NTEP *NEWSLINE*

A publication of the National Turfgrass Evaluation Program

October - December 1999
Volume 2, Issue 3

On-Site Overseeding Trial Update

In early September, NTEP compiled and assembled the entries in their first fairway overseeding trial conducted on actual bermudagrass fairways. Ten golf courses have been selected (*see list on page two*) and overseeding has taken place on the northern-most sites as of this writing. The southern locations will be overseeded in October with data collection commencing shortly thereafter. Data will be collected throughout fall, winter and spring ending when transition from the overseeding grass to bermudagrass is complete (no later than August 1). Then the entire process will be repeated with overseeding of all entries commencing again in fall 2000. By August 1, 2001, the trials will be completed. NTEP will compile the data and release progress reports in fall 2000 and 2001 with a two-year summary (final) report being completed and released in late fall 2001.

This trial contains forty-two (42) entries from fifteen sponsoring companies (*see the entry list on page two*). Details on test procedures, seeding rates, etc. were published in the last *Newsline* issue. It is available on the NTEP web site.

1999 Perennial Ryegrass Test Update

The 1999 National Perennial Ryegrass Test has been initiated containing a record 134 entries. The test was mailed in late August to thirty university cooperators (in twenty-eight states) that will conduct standard evaluations. In addition, seed sets for ancillary tests were sent to three sites for future gray leaf spot (*Pyricularia grisea*) evaluations, three sites for two years of traffic evaluations and one site to evaluate winter tolerance at high elevations (*see* Newsline, *Vol. 2, Issue 2 for details on sites and management levels*).

The number of entries (134) submitted by companies is the most ever received for any NTEP test (*see entry and sponsor list on page three*). Only twenty-one (21) of these entries have been evaluated in past NTEP tests making this a trial of many new experimental varieties. In addition, the test contains entries from thirty different sponsoring companies. Please watch future *Newsline* issues for updated information on this important trial.

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NTEP Web Site Enhancements!

Enhancements are being added daily to the new NTEP web site (**www.ntep.org**). An easier to navigate menu with more options is just one of the many changes made recently. The site has been completely redesigned with information available on NTEP organization, test procedures and methods, cooperative efforts with other organiza-

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ON-SITE OVERSEEDING TRIAL UPDATE *(continued from page one)*

ON-SITE OVERSEEDING OF BERMUDAGRASS FAIRWAYS TEST LOCATIONS

Location	Golf Course	Superintendent	Research Cooperator	University
Tucson, AZ	Tucson Country Club	Marty Wells	Dr. David Kopec	Arizona
Palm Desert, CA	Mountain Vista	Nancy Dickens	Dr. Robert Green	California-Riverside
Orlando, FL	Grand Cypress	Tom Alex	Dr. Al Dudeck	Florida
Duluth, GA (Atlanta)	Atlanta Athletic Club	Ken Mangum	Dr. Gil Landry	Georgia
Mississippi St., MS	Mississippi State Univ.	Pat Sneed	Dr. Jeff Krans	Mississippi State
Crescent, MO (St. Louis)	Players Club at St. Louis	Todd Marquette	Dr. Erik Ervin	Missouri
Myrtle Beach, SC	Blackmoor	Bob Zuercher	Dr. Bruce Martin	Clemson
Garland, TX (Dallas)	Fire Wheel Golf Park	Gary Chambers	Dr. Milt Engelke	Texas A&M-Dallas
The Woodlands, TX (Houston)	The Woodlands	Scott Hamilton, Gant Austin	Dr. Richard White	Texas A&M-College Station
Charlottesville, VA	Glenmore C.C.	Tim Thomas	Dr. David Chalmers	Virginia Tech

