Civitas Increases Clipping Yield on a Cool-Season Putting Green

William C. Kreuser* and Frank S. Rossi

Civitas (Suncor Energy, Calgary, AB, Canada) is an isoparaffin horticultural oil marketed to enhance plant defense and is certified by the Organic Materials Review Institute (www.omri.org). It triggers induced systemic resistance to diseases leading to reduced pesticide requirements for turfgrass (Cortes-Barco et al., 2010). To mask phytotoxicity, Civitas is mixed with a copper phthalocyanate-based pigment called Harmonizer (Suncor Energy, Calgary, AB, Canada). Civitas and Harmonizer can be mixed on site (called the Two-Pack) or pre-mixed at the factory (called Civitas One).

There are anecdotal reports of increased clipping yield and reduced ball roll distance following application of the Two-Pack to putting greens of cool-season grasses, but these claims have not been substantiated scientifically. Increased clipping yield or reduced ball roll distance may limit the use of Civitas. Our objective was to determine the effect of Civitas, Harmonizer, and their combination on the clipping yield of cool-season grasses maintained as a putting green.

This study was conducted in 2011 and 2012 on a mature stand of 60% creeping bentgrass (Agrostis stolonifera Hud. ‘Penncross’) and 40% perennial biotype annual bluegrass (Poa annua var. reptans) putting green at the Cornell University Bluegrass Lane Turf and Landscape Research Center in Ithaca, NY. The green was constructed approximately 15 years ago from the on-site Arkport fine sandy loam soil with a 3-inch layer of sand from monthly topdressing applications. Plots were mowed daily at 0.12 inches with a Toro Greensmaster 1000 (Toro Co., Bloomington, MN), fertilized weekly from May until October with urea at 0.1 lbs N/1000 ft², and irrigated to prevent drought stress.

The experiment was a randomized complete block design with four replicates of 8 by 4 ft plots. Treatments included an untreated control, the high labeled rate of Civitas oil applied alone (16 fl oz/1000ft²), Harmonizer pigment alone (1 fl oz/1000ft²), and Civitas and Harmonizer mixed on-site (Two-Pack; 16 and 1 fl oz/1000ft², respectively) and Civitas One...