

## Effect of Watering in Preemergence Herbicides

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The requirement to water in preemergence herbicide applications has been an absolute one in turfgrass management. There has been discussion amongst regulatory agencies on whether not watering in a preemergence herbicide would be a violation of the label directions.

This study was started in 1989 to determine how important it is to water in preemergence herbicide applications. Eight commonly used preemergence annual grass herbicides at at least two different rates were applied on 4-27-91. Half of the plots were irrigated immediately after application with 0.25" of irrigation. The other half were not irrigated for ten days after the application. In the event of rain, the not watered in plots were covered with a tarp to keep the rain off.

The plots were rated in July and August for percent crabgrass (Table 1). The data has been consistent and surprising. In each year of the study, there has been no effect of watering in on crabgrass control when averaged over all herbicide treatments. In fact, this year the herbicide Ronstar did significantly better when not watered in. None of the other herbicides had any significant differences between the watered in and not watered in treatments.

After three years of testing, it would appear that not watering in preemergence herbicides does not significantly reduce their activity. We will continue this project in 1992 with a slightly different method of keeping the rain off the plots. One concern with our technique is that when the tarp is left on overnight as is the case if there is a forecast for rain, condensation forms on the underside of the tarp. Whether this condensation provides enough moisture to effectively move the herbicides into the soil is problematic. In 1992 the tarp will be raised slightly off the ground to prevent condensation from forming. The results of this test, if consistent with the previous years results, would provide concrete evidence that watering in herbicides is not necessary on turfgrasses in Michigan.

-----°/o crabgrass-----								
			7/18			8/14		
Herbicide	Formulation	Rate (lbsAI/A)	Watered in	Not watered	Avg.	Watered in	Not watered	Avg.
Dimension	1 EC	0.25	0.3	0	0.2	1	1.3	1.2
Dimension	1 EC	0.38	0	0.3	0.2	1	0.3	0.7
Dimension	1 EC	0.50	0	0	0	0	0	0
Prodiamine	65 WDG	0.5	0.7	0.3	0.5	1	0	0.5
Prodiamine	65 WDG	0.75	0.3	0.3	0.3	0.3	0	0.2
PreM	60 WDG	1.5	1.3	1.5	1.4	2.3	3.7	3
PreM	60 WDG	3.0	0	0.3	0.2	0.3	0.3	0.3
Team	2 G	2.0	3.3	1	2.2	5	3.3	4.2
Team	2 G	3.0	1	0.3	0.7	3	0.7	1.8
Balan	2.5 G	2.0	7.3	2.7	5	3	5	4
Balan	2.5 G	3.0	3	1.2	2.1	5	3	4
DCPA	75 WP	7.5	1.3	0	0.7	0.7	1	0.8
DCPA	75 WP	10.5	1.7	0	0.8	3.7	2	2.8
Betamec	4 EC	12.0	0	1	0.5	0.3	2	1.2
Betamec	4 EC	10.0	0.3	5.7	3	1	5	3
Betamec	4 EC	7.0	2	0.7	1.3	1.3	0.7	1
Ronstar	2 G	2.0	26.7	7.3	17	35	14.3	24.7
Ronstar	2 G	4.0	5.7	1.3	3.5	10	1.7	5.8
Control			33.3	41.7	37.5		50	28.5
Control			31.7	28.3	30	33.3	20	26.7
LSD (P=0.05)			9.5	9.5	6.7	4.8	4.8	6.8