

# USGA — Tips

## “Squirting, Squashing and Stabbing”

By Pat Gross, Western Region Agronomist

**No**, this is not a review of the latest action adventure movie, but rather a discussion about spiking. During our travels, Mike and I have seen many courses using these tools and practices to their advantage, however, many superintendents still express concern on the possibility of turf damage. This month, I would like to pass along information about these practices that we have gathered from other superintendents and research reports.

**Putting green rollers** — Putting green rollers have become a popular tool for superintendents to improve surface smoothness and slightly increase speed without the need to reduce mowing heights on the greens. In my opinion, increasing the mowing height and using the rollers has helped cut down on the occurrence and severity of stress related diseases such as summer patch and anthracnose. Several

superintendents are still hesitant to use the rollers due to the concern over soil compaction. Interestingly, research at North Carolina State University by Chris Hartwiger showed that increased soil compaction was not detectable on USGA sand greens or native soil greens at a rolling frequency of four times per week for ten weeks. The study did show turf injury from wear and abrasion at the higher rolling frequencies. The bottom line is to use the rollers with moderation and common sense. Most courses have had good success by rolling two to three times per week, and no adverse effects have been reported with the rollers are used three days in a row for special tournaments. If you see wear symptoms, especially on the edges of greens, you should back off the rolling program and allow the turf to recover.

**Water injection aeration** — This has become a popular program to relieve soil

compaction during the summer without disrupting the putting surface or causing stress to the grass plant. Many superintendents are using this tool as a supplement to their core aeration program, and to relieve any soil compaction caused by putting green rollers. Some people have expressed a concern over the possible migration of fine soil particles in the root zone, however, I am not familiar with any research or observations to support that theory. Also, some people report that the water jets don't penetrate more than three to four inches on their greens. In this case, you may wish to have the pressure accumulator checked by the distributor and also look for worn nozzles and proper functioning of the air relief valves. According to Dr. Chip Howard, these parts may need to be serviced more frequently depending on the amount of use and the quality of your water source.

(Continued on page 7)



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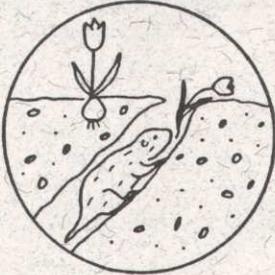
**Aeration and Water Movement:** *Mr. Pat Simmsgeiger, Diversified Waterscapes*

## USGA Tips (Cont'd)

**Spiking** — Now that the water injection aerifier and other forms of small tine aerification are available, it seems that many superintendents have moved away from the practice of spiking greens. Spiking continues to be a good method to relieve surface compaction and open up the turf canopy for air and water penetration without causing significant surface disruption. It is also useful as a pretreatment for bentgrass seeding operations. Although the compaction relief is not as long-lived as other forms of aeration, spiking cuts stolons and helps to initiate new root growth. Many superintendents continue to use this tried and true management practice every one to two weeks during the summer with good results.

Modern technology has given us a variety of tools and products to produce the best possible putting green turf. While many of these products and practices have merit, it is important to evaluate your own conditions and implement these programs in moderation and with good common sense. ↙

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