ENTRIES AND SPONSORS - ON-SITE OVERSEEDING FAIRWAY TRIAL

Entry #	Name	Species or composition	Sponsor
1	Allsport	perennial ryegrass	LESCO, Inc.
2	LS-DE1	perennial ryegrass	LESCO, Inc.
3	Proam	poa trivialis	LESCO, Inc.
4	Barlennium	perennial ryegrass	Barenbrug USA
5	Pirouette	perennial ryegrass	Barenbrug USA
6	Bariviera	poa trivialis	Barenbrug USA
7	Professional's Select	40% Windstar, 35% Sonata, 25% Jet p. ryegrass blend	Pennington Seed, Inc.
8	Transist	intermediate ryegrass	Pickseed West, Inc.
9	Pick HR A-97	intermediate ryegrass	Pickseed West, Inc.
10	First Cut	85% Paragon p. rye, 15% Stardust poa trivialis	Turf Merchants, Inc.
11	Brightstar II	perennial ryegrass	Turf-Seed, Inc.
12	Charger II	perennial ryegrass	Turf-Seed, Inc.
13	Citation III	perennial ryegrass	Turf-Seed, Inc.
14	Brightstar II + Winterplay	85% Brightstar II p. rye, 15% Winterplay poa trivialis	Turf-Seed, Inc.
15	Charger	perennial ryegrass	Standard Entry
16	Citation III + Winterstar	85% Citation III p. rye, 15% Winterstar poa trivialis	Turf-Seed, Inc.
17	Winterplay	poa trivialis	Standard Entry
18	ABT-99-3.268	annual ryegrass	AgriBioTech, Inc.
19	Paragon	perennial ryegrass	Turf Merchants, Inc.
20	PST-3BK-99	perennial ryegrass	Pure-Seed Testing, Inc.
21	Fiesta 3	perennial ryegrass	Pickseed West, Inc.
22	Futura 2500	33% Cutter p. rye, 33% Sunshine p. rye, 33% Transist intermediate rye	Pickseed West, Inc.
23	MED-007	25% JR-151, 25% JR-142, 25% JR-128, 25% JR-265 p. ryegrass blend	Simplot Turf & Horticulture
24	Capri	perennial ryegrass	DLF Trifolium
25	Leaderboard	34% Pennant II, 33% Panther, 33% Seville II p. ryegrass blend	Independent Seeds
26	Seville II	perennial ryegrass	Independent Seeds
27	Snowbird	poa trivialis	Independent Seeds
28	MP58	perennial ryegrass	Jenks Seed Connection
29	Prime	33% Elfkin, 33% MP58, 33% MP88 p. ryegrass blend	Jenks Seed Connection
30	Elfkin	perennial ryegrass	Jenks Seed Connection
31	MP111	perennial ryegrass	Cascade International Seed Co.
32	Mountain View Seed Blend 1	40% Pearl, 30% Pageant II, 30% EP57 p. ryegrass blend	Mountain View Seed Co.
33	Mountain View Seed Blend 2	40% EP56, 30% Pearl, 30% Academy p. ryegrass blend	Mountain View Seed Co.
34	Mountain View Seed Blend 3	40% EP57, 30% EP56, 30% Flash p. ryegrass blend	Mountain View Seed Co.
35	Essence	perennial ryegrass	Cebeco International Seeds
36	Top Hat	perennial ryegrass	Standard Entry
37	Cebeco Blend 1	33% Top Hat, 33% R2, 33% Gator II p. ryegrass blend	Cebeco International Seeds
38	Sabre	poa trivialis	Standard Entry
39	Tourstar	34% Imagine, 33% Ice, 33% Lynx p. ryegrass blend	AgriBioTech, Inc.
40	Marvelgreen + Laser	40% Palmer III, 20% Prelude III, 20% Phantom p. rye, 15% Laser poa triv.	AgriBioTech, Inc.
41	Phantom	perennial ryegrass	AgriBioTech, Inc.
42	Marvelgreen Supreme	50% Palmer III, 25% Prelude III, 25% Phantom p. ryegrass blend	AgriBioTech, Inc.

