By MARK LESTER

Ryegrass breeding has progressed with such fervor in the last nine years that re-
searchers may have reached perfection in some areas, according to an eminent ryegrass expert.

Dr. Reed Funk of Rutgers University said that with the present era, we now have a great many seed companies, and it is easy for them to go on, day by day, and develop varieties and promising selections in the New York area, or the Midwest, or the West, or wherever they are located. Dr. Funk said that the most important thing is to make sure that the varieties are being produced on a large scale, so that they can be marketed and sold.

Dr. Funk also said that the industry has made great progress in the past few years, with the introduction of new varieties, such as Brightstar, and the development of improved disease resistance.

Dr. Funk said that the NTEP program is vital to the industry, as it allows breeders to test their varieties under a variety of conditions, and to determine which ones perform best in different environments.

Dr. Funk also emphasized the importance of quality control, and the need for breeders to work closely with turfgrass experts, such as himself, to ensure that the varieties are of the highest quality.

Dr. Funk concluded by saying that the future of ryegrass breeding is bright, and that there is a great deal of potential for the development of new varieties that will meet the needs of growers and consumers alike.

Turfgrass tests very useful — if you use them correctly

By KENNETH M. MORRIS

The National Turfgrass Evaluation Program (NTEP) was initiated in 1980 to coordinate uniform evaluation trials of turfgrass varieties and promising selections in the United States and Canada. Tests are conducted at universities and some private institutions with most states evaluating at least one NTEP test.

Since its inception, the NTEP has collected information on more than 50 turfgrass characteristics from approximately 800 experimental and commercial cultivars encompassing 17 turfgrass species.

Annual progress reports containing data collected the previous year are released for each species tested. A final report containing data collected is produced at the end of the test period. Progress reports are available to anyone who requests them.

The number of experimental and commercial cultivars in NTEP tests has increased greatly in the last few years — with 123 entries in the current national perennial ryegrass test — making decisions about varieties more difficult for consumers. Therefore, to use NTEP information most effectively, it is important to know how to correctly interpret the test results.

The first step in this interpretation process is to look at Table A — "Locations, Site Descriptions and Management Practices." This table gives information on soil type and pH, color and density when rating turfgrass quality.

Turfgrass quality ratings are collected monthly and are an overall visual evaluation of each grass. Quality ratings encompass all the factors that affect the quality of a turf stand. The overall rating by color density, percent ground cover, disease and insect injury, heat and drought tolerance and uniformity.

Past research has found that most researchers evaluating NTEP test results color density and weight when rating turfgrass quality.

Turfgrass quality is contained in three tables in all NTEP progress reports. One table displays data from each test location and an overall average (mean). To best use this table, you must determine what locations are the closest geographical to your location.

The overall average is useful to gauge the cultivars' performance over many locations and is helpful in regional and national marketing. However, national averages can be misleading to the average consumer working within only one city or state.

The second table gives the same turfgrass quality data but presents it for each month collected. Evaluating this table can lead to a better understanding of the varieties that perform better or worse during different months or seasons.

Many people use this table when deciding on blends of varieties. An individual may want to blend a grass that performs well in spring but poor in summer with a good summer-performing grass.

When considering data from any NTEP table, it is a figure at the bottom of the table, the "LSD Value," that needs your attention. The LSD (Least Significant Difference) Value is a figure at the bottom of each table, there is a figure at the bottom — the LSD Value — that needs your attention. The LSD Value is a figure at the bottom of each table, there is a figure at the bottom — the LSD Value — that needs your attention.

On blends of varieties. An individual may want to blend a grass that performs well in spring but poor in summer with a good summer-performing grass. When considering data from any NTEP table, it is a figure at the bottom of the table, the "LSD Value," that needs your attention. The LSD (Least Significant Difference) Value is a statistical tool to determine if the difference in cultivars' performance is actually or just happened by chance. To determine if a statistical difference exists among two cultivars, subtract the cultivar with the smaller value from the cultivar with the larger value. If the difference is significant, the numbers are different.
Heat, drought sock seed yield, mean high prices

Low seed yields will result in higher prices this fall as late-June temperatures climbed into the high-90s and low-100s throughout the grass-rich Willamette Valley, July brought no relief.

The high temperatures were part of a devastating 1-2 punch that saw the region’s rainfall during the September-June grass-growing season fall 14 inches below the average 35 to 40 inches.

As a result, fine and tall fescue production will only reach 30 to 40 percent of their normal yields, predicted Seed Research of Oregon President Mike Robinson. The ryegrass crop will be off 10 percent and maybe more if the hot, dry weather continues, he added.

“I saw one 50-acre field yesterday (June 23) that will be a total write-off,” Robinson said. “This is the critical time when seeds begin dropping. The fields don’t fill well in weather like this, especially in sandy areas. Many of the fields in gravelly areas along the rivers are gone.”

More water-retentive, clay-soil fields are in far better shape, Robinson said. So, too, are the bentgrass plots, although a continued heat wave could also affect them. Oregon has had the greatest increase in average temperature of any of the 50 states this year,” Robinson said. “Last year it rained almost every day through July 4 and we were afraid the grass would never produce. It’s always feast or famine here.”

According to Barry Norris, an engineer for the Oregon Department of Water Resources, drought conditions have persisted for six years now. A lack of precipitation has been exacerbated by this year’s record-setting temperatures.

“It’s been extremely warm here,” said Norris. “We’ve had record high temperatures broken on several occasions. We’ve also had record breaking low flows in rivers across the state — not just record breaking, record shattering. These rivers are down 33 percent.”

News of the poor seed harvest didn’t surprise Norris. “If they’re depending on high-precipitation this year, they’re hurting.”

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Ryegrass breeders pursuing major results

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since the discovery in 1963 of endophyte, a fungus that lives within plants and gives them natural resistance to certain surface insects.

“Soon, with that (endophyte) clue, we found resistance to sod webworm and later to billbugs and chinchbugs and so forth,” Funk said.

And the list of improvements goes on, although presence of endophytes in a grass matters less if it is being used to overseed.

Funk pointed out that of the top 45 varieties of ryegrass in the 1991 first-year results of the National Turfgrass Evaluation Program, only two were in the previous test.

Kevin Morris, director of the NTEP, said: “In this test we have almost twice as many entries as the last one. I suspect of the 125 varieties this year, 80 to 90 have never been in the test before.”

Saturn, which topped the list in 1986, rated 45th in the 1991 results, which were released in July. Dimension was near the top in 1986 and is ranked 35th now in overall average.

“Most of the varieties that performed with higher averages are just coming on the market,” Funk said. “They are darker, lower-growing, more stress-tolerant, more resistant to brown patch, better mowing.”

Funk said plant breeders can “build on every previous cycle” of breeding.

“We’ve made a lot of progress in the last 30 years. I think we’ll make even more in the next 30 years,” he said. “A big factor is we’ve been able to attract a number of very competent young men and women into turfgrass breeding. They will do better than the old professors that started out knowing less than they do.”

Funk said more of those plant breeders are working at commercial firms than at universities.

Morris explained that more companies today want their own varieties. “They then don’t have to pay royalty fees and they have more control of the supply,” he said.

Asked why a seed company would enter so many varieties of ryegrass in the national test knowing they might not sell, Funk explained that more companies today want their own varieties. “They then don’t have to pay royalty fees and they have more control of the supply,” he said.

“Companies in the lead usually offer a great difference in seed. They may be looking for varieties that produce well or to put into blends and sell on the consumer market.”

“In the golf industry,” he said, “the superintendent usually wants the best and has the money for it. But he also has out-of-play areas he doesn’t want to pay so much for.”

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