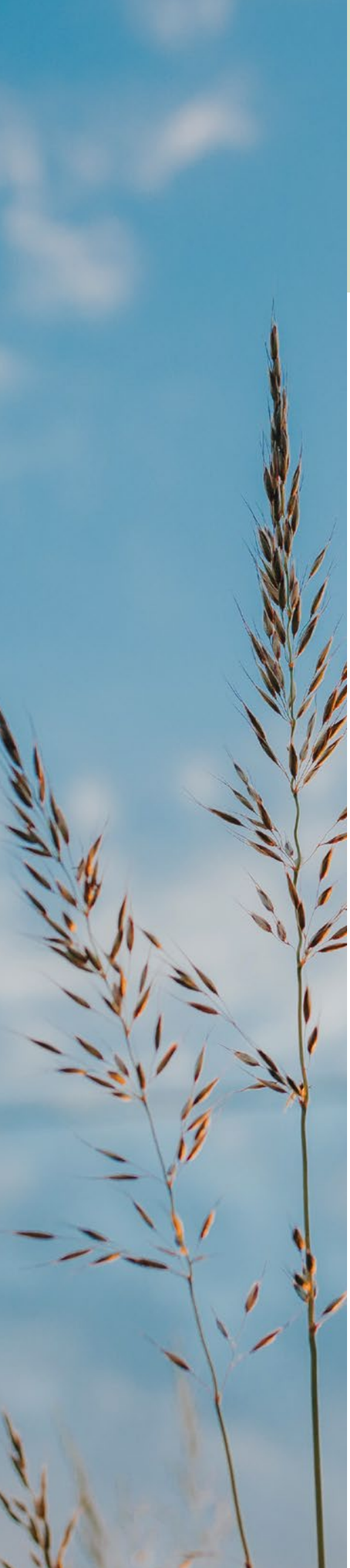

Recovery of Fairway Creeping Bentgrass *(Agrostis stolonifera)* and Tall Fescue *(Festuca arundinacea)* From Injury

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A growing interest in the golf industry is to potentially grow tall fescue *(Festuca arundinacea)* in fairways due to its low fertility needs, and disease and drought tolerance. Traditionally, in cool season turfgrass systems, creeping bentgrass *(Agrostis stolonifera)* was used due to its ability to effectively recover from disturbances and for its golf playability. While there are positive and negative management differences between both species, no research has been conducted to determine how well tall fescue can recover from disturbances compared to creeping bentgrass as a fairway grass. The objective of this research is to determine how well tall fescue fairways recover from injury compared to a creeping bentgrass fairway.

Materials and Methods

Research was conducted at the Iowa State University Horticulture Research Station, Ames, Iowa, on an established creeping bentgrass and tall fescue fairway on a native soil. Mowing occurred three times per week at 0.4 in. using a reel mower with clippings collected. Irrigation was applied to prevent drought stress. Experimental units were 10 holes (4 in. in diameter, 3 in. deep, and 6 in. apart) simulating an injury in each of the two fairways. Sand meeting United States Golf Association specification was used to fill each hole until it was level with the fairway surface the day of injury. Digital images were taken weekly with the use of a light box to ensure consistent lighting and a digital camera. Images then were scanned using Turf Analyzer to determine percent green cover. Data collection occurred from July 12 to September 13.

Results and Discussion

The creeping bentgrass fairway recovered faster than the tall fescue early (Figure 1). Drops within percent green coverage in this experiment can be attributed to fairway heat stress and topdressing, a common maintenance practice. Creeping bentgrass had a greater drop on many of these dates than the tall fescue fairway. After week 11, both species' percent green cover was not significantly different (data not shown). The small difference in percent green cover indicates that a tall fescue fairway will recover from damage as quickly as creeping bentgrass.

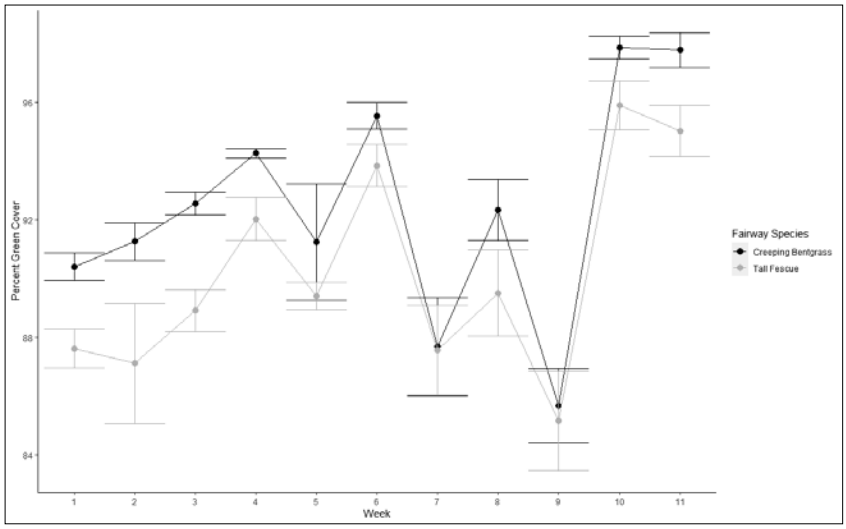

Figure 1. Turfgrass species recovery from injury as tracked by percent green coverage from digital image analysis from July 12 to September 13.