

1988 Turf Weed Control, PGR, and Management Studies  
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The drought of 1988 offered some unique opportunities to study grasses under these conditions. One ongoing study which yielded some valuable information was an evaluation of various cool-season turfgrass species and cultivars for their performance under low maintenance conditions. This trial consisted of 48 cultivars of Kentucky bluegrass (*Poa pratensis*), tall fescue (*Festuca Arundinacea*), fine fescues (*Festuca rubra*), and perennial ryegrass (*Lolium perenne*) evaluated under conditions of no irrigation and low nitrogen fertility (1 lb N/M/YR). Data in table 1 show the percent survival of each species. The two species which fared the best were tall fescue and perennial ryegrass. Surprisingly, the fine fescues did not survive the drought very well which was unexpected because the fine fescues have always been touted as low maintenance, drought hardy grasses. The Kentucky bluegrasses also did not do very well but some of their lack of survival can be attributed to the difficulty in establishing bluegrasses and the gradual deterioration seen with the improved, sod-quality bluegrass varieties under low maintenance. The two species that fared well in this test were tall fescue and perennial ryegrass. Tall fescue has long been noted for its ability to withstand droughts and has done so by being very deep rooted compared to other cool season turfgrasses. This trial has demonstrated that for medium to low maintenance turfs, tall fescue should be strongly considered for use in Michigan. Our trials have never shown any problems with winterkill of tall fescue in Michigan, however, this has long been a concern. Until we get more data, we still caution against the use of tall fescues on wet or poorly drained soils.

Data in tables 2-5 show the 1988 quality ratings for variety trials of Kentucky bluegrass, tall fescue, fine fescues, and perennial ryegrass. The tall fescue variety trial was established in May of 1988 so data was only available from August, September and October of 1988. Because of the number of varieties now available in all species, a good rule of thumb for selecting varieties is to select those varieties that are in the top 25% of the trial. This will assure you of selecting high quality varieties.

A study was conducted in 1988 to examine the ability of various iron sources to mask the injury seen from spring applications of Embark to control annual bluegrass seedheads. Embark was applied at 1/8 lb AI/A (8 oz/A) alone and in combination with various commercially available iron sources and the treatments were evaluated for percent seedhead control and turf quality. Data in table six describes the rate and sources of iron used in the study and shows the results in terms of turf quality and seedhead density and control. Most of the iron sources tested did provide some masking of Embark injury with Scott's Iron S granular source providing the best turf quality. Also providing good masking of Embark injury was Ferromec at 2 and 4 oz/M. The most interesting observation of the study was that many of the iron sources antagonized the efficacy of Embark. This was clearly shown in the percent seedhead control data. Only Scott's Iron-S and Agriflex provided the same level of control as Embark alone. Ferromec AC at 2 oz/M showed slight antagonism but was still effective. The Lesco Iron plus N and Ferromec AC at 6 oz/M caused a noticeable loss of seedhead control but they were not statistically different from the Embark alone treatment. All other rates and sources of iron caused a significant loss of seedhead control.

TABLE 1. Low Maintenance Variety Trial

Variety	Species	Quality Ratings			Grand Means	%	%
		4/25	5/20	7/1		Survival	Crab
5D2	Tall Fescue	4.8	6.3	3.3	4.8	83.3	3.3
Apache	Tall Fescue	5.2	6.3	2.7	4.7	86.7	3.7
Spartan	Hard Fescue	5.8	6.0	2.0	4.6	20.0	0.7
Bonanza	Tall Fescue	5.3	5.7	2.7	4.6	80.0	3.0
Scaldis	Hard Fescue	5.7	5.7	2.2	4.5	20.0	1.0
Shadow	Creeping Fescue	5.3	5.0	2.7	4.3	43.3	.3
Agram	Creeping Fescue	5.2	5.3	2.2	4.2	21.7	.3
Tempo	Tall Fescue	5.3	5.3	1.3	4.0	81.7	3.0
Bighorn	Sheep Fescue	4.0	6.0	2.0	4.0	18.3	.3
Mustang	Tall Fescue	4.8	5.3	1.7	3.9	88.3	3.3
Victory	Creeping Fescue	5.2	5.0	1.7	3.9	28.3	2.0
Calicote	Perennial Ryegrass	5.3	4.3	2.0	3.9	45.0	11.0
Kenblue	Kentucky Bluegrass	5.7	4.7	1.3	3.9	35.0	28.3
Parade	Kentucky Bluegrass	5.2	4.7	1.8	3.9	11.0	5.3
Galway	Tall Fescue	4.8	5.0	1.7	3.8	86.7	3.0
Touchdown	Kentucky Bluegrass	5.3	4.7	1.5	3.8	4.3	2.3
Houndog	Tall Fescue	4.5	5.7	1.3	3.8	91.7	1.7
Delray	Perennial Ryegrass	5.7	4.3	1.3	3.8	31.7	11.7
Tournament	Hard Fescue	4.8	5.0	1.5	3.8	12.0	1.0
Pennfire	Perennial Ryegrass	6.3	4.0	1.0	3.8	60.0	12.7
Trident	Tall Fescue	4.3	5.3	1.5	3.7	83.3	5.0
Arid	Tall Fescue	4.0	4.7	2.3	3.7	90.0	2.0
Park	Kentucky Bluegrass	5.5	4.3	1.2	3.7	27.7	11.0
Delta	Kentucky Bluegrass	5.7	3.0	2.2	3.6	13.3	28.3
Flyer	Creeping Fescue	5.2	3.7	2.0	3.6	13.3	3.0
Azay	Sheep Fescue	5.3	4.3	1.2	3.6	17.0	1.3
Jazz	Perennial Ryegrass	4.8	4.3	1.5	3.6	53.3	14.3
Goalie	Perennial Ryegrass	6.0	3.7	1.0	3.6	20.0	20.0
Aurora	Hard Fescue	4.7	4.7	1.2	3.5	10.7	2.3
Maverick	Tall Fescue	4.5	4.7	1.3	3.5	75.0	3.7
America	Kentucky Bluegrass	5.2	3.7	1.3	3.4	23.3	3.0
Nassua	Kentucky Bluegrass	5.5	3.0	1.7	3.4	13.3	38.3
Banff	Kentucky Bluegrass	5.2	4.0	1.0	3.4	10.0	2.7
All-Star	Perennial Ryegrass	4.3	4.3	1.0	3.2	55.0	7.0
Gator	Perennial Ryegrass	4.0	4.3	1.3	3.2	65.0	7.0
Georgetown	Kentucky Bluegrass	4.7	3.3	1.7	3.2	25.0	7.0
Dawson	Chewings Fescue	3.8	3.0	2.3	3.1	10.0	2.7
Ruby	Creeping Fescue	3.7	3.3	2.0	3.0	36.7	5.0
Fiesta	Perennial Ryegrass	4.5	3.3	1.0	2.9	63.3	8.0
Blazor	Perennial Ryegrass	4.3	3.3	1.0	2.9	53.3	5.3
Adelphi	Kentucky Bluegrass	4.5	3.0	1.2	2.9	21.7	10.7
NK 200	Perennial Ryegrass	4.0	3.3	1.0	2.8	46.7	16.0