

Moss Eradication

Moss Study A

The study was set up on an annual bluegrass green where a severe moss infestation existed. It was set up in a randomized complete block design with 4 replicate plots per treatment. The plots measured 2' x 4.5' with 1' alleys. Spray treatments were applied using a CO₂ backpack sprayer set at 35 psi with a single 8002E flat fan Tee Jet nozzle. Spray application volume was 3 gal/1000 sq ft. Granular treatments were applied by hand, followed by a light drench with water after each application. Plots were mowed at 0.150" using a triplex mower. Plots were fertilized with Country Club (18-3-12) as follows: 6/29 (1/2 lb N), 7/13 (1/4 lb N), 7/28 (1/4 lb N), 8/5 (1/4 lb N). Initial treatment application for most treatments occurred on 6/18 unless noted in Table 13 and 14. Plots were rated by visually estimating the percent plot area with moss. An initial rating was taken on June 16 prior to treatment application, and percent turf recovery as of Sept 8 was calculated and is presented in Table 13. Plots were also rated for phytotoxicity to annual bluegrass on a 1-5 scale where 1 indicates no damage to the turf and 5 indicates severe turfgrass phytotoxicity (Table 14). Note that the Lebanon treatments were not started until July 16 (Table 14) so no pretreatment rating was available for their inclusion in Table 13. A percent recovery was calculated for them based on August 6 and Sept 8 ratings and is included as a footnote in Table 13.

The experimental product L-0481 provided excellent moss control and was the only treatment to provide statistically significant recovery when compared to the untreated control (Table 13.) It caused mild phytotoxicity (Table 14) with the 5 oz rate causing more than the 2.5 oz rate.

Table 13. Moss 2004.

Location: Hancock Turf Research Center, E. Lansing, MI.

Rating Scale: Percent turf recovery from June 16 (initial rating) - Sept 8.

Treatment and Rate/1000 sq ft	Interval (days)	Mean^{a,b}
L-0481 5 oz	21	99.4 a
L-0481 2.5 oz	21	87.6 a
Signature 4 oz	14	74.0 ab
Control	---	28.2 b-e
TD 2390 6 oz	14	8.4 d-f
TD 2389 6 oz	14	-14.8 fg
Gary's Green 6 fl oz + Ultra Plex 3 fl oz + Griggs Exp #2 6 fl oz	14	-37.5 fg
TD 2463 3 oz	14	-37.5 fg

^a Mean of 4 replicate plots.

^b Treatment means followed by the same letter do not significantly differ (LSD, $p=0.05$).

Note: Lebanon Part B 1/2X rate treatment applied on 7/16, 7/23, 7/29, 8/6, 8/12, 8/30, and 9/10 provided 60.8% recovery from Aug 6 – Sept 8 which was not significantly different from the control which had 42.1% recovery. No data are available for the Lebanon Part A + Lebanon Part B 1X rate treatment applied on 7/16, 7/29, and 8/12.

Table 14. Turfgrass Phytotoxicity Rating.
Location: Hancock Turf Research Center, E. Lansing, MI.
Rating Scale: 1-5, 1=no damage, 5=severe burn

Treatment and Rate/1000 sq ft	Interval (days)*	June 21 Mean ^{a,b}	Aug 13 Mean ^{a,b}
Gary's Green 6 fl oz + Ultra Plex 3 fl oz + Griggs Exp #2 6 fl oz	14	1.0 f	1.0 ef
Control		1.0 f	1.0 ef
TD 2390 6 oz	14	1.3 ef	1.3 d-f
TD 2463 3 oz	14	1.8 d-f	1.3 d-f
Signature 4 oz	14	1.0 f	1.3 d-f
TD 2389 6 oz	14	1.0 f	1.5 c-e
L-0481 2.5 oz	21	2.3 cd	2.0 d
L-0481 5 oz	21	3.0 c	2.0 d
Lebanon Part A + Lebanon Part B 1X rate	7/16, 7/29, 8/12	na	2.7 b
Lebanon Part B 1/2 X rate	7	na	3.3 a

^a Mean of 4 replicate plots.

^b Treatment means followed by the same letter do not significantly differ (LSD, p=0.05)

*7 day treatment applied on: 6/18, 6/25, 7/2, 7/9, 7/16, 7/23, 7/29, 8/6, 8/12, 8/30, 9/10, 9/20, 9/25; 14 day treatments applied on: 6/18, 7/9, 7/23, 8/6, 8/30, 9/10, 9/25; and 21 day treatment applied on: 6/18, 7/2, 7/23, 8/12, 9/10.