1999 National Perennial Ryegrass Test - Entries and Sponsors

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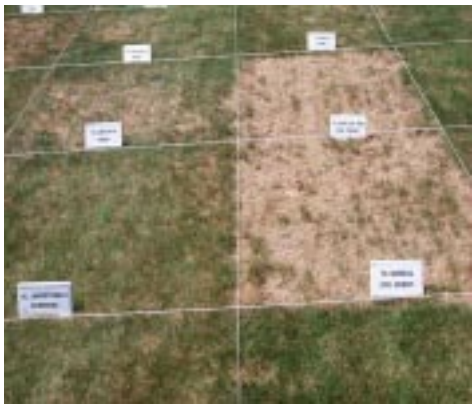
Entry #	Name	Sponsor
1	Calypso II	Roberts Seed Company
2	Racer	Roberts Seed Company
3	Fiesta 3	Pickseed West, Inc.
4	Linn	Standard Entry
5	Buccaneer	Standard Entry
6	Pick PR 1-94	Pickseed West, Inc.
7	Passport	Roberts Seed Company
8	Headstart	Roberts Seed Company
9	LPR 98-143	Deutsche Saatveredelung
10	LPR 98-144	Deutsche Saatveredelung
11	YatsuGreen	Nichino Ryokka Co., Ltd.
12	Secretariat	Grassland West Company
13	Pizzazz	Turf Merchants, Inc.
14	Promise	Turf Merchants, Inc.
15	Paragon	Turf Merchants, Inc.
16	Pick RC2	Pickseed West, Inc.
17	Pick EX2	Pickseed West, Inc.
18	Affinity	Standard Entry
19	APR 1234	Advanta Seeds Pacific, Inc.
20	APR 1233	Advanta Seeds Pacific, Inc.
21	Koos R-71	Willamette Valley Plant Breeders
22	WVPB-R-82	Willamette Valley Plant Breeders
23	WVPB-R-84	Willamette Valley Plant Breeders
24	APR 1236	Smith Seed Services
25	Nexus	Smith Seed Services
26	DLF-LDD	DLF-Trifolium
27	NJ-6401	Rutgers University
28	Roberts-627	Roberts Seed Company
29	LTP 98-501	Lebanon Seaboard Corp.
30	Pennington-11301	Pennington Seed Company
31	CIS-PR-69	Cebeco International Seeds
32	CIS-PR-75	Cebeco International Seeds
33	CIS-PR-78	Cebeco International Seeds
34	CIS-PR-80	Cebeco International Seeds
35	CIS-PR-84	Cebeco International Seeds
36	CIS-PR-85	Cebeco International Seeds
37	R8000	The Scotts Company
38	Majesty	The Scotts Company
39	Divine	The Scotts Company
40	Ascend	The Scotts Company
41	Pleasure XL	Ampac Seed Company
42	B1	Ampac Seed Company
43	APR 1235	Advanta Seeds Pacific, Inc.
44	APR 1237	Advanta Seeds Pacific, Inc.
45	Churchill	Lebanon Seaboard Corp.
46	Exacta	Lebanon Seaboard Corp.
47	Affirmed	Lebanon Seaboard Corp.
48	LTP-ME	Lebanon Seaboard Corp.
49	Barlennium	Barenbrug USA
50	BAR 9 B2	Barenbrug USA
51	Premier II	Barenbrug USA
52	Premier	Standard Entry
53	JR-187	Simplot Turf and Horticulture
54	JR-128	Simplot Turf and Horticulture
55	JR-317	Simplot Turf and Horticulture
56	JR-151	Simplot Turf and Horticulture
57	Edge	Pickseed West, Inc.
58	Pick PR QH-97	Pickseed West, Inc.
59	Pick MDR	Pickseed West, Inc.
60	Pick PRNGS	Pickseed West, Inc.
61	Pick PR B-97	Pickseed West, Inc.
62	PST-2RT	Pure-Seed Testing, Inc.
63	PST-2A6B	Pure-Seed Testing, Inc.
64	PST-2SBE	Pure-Seed Testing, Inc.
