to make the repair before the flow stopped.

The bruises on my forehead from my "Why Didn't I Think Of This Sooner" experience faded, and in September, I applied for and received a provisional patent for the use of water-soluble material to stop a flow in a pipe line. Presently, I am seeking how to market the material so that others can benefit from the time-saving method of making pvc repairs.

*Editor's note: Dale submitted his innovation for irrigation repairs while he was still a superintendent at the Royal Palm C.C. in Naples. This isn't a plug for a Lesco product, but it might be some day. For current contact information, see the inside cover. Good luck, Dale!.*