Moss Study B

The study was set up on an annual bluegrass green where a severe moss infestation existed. It was set up in a randomized complete block design with 4 replicate plots per treatment. The plots measured 2' x 4.5' with 1' alleys. Spray treatments were applied using a CO₂ backpack sprayer set at 35 psi with a single 8002E flat fan Tee Jet nozzle. Spray application volume was 3 gal/1000 sq ft. Granular treatments were applied by hand followed by a light drench with water after each application. Plots were mowed at 0.150" using a walk mower. Plots were fertilized with urea as follows: 6/30 (1/8 lb), 7/13 (1/8 lb), 7/23, (1/8 lb), 7/28 (1/8 lb), 8/5 (1/8 lb). Initial treatment application for most treatments occurred on 6/18 unless noted in Table 15 and 16. Plots were rated by visually estimating the percent plot area with moss. An initial rating was taken on June 16 prior to treatment application, and percent turf recovery as of Sept 8 was calculated and is presented in Table 13. Plots were also rated for phytotoxicity to annual bluegrass on a 1-5 scale where 1 indicates no damage to the turf and 5 indicates severe turfgrass phytotoxicity (Table 14). Note that the Lebanon treatments were not started until July 16 so no pretreatment rating was available for their inclusion in Table 15. A percent recovery was calculated for them based on August 6 and Sept 8 ratings and is included as a footnote in Table 15.

The experimental product L-0481 provided excellent moss control and was the only treatment to provide statistically significant recovery when compared to the untreated control (Table 13.) It caused mild to moderate phytotoxicity (Table 14) with the 5 oz rate causing more phytotoxicity than the 2.5 oz rate.

Table 15. Moss 2004.**Location: Hancock Turf Research Center, E. Lansing, MI.****Rating Scale: Percent recovery from June 16 - Sept 8.**

	Interval (days)	Mean^{a,b}
L-0481 5 oz	21	95.1 a
L-0481 2.5 oz	21	90.8 ab
Signature 4 oz	14	49.4 b-d
Control	---	36.7 c-e
TD 2389 6 oz	14	-7.3 fg
TD 2463 3 oz	14	-27.0 gh
Gary's Green 6 fl oz + Ultra Plex 3 fl oz + Griggs Exp #2 6 fl oz	14	-38.9 gh
TD 2390 6 oz	14	-58.6 h

^a Mean of 4 replicate plots.^b Treatment means followed by the same letter do not significantly differ (LSD, p=0.05)

Note: Lebanon Part B 1/2X rate treatment, applied on 7/16, 7/23, 7/29, 8/6, 8/12, 8/30, and 9/10, provided 22.9% recovery from Aug 6 – Sept 8. Lebanon Part A + Lebanon Part B 1X rate treatment, applied on 7/16, 7/29, and 8/12, provided 48.2% recovery. Neither were significantly different from the control which had 51.3% recovery over the same time period.

Table 16. Turfgrass Phytotoxicity Rating.**Location: Hancock Turf Research Center, E. Lansing, MI.****Rating Scale: 1-5, 1=no damage, 5=severe burn**

Treatment and Rate/1000 sq ft	Interval (days)	June 21 Mean^{a,b}	Aug 13 Mean^{a,b}
Gary's Green 6 fl oz + Ultra Plex 3 fl oz + Griggs Exp #2 6 fl oz	14	1.0 h	1.3 fg
Signature 4 oz	14	1.0 h	1.3 fg
Control		1.0 h	1.3 fg
TD 2389 6 oz	14	1.0 h	1.5 e-g
TD 2390 6 oz	14	1.5 gh	1.8 d-f
TD 2463 3 oz	14	2.0 fg	1.8 d-f
L-0481 2.5 oz	21	1.3 gh	2.5 c
L-0481 5 oz	21	3.3 c-e	3.3 b
Lebanon Part A + Lebanon Part B 1X rate	7/16, 7/29, 8/12	NA	3.3 b
Lebanon Part B 1/2 X rate	7	NA	4.0 a

^a Mean of 4 replicate plots.^b Treatment means followed by the same letter do not significantly differ (LSD, p=0.05).

*7 day treatment applied on: 6/18, 6/25, 7/2, 7/9, 7/16, 7/23, 7/29, 8/6, 8/12, 8/30, 9/10, 9/20, 9/25.; 14 day treatments applied on: 6/18, 7/9, 7/23, 8/6, 8/30, 9/10, 9/25; and 21 day treatment applied on: 6/18, 7/2, 7/23, 8/12, 9/10.