



TROE CENTER UPDATE

By **CRAIG KRUEGER**

U of M TROE Center Field Manager

2008 was a very good year for the Turf program here at the University of Minnesota. The number of graduate students enrolled has doubled, the scope of the research projects has grown, and we had a very successful Field Day.

The 2008 MTGF Field Day was once again held in September. Even though it rained through most of the program, the spirits and interest of the more than 200 attendees remained high. Exciting research was presented and discussed throughout the morning. Next year, field day is scheduled for September 10, so mark it on your calendars now.

On behalf of all that make up the turf team, we would like to extend a very sincere thank you to all of the vendors who have supported our research this year by donating supplies and equipment. Without their support our program could not be as successful as it is. Please join us in thanking the following vendors when you have a chance to talk to them:

MTI Distributing, Inc.
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Twin City Seed Co.
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Ramy Turf Products
Tiziani Golf Cars of Minnesota
Turfwerks, LLC
Reinder's Inc.

Thank you again for all of your support and we look forward to another successful research year at the TROE Center.

From the U to You...Studies Funded by the MTGF

2005 NATIONAL KENTUCKY BLUEGRASS TRIAL

By **Eric Watkins, Andrew Hollman and Brian Horgan**
Department of Horticultural Science, University of Minnesota

The University of Minnesota has a long history of breeding Kentucky bluegrass. The first variety 'Park' was released in 1957 and is still in seed production in northern Minnesota. Park is a variety characterized as having excellent seedling vigor, but has dramatically lost market share due to poor disease resistance and turf quality. The northern Minnesota turfgrass seed production industry contributes millions of dollars to the rural economy but has lost market share due to the older turf varieties currently in seed production. Evaluating available varieties will allow us to identify traits that should be the focus of our germplasm improvement program.

The goal of the National Turfgrass Evaluation Program (NTEP) is to develop and coordinate uniform evaluation trials of turfgrass varieties and promising selections in the United States and Canada. Test results can be used by industry, extension specialists, turf managers and plant breeders to determine a variety's adaptation across a wide range of environments and levels of turf maintenance.

Materials and Methods

In 2005, the National Kentucky bluegrass trial was established on the St. Paul campus with 110 released and experimental varieties. The evaluation of turfgrasses is generally conducted with visual ratings of numerous traits of interest to the end users. Visual traits evaluated include genetic color, stand density, leaf texture, disease resistance and turf quality. Most visual ratings collected on NTEP trials are based on a scale of 1 to 9 where 1 is the poorest and 9 is the best. Turf quality is a combination of color, density, uniformity, leaf texture, pest and/or environmental stresses. Turf quality ratings are taken monthly at each NTEP site during the growing season and will vary based on the turfgrass species, the intensity of the management and the time of the year. The data collected in 2007 included summer color, spring green-up, leaf texture, seedling vigor, drought tolerance, seed-head rating and turf quality ratings from May through October. The trial was managed using a medium maintenance schedule including a 1.5 inch mowing height, 4 lbs N per 1,000 square feet per year, and

irrigation only as needed to prevent stand loss; no chemicals were applied to the trial in 2007.

Results and Discussion

Since the inception of this trial, the top five varieties and selections for overall turfgrass quality have been Bd 03-84, Shiraz, J-2404, A00-1400 and Blue Note.

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The data from the trial is available through the NTEP website at www.ntep.org and the University of Minnesota turfgrass science website at www.turf.umn.edu.

Our plant breeding program has developed a cooperative relationship with Rutgers University to access their valuable germplasm and provide seed producers with marketable, high quality turf varieties of Kentucky bluegrass that produce consistently high seed yields in northern Minnesota. There are three experimental Rutgers-UM varieties being evaluated in the 2005 National Kentucky Bluegrass Trial for potential variety release (MSP 3722, MSP 3723 and MSP 3724). In addition, a hybrid breeding program for Kentucky bluegrass has been initiated at the University of Minnesota.

Summary

There are a number of varieties and selections of Kentucky bluegrass that do well in Minnesota when grown under medium and high maintenance conditions. In order to provide even better options for seed producers and end users, we are accelerating the development and release of new varieties of Kentucky bluegrass for use in Minnesota and the northern United States. These new varieties should be available to seed producers and turf managers within the next two years.