65	PST-2CRR	Pure-Seed Testing, Inc.
66	PST-2M4	Pure-Seed Testing, Inc.
67	PST-2SLX	Pure-Seed Testing, Inc.
68	PST-2BR	Pure-Seed Testing, Inc.
69	PST-CATS	Pure-Seed Testing, Inc.
70	PST-2CRL	Pure-Seed Testing, Inc.
71	PST-2LA	Pure-Seed Testing, Inc.
72	Brightstar II	Turf-Seed, Inc.
73	Catalina	Turf-Seed, Inc.
74	Manhattan 3	Turf-Seed, Inc. & Turf Merchants, Inc.
75	Charger II	Turf-Seed, Inc.
76	Palmer III	Standard Entry
77	Phantom	AgriBioTech, Inc.
78	ABT-99-4.339	AgriBioTech, Inc.
79	ABT-99-4.464	AgriBioTech, Inc.
80	ABT-99-4.600	AgriBioTech, Inc.
81	ABT-99-4.721	AgriBioTech, Inc.
82	ABT-99-4.815	AgriBioTech, Inc.
83	ABT-99-4.834	AgriBioTech, Inc.
84	Cathedral II	Independent Seeds
85	Panther	Independent Seeds
86	Seville II	Independent Seeds
87	Pennant II	Independent Seeds
88	DP 17-9496	DLF-Trifolium
89	DP LP-1	DLF-Trifolium
90	DP 17-9069	DLF-Trifolium
91	DP 17-9391	DLF-Trifolium
92	Allsport	LESCO, Inc.
93	Line Drive	LESCO, Inc.
94	Wilmington	LESCO, Inc.
95	6011	LESCO, Inc.
96	AG-P981	LESCO, Inc.
97	APR 777	Advanta Seeds Pacific, Inc.
98	APR 776	Advanta Seeds Pacific, Inc.
99	APR 1231	Advanta Seeds Pacific, Inc.
100	APR 1232	Advanta Seeds Pacific, Inc.
101	SRX 4801	Seed Research of Oregon, Inc.
102	SR 4500	Seed Research of Oregon, Inc.
103	SRX 4120	Seed Research of Oregon, Inc.
104	SRX 4RHT	Seed Research of Oregon, Inc.
105	Elfkin	Jenks Seed Connection
106	CAS-LP84	ProSeeds, Inc.
107	MDP	ProSeeds, Inc.
108	EPD	Mountain View Seeds, Ltd.
109	EP53	Grassland West Co.
110	EP57	Mountain View Seeds, Ltd.
111	Skyhawk	Forbes Seed & Grain
112	MP58	Jenks Seed Connection
113	MP107	Cascade International Seed Co.
114	MP103	Cascade International Seed Co.
115	MEPY	Jenks Seed Connection
116	ABT-99-4.115	AgriBioTech, Inc.
117	ABT-99-4.560	AgriBioTech, Inc.
118	ABT-99-4.625	AgriBioTech, Inc.
119	ABT-99-4.709	AgriBioTech, Inc.
120	ABT-99-4.724	AgriBioTech, Inc.
121	ABT-99-4.960	AgriBioTech, Inc.
122	ABT-99-4.965	AgriBioTech, Inc.
123	CIS-PR-72	Mountain View Seeds, Ltd.
124	PST-2JH	Pure-Seed Testing, Inc.
125	PST-2L96	Pure-Seed Testing, Inc.
126	SRX 4820	Seed Research of Oregon, Inc.
127	ABT-99-4.461	AgriBioTech, Inc.
128	ABT-99-4.629	AgriBioTech, Inc.
129	ABT-99-4.633	AgriBioTech, Inc.
130	ABT-99-4.753	AgriBioTech, Inc.
131	ABT-99-4.903	AgriBioTech, Inc.
132	Radiant	Independent Seeds
133	Jet	Pennington Seed Co.
134	BY-100	Brett Young Seeds, Ltd.

