

#### Healthy, Fast Creeping Bentgrass Greens in the Transition Zone

John Sorochan, Ph.D., is an associate professor of turfgrass science at the University of Tennessee-Knoxville and devotes part of his research effort to developing strategies to maintain healthy creeping bentgrass putting greens without sacrificing putting green speed.

# Where do you start when you need to get a creeping bentgrass green through a Transition Zone summer and maintain acceptable putting green speeds at the same time?

Don't try to achieve the desired putting green speed manipulating only mowing height and mowing frequency. When mowing height is lowered there is less leaf area and the photosynthetic capacity of the turfgrass is reduced. Creeping bentgrass greens already struggle to survive the summer due to the long duration of intense heat without superintendents reducing photosynthetic capacity by lowering the mowing height.

## What practices do you recommend to achieve the desired putting speed throughout the summer in Tennessee?

Mow every other day at a height of 0.125 to 0.140 inches during the most stressful periods. On the non-mow days, roll. Rolling smooths the putting surface and maintains the desired putting speed while giving the turfgrass plant additional leaf area so it can produce much needed energy. Plus, by not mowing, the plant won't have to

expend energy to repair the wounding caused by mowing.

Topdress lightly every week or every other week if resources allow throughout the growing season to maintain a firm, smooth and true putting surface. A dusting of sand once a week helps dilute thatch and keeps the surface firm and true. Golfers notice if the putting surface is true, especially on long putts, and a true putting surface helps increase putting speed.

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## When do you recommend starting a program of mowing and rolling on alternate days?

Start alternate days of mowing and rolling when the daily high air temperatures are consistently above 85 degrees F. I would even consider mowing and rolling on alternate days year-round. Research shows that will result in the best putting surfaces over the long haul. However, it is important to use a plant growth regulator if you are alternating mowing and rolling when the creeping bentgrass is actively growing to avoid too much vertical leaf growth.

### Are there any concerns with rolling greens three or four times a week?

No. Putting greens, whether sand based or native soil, handle rolling without a problem. Today's rollers are light and only smooth the putting surface. They aren't heavy enough to compact the soil.

Problems with rolling occur on the collar and on areas where space to stop and start the roller is restricted. Rollers can operate at high speeds and turfgrass wear can occur where the roller stops, starts and changes direction for the next pass across the green. Make all stops and starts off the collar if possible. Educate the roller operator to ease into stops and starts. Plastic lattice can be placed over the turf to protect it in areas where space is limited for the roller to stop and start.

#### Is there anything else you would like to add?

Fertilize with a reasonable amount of nitrogen. The best performing creeping bentgrass greens that I see in my travels around the Transition Zone are those that receive 4.0 to 5.0 lbs. of nitrogen per 1,000 sq. ft. for the nine- or 10-month growing season.

These greens are fertilized with 0.1 to 0.2 lbs. nitrogen per 1,000 sq. ft. every week or two during the summer months to encourage a modest amount of growth, which allows the grass to cope with wear and recover from other stresses. These courses also have a preventive disease management program in place.

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