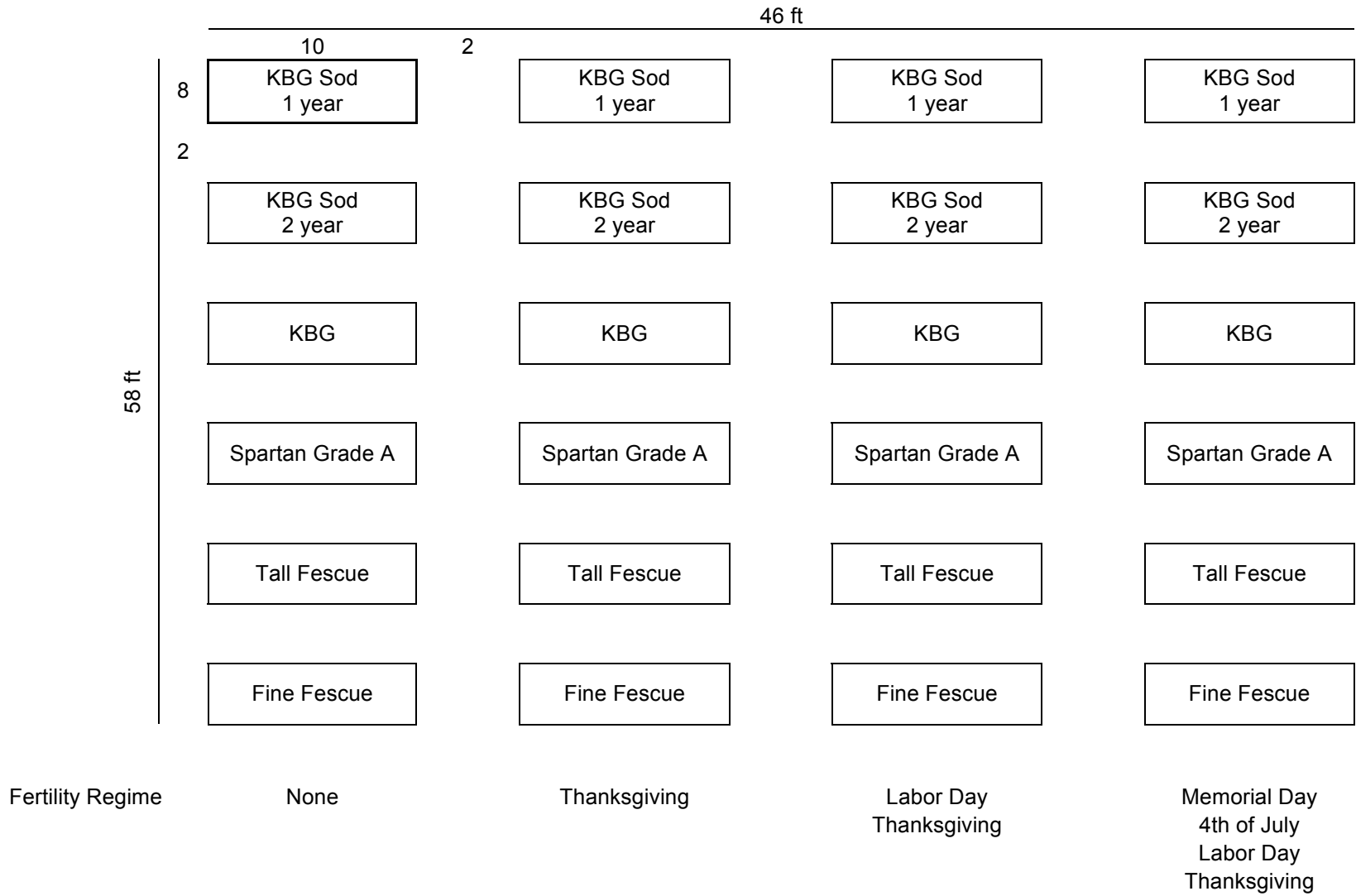


**Figure 1: The Lawn Turf Species Demonstration Trial**

NE  
Corner



**Table 1: The 2008 Dormancy Check in Bermudagrass with Glyphosate Trial**  
 Bermudagrass Injury Expressed as Mean Percent of Treatment Plot that is Dead or Bare

