

YELLOW PATCH/COOL SEASON BROWN PATCH

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Treatments were started on June 29, 1983, on a Kentucky sodded bluegrass area previously diagnosed as having the disease Yellow Patch/Cool Season Brown Patch caused by the fungus Rhizoctonia cerealis. Each chemical was replicated three times in 6 x 9 plots with an untreated control included. The number of disease patches was recorded for each plot prior to initiation of treatments. The treatments were applied on 6/29, 8/8, 9/6 and 10/24 at recommended rates from the manufacturer (Table I). Table II indicates the percentage of reduction or increase (negative value) in disease that occurred on each date. The figures were arrived at by counting disease rings/patches within each individual plot and averaging all representative (3 replications) plots together. Treatments were reapplied (Table III) and the plots evaluated every 4-5 weeks.

Table 1. Treatments and rates of application.

Treatment	Material	Application Rate Per Treatment
1	Soil Aid	12.8 oz/1000 ft ²
2	Catzyme	4 oz/1000 ft ²
3	Strengthen & Restore	64 oz/1000 ft ²
4	Green Magic	64 oz/1000 ft ²
5	Vita Feed	12.3 oz/1000 ft ²
6	Relief	16 oz/1000 ft ²
7	Rx	30 lbs/1000 ft ²
8	Lawn Keeper	10 lbs/1000 ft ²
9	Control	no treatment

Table 2. Percent reduction in disease.

Treatment	Material	8-3-83	8-31-83	10-6-83	10-24-83	11-21-83
1	Soil Aid	37%	40%	14%	9.7%	43.6%
2	Catzyme	23%	23%	17%	13.3%	-5.33%
3	Strengthen & Restore	22%	50%	66%	51.8%	14%
4	Green Magic	46%	82%	86%	68.75%	35.6%
5	Vita Feed	0	0	-18%	-2%	42%
6	Relief	13%	29%	42%	25.8%	51.6%
7	Rx	19%	19%	31%	38.3%	11.3%
8	Lawn Keeper	25%	57%	64%	78.3%	82.6%
9	Control/Check	20%	20%	7%	0%	-39.3%

Treatment 1: Treatment #1 had a final recovery of 40% when compared to the initial reading although there was an increase in disease activity during October. (Product composition is a natural/organic formulation which may correct compacted soils.)

Treatment 2: Treatment #2 remained consistent. Minimal initial recovery remained the same or slightly lower through the season. (Product composition consists of a natural catalytic enzyme that is proposed to leach out toxic salt, chlorides and sodium.)

Treatment 3: Treatment #3 demonstrated consistent recovery during most of the growing season. There was a marked increase in disease activity from October 24 to November 11 (Table II). This may be attributable to no new applications after October 6, 1983. The November 11 rating was made approximately six weeks after the last treatment, which may have been too long an interval between treatments during a period of severe disease pressure. Prior to November 21, 1983, the plots treated with #3 were dark green in color and the disease patches were almost completely filled in. (Product composition consists of major; N, P, K and minor; Ca, S, Cu, Fe, Mn, Zn elements.)

Treatment 4: Treatment #4 had the fastest initial recovery rate of all the treatments. Initial recovery on August 3 was 46% which progressed to 85% by October 6, 1983. These disease patches filled in and appeared dark green in color during the growing season. An increase in disease activity occurred in the November 21, 1983 readings. These results are similar to treatment #3 and the explanation of results is probably the same. Perhaps an additional application after 10/6 would have allowed the recovery to continue or at least may have prevented new infection. This needs to be tested next season. Treatments #3 and #4 demonstrated good recovery potential for tuftgrass affected with yellow patch although the actual suppression and control under severe disease pressure may require a fungicide application or additional applications of Green Magic. (product composition consists of N, P, K, Fe, Mn, Cu, Mg, S).

Treatment 5: Treatment #5 had a 36% recovery on November 11. Little recovery was observed prior to this reading. In fact an increase in disease activity was observed in October. (Product composition are micronutrients: Fe, Mn, Cu, Zn, S).

Treatment 6: Treatment #6 showed a 58% recovery by November 11 the majority of which occurred during the period of disease pressure. (Product composition is a combination product containing #1, #2, #3).

Treatment 7: Treatment #7 showed a steady increase in recovery until the 10/24 reading where it peaked at 44%. The recovery dropped to 13% on November 11 as the disease pressure increased.

Treatment 8: Treatment #8 was the most consistent treatment in the study. The initial disease recovery was slow but consistent. Through the test period the percent recovery rose steadily upward until it finally reached 82% on November 11. Treatment #8 did not green up as fast as treatment #4, but at the end of the season plots were dark green in color and showed no new disease activity despite severe disease pressure. Lawn Keeper has potential to be used as a restorative product to reestablish areas previously blighted by R.

cerealis and to prevent new infection from occurring.

Treatment 9: The untreated control had an initial recovery probably due to the inactivity of R. cerealis during the warm weather. The final reading showed 40% increase in disease activity compared to the initial readings.

