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 grassrich 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 highprecipitation this year, they're hurting."



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since the discovery in 1983 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 123 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, lowergrowing, 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 ompany would enter so many varieties of ryegrass in the national test knowing they might not rank highly, Morris 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."