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Scotts Weed and Feed Study 2008
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Introduction:

The objective of this experiment was to compare different formulations of Weed and Feed products for control of dandelion and clover and to observe grass response in Kentucky bluegrass turf. This trial was located at the Iowa State University research station near east of Gilbert, Iowa.

Materials and Methods:

This experiment was conducted in as a randomized complete block design with 6 replications. There were 16 treatments including the control (Table 1). The containers with the weed and feed products were rolled on the ground before being weighed out and were scooped out of their containers. The application for this trial took place on the morning of May 14, from 6:00 am to 7:15 am when dew was at the heaviest. The heavy amount of dew caused the granules to stick to the leaves of the dandelions and clover. All granular treatments were applied with shaker box containers which were then dropped through a screen to further evenly distribute the particles. The Trimec classic was applied in the equivalent of 3 gallons water/1000 ft² with a CO₂ sprayer backpack sprayer. No rainfall or irrigation occurred for 24 hours after the application and the turf was not mowed for at least 24 hours. The turf was maintained at 3 inches and received sufficient rainfall to grow at a rate of approximately 1 inch per week.

A pre-count of dandelion and clover were taken followed by ratings at 2, 4, and 6 weeks. A two and four week rating determined weed injury on a scale of 0-10, where 0 = no injury and 10 = brown and appears dead. Ratings were taken at 2, 4, and 6 weeks to determine turf color using the NTEP scale 0-9 where 9 = the darkest turf possible. Phytotoxicity ratings were taken at 2, 4, and 6 weeks with a scale of 0-10, where 0 is no damage and 10 is dead turf.

Dandelions were counted with a 36 square grid count where a 16 in² grid with dandelions in it was counted and a grid without dandelions in it was not counted. The scale was therefore 0-36 with 36 being complete coverage with dandelions. Clover data was taken on a scale of 0-100 % cover.

Results:

Dandelion

No significant differences were seen at the pre-count or 2 WAT ratings.

At the 4 WAT, rating treatment 15 (trimec) had the lowest mean dandelion count. All treatments except treatment 9 significantly reduced the dandelion population compared to the control. Treatments 14 (S07201) and 10 (S13637) performed the best out of the weed and feed products, dropping the mean weed population below 10 out of a possible 36. These two products were not significantly different from treatment 15 (trimec).

At the 6 WAT rating, 9 of the treatments still significantly reduced the number of dandelions compared to the control. Again at the 6 WAT rating treatment 15 (trimec) had the lowest mean dandelion count. Treatments 14 (S07201) was found not to be significantly different from trimec at this rating.

Clover

No significant differences were seen at the pre-count or 2 WAT ratings.

At the 4 WAT rating, treatment 15 (trimec) had the lowest clover percentage. Treatments 14 (S07201), 10 (S13637), and 11 (S13599) reduced the clover coverage below 10% and were not significantly different from trimec. Treatments 7 (MG08-078-A) and 6 (MG08-085-A) were also not significantly different from trimec at the 4 WAT rating.

At the 6 WAT rating, treatment 15 (trimec) had the lowest mean clover percentage. The clover coverage for treatment 10 (S13637) was still below 10% and was not significantly different from treatment 15 (trimec). Treatments 14 (S07201), 6 (MG08-085-A), and 11 (S13599) were also not significantly different from treatment 15 (trimec).

Color

At both the 2 and 4 WAT, ratings all of the weed and feed formulations improved the turf color compared to the control and the plots treated with trimec.

At the 6 WAT rating, all of the weed and feed formulations improved the color over the control. All of the weed and feed formulations, except 10 (S13637) and 6 (MG08-085-A), improved color over treatment 15 (trimec).

Weed Injury

At the 2 WAT, trimec had the highest mean weed injury. Treatments 8 (MG08-080-A) and 10 (S13637) had the highest weed injury for weed and feed products and were not significantly different from treatment 15 (trimec).

At the 4 WAT, rating treatment 15 (trimec) had the highest weed injury rating. Treatments 14 (S07201) and 10 (S13637) had the highest weed injury out of the weed and feed products and were not significantly different from treatment 15 (trimec).