NTEP Site Profile: University of Rhode Island

Turfgrass research has been conducted at the University of Rhode Island since 1890 with variety and species evaluation as an important component of the overall program. In the 1960's, Dr. C. R. Skogley contributed greatly to regional variety evaluations in cooperation with other Northeast researchers. This early work was the foundation for the initiation of NTEP. Here in the 1990's, the work continues with Dr. Bridget Ruemmele responsible for NTEP trials. Dr. Ruemmele and research associate Mr. Greg Fales maintain and evaluate NTEP trials on Kentucky bluegrass (high and low input), perennial ryegrass, fineleaf fescue, tall fescue and bentgrass (putting green and fairway). Being only a few miles from the Atlantic Ocean, the fifteen acre research facility in Kingston is an excellent location for evaluating variety response to coastal Northeast conditions. Various pests, such as dollar spot, are consistent threats and damage weak grasses.

Entrance sign to the University of Rhode Island turfgrass research facility in Kingston



Variety differences in the 1998 National Fineleaf Fescue Test at Kingston, RI. Summer drought in 1999 damaged the common creeping red fescue plots on the right while the improved chewings fescue on the left suffered little damage.

The heat and drought of summer 1999 stressed many of the grasses throughout the Northeast with the trials at Kingston being no exception. Considerable differences were noted in fineleaf fescue, Kentucky bluegrass and bentgrass trials. In addition, observations were made on newly improved species such as velvet bentgrass, colonial bentgrass and hairgrass (*Deschampsia sp.*).

Dr. Ruemmele also conducts ancillary trials on the NTEP bentgrass putting green and fairway/tee tests. She is maintaining one-half of each entry with little or no fungicide use allowing diseases to flourish. This year, due to drought, not much disease developed. Hopefully, in future years, disease pressure will allow data collection on resistance and the possibility of significantly reducing fungicide use on bentgrass. We appreciate the work of Dr. Ruemmele, Mr. Fales and the other colleagues at URI involved in NTEP research!

Web site Update

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tions, impact and results of testing and membership information. In addition, a new section "Services" has been added containing information on such items as our recently introduced *Custom Data Analysis*. Of course, NTEP data for the last five years is available, as it was on our old site.

Future planned enhancements include:

• Updated listing of varieties and their sponsoring companies. This list will include company information such as address, phone and fax numbers, contact persons and links to company web sites.

• On-line ordering/payment of reports and membership dues.

NEW
NTEP Web Site Address

http://www.ntep.org

• Contact information for university cooperators, tests being evaluated at each location and more details on new tests.

We want to better serve your needs, therefore please contact us via phone or email with your suggestions.

What You Need to Know About NTEP: Part Three "Test Procedures and Methods"

Successful variety evaluations require considerable planning and forethought. First, the NTEP Policy Committee produces a testing schedule for the next three to five years. Scheduling tests up to five years in advance gives seed companies and plant breeders the time needed to evaluate experimental selections and choose the most promising for further evaluation. Also, one to two years is needed to produce sufficient quantities of seed for entry into NTEP tests (for instance, NTEP needs 8 - 10 kg of seed for one tall fescue entry). The advance scheduling is important to university cooperators as they can better plan future field studies and the most efficient use of land resources.

Next, information is mailed to seed companies and plant breeders announcing the upcoming test. This official announcement is made 10-12 months in advance of the deadline for seed to be received at NTEP headquarters in Beltsville, Maryland. Included with the announcement is a questionnaire concerning the approximate number of entries each company will submit. Companies are not held to these numbers. They are used solely to estimate the number of entries NTEP and cooperators can expect. At the same time, a questionnaire is mailed to university scientists to solicit those interested in evaluating this test. After the questionnaires are received and compiled, an advisory committee consisting of members from universities and industry make suggestions on the site locations, test management levels (i.e., fertility, mowing height, irrigation, etc.), seeding rates, standard entries and additional test data to be collected. For instance, the tall fescue advisory committee may suggest that traffic tolerance and brown patch resistance are two important testing needs. The NTEP administration would then seek locations that can adequately evaluate those characteristics. Additional funding is given to locations that perform these additional evaluations (called *ancillary studies*).

In addition, funding proposals are often submitted by researchers. The advisory committee and the NTEP administration evaluate each proposal based on merit, cost and relevance of the research and makes a determination on whether to fund or not fund.

After site locations and ancillary studies are determined, research agreements are mailed to university scientists (cooperators) chosen to evaluate the test. The agreement contains the following basic points:

1. The Principal Investigator (PI) must collect the following data: an establishment rating; genetic color, spring greenup and leaf texture ratings (once each year); turfgrass quality ratings monthly during the growing season.

