Report of 1962 Michigan Turfgrass Trials

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The major portion of this report concerns establishment data of turfgrass selections and mixtures. Thus, the following rankings only reflect the ability of grass selections to establish a dense turf. Overall turfgrass performance requires 4 to 5 years of evaluation including thatching tendencies and disease resistance.

Establishment data were taken in terms of (a) growth (height in inches) and (b) a visual turf quality rating (1-best, 9-poorest) which includes uniformity, density, and texture.

Vertical mowing, renovation, and thatch removal

Grasses under high management levels are producing large quantities of organic material which accumulate as thatch over a 4 to 5 year period. This thatch layer provides an ideal environment for disease activity and under dry conditions can inhibit moisture movement.

Several machines are now on the market for thatch removal including the (1) Aero-Thatch, (2) E-Z Rake, (3) Henderson, (4) Jacobson Thin Cut, (5) Ryan Ren-o-thin, and (6) West Point Verticut. These machines are relatively new, particularly at the homeowner level. In the near future, thatch removal may become an annual practice on lawns maintained under high fertility and moisture levels. The machines are available on a rental basis.

The concept of thatch removal is not new. It has been widely utilized by professional turfmen on bentgrass for many years. However, its utilization at the homeowner level is just being introduced.

		C	th (inche	()	<u>Iuri ç</u>	Juanty (1-	best, 9-poc Ave. of	Poa
Entry	Selection		8-7-62		8-1-62	10-1-62	5 ratings	
1	Roughstalk	0.7	1.2	1.7	1.7	1, 3	1.4	0
2	Delta	0.4	1,0	1.4	2.3	1.3	1,6	0
3	Park	0.6	1.9	1.5	2.0	2.7	1.7	0
4	Common	0.3	0.8	1.1	3.3	3.7	2.5	0
5	Newport	0.3	0.8	1.1	4.0	3.0	2.7	60
6	C-1	0.3	0.6	1.1	4.7	3.3	3.3	0
7	Merion	0.0	0.3	1, 1	6.0	4.3	3.6	0
8	Campus	0.4	1, 1	1, 3	2.7	2.0	2.0	0
9	Prato	0.4	0,8	1.1	2,7	2.0	2.0	5
10	С.В.	0.5	0.9	1.1	2.7	2.0	2.1	40
11	K5(47)	0.2	0.9	1.2	2.7	1.7	2.1	0
12	PNW	0.5	0.8	1.1	3.7	3.0	2.7	0
13	IBB #15	0.4	0.8	1, 2	2.7	3.0	2.7	0
14	Brabantia	0.5	0.8	0.9	3.0	3.7	2.8	0
15	IBB #17	0.4	0.7	1.1	4.0	3.3	2.8	0
16	Z. W. B.	0.4	0.8	1.3	4.3	3.7	2.9	75
17	IBB #16	0.4	0.9	1, 1	3.3	3.0	3.0	0

Table 1. Bluegrass variety establishment evaluation. Planted July 26, 1962.

		Growth (inches)	Turf Qua	lity (1-best,	9-poorest) Average of
ntry	Selection	7-23-62	8-15-62	10-1-62	5 ratings
1	Common Chewings	1, 1	3.7	1.7	2,7
2	Rainier	1.9	3.7	3,0	3, 3
3	Pennlawn	1,9	4,0	2.7	3, 3
4	Ilahee	1,9	4.8	2,0	3,4
5	Olds	1.7	4,0	3, 3	3.6
6	Common Creeping	1,9	6.2	5.0	5,6
7	Highlight	2.0	2.2	1,0	1,6
8	S-59	2,0	2.7	1, 3	2.0
9	Oase	1.8	4.3	1,0	2,6
10	Duraturf	1. 1	3,0	2,3	2,6
11	Syn B	2.0	3, 5	2.3	2.9
12	Grand Praire	1.2	4.0	2.7	3.3
13	Syn A	1.7	5.0	2.7	3,8
14	Golfrood	1, 5	6.7	2.0	4, 3
15	S.L. 3	1.2	8.3	6.3	7.3
16	MSU-18-Fr (Sweden)	1.5	2,0	1,6	1, 8
17	MSU-36-Fr (Neth)	2, 1	3.6	2,3	2.9
18	MSU-3-Fr (Clone 1)	1.3	4.0	2.6	3.3

Table 2. Red fescue variety establishment evaluation. Planted July 11, 1962.

	ang allow and a second s	Growth (inches)			9-poorest)	Density (shoots/ 4 sq.in.)
Entry	Selection	7-26-62	10-1-62	11-1-62	Ave. of 2 ratings	9-11-62
1	Common	4.2	1.0	1,7	1, 3	52
2	E1506	3.2	1.0	1.0	1.0	57
3	MSU-3-Lm*	4,0	1,0	1,0	1.0	58
4	MSU-2-Lm	3.2	1.0	1.0	1,0	52

Table 3. Annual ryegrass variety establishment evaluation. Planted July 10, 1962.

