Stop 1. Herbicide and Plant Growth Regulator Programs for Controlling *Poa annua* on Creeping Bentgrass Putting Greens

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Annual bluegrass (Poa annua) [ABG] is one of the most cosmopolitan weeds in the world and a common invader of creeping bentgrass [CBG] putting greens. Few chemical controls exist for limiting ABG encroachment on putting greens. Most university research has focused on tee and fairway height turf due to challenges associated with measuring ABG at greens height. In 2009, a regional study was designed to evaluate the effects of herbicide and PGR programs on relatively clean (less than 15% ABG infestation) CBG greens. Programs of herbicide and PGR treatments have been made in 2009 and 2010 and will continue through 2013. ABG populations are monitored throughout the season to determine which programs will most limit the infestation of ABG in CBG putting greens.

Stop 2. A Study to Investigate Methods to Estimate Water Replenishment by Irrigation

Rodney Tocco and Dr. Thomas A. Nikolai

James B. Beard wrote in his book *Turf Management for Golf Courses* that, “Proper turf irrigation is the most difficult day-to-day agronomic decision the golf course superintendent makes”. One of the main reasons that statement is true is there have been very few putting green irrigation research studies. To address this void MSU is currently performing three putting green irrigation studies. Rod Tocco is a Ph.D. candidate running a study to investigate Evapotranpiration (E.T.) and Time Domain Reflectometrey (TDRs) as methods to replenish plant available water in a putting green. Rods study also investigates the impact of wetting agents and daily double cutting under three different irrigation regimes and how these combine to affect green speed, turfgrass disease, organic matter content, and microbial activity.

Stop 3. A New Bacterial Disease of Creeping Bentgrass

Paul Giordano and Dr. J.M. Vargas, Jr.

In the summers of 2009 and 2010 are laboratory received samples that exhibited heavy bacterial streaming form diseased creeping bentgrass plants. The bacterium was later identified as *Acidovorax avenae* subsp. *Avenae.* Unfortunately, the bacterium has been found in many of the new low mow creeping bentgrass cultivars. Our research thus far has found significant virulence on numerous different cultivars of creeping bentgrass with select isolates of the bacterium. Additionally, DNA comparisons among isolates obtained from 9 different golf courses indicate seven with *Acidovorax avenae* subsp. *avenae* as the ubiquitous bacterium inhabiting infected host tissues. Golf courses and turf growers in the United States could face