Treatment	June/12/08	June/19/08	July/10/08
	percent bare ground		
RoundUp Pro -200 GDD	0.0 c	0.0 c	0.0 d
RoundUp Pro -400 GDD	5.0 c	1.3 c	1.3 d
RoundUp Pro -600 GDD	12.3 c	9.7 c	0.7 d
RoundUp Pro -800 GDD	3.7 c	2.3 c	0.7 d
RoundUp Pro-1000 GDD	51.3 b	30.7 b	0.3 d
RoundUp Pro-1200 GDD	74.7 a	75.3 a	15.0 c
RoundUp Pro-1400 GDD	41.7 b	77.3 a	40.0 b
RoundUp Pro-1600 GDD		73.0 a	96.0 a
Untreated	0.0 c	0.7 c	0.0 d
LSD (P=.05)	21.18	11.67	12.86

† Means followed by same letter do not significantly differ (P=0.05, LSD).

**Table 2: The 2008 Dormancy Check in Bermudagrass with Glyphosate Trial**  
 Weeds Present Expressed as Mean Percent of Treatment Plot

Treatment	June/12/08	June/19/08	June/26/08	July/10/08	July/30/08
	percent weeds				
RoundUp Pro -200 GDD	8.3 b	15.0 a	14.0 a	18.7 a	22.3 ab
RoundUp Pro -400 GDD	2.3 bc	5.3 b	5.7 b	6.7 b	14.0 bcd
RoundUp Pro -600 GDD	0.0 c	1.0 c	1.7 bc	2.3 bc	6.7 d
RoundUp Pro -800 GDD	0.3 c	1.3 bc	1.7 bc	2.3 bc	5.7 d
RoundUp Pro-1000 GDD	2.0 c	1.0 c	1.0 c	3.0 bc	6.3 d
RoundUp Pro-1200 GDD	6.0 bc	0.3 c	0.0 c	4.7 bc	13.7 cd
RoundUp Pro-1400 GDD		1.0 c	0.0 c	3.7 bc	16.0 abc
RoundUp Pro-1600 GDD			0.0 c	0.0 c	12.7 cd
Untreated	20.0 a	16.0 a	14.7 a	17.0 a	22.7 a
LSD (P=.05)	6.06	4.11	4.61	5.30	8.39

† Means followed by same letter do not significantly differ (P=0.05, LSD).

**Table 3: The 2008 Dormancy Check in Bermudagrass with Glyphosate Trial**

Quality of Turf Stand (9-1, where 1=lowest quality and 9=highest quality).

Injury of Turf Stand (1-9, where 1= no injury and 9=dead turf).

Treatment	June/19/08	June/26/08	July/10/08	July/30/08
	Quality (9-1)			Injury (1-9)
RoundUp Pro -200 GDD	6.0 a	6.7 b	6.0 a	1.0 c
RoundUp Pro -400 GDD	6.3 a	7.0 b	7.0 a	1.0 c
RoundUp Pro -600 GDD	6.0 a	7.0 b	7.0 a	1.0 c
RoundUp Pro -800 GDD	7.0 a	8.0 a	7.0 a	1.0 c
RoundUp Pro-1000 GDD	4.0 b	5.7 c	7.0 a	1.0 c
RoundUp Pro-1200 GDD	1.3 c	2.3 d	4.0 b	2.0 c
RoundUp Pro-1400 GDD	1.3 c	2.0 d	2.7 c	3.3 b
RoundUp Pro-1600 GDD	1.0 c	1.0 e	1.0 d	8.0 a
Untreated	6.0 a	6.7 b	6.0 a	1.0 c
LSD (P=.05)	1.31	0.90	1.24	1.01

† Means followed by same letter do not significantly differ (P=0.05, LSD).

