# Update on university turf-related research projects

***Editor's note:*** *Following are reports from some leading turfgrass researchers in the US on their current studies.*

## Cal Poly State University

1. Tall fescue cultivar trial. Evaluation of 18 top tall fescue cultivars for use on the central California coast. Testing for establishment success, texture, density, color, spring green-up, and persistence.

2. Buffalograss/fine fescue mixes for year round green color. Testing whether one can establish either seeded or vegetative (plugs) buffalograsses into existing fine fescue (red, sheep, and hard) plots. These two grasses are very drought tolerant and perform well during different times of the year.

3. Wetting agent trials for effective water management on a bentgrass green. Tested 13 wetting agents for efficacy and phytotoxicity on a Penncross creeping bentgrass/*Poa annua* green in the central California coast. Funded by Aquatrols, Precision Labs, and Milliken.

4. Correlating lab tested soil moisture conditions on a bentgrass green with the use of a hand held soil moisture meter to evaluate the effectiveness of using a field meter to determine irrigation schedules. Our goal is to provide turfgrass practitioners with techniques to instantly evaluate soil moisture content and ultimately, irrigation needs.

5. Green roofs for the central California coast. Examining three different growing media and five different plant species (including some grasses) for use in green roofs for the central California coast climate.

6. Traffic wear trials. Testing simulated sports shoe traffic (wear) on various new perennial ryegrass and tall fescue cultivars developed. Funded by Barenbrug USA Seed.

7. Presently have a fine fescue NTEP trial to examine the establishment success and persistence of 25 new fine fescue species (red, chewings, hard, and sheep) as well as various cultivars of each to our area.

8. Slated for spring 2010: Trials to test cultural, nutritional, and chemical management tools for two new cultivars of kikuyugrass (*Pennisetum clandestinum*) for golf course fairways in coastal regions of California. Initial trials will test performance under different nutrition, cultivation, and plant growth regulator management strategies. Prep will begin this winter.

9. Slated for late spring 2010: Buffalograss adaption trial in conjunction with Dr. Bob Shearman, University of Nebraska-Lincoln. Prep will begin this winter.

10. Slated for summer 2010: Cutting Strategies for managing tall native and ornamental grasses. Testing the best cutting management schedules for a combination of 30 species and/or cultivars of tall native and ornamental grasses that can be used in the central California region and how these grasses can be established as cover, buffers and wildlife habitat. Specifically, I wish to determine the latest date these tall grass species can be cut back and still produce acceptable flowering and aesthetic quality. Field prep is underway.

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## Michigan State University

**Differences in blends and monostands of Kentucky bluegrass varieties.** Traditionally for athletic field construction, the blending of turfgrasses will provide advantages over single-cultivar stands in highly stressed environments. Whether these environments include high trafficked areas, disease pressure, or weed interactions, turfgrass blends out perform monostands. However, due to recent advancements in breeding technology, single cultivars breed for disease resistance, aggressive tillering, and herbicide resistance may be used in place of a blend, which was previously necessary to provide all of these characteristics.

A series of experiments were designed to examine *Poa pratensis* (Kentucky bluegrass) varieties. New and old varieties were selected based on traffic tolerance, disease resistance, bispyribac-sodium (Velocity) resistance, and aggressive tillering. Furthermore, these varieties were planted as single cultivars and then in blends to determine if there are still advantages provided by using a blend of multiple cultivars.

Four field experiments were designed and initiated on September 15th 2009, to address each of the following objectives individually:

Observe the effects of traffic simulation on single-cultivar plantings and blends of the selected Kentucky bluegrass varieties established on native soil.

Observe the effects of topdressing and traffic simulation on single-cultivar plantings and blends.

Evaluate the differences between single-cultivar plantings and blends with inoculation of turf disease pathogens.

Evaluate the effectiveness of selective, specific herbicides on single-cultivar plantings and blends.

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