Phytotoxicity

No phytotoxicity to grass was observed at any rating during this study.

Table 1. Formulations and Rates

Treatment	Formulation	%	a.i.	Fertilizer	Rate lb/M	Rate/plot g/9ft ²
1	MG07-047-A	1.21, 0.61	2,4-D, mcpp-p	28-2-3	2.86	11.685
2	MG07-051-A	1.21, 0.61	2,4-D, mcpp-p	28-2-3	2.86	11.685
3	MG07-051-B	1.21, 0.61	2,4-D, mcpp-p	28-2-3	2.86	11.685
4	MG07-051-C	1.21, 0.61	2,4-D, mcpp-p	28-2-3	2.86	11.685
5	MG08-085-B	1.21, 0.61	2,4-D, mcpp-p	28-0-4	2.86	11.685
6	MG08-085-A	1.21, 0.61	2,4-D, mcpp-p	28-0-4	2.86	11.685
7	MG08-078-A	1.21, 0.61	2,4-D, mcpp-p	28-0-4	2.86	11.685
8	MG08-080-A	1.21, 0.61	2,4-D, mcpp-p	28-1-4	2.86	11.685
9	S13074	0.735, 0.167, 0.071	2,4-D, mcpp-p, dicamba	28-3-3	2.8	11.44
10	S13637	0.64, 0.14, 0.06, 0.16	2,4-D, mcpp-p, dicamba, diflthiopyr	26-2-8	3.6	14.71
11	S13599	0.735, 0.167, 0.071	2,4-D, mcpp-p, dicamba	28-0-4	2.8	11.44
12	S13592	0.46, 0.12, 0.12	2,4-D, mcpp-p, 2,4-DP-p	18-2-9	4	16.34
13	S13591	0.601, 0.122, 0.074	2,4-D, mcpp-p, 2,4-DP-p	28-3-3	3.2	13.075
14	S07201	1.21, 0.61	2,4-D, mcpp-p	28-3-3	2.86	11.685
15	Trimec	21.54, 5.73, 2.29	2,4-D, mcpp-p, dicamba	-	1.5fl oz	.405 oz
16	Control	-	-	-	-	-

Table 2. Pre-counts, weed injury at 2 and 4 weeks, evaluations of dandelion, % clover, and color during the 6 weeks of the study.

Treatment	Formulation	Weed Injury			Dandelion Count			Percentage Clover			Turf Color			
		2 WAT	4 WAT	Pre-count	2 WAT	4 WAT	6 WAT	Pre-count	2 WAT	4 WAT	6 WAT	2 WAT	4 WAT	6 WAT
		1	MG07-047-A	5	5	34	32	18	29	58	41	39	51	7
2	MG07-051-A	4	5	35	34	19	31	54	34	28	36	7	7	7
3	MG07-051-B	4	6	36	35	24	33	48	37	40	43	7	7	7
4	MG07-051-C	4	7	36	35	19	28	59	39	40	38	7	7	7
5	MG08-085-B	4	6	35	35	16	28	56	33	28	30	7	7	7
6	MG08-085-A	4	7	35	35	18	28	28	22	17	21	7	7	7
7	MG08-078-A	4	8	35	35	12	24	39	25	18	28	7	7	7
8	MG08-080-A	5	6	35	35	15	29	49	36	38	47	7	7	7
9	S13074	3	6	35	34	27	33	63	43	37	52	7	7	7
10	S13637	5	10	36	35	7	22	46	18	2	6	7	7	6
11	S13599	3	6	35	34	19	30	53	35	9	22	7	7	7
12	S13592	3	4	35	35	20	31	58	37	43	41	7	7	7
13	S13591	2	6	35	35	23	34	46	40	33	45	7	7	7
14	S07201	5	8	35	34	9	17	38	18	9	15	6	7	7
15	Trimec	7	10	36	32	4	15	53	19	1	4	5	5	6
16	Control	1	4	36	36	33	35	38	42	39	47	6	6	6
LSD		2	2	NS	NS	7	6	NS	NS	18	19	0	1	1