Aesthetic appeal of dormant Zoysiagrass enhanced with colorants

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Homeowners who live in the transition zone, where both cool- and warm-season grasses are options for use in lawns, are looking for low-maintenance turf grasses that also provide year-round color. A new study presents options for maintaining green lawns in the transition zone through the application of turfgrass colorants to zoysiagrass.

The authors of report in the June 2016 issue of *HortTechnology* say zoysiagrass is popular because it requires fewer pesticides and fertilizers than most cool-season turfgrass species; however, it turns brown following the first autumn frost and remains dormant until mid to late spring. The dormancy period, they noted, "can be unappealing to homeowners, especially when cool-season grasses, which retain color longer in autumn and green-up sooner in spring, are grown in the same vicinity."

The use of colorants is being explored as a way to maintain turf color throughout dormant periods. Turf colorants have become popular on golf course fairways and putting greens in the southern United States, and now researchers are looking for ways to use the colorants for home lawn applications.

Ross Braun, Jack Fry, Megan Kennelly, Dale Bremer, and Jason Griffin conducted experiments at two locations in Kansas with 'Chisholm' zoysiagrass that was maintained at a 2.5-inch height. Commercial colorants were applied in October at 80, 160, or 240 gal/acre at a 1:6 dilution (colorant:water), and evaluated throughout the winter and spring

of the following year. The experiments included tall fescue, a commonly used cool-season turfgrass, as a comparison for zoysiagrass.

The scientists evaluated all treatments for turf color, impact on soil temperature, and days of acceptable green color. They rated turf color visually on a 1-9 scale in which 1=straw brown, 6=acceptable green color (light green), and 9=dark green.

Results showed that persistence of green color increased with application volume, but differences among colorants were limited. Colorants provided acceptable color for 55-69 days at 80 gal/acre, 69-118 days at 160 gal/acre, and 118-167 days at 240 gal/acre. Compared with tall fescue, colorant-treated zoysiagrass had significantly higher color ratings for 98-112 days at 80 gal/acre, 112-154 days at 160 gal/acre, and 138-154 days at 240 gal/acre.

Colorants increased turfgrass canopy temperature by up to 12.1 °F, but did not accelerate spring greenup.

"Some homeowners may be more amenable to the use of 'Chisholm' or other warm-season turfgrasses if colorants are used to enhance the aesthetic appeal of dormant turf," the authors said.

More information: The complete study and abstract are available on the ASHS HortTechnology electronic journal web site: horttech.ashspublications.org/ … nt/26/3/314.abstract

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https://phys.org/news/2016-08-aesthetic-appeal-dormant-zoysiagrass.html