

STOP 3

CRABGRASS CONTROL

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Crabgrass, both large or hairy crabgrass (Digitaria sanguinalis) and small or smooth crabgrass (Digitaria ischaemum), is certainly the number one annual grass weed of turf in Michigan. Present recommendations for crabgrass control stress the use of preemergence herbicides. These herbicides need to be applied prior to crabgrass germination to be effective. Five to seven consecutive nights with temperatures above 50°F, and moist soil, are normally required for crabgrass seed to germinate. Seed germination usually occurs in early May, about the time forsythia is in final bloom.

Materials used for preemergence crabgrass control include the following:

<u>Chemical Name</u>	<u>Tradenames</u>
1. benefin	Balan, Pel-Tech
2. bensulide	Betasan, Presan, Lescosan
3. DCPA	Dacthal
4. oxadiazon	Chipco Ronstar G
5. siduron	Tupersan

Soil life of these materials depends on the rate applied and weather conditions following application. Generally, benefin, bensulide, and oxadiazon are similarly long lasting and under ideal conditions can provide up to four months of control. Dacthal has shorter residue in the soil, on the order of two months. A second application of Dacthal can extend the control period. These soil life figures are also good guidelines for a waiting period between application and when reseeding the treated area would be safe. Tupersan is unique in that it can be used at reduced rates on new seedings of bluegrass.

All the preemergence crabgrass herbicides are growth inhibitors which can potentially injure the turfgrass species. The injury can appear as premature drought stress (browning) during the summer. The drought stress is due to reduced turfgrass root growth. Benefin, Ronstar G, and Dacthal can injure fine fescues and bentgrasses. Tupersan and bensulide do not appear to injure Kentucky bluegrass, fine fescues, or bentgrasses.

A deficiency in crabgrass control in turf is the lack of really good post-emergence crabgrass herbicides. Currently available materials are forms of methanearsonates (DSMA, MSMA, CMA, AMA) which are primarily contact herbicides. Problems associated with methanearsonate use include: 1) Several applications may be required; 2) Turf discoloration can occur in hot, dry weather; 3) Crabgrass plants should be very young for good control. These difficulties prevent recommendation of postemergence herbicides as a primary means of crabgrass control and usually make cleanup of a crabgrass breakthrough after preemergence treatments impractical.

A number of new chemicals are currently being developed for annual and perennial grass control in broadleaf agronomic field crops. These herbicides all

show fair to excellent crabgrass control. A possible serious limitation to their use in turf is that many of these chemicals will also kill perennial grass species. An experiment was done on the Hancock Turf facility in 1982 to evaluate the tolerance of fescue and control of large crabgrass with several of these chemicals. Treatments were applied August 11 except for the AMA which was applied August 13 and again on August 20.

<u>Treatment</u>	<u>Rate (lb a: /A)</u>
1. Check	-
2. Hoelon	1
3. Hoelon	2
4. Hoelon	3
5. Poast + Oil Concentrate	0.10 + 1 qt
6. Poast + Oil Concentrate	0.15 + 1 qt
7. Poast + Oil Concentrate	0.20 + 1 qt
8. Fusilade + Oil Concentrate	0.10 + 1 qt
9. Fusilade + Oil Concentrate	0.15 + 1 qt
10. Fusilade + Oil Concentrate	0.20 + 1 qt
11. Dowco 435 + Oil Concentrate	0.05 + 1 qt
12. Dowco 453 + Oil Concentrate	0.10 + 1 qt
13. Dowco 453 + Oil Concentrate	0.20 + 1 qt
14. CGA 82725 + Oil Concentrate	0.15 + 1 qt
15. CGA 82725 + Oil Concentrate	0.25 + 1 qt
16. CGA 82725 + Oil Concentrate	0.50 + 1 qt
17. AMA (1 Application)	
18. AMA (2 Applications)	