



# TURFGRASS MATTERS

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## Patience is a Virtue

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**I**t's that time of year again in the Mid-Atlantic Region when those of us involved with the game of golf must prepare ourselves to deal with the inevitability of frost delays at our favorite golfing venues. Now that we are well into the fall season, all of us, golfers, golf course superintendents, golf professionals and pro shop staffs must contend with disruptions of schedules due to frost.

I'm sure the majority of the golfing public understands the reasoning behind why golf cannot be played on frost covered turfgrass, but a reminder of the agronomic rationale for waiting for frost to clear is in order at this time of year. The leaf blades of the grass plant perform several important functions in the life cycle of the plant. Among the most important are photosynthesis, carbohydrate production and storage as well as respiration. In one sense, you could think of the leaves as the "lungs" of the plant. The leaf blade contains small openings called stomates that take in carbon dioxide and are responsible for the respiration process of the plant. At night, these stomates close to preserve water for use in the plant the next day.

When Mother Nature puts down a covering of frost over-

night, small ice crystals form on the leaves blocking the stomates and freezing leaf tissue. If foot or vehicular traffic is allowed on the turfgrass the frozen tissues are destroyed causing desiccation or dying of the leaves. You may be familiar with the term "footprinting" which is used to describe this injury to the plant.

Another important function of the leaf blade is to act as a protectant for the crown of the grass plant. The crown is the "heart" of the plant from which all growth begins, including roots, stems, and leaves. If leaf blades are destroyed the crown is exposed and very susceptible to further damage. If the crown is destroyed, the result is dead turfgrass.

As you also know, turfgrass managers have been busy in September and October with the process of overseeding or re-seeding many areas of the golf course. As with young humans, young grass plants are more prone to injury and infectious diseases than are adults. If young seedlings are injured by traffic under frost conditions their chances for survival are greatly reduced. The goal of every turfgrass manager is to provide the golfer with the best playing conditions possible throughout the entire year. This is why certain precautions must be taken when dealing with frost. Frost delays are an inconvenience for

everyone. The maintenance staff must wait until the frost clears to prepare the course for play, the pro shop staff has to deal with rearranging tee times and the golfer is left to drink coffee and rehash that three foot birdie putt they missed yesterday. At times like these the two most important qualities to employ are patience and communication.

Communication is the key. The golf course superintendent or assistant must update the pro shop staff with an estimate of when the course will be ready for play, in turn the pro shop staff must keep golfers informed about when play may begin.

When you encounter your next frost delay remember these two cliches - "You can't fight Mother Nature" and "Patience is a Virtue."

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