* Excellent upright growth habit.

Table 4. Perennial ryegrass variety establishment evaluation. Planted July 10, 19.62.

		Growth (inches)			Rating 9-poorest)	Density (shoots/ 4 sq.in,)
Entry	Selection	7-26-62	10-1-62	11-1-62	Ave. of 2 ratings	9-11-62
1	Common	4.2	1.0	1.0	1,0	79
2	Brabantia	3,8	1.0	1.0	1.0	91
3	S-23	3,2	1.0	1.3	1, 1	95
4	A2272	3.0	1.0	1.3	1, 1	89
5	Pelo	3.0	1.0	1.3	1, 1	81
6	Norlea*	4.0	1, 0	2.7	1, 8	73
7	MSU-21-Lp(Com	p)3.4	1, 3	1.0	1, 1	89
8	MSU-6-Lp(Clone	1)2.6	1, 3	1.0	1, 1	94
9	MSU-17-Lp(Bdg)	3.4	1.0	1.0	1,0	73

* Dark green color

		Growth (inches)	()	Quality R l-best, 9-		Density (shoots/ 4 sq.in.)
Entry	Selection	7-26-62	10-1-62	11-1-62	Ave, of 2 ratings	9-11-62
1	Kentucky 31	2.2	1.0	1,0	1. 0	52
2	Alta	2,5	1.3	1.0	1, 1	51
3	Traveler*	2.4	1.3	1.0	1, 1	47
4	Syn A	2,5	2.0	1.7	1.8	52
5	5-170	1.7	3,0	1.0	2.0	36
6	MSU-1-Fp(Swed)	2.9	1.0	1.3	1, 1	90
7	MSU-7-Fe(Italy)	2.2	1.0	1, 3	1, 1	70

Table 5. Tall fescue variety establishment evaluation. Planted July 10, 1962.

* High percent of off types (40%)

 Table 6. Bentgrass variety establishment evaluation. Entries 1 to 9 were planted October 25, 1961 and entries

 10 to 14 were planted June 4, 1962.

Entry	Selection	Spring Growth (1-best, 9-poorest) Ave. of 2 ratings	Rate of Cover (1-best, 9-poorest) Ave. of 2 ratings	Turf Quality (1-best, 9-poorest) Ave. of 4 ratings	Fall discoloration (1-No discolor 9-Discolor) 10-1-62
-	Pennlu	5.4	3. 1	1.9	3
8	Nimisilla	3.2	3.3	2.2	2
æ	Toronto (C-15)	5.4	4.0	2.5	Э
4	Cohansey (C-7)	6.4	4.6	2.8	6
5	Congressional (C-19)	5.0	3.9	3.0	5
9	Arlington (C-1)	7.2	5.8	4.5	3
2	Washington (C-50)	6.2	4.8	4.7	9
00	C-1 & C-19	6.8	5.8	5.0	5
6	MSU -12-Ap	4.6	6.4	5. 1	7
10	Evansville	1	8.3	5.8	7
11	Old Orchard (C-52)	1	1	6.3	9
75	Penncross	1		3.7	2
13	Seaside	1	1	4.1	1
14	Astoria		ł	6.8	3

			Quality Rating	lating	1 H	Powdery Mildew (1-least, 9-most)	Fading out (1-least, 9-most)
Entry	Treatment (% P.G.S.)	4-1-62	7-1-62	9-1-62	Ave. of 10 ratings	Ave. of 2 ratings	5-25-62
-	Commercial Mixture*	4.3	3.3	2.3	3.1	1.3	4.0
10	100% Poa trivialis	2.7	3.3	3.0	3.2	1.0	4.7
5	50% P. trivialis-50% Com. bluegrass	3.0	3.0	3.0	3.3	1.5	2.7
4	50% P. trivialis-50% Pennlawn red fescue	3.3	2.7	3.7	3.6	1.0	2.7
ŝ	33% P. trivialis, 33% Pennlawn red fescue	2 3	0 4	2 7	8	2	3 0
4	75% Colli. Duck rass		D *#		0.		
þ	25% Pennlawn red fescue	2.7	7.2	8.3	6.2	6.1	2.3
2	33% Com. bluegrass, 33% Perennial rye-						
	grass, 33% Pennlawn red fescue	7.3	6.5	7.3	6.4	1.3	6.3
80	100% Pennlawn red fescue	2.3	7.0	8.3	6.5	2.8	5.0
6	50% Com. bluegrass						
	50% Pennlawn red fescue	2.3	8.3	0.6	6.8	5.8	5.7
10							
:	50% Kent. 31 tall fescue	7.0	6.7	7.7	6.9	4.6	3, 3
;	750 Dourloss and free			c c			
12	100 % Common Kentucky bluegrass	2.7	8.7	0.0	2.9	7.5	3.0
13	100% Kentucky 31 tall fescue	7.0	7.0	8.0	7.3	1.5	6.0
14	100% Merion Kentucky hlueorass	2.0	0	0.0	0.0	8.0	1.0
15	50% Merion . 50% Pennlawn	0.0	0.2	0.0		4.5	4.0
16	100% Norlea perennial rveorass	2.0	6.0	8.0	7.3	1.0	2.0
17	17 100% Common perennial ryegrass	6.0	6.0	7.0	6.8	1.0	4.0

