

GRASSY WEED CONTROL UPDATE

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As with the broadleaf herbicides, several new active ingredients for grassy weed control have been released in the past several years. Many of these products offer selectivity of control or effectiveness that were not previously available. Table 1 provides some recommendations for the use of these products, based on observations from trial work. However, be aware that the label for these products may include other weeds that may also be controlled.

NEWER ACTIVE INGREDIENTS FOR GRASSY WEED CONTROL

Amicarbazone

Xonerate® herbicide, from Arysta Lifesciences, is labelled for golf courses, sod farms, commercial and residential turfgrass and athletic turf. It is used for control of annual bluegrass and 22 other annual weeds that are listed on the label. Research has shown some favorable results with the use of this product. Control of annual bluegrass with any herbicide can be variable, but research has shown up to 95% control is possible with Xonerate. For cool season turfgrasses such as Kentucky bluegrass and perennial ryegrass the label includes 2 application schedules but most university research is recommending the lighter and more frequent 1.0 oz application schedule and to not apply when temperatures are too warm (above 85 degrees). Xonerate may be used on dormant and actively growing warm season turfgrasses but again, make sure to refer to the label for specific application instructions.

Topramazone

A recent introduction from BASF marketed as Pylex® Herbicide, which has a similar mode of action to that of mesotrione, the active ingredient in Tenacity herbicide. Topramazone inhibits carotenoid biosynthesis which results in bleaching of affected leaf tissues. Pylex® is only for use on centipedegrass or the cool season turfgrasses Kentucky bluegrass, perennial ryegrass and tall or fine fescue. It can be used on golf courses but, as of this writing, Pylex® is labeled only for spot treatment applications on sports turf and there is a special section on the label that articulates this. It is possible though that in the near future the spot application restriction will be lifted and broadcast applications will be permitted. In addition, there is a supplemental label for broadcast application on residential turfgrass. Topramazone has both pre and postemergence activity and Pylex is labelled for the control of 15 grassy and 39 broadleaf weeds, both annual and perennial.

Pylex® has a broad spectrum of weeds that it is labelled to control. It is excellent for the control of goosegrass and sedges. In addition, research has found that it can be very effective for the postemergence control of tillering crabgrass. In OSU trials, we found that control was similar, or in some cases, better than, control of crabgrass with mesotrione or quinclorac. Pylex® also has activity on perennial grassy weeds and is labelled for either suppression or control of creeping bentgrass, bermudagrass, dallisgrass and nimblewill. Control of these weeds is achieved with a 3 application schedule similar to that of mesotrione. Consult the label for specifics. For broadleaf weed control, research at Ohio State University has found that topramazone has good activity against white clover but is not as active against broadleaf weeds such as dandelion or ground ivy. Similar to mesotrione, Pylex® can be applied on the day of seeding for suppression or control of germinating grassy and broadleaf weeds but is safe to seedlings of tolerant turfgrass species.

Dimethinamid-P

Marketed by BASF as Tower® herbicide, this product is labelled for use on golf courses and for landscapes and grounds.

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Table 1. Herbicides for Grassy Weed Control

Weed Species	Preemergence									Postemergence											
	Bensulide	Dimethenamid-p	Ethofumesate	Benefin	Pendimethalin	Prodiamine	Dithiopyr ¹	Siduron	Oxadiazon	Dipeptides	Mesotrione ²	Topramazone ²	Amicarbazone	Fenoxaprop	Quinclorac	Bispyribac	Chlorsulfuron	Halosulfuron	Bentazon	Sulfentrazone	Glyphosate
Summer Annual Grassy Weeds																					
Barnyardgrass	✓		✓	✓	✓	✓	✓		✓				✓	✓							
Crabgrass (Large)	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓							
Crabgrass (Smooth)	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓							
Dallisgrass						✓					✓										
Goosegrass		✓		✓		✓	✓		✓	✓	✓		✓								
Green Foxtail	✓		✓	✓	✓	✓	✓	✓					✓	✓							
Johnsongrass						✓							✓								
Lovegrass						✓															
Witchgrass						✓															
Yellow Foxtail	✓		✓	✓	✓	✓	✓	✓		✓			✓	✓							
Winter Annual Grassy Weeds																					
Annual Bluegrass	✓		✓	✓	✓	✓	✓		✓			✓				✓					
Downy Brome						✓	✓														
Perennial Grassy Weeds																					
Nimblewill										✓	✓										✓
Orchardgrass										✓											✓
Quackgrass																					✓
Rough bluegrass																					✓
Smooth Brome																					✓
Timothy																					✓
Weedy Turfgrasses																					
Bermudagrass																					✓
Creeping bentgrass										✓	✓										✓
Perennial ryegrass																✓					✓
Tall fescue															✓						✓
Sedge																					
Yellow Nutsedge		✓								✓							✓	✓	✓		

¹ Dithiopyr also has early postemergence activity on crabgrass

² Can be used pre- or post-emergence against annual grasses and sedges, and post against perennial grasses.

Best Choice
 Effective

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It has a supplemental label that allows its use only on athletic surfaces with warm season turfgrass species. Tower is labelled for use on cool season turfgrass used on golf courses, but it is not labelled for use on athletic turf that contains cool season grasses. One of the reasons for this labelling decision is that dimethinamid-P will discolor, but not control annual and rough bluegrass on cool season athletic fields. On warm season turfgrass the label also cautions not to use Tower because it will injure and thin (but not control) annual bluegrass. Dimethinamid-P is a preemergence herbicide that has good activity on annual weeds, including goosegrass, which it is particularly effective at controlling. Another advantage of this herbicide is that, for a preemergence herbicide, it has a relatively quick reseeding interval of 6 weeks.

Prodiamine + Quinclorac

While there is variation in duration of control among products, one of the disadvantages of using a preemergence herbicide to control crabgrass can be that the residual activity, or length of control, is not adequate to last the entire season. On the other hand, one of the disadvantages of using a postemergence herbicide for control of crabgrass is that they are often times less effective than desired if the crabgrass is actively flowering or tillering. This can be partially offset by applying the postemergence herbicide earlier, while the crabgrass is still in leaf stage. However, this is a temporary solution because crabgrass is usually still germinating and thus the controlled leaf stage crabgrass will be replaced by seedlings that germinate following application.

The product Calvalcade® PQ was introduced a couple years ago by SipcamAdvan. It combines the preemergence herbicide prodiamine with the postemergence herbicide quinclorac. If this product is used when emerged crabgrass is in leaf stage (the month of May in the Midwest) then the emerged crabgrass is controlled by the quinclorac. In addition, the prodiamine is applied late enough that you are much more likely to see residual activity that lasts for the remainder of the season. Calvalcade PQ should ideally be applied when there is leaf stage crabgrass about 1 month after germination has started (the middle of May in the Midwest). The product can be used earlier, but you increase the risk of not having adequate residual control. You can also use the product later, but you increase the odds of getting incomplete control of the tillered crabgrass. However, research at The Ohio Turfgrass Foundation Research and Education Center has shown that when applied to leaf stage crabgrass during the month of May that 85-95% control

can be achieved for the duration of the season. It should also be mentioned as a reminder, even though not new, that dithiopyr (Dimension) has early postemergence activity on leaf stage crabgrass as well as residual preemergence activity allowing for early post and preemergence activity on crabgrass in a single spring application. It is available in many granular formulations.

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