

**1992 SHADE VARIETY TRIALS**  
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Shaded turf areas often pose a problem to general turf managers, even the most experienced. In most shaded turf situations the turf begins yearly growth quite vigorously but as the season wears on the grass goes into decline. Cultural methods need to be altered, but the first and foremost aspect that needs to be considered is that of the turf species itself. During the 1992 growing season 12 varieties (either monostands, blends, or mixtures) were considered for their adaptivity to a shaded area. The varieties used are included in Table 1:

**Table 1: Shade varieties used and seeding rates.**

VARIETY/BLEND/MIXTURE	SEED RATE (lbs./M)
1. 'Palmer' perennial ryegrass	5.0
2. 'Dandy' perennial ryegrass	5.0
3. 'Pennncross' creeping bentgrass	1.0
4. 'Putter' creeping bentgrass	1.0
5. 'Pennlinks' creeping bentgrass	1.0
6. 'Enjoy' fine fescue	3.0
7. 'Shademaster' fine fescue	3.0
8. 'Sabre' <i>Poa trivialis</i> (Pt)	2.0
9. 50% 'Dandy', 50% 'Sabre' Pt	2.5, 2.5
10. 50% 'Palmer', 50% 'Sabre' Pt	2.5, 2.5
11. <i>Poa annua</i>	2.0
12. 40% 'Palmer', 60% 'Dandy'	2.0, 3.0

## METHODS

The study was conducted through the 1992 growing season, approximately mid-April through mid-September. The shaded areas utilized were located at Michigan State University Forest Akers East Course, (tee areas from holes 11 and 14). All plots within the area that had been thinned from the previous year (1991) were reseeded 6 May. The day after seeding, 7 May, 13-25-12 fertilizer was applied granularly at a rate of .75 lbs./M. Seed germination occurred since the tree stand present had not yet bore any leaves and allowed for ample light. The design was a completely randomized block design with four replications. All the plots were maintained with moderate intensity throughout June, (cutting height was approximately 2.5"). Mowing height was lowered to 1/2" height by 21 July. Five rating dates were conducted in which density and color were rated on a scale of 1-9 (9 being superior). All rating dates were conducted by the same individual. Table 2 provides the density and color means as well as LSD values which were formatted using ANOVA procedures.

## RESULTS

The treatments which received the highest density ratings throughout the study were *Poa annua* and *Poa trivialis* while the perennial ryegrass and creeping bentgrass treatments had higher color ratings, (see Table 2). Lowering the height of cut to the 1/2" height caused some thinning of the plot area as a whole but nothing of significance between treatments. One must take note of the atypical summer as it was characterized by higher than average rainfall amounts and lower temperatures. Also of note was the application of flurprimidol (PGR) to all the plots on the following dates; 25 June, 18 July, and 5 August. Little to no effect was observed between species from the flurprimidol treatments.

## FUTURE STUDIES

Plans are being made to continue this study in 1993. In 1993 the individual plots will be bisected with one half receiving a plant growth regulator (PGR) application and the other half remaining as a check (no PGR) to provide for a better comparison of the PGR.

Table 2. Treatment Means of 1992 Shade Study, Michigan State University

TREATMENT	RATING DATES (MEANS GIVEN BELOW)									
	6/30/92		7/22/92		8/04/92		8/17/92		8/25/92	
	DENSITY	COLOR	DENSITY	COLOR	DENSITY	COLOR	DENSITY	COLOR	DENSITY	COLOR
1. Palmer PRG	7.4	8.0	5.3	5.0	5.0	7.0	5.3	6.6	5.5	7.4
2. Dandy PRG	7.0	8.0	5.0	4.8	4.5	7.3	4.5	6.6	5.3	7.6
3. Penncross CBG	5.4	7.4	6.4	7.3	6.8	6.8	6.0	6.8	6.6	6.6
4. Putter CBG	4.6	7.5	6.6	7.5	6.5	7.0	5.8	6.6	6.8	6.8
5. Pennlinks CBG	6.6	7.1	5.9	6.6	6.5	6.8	5.5	6.5	5.8	6.9
6. Enjoy (ff)	5.6	7.4	6.1	6.3	5.8	6.3	4.8	5.6	5.5	7.0
7. Shademaster (ff)	6.6	7.1	6.0	6.5	6.0	6.5	5.5	6.4	6.5	7.1
8. <i>Poa trivialis</i> (Pt)	7.1	7.3	6.5	7.0	6.8	7.0	6.0	7.3	6.6	7.1
9. 50 Dandy,50 Sabre Pt	7.3	7.9	6.0	6.4	5.8	6.8	5.6	6.8	6.0	7.0
10. 50 Palmer,50 Sabre Pt	7.5	8.0	5.9	6.3	6.0	7.0	5.0	6.6	5.8	7.5
11. <i>Poa annua</i>	7.8	7.8	7.4	7.6	7.5	6.8	6.8	6.6	7.0	7.1
12. 40 Palmer,60 Dandy	7.1	7.6	5.1	5.0	5.0	7.3	4.5	6.5	5.1	7.6
LSD VALUES	0.4	0.2	0.3	0.4	0.4	0.4	0.3	0.3	0.4	0.2