

POSTEMERGENCE CRABGRASS CONTROL  
WITH NEW HERBICIDES

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Many new annual grass herbicides have been developed in the past three decades, yet crabgrass control continues to be a challenging problem for the turfgrass manager. Consequently, the search for new, better compounds is ongoing. Quinclorac (trade name: Impact) and dithiopyr (trade name: Dimension) are two new, experimental crabgrass herbicides from BASF Corp. and Monsanto Co., respectively.

Quinclorac is a very fast-acting, extremely effective herbicide. It has some preemergence activity to go along with the postemergence control it provides. Quinclorac was consistently the best herbicide for control of tillered crabgrass in our postemergence trials in 1989 and 1990, with control superior to that given by Acclaim. Typical use rates for this compound are 0.75-1.0 lb ai/A. Tolerant cool-season turfgrasses include Kentucky bluegrass, annual bluegrass, perennial ryegrass, and tall fescue. There is some question as to its safety on the fine fescues.

Dithiopyr was developed primarily as a preemergence herbicide, but it also has excellent early-postemergence activity, meaning effective control is achieved if it is applied before the crabgrass has tillered. If applied after tillering, however, efficacy drops sharply. The niche for this product may be late spring applications where it can control any emerged crabgrass seedlings, and then provide extended control through the summer due to its strong preemergence activity. Typical use rates for dithiopyr are 0.25-0.75 lb ai/A. This herbicide is safe, at normal use rates, to most commonly used cool-season turfgrass species. Safety to creeping bentgrass is a real bonus. The fine fescues, particularly the chewings fescues, are somewhat sensitive at higher rates (0.75 lb ai/A and up).

We have done extensive research to evaluate the effect of adjuvants on dithiopyr control of tillered crabgrass, in an attempt to further increase the efficacy of this herbicide. Adjuvants are defined as additives that affect the performance or behavior of herbicides. We have specifically investigated activator adjuvants - adjuvants that increase the activity of foliar applied herbicides. We saw significant increases in tillered crabgrass control when we combined one of several adjuvants with dithiopyr at a herbicide rate of 0.38 lb ai/A. Adjuvants were added to the spray solution at 0.5% v/v and increased control of 3 to 6-tiller crabgrass from 50-74% with dithiopyr alone, to well over 90% with several adjuvants. Promising adjuvants for use with dithiopyr included Sylgard 309, X-77, Herbimax, Activator 90, and Agsco Sunit.