1	1	
. 7, 1961.		Kent.31 Common Tall Perennial Fescue Rvegrass
anted Sept		Kent.31 Tall Fescue
ditions. Pl	osition	Pennlawn Kent.31 Common Red Tall Perennia Fescue Fescue Rvegrass
er shade cor	% Composition	Poa trivialis
ures grown und		Density Common hoots/4sq.in) Kentucky
of grass mixt		Density (shoots/4sq.i
Table 8. Percent composition and density of grass mixtures grown under shade conditions. Planted Sept. 7, 1961.		Treatment
Table 8.		H

		Dancitur	Common		Pennlawn	Kent. 31	Common
Entry	Treatment (% P.G.S.)	(shoots/4sq.in) 9-11-62) Kentucky Bluegrass	Foa trivialis	Red Fescue	Tall Fescue	Perennial Ryegrass
-	Commercial Mixture*	66	0	91	2	1	1
1	100% Poa trivialis	54	;	100	:	!	1
1 m	500, D twinialie-500, Com bluearase	366 56	~	26	1	1	1
4		ause	.1	91	6	:	1
5		ed fescue					
		46	1	91	00	:	:
9	75% Com. bluegrass						
	25% Pennlawn red fescue	27	11	1	89	!	1
2	33% Com. bluegrass, 33% Perennial rye-						
	grass, 33% Pennlawn red fescue		2	:	21	1	17
8	100% Pennlawn red fescue	25	1	:	100	;	1
6	50% Com. bluegrass						
	50% Pennlawn red fescue	16	9	1	94	1	1
10	50% Com. bluegrass						
	50% Kent. 31 tall fescue	16	12	;	1	88	:
11	25% Com. bluegrass						
	75% Pennlawn red fescue	22	10	;	66	1	:
12	100% Common Kentucky bluegrass	15	100	:	1	1	1
13	100% Kentucky 31 tall fescue	18	:	:		100	:
14	100% Merion Kentucky bluegrass	6	100	!	;	1	1
15	50% Merion, 50% Pennlawn	00	12	;	88	1	:
16	100% Norlea perennial ryegrass	10	;	;	:	1	100
17	100% Common perennial ryegrass	22	:	1	1	1	100