Table 3. Yellow Patch Nutrients Study - 1983 - Northville, MI Rating date was 10/24/83. % Improvement per plot following treatment

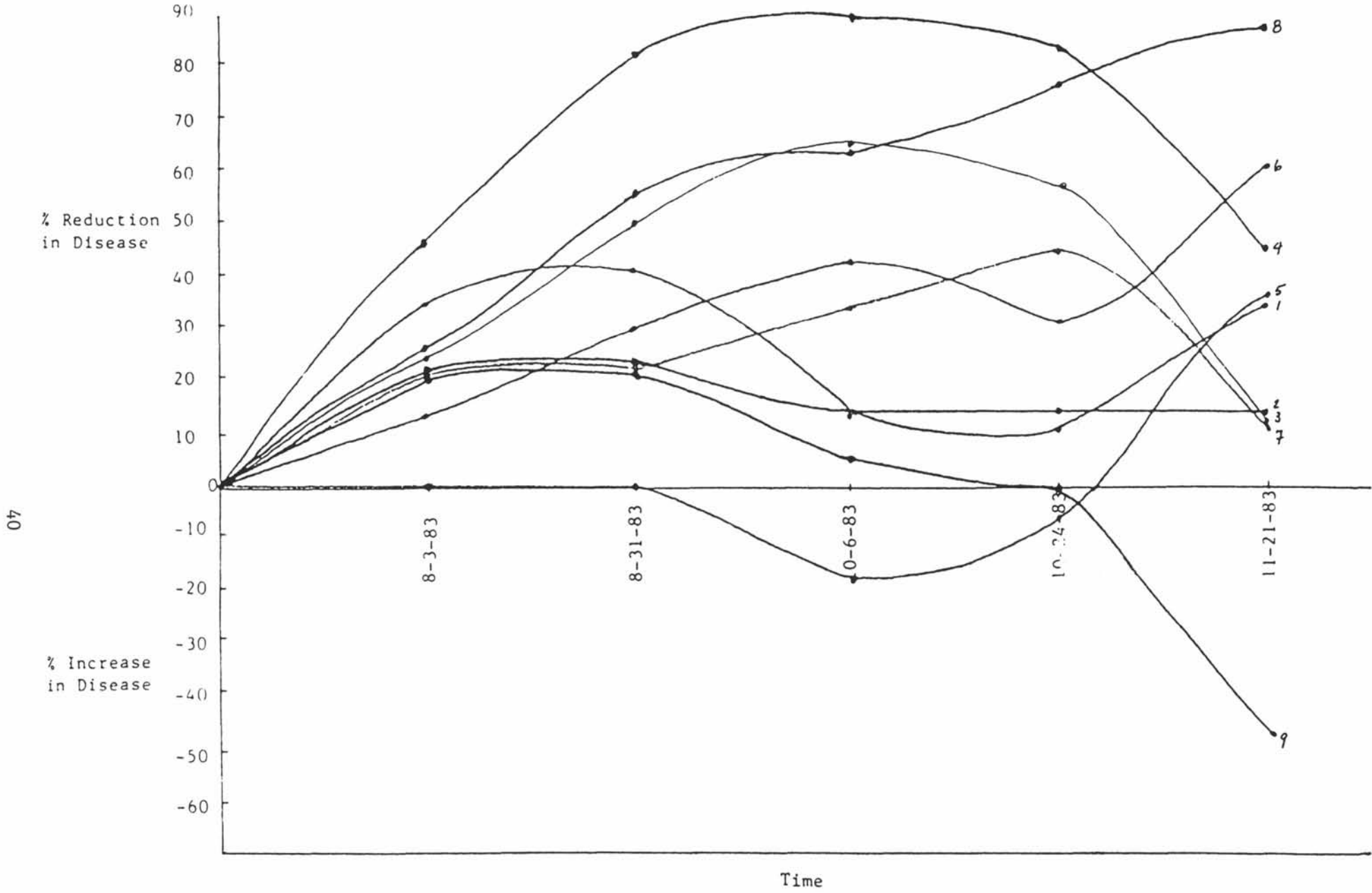
Treatment	Material Rate/1000 ft ²	Repetition				DMR
		I	II	III	AVE	
Lawn Keeper	10 lbs	60	100	75	78.3	A
Green Magic	64 oz	93.75	87.5	25	68.75	AB
Strengthen & Restore	64 oz	100	33.3	22	51.8	ABC
RX	30 lbs	16.6	100	0	38.8	ABC
Relief	16 oz	40	37.5	0	25.8	ABC
Catzyme	4 oz	33.3	40	-33.3	13.3	BC
Soil Aid	13.8 oz	12.5	0	16.6	9.7	BC
Check	-	-20	16.6	0	-1.13	C
Vita Feed	12.8 oz	6.25	0	-12.5	-2.0	C

* Treatments followed by the same letter are not significantly different from each at the 5% level.

Table 4. Yellow Patch Nutrient Study - 1983. Northville, MI. Rating date - 11/21/83. % Improvement per plot following treatment.

Treatment	Material Rate/1000 ft ²	Repetition					DMR
		I	II	III	AVE		
Lawn Keeper	10 lb	90	83	75	82.6	A	
Relief	16 oz	80	75	0	51.6	AB	
Soil Aid	12.8 oz	31	100	8	46.3	AB	
Vita Feed	12.8 oz	38	50	38	42	BC	
Green Magic	64 oz	44	88	-25	35.6	BC	
Strength & Restore	64 oz	25	17	0	14	BC	
Rx	30 lbs	17	17	0	11.3	BC	
Catzyme	4 oz	17	0	-33	-5.33	BC	
Check	--	-60	-75	17	-39.3	C	

* Treatments followed by the same letter are not significantly different from each other at the 5% level.



- 1 Soil Aid
- 2 Catzyme
- 3 Strength & Restore
- 4 Green Magic
- 5 Vita Feed
- 6 Relief
- 7 Rx
- 8 Lawn Keeper
- 9 Control

Graph VI