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IN THIS ISSUE

- Fast Putting Surfaces Cause Major Cultural Changes
- Managing Earthworm Problems in Turfgrass
- The Moss Network
- Summer Bentgrass Decline Complex May Be More Physiological Than Pathological
- Potential Problems with Continuous Use of the Same Herbicide
- Research Summary: Fungicide Effects on Bacteria Used as Biological Control Agents
- JB Comments: Understanding the New Dwarf Bermudagrass Cultivars
- Ask Dr. Beard

Fast Putting Surfaces Cause Major Cultural Changes

by
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The golfer movement to more fast putting green surfaces has changed the cultural practices on greens, including very close mowing of 5/32 to 1/8 inch (4.0 to 3.2 mm). These very close mowing heights tend to cause a reduced shoot density in many cultivars, and a resultant decline in surface turf quality and increased *Poa annua*, moss, and algae problems. The very close mowing also has emphasized:

1. the potential for proper turf rolling.
2. the problem of spike marks caused by traditional metal spikes.
3. the need for turfgrass cultivars that sustain shoot density and rooting at 1/8 inch (3.2 mm) cutting height.
4. changes in turfgrass cultural practices.

Turf Rolling of Putting Greens Constructed With High-Sand Root Zones

The potential benefits of rolling putting greens reentered the cultural picture due to (a) the extensive use of high-sand root zones in putting greens, thereby greatly reducing the potential for soil compaction problems from turf rolling and (b) the preference of golfers for fast ball roll speeds which have been achieved principally through very close mowing heights, which also result in further shortening of the root system, reduced turfgrass health and canopy density, and an increase in moss and algae problems.

This situation leads to the possibility that increased ball roll distance can be achieved by turf rolling rather than by extremely close mowing heights. The result would provide the opportunity to raise the cutting height, thereby achieving better overall turf health, rooting, and canopy density, plus an associated reduction in moss and algae. Research findings from turf rolling on creeping bentgrass putting greens are summarized as follows:

- a single turf rolling in early morning consistently **increased distance of ball roll by 10%** at the morning reading.
- combinations of 1, 2, 3, and 4 consecutive turf rollings each morning increased the distance of ball roll by 10 to 20%.
- a **2-day post turf rolling effect** can be achieved in most situations.
- there was no increase in the distance of ball roll when the turf rolling pressure was increased from 4.8 to 11.9 pounds per lateral inch (0.86–2.12 kg per lateral centimeter).
- the distances of ball roll were similar when the turf was rolled with the direction of mowing in comparison to when the turf was rolled against the direction of mowing.
- operating speed during turf rolling did not influence the distance of ball roll.

Continued on page 2