2. Plant material (seed or vegetative) will not be used for breeding or seed production purposes unless written permission is obtained from the owner of each entry. All plant materials will be destroyed at the end of the testing period.

3. If the above conditions are met and complete data are submitted, the PI will be paid a total of US$10,000.00 (current payment structure initiated with the 1999 Perennial Ryegrass Test) over the following period:

A. When the seed or planting stock is mailed:
US$1,000.00

B. When the first full years' data is received:
US$2,500.00

C. When the second full years' data is received:
US$2,500.00

D. When the third full years' data is received:
US$2,000.00

E. When the fourth full years' data is received:
US$2,000.00

Data must be submitted to NTEP by February 1 following the year the data was collected. This allows NTEP to review, analyze and publish the data in a timely manner. Data for a particular year is published and released four to six months after the end of the calendar year.

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WHAT YOU NEED TO KNOW ABOUT NTEP (*continued from page five*)

NTEP test sites use a standard plot size depending on the species. Cool-season grasses, such as Kentucky bluegrass or perennial ryegrass, are planted in approximately 25 square feet plots (2.2 m^2) while warm-season grasses, such as bermudagrass or buffalograss, use approximately 36 square feet plots (2.6 m^2). Tests are planted in randomized complete block designs with three replications. Cool-season grasses are planted often with no border between them. This allows for even and uniform mowing patterns. Warm-season grasses are highly stoloniferous and will contaminate each other quite easily, therefore, borders of other species or bare soil are used between plots.

Standard establishment procedures, such as adequate irrigation, timely fertilization and proper mowing heights, are used initially to enhance germination or vegetative development. This allows for a uniform evaluation of establishment rates for all entries. When plots are fully established, then the selected management regime is initiated. This management regime will be used for the remainder of the testing period (four to five years).

Each NTEP study utilizes different management regimes. These are agreed upon by the advisory committee and are assigned by NTEP administration based on a uniform geographical distribution and the resources available at each test site.

Data is collected by cooperators at each university location and then submitted to NTEP at the end of the growing season. The data is first reviewed and checked for any obvious errors. For instance, disease ratings are reviewed to ensure a good disease infection occurred and that the proper rating scale was used (many pathologists in the U.S. use a scale for rating diseases of 0-10; 0=no disease). This is accomplished by comparing the ratings of certain disease susceptible "standard" entries with other entries. If the standard entries have high ratings, we suspect that either the wrong scale was used or a low disease infection was present. After an initial review, any questions or problems found are directed to the cooperator. When these questions are resolved, the data is statistically analyzed using an ANOVA (Analysis of Variance) procedure. ANOVA compares the data collected across replications and entries in terms of their means and variability.

NTEP examines the ANOVA produced for each data set (data set is defined as the data from one species test at one location). Data sets that appear to be problem-free are printed and returned to the cooperator for final review. If no problems are found with the data as it is analyzed by NTEP, it is used in that form by NTEP. However, problems are found in 25 to 30 percent (%) of the data sets during this step. Often the problems relate to improper coding of the data. These problems are normally easily corrected. Again, NTEP staff directs the questions it has to the cooperator. After consultation with the cooperator, questionable data is either adjusted or discarded. The corrected data sets are analyzed again, printed and mailed to cooperators for their final review.

When all data sets have been reviewed and/or corrected, NTEP staff starts the summary report. All data are pooled and statistically analyzed. Turfgrass quality data is summarized and presented in computer generated table format. Data on individual characteristics such as genetic color, leaf texture, diseases, etc. are analyzed and printed in separate tables. The summary report (progress report) is formatted, reviewed for errors and printed. The summary reports are then mailed to NTEP members and loaded on the NTEP web site (www.ntep.org).

(*This is part three of a series of articles that was originally published as a chapter in* Turfgrass Cultivars: Breeding and Utilization, *by SoftScience, Inc. (Japanese only). The next issue of* Newsline *will focus on NTEP test sites/locations).*

NTEP NEWSLINE is issued on a quarterly basis. If you have concerns or suggestions, please contact:

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