MKB CKB PRF CRF PR AR KIF R B 33 43 11 11 30 5 80 33 33 20 20 20 20 80 20 21 11 11 30 5 80 20 27 20 20 80 80 80 20 27 24 3 33 46 75 55 55 55 55 50	y MKB CKB FKF CRF P.R. ATF R B-22-62 3 ratings 33 43 11 11 30 5 2.5 3.2			ercent	Species	Percent Species Composition (%	tion (%		on P. G. 3. basis)	(s)		(Inches) Growth	(s)	Quality Rating
MXB GAB FAR GAB FAR GAB MAR GAB MAR GAB GAB <th>AMAB CAB FAR A.R. A</th> <th>1</th> <th></th> <th>440</th> <th></th> <th>100</th> <th></th> <th>4 V</th> <th>(7 m E</th> <th>9</th> <th>00</th> <th>6-22-62</th> <th>1</th> <th>(1-best-9-poorest)</th>	AMAB CAB FAR A.R. A	1		440		100		4 V	(7 m E	9	00	6-22-62	1	(1-best-9-poorest)
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$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	75 25 14 1 2 0.3 0.5 3. 83 14 1 2 0.2 0.5 3. 25 50 0.5 0.5 0.5 3. 75 25 75 0.5 0.5 4. 75 25 0.5 0.4 0.5 4. 75 25 0.5 0.4 0.5 4. 75 25 0.2 0.4 0.5 4. 60 50 0.2 0.4 0.5 4. 75 20 0.2 0.4 0.5 4. 75 50 0.2 0.4 0.5 4. 7 - Merion Kentucky bluegrass A. A. 4. - Common Kentucky bluegrass KTF - Kentucky 31 Tall Fescue 7. 4. - Fennlawn Red Fescue R. R. 8. 8. 4. - Creeping Red Fescue R. R. 8. 8. 4. - Creeping Red Fescue R. R. 8. 8.	12			50						50	0.4	0.6	3.0
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	83 14 1 2 0.2 0.5 3. 25 75 75 75 0.5 0.6 3. 75 25 0.5 0.5 0.5 4. 75 25 0.5 0.5 0.5 4. 60 50 0.2 0.5 4. 75 25 0.4 0.5 4. 60 50 0.2 0.4 0.5 4. 60 50 0.2 0.4 0.5 4. 60 50 0.2 0.4 0.5 4. 7 0.2 0.2 0.4 0.4 4. 6 0.2 0.2 0.4 0.5 4. 7 0.2 0.2 0.4 0.5 4. 6 6 6 6 6. 6. 4. 7 6 7 7 7 7 4. 6 6 6 6 6 6 4. 7 6 7	13		75	25							0.3	0.5	3.0
25 75 0.5 0.6 3. 75 50 0.5 0.5 0.6 4. 75 25 0.5 0.5 4. 4. 50 50 0.4 0.5 4. 50 50 0.2 0.4 0.5 4. 50 50 0.2 0.4 4.	25 75 0.5 0.6 3. 50 50 0.5 0.5 4. 75 25 0.5 0.5 4. 50 50 0.2 0.5 4. 50 50 0.2 0.4 0.5 4. 60 50 0.2 0.4 0.5 4. - Merion Kentucky bluegrass 0.2 0.4 9.2 0.4 4. - Merion Kentucky bluegrass AR - Annual Ryegrass 0.2 0.4 4. - Common Kentucky bluegrass KTF - Kentucky 31 Tall Fescue R Redtop R Redtop 2. 0.4 4. 7 Creeping Red Fescue R Redtop R Redtop R Redtop 0.1 Under Fescue	14		83		14	1		2			0.2	0.5	3.0
50 50 6.5 4. 75 25 0.5 0.5 4. 50 50 0.2 0.4 0.5 4. 50 50 0.2 0.4 0.5 4.	50506.54.75250.40.54.50500.20.40.5- Merion Kentucky bluegrassAR - Annual Ryegrass0.20.4- Merion Kentucky bluegrassKTF - Kentucky 31 Tall Fescue8 Common Kentucky bluegrassR - RedtopR Creeping Red FescueRB - Roughstalk Bluegrass	15		25		75						0.5	0.6	3, 3
75 25 0.5 4. 50 50 0.2 0.4 4.	75 25 4. 50 50 50 60.5 50 60.2 0.4 60.2 0.4 60.2 0.4 75 0.2 60.2 0.4 60.2 0.4 60.2 0.4 60.2 0.4 60.2 0.4 60.2 0.4 7 0.2 60.2 0.4 60.2 0.4 60.2 0.4 60.2 0.4 7 0.2 60.2 0.4 7 0.2 60.2 0.4 7 0.2 8 - Kentucky 31 Tall Fescue 7 R 7 R 7 R 8 - Redtop 8 - Roughstalk Bluegrass			50							50	0.5	0.5	4.0
50 50 0.4 4.	50500.20.44 Merion Kentucky bluegrassAR - Annual RyegrassA.4 Common Kentucky bluegrassKTF - Kentucky 31 Tall Fescue8.4 Common Kentucky bluegrassR - Redtop8.4 Creeping Red FescueRB - Roughstalk Bluegrass		75	25								0.4	0.5	4.3
	 Merion Kentucky bluegrass Merion Kentucky bluegrass Common Kentucky bluegrass Common Red Fescue Creeping Red Fescue RB - Roughstalk Bluegra 		20	50								0.2	0.4	4.3
	- Fennlawn Ked Fescue - Creeping Red Fescue Demonial Dimension RB -	1	nome	Kentuch	cy blueg	rass		H44 F	KTF - Ke	ntuck	y 31 T	all Fescue		
- Common Kentucky bluegrass KTF - Kentucky 31 Tall		, , A	eping	Red Fe	scue				4 1	P ghstal	k Blue	grass		

Table 9. Establishment evaluation of eighteen grass mixtures. Planted August 20, 1962.