

Preliminary Evaluation of Perennial Ryegrass and Buffalograss Blends for Seeded Roadside Establishment to Comply with Storm Water Control Regulations

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Introduction

Buffalograss (*Buchloë dactyloides* [Nutt.] Engelm.) is a native low maintenance turfgrass species that is well adapted for lawns, parks, athletic fields, roadsides, and golf courses in the transition zone of the Midwestern United States. Perennial ryegrass (*Lolium perenne*) has also been used in many states as perennial roadside vegetation. Blending buffalograss with a rapidly establishing cool-season turfgrass, perennial ryegrass, could provide quick temporary vegetative cover, followed by the establishment of a sod-forming, drought-tolerant permanent cover of buffalograss.

Project Description

Research was repeated on two separate roadside shoulder areas (25–100 feet from roadway) west of US-281. The parameters evaluated will include nine seed blend treatments and three seeding timings. All seed blends were established at all seeding timings at both locations. Seed blends included Kansas Department of Transportation (KDOT) standard seed mix for west of US-281, 100%/0%, 80%/20%, 60%/40%, 50%/50%, 40%/60%, 20%/80%, and 0%/100% buffalograss/perennial ryegrass on a volume-to-volume ratio. A non-treated control was also included at each seeding timing for comparison. Seed timings included dormant (January 26, 2016), Spring/Summer (May 23, 2016), and Fall (September 20, 2016).

Treatments were evaluated bi-monthly until 1 year after final treatment application (September 2017). Evaluations included visual percent aerial cover ratings of perennial ryegrass, buffalograss, and weed cover on a scale of 0 (no cover) to 100% (complete cover). Turfgrass quality was also assessed using a scale of 0 to 9, where 9 is considered to be optimal turf quality and 6 is the minimum acceptable level according to National Turfgrass Evaluation Program (NTEP) standards.

Project Results

Spring/Summer and dormant season (January) treatments were both successful in establishing roadside plantings with acceptable survival and growth rates, but all Fall treatments had less than 40% desirable vegetative species coverage.

All Spring/Summer seeding treatments resulted in >80% buffalograss cover by 506 days after seeding (October 12, 2017), except the non-treated control, the standard KDOT mix, and the 0% buffalograss/100% perennial ryegrass (p.ryegrass) treatment.

Spring/Summer sown buffalograss and perennial ryegrass blends that provided the quickest continuous roadside cover were: (1) 100% buffalograss/0% p.ryegrass; (2) 80% buffalograss/20% p.ryegrass; and (3) 60% buffalograss/40% p.ryegrass treatments when established in the Spring/Summer.

While Spring/Summer seeding resulted in optimal establishment timing for buffalograss and perennial ryegrass blends, dormant (January) seeding timing was also successful.

Project Information

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