**Table 4: The Nonselective Species Specific Control Trial - 2008**

Control of Dandelion, White Clover, and Turf on 3 Dates

Treatment	Rate	Dandelion	Clover July 10 13 DAT	Turf	Dandelion	Clover July 25 28 DAT	Turf	Dandelion August 26 60 DAT
percent control								
1 MON 76207	4.67 QT/A	22.9 a	94.6 a	100 a	75.1 a	98.9 a	100 a	22.5 a
2 MON 77360	7 QT/A	32.3 a	97.4 a	100 a	76.9 a	100 a	100 a	0.0 a
3 MON 54154	7 QT/A	29.4 a	95.6 a	100 a	88.6 a	100 a	100 a	0.0 a
4 MON 54155	7 QT/A	17.4 ab	93.1 a	100 a	81.0 a	100 a	99.6 a	0.0 a
5 Untreated		0.0 b	0.0 b	0.0 b	0.0 b	0.0 b	0.0 b	0.0 a
LSD (P=.05)		20.04	6.10	0.00	14.04	1.56	0.65	32.86

Means followed by same letter do not significantly differ (P=.05, LSD).

**Table 5: The Nonselective Species Specific Control Trial - 2008**

Injury of Dandelion, White Clover, and Turf on 4 Dates

Treatment	Rate	Dandelion July 2 5 DA-A	Clover July 2 5 DA-A	Turf	Dandelion July 3 6 DA-A	Clover July 3 6 DA-A	Turf	Dandelion July 7 10 DA-A	Clover July 7 10 DA-A	Turf	Dandelion July 10 13 DA-A	Clover July 10 13 DA-A	Turf
Injury (1-9)													
1 MON 76207	4.67 QT/A	2.0 b	6.0 a	5.7 a	2.3 a	6.0 a	6.3 a	3.3 a	8.0 a	8.3 a	4.0 a	8.7 a	9.0 a
2 MON 77360	7 QT/A	3.3 a	6.0 a	6.7 a	2.3 a	6.0 a	6.7 a	3.3 a	8.0 a	8.7 a	4.0 a	8.7 a	9.0 a
3 MON 54154	7 QT/A	1.7 b	6.0 a	6.3 a	2.7 a	6.0 a	6.3 a	3.3 a	8.0 a	8.3 a	4.0 a	8.3 a	9.0 a
4 MON 54155	7 QT/A	2.0 b	6.0 a	6.0 a	2.3 a	6.0 a	6.3 a	3.3 a	8.0 a	8.0 a	4.0 a	8.7 a	9.0 a
5 UNTREATED		1.0 c	1.0 b	1.0 b	1.0 b	1.0 b	1.0 b	1.0 b	1.0 b	1.0 b	1.0 b	1.0 b	1.0 b
LSD (P=.05)		0.64	0.00	1.38	0.88	0.00	1.06	1.35	0.00	0.69	0.00	0.88	0.00

Means followed by same letter do not significantly differ (P=.05, LSD).

## Special Projects

**The Weed Garden**, established in 1998, flourished again in 2008. It proved very useful weed identification tool in MSU classes, as extension agents and lawncare operators that stop by the turf center with a weed question, and for the Weed I.D. workshop at field day.

**The Lawn Turf Species Demonstration Trial** (irrigated and unirrigated), observational trials, were seeded on June 6, 2007. This visual trial will help homeowners and lawn care operators make more informed decisions when choosing turf specie(s) for their lawns. The trial investigates two factors, turf specie(s) and fertilization regime. The turf specie(s) planted were Kentucky bluegrass, tall fescue, fine fescue, and Spartan Grade A mixture and the fertilization treatments are none, once/year, twice/year, and 4x/year. Sod, one and two year(s) old, was also included as turf species. Two identical trials were planted, one irrigated and the other unirrigated. A map of the trial is presented in Figure 1.

The trial will give observers a look at Kentucky bluegrass, for example, planted on an unrrigated site that receives fertilizer between 0 and 4 times per year. They will also get the chance to compare each of these species to any other as they are all planted in the same 60 ft<sup>2</sup> block. It will also aid lawn care operators in their recommendations as they can show visual differences between species in differing sites and receiving different amount of fertilizer throughout a year. All of these planted species can also be visually compared to sod, hopefully helping buyers decide if the extra cost of sod is worth the benefit(s).

