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NTEP *Comings and Goings*

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Dear Kevin,

I am pleased to distribute the July issue of NTEP *Comings and Goings*. If there is any information we can help you with, or if you have suggestions for future information needs, please feel free to contact us.

We wish you a safe and enjoyable safe summer!

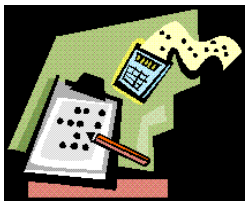
In This Issue

2010 NTEP Perennial Ryegrass Trial will include new trials and testing procedures

NTEP has finalized plans for the 2010 Perennial Ryegrass Test, to be established at 23 locations. For this trial, NTEP is expanding its use of *ancillary* trials, which evaluate specific traits using improved technology and/or methods. New procedures will be used to test drought under shelters (similar to the University of Arkansas shelter above) and under reduced irrigation, grey leaf spot of seedling turf as well as mature turf, traffic at four locations and salinity tolerance (in the field and greenhouse). Also new is evaluation of entries for fairway winter overseeding at three southern locations. Standard evaluations of turf quality, color, density and disease will be conducted at fourteen locations. All the details on the new trial can be found here in the NTEP News Room.

Another change to this trial is the reduction in entry fees for experimental entries, as well as for entries that have been previously tested by NTEP. This will allow seed companies and breeders to more economically enter grasses that either have good potential, or have proven themselves in the past. Details on these changes, along with entry application forms and submission information, are found in this document.

New reports on bermuda, zoysia, paspalum & st. augustine now available online



Improved statistical analysis used by NTEP

In 2009, NTEP introduced the use of 'AMMI', a new statistical procedure that combines from data from locations that perform in a similar manner. AMMI is being used on new trials only, therefore, it was applied only to the 2007 warm-season grass trials in 2009. This year, AMMI was used on the 2008 bentgrass and fineleaf fescue trials as well as the warm-season grass trials. AMMI is only used for turfgrass quality data. Data on color, texture, disease, etc. is analyzed in the traditional manner.

Background

AMMI is a proven statistical procedure that has undergone scientific scrutiny among statisticians. In fact, NTEP spent ten years researching various statistical procedures and other methodologies with the goal of improving data collection and analysis. This research led NTEP to conclude that AMMI was an appropriate upgrade of its statistics.

The unique aspect of AMMI is its ability to better understand how each entry responds with the 'environment' where it is planted and evaluated. The 'environment' consists of the geographical location, the management level used at that location, the soil and other site characteristics, and the climatic conditions. The 'environment' can change from year to year as we

The 2007 NTEP Bermuda trial at Baton Rouge, LA

The Cady, originally built by Michigan State researchers using a Ryan GA-30 aerator and fitted with cleats, is used for traffic simulation on the Gainesville, FL NTEP bermuda

After establishment in 2007, the current NTEP warm-season grasses trials are providing important data. Following is a wrap-up of the information available for each trial:

Bermudagrass

Besides the traditional quality, color and density ratings, NTEP evaluators collected some unique data in 2009. Three locations conducted traffic evaluations using mechanical simulators. Researchers at Fayetteville, AR simulated traffic in two 'seasons', summer and fall, measuring percent living ground cover before, during and after each 'season'. The Gainesville, FL location applied traffic in four four-week 'seasons' from November 2008 through December 2009. Researchers at Gainesville also measured percent living ground cover during each four week season, and during a four week recovery period. Simulated traffic was applied to the Raleigh, NC trial in summer 2008 and summer 2009. N.C. State researchers rated wear tolerance and shear strength on the Raleigh trial.

Salinity tolerance (water quality: pH=7.9, TDS=1800, SAR=2.06) was evaluated at Las Cruces, NM with significant differences emerging among the entries.

Turf quality evaluations were not neglected, with the NTEP AMMI statistical analysis (see sidebar) identifying four groups of locations. These groupings are locations where entries performed in a similar manner, making the statistical analysis more accurate. All the data from this trial can be viewed by going to this page, and then clicking on the left hand side links.

Zoysiagrass

AMMI analysis of the 2009 data showed that the locations did not react in a similar manner, therefore, data from each location was kept separate for statistical purposes. Users should consult a trial location that is geographically close to them.

Salinity tolerance was evaluated at Las Cruces, NM using the same saline water listed above for the bermuda trial. The entries 'Shadowturf' and 'L1F' finished 2009 in the top statistical group for turf quality ratingsat Las Cruces.

The West Lafayette, IN trial noted significant winter damage in 2009, with the entries 'Meyer', 'Zenith' and '29-2' showing statistically less injury.

Data on brown patch, dollar spot, and mole cricket damage was also collected in 2009.

Seashore Paspalum

2009 was the third year of data collection from our first seashore paspalum trial. Similar to the zoysia trial, AMMI analysis separated all the trial locations, reporting each in its own table. As with the bermuda and zoysia trial, Las Cruces, NM evaluated entries using saline irrigation water.

Since this is our first paspalum trial, we are very interested in data from descriptive characteristics, such as genetic color, leaf texture and density. Significant differences have been noted among entries for these traits, among others.

St. Augustinegrass

Data from the four locations were treated as separate tables and not grouped by AMMI. Winter kill rated at Raleigh, NC showed some significant differences. Brown patch ratings collected in Gainesville, FL showed large entry differences, while density ratings in spring, summer, and fall described the density variation among the entries.

Thanks for reading again, in this issue about what is happening at NTEP. If you have any questions, comments or suggestions, please feel free to contact me at 301-504-5125 or kmorris@ntep.org.

Sincerely,

Kevin Morris

encounter different weather conditions, more or less rain, hot or cold, higher or lower humidity, etc. Also, the environment can change if the management (i.e. fertility, mowing height, other inputs) used is changed slightly from one year to the next.

Using AMMI

AMMI often groups data that is not based on geography. In other words, trial locations in adjacent states may not be grouped together by AMMI.

Please keep in mind that the more data that is available for you to review, the better off you are. Therefore, to use AMMI, find your state in one the of AMMI groups. When found, the average of all those locations is more useful to you than a single location (this is because more data makes the statistical analysis that much stronger). If you cannot locate an AMMI group within your state (NTEP does not have a trial in every state), then find a location that you believe is similar to yours.

In some instances, you will not find AMMI groups identified in our reports. Older trials (started before NTEP initiated AMMI), will not have AMMI groups. Also, AMMI analysis may recognize that none of the locations should be grouped, meaning that the locations are not similar for that year. In this case, each location's data will be in a separate table (see the zoysia trial write-up in this newsletter).

To learn more

NTEP knows AMMI is new and different, so we will continue to improve our data presentation and address your questions. If you have additional questions, please contact us. Thanks for your patience!

For more information on AMMI, go to our Question and Answer document.

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