A **Low Input Sustainable Turf** (LIST) trial was also planted in 2007, on September, 17 and will again be evaluated in 2008. This regional cooperative research project is made up of Kentucky bluegrass, tall fescue, hard fescue, chewings fescue, tufted hairgrass, prairie junegrass, Texas bluegrass hybrid, colonial bentgrass, Idaho, bentgrass, and sheeps fescue – multiple cultivars are evaluated for some of these species. The turf will be mowed at three inches, it will not be fertilized or irrigated after establishment, and will not receive pesticide

applications of any kind. Turfgrass quality, establishment, density, percent cover, and disease pressure, will be collected monthly over two growing seasons.

**The 2008 Andersons Granular PGR Trial** was treated on May 19, 2008. This trial investigated the new granular PGRs, such as Governor (trinexapac-ethyl), and their abilities to compare to their liquid counterparts – Primo Maxx (trinexapac-ethyl) and Trimmit (paclobutrazol), on a creeping bentgrass putting green. Clippings from each plot were collected twice per week, dried, then weighed to determine the amount of growth during each seven day period after treatment application for each treatment. Quality (9-1), density (9-1), and color (9-1) were also evaluated on a weekly basis. Although the results are not presented, the PGRs, regardless of treatment, generally, did not provide higher quality, visual density, or color than the untreated. Turfgrass growth was reduced mostly between 8 and 25 DAT, but the granular PGRs, generally, provided less growth regulation than their liquid counterparts.

**The 2008 Dormancy Check in Bermudagrass with Glyphosate Trial** was conducted at the HTRC on a stand of Bermudagrass to investigate the best timing to apply a non-selective herbicide on dormant Bermudagrass in Michigan – too early and weeds may not be actively growing; too late and the Bermudagrass may be injured or killed. Consecutive Roundup (glyphosate) treatments were made to the Bermudagrass, every 200 growing degree days (GDD) on a base of 32, to determine, climatologically, when to apply glyphosate. A complete treatment list and results are presented in Tables 1-3.

Roundup applied at GDD<sub>32</sub> 600 and GDD<sub>32</sub> 800 provided the best weed cleanup while the Bermudagrass was still dormant and, therefore, uninjured. The quality for these treatments were also the highest.

**The Nonselective Species Specific Control Trial** was treated on June 27, 2008. This trial was conducted in an unmanaged area consisting of turf (mostly Kentucky bluegrass and some fine fescue, perennial ryegrass, and creeping bentgrass), white clover (*Trifolium*

*repens*), dandelion (*Taraxacum officinale*), and broadleaf plantain (*Plantago major*). All of these weeds, except for broadleaf plantain, were well represented throughout the trial area. For this reason, broadleaf plantain data will not be presented. Percent control was determined on July 10, July 25, and August 26, which were 13, 28, and 60 DAT (days after treatment), respectively using the Henderson-Tilton pre-count/post-count method. Table 4 contains the complete treatment list and results for weed control. Table 5 contains injury data collected on July 2, 3, 7, and 10, which were 5, 6, 10, and 13 DAT on a scale of 1 to 9, where 1 represents no injury and 9 represents dead turf. All treatments were applied with a backpack sprayer at an output of 85.5 gallons per acre.

The turfgrass present in the plots showed the most injury and was completely dead 13 DAT. White clover was nearly dead 13 DAT and completely dead in each treated plot 28 DAT. No treatment, however, provided more than 90% control of dandelion and, 60 DAT, all treated plots showed no difference from the untreated plots for dandelion population evaluations. No treatment ever differed from the other treatments on any date for control of any weed species. The injury reinforces that the turfgrass was the first to show injury and showed the most injury. Dandelion, again, showed minimal injury even 28 DAT. Although all of these products provided excellent control of the turfgrasses present and white clover, dandelion was not adequately controlled as would be expected from any nonselective product.