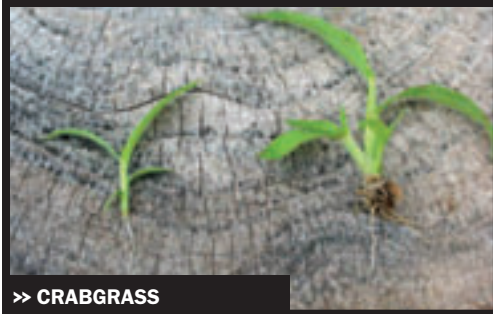


Post-emergent weed control for sports fields



>> DANDELION



>> CRABGRASS



>> GOOSEGRASS



>> PROSTRATE KNOTWEED

Images above

>> **DANDELION** is a perennial broadleaf weed that is best controlled in early fall.

>> **CRABGRASS** is a summer annual grassy weed. Best control for post-emergent herbicides is at the 1 to 3 leaf stage (left). Products containing quinclorac are best in the early tiller stage (right).

>> **GOOSEGRASS** is a summer annual grassy weed that will emerge after crabgrass.

>> **PROSTRATE KNOTWEED** is a summer annual broadleaf weed that is an excellent indicator weed for soil compaction.

ONE GENERAL COMMENT that can be made about weeds is the fact that they are there due to a weakened stand of turfgrass. Culturally, we can reduce our potential for weeds if a dense stand of turfgrass can be maintained at the highest cutting height possible. While most sports fields are mowed at relatively close mowing heights as compared to a home lawn, we do know that going from 1½ inches to 3½ inches can reduce annual weeds by 80%. Weed seed requires light for germination and a dense turfgrass canopy mowed taller creates a shade effect. Obviously we are not saying that all sports fields should be mowed at 3½ inches. However, in some situations, keep in mind that if we can get by with a higher mowing height every additional ¼ to ½ inch does help; we can reduce weed infestations.

Often weeds are properly identified and the first question asked is, “What do I spray to kill it or control it?” Most extension specialists or weed scientists can give a short-term solution to that question. What we would like you to ask yourself first is, “Why is this weed there?” Knowing why weeds exist outside of having a weakened turfgrass can sometimes dictate changes in our cultural practices that may impact the level of infesta-

tion we have. Understanding that some weeds favor compacted soils, droughty or poorly drained soils, low or high soil pH, low or high nitrogen, low fertility and/or shade can help identify needs for perhaps aeration, grade work, proper fertility and irrigation, and soil testing (see table below)

Treating weeds after they emerge allows for proper identity of the weed species. However, several weed species are difficult to identify in the seedling stage. It’s only after they become more established and unsightly before correct identification can be made. Controlling weeds when they are young and actively growing will provide the best post-emergence control. Grasses are best controlled prior to tiller. Broadleaves are best controlled in the 2 to 4 leaf stage, sedges usually in a 3 to early 6 leaf stage. Avoid mowing within 24 to 48 hours before or following applications of post-emergence herbicides. The goal here is to provide maximum leaf area for maximum plant uptake. Irrigation within 24 hours after post-emergence applications should be avoided. Note that many new formulations of post-emergence herbicides are rain-fast within 6 hours. Be sure to check the label. Drought stressed weeds should be irrigated 24 hours before applications of herbicides for improved efficacy.

Other Reasons Weeds Exists	Weeds
Low Mowing	Annuals such as annual bluegrass, chickweed, crabgrass, speedwell; also plantains
Compaction	Annual bluegrass, crabgrass, dandelion, goosegrass, pineapple weeds, prostrate knotweed, prostrate spurge, speedwell
Drought	Black medic, cinquefoil, clovers, crabgrass, curly dock, goosegrass, prostrate spurge, speedwell, yellow wood sorrel
Poor Drainage/ Wet Soils	Barnyardgrass, buttercups, nutsedge, plantains
Low Soil pH	Common mullein, English daisy, hawkweed, knawel, red sorrel, wild strawberry
High Soil pH	Broadleaf plantain, hop clover, wild carrot
Low Nitrogen	Black medic, clovers
High Nitrogen	Annual bluegrass
Low Fertility	Foxtails, henbit
Low Calcium	Dandelion
Shade	Chickweeds, moss, speedwell, wild violets

Grassy Weed Control Products

Trade Name	Common Name	Turfgrass Species*
Acclaim Extra	fenoxaprop-ethyl	Z, KB, TF, PR

After proper identification, management principles of cultural and mechanical control strategies should be considered before chemical control strategies. Selection of a post-emergence herbicide requires several questions be answered before that decision is made. 1) What are the turfgrass species involved? Keep in mind that some turfgrass mixes may work for some products, but not all. An herbicide may be applied to tall fescue, but not Kentucky bluegrass. 2) Are there any site restrictions, temperature restrictions for the product? 3) What is the re-entry interval before fields can be used? 4) And, with many post-emergence herbicides; what is the re-seeding interval for turfgrasses or effects on new turfgrass seedlings? And finally, 5) know how “established turfgrass” is defined; is it two or more mowings or something else? Knowing the answers to these questions will help sports field managers decide the best post herbicide for their weed control situation.

Some 20-plus years ago as my memory serves me, post-emergence applications in many situations were considered rescue treatments. Of course this related to failures in pre-emergence herbicides that controlled summer annual grassy

and broadleaf weeds. Post-emergent grassy weed herbicides were limited then as they still are now for cool-season turfgrasses. The biggest arsenal of post-emergent herbicides available for sports field managers has been for broadleaf weed control. And now, we see a wide array of combination products that control both grassy and broadleaf weeds with a single application. Along with all these products, we have a growing assortment of post herbicides specifically used on warm-season turfgrasses.

As you read through this article, you will find a toolbox filled with products for post-emergent weed control. With the onset of spring coming 4 to 5 weeks earlier this year in many areas of the country, post emergent herbicides will more than likely be part of a weed control program. These products will be separated into specific categories based on the weeds they control—grasses, broadleaves, grasses and broadleaves, and sedges. Each will be discussed and presented in a table format in order to provide a complete understanding of the tools we have available for post weed control (see table above).

With the removal of MSMA from the market, control of several annual grasses falls on

products like Acclaim Extra, Dimension, and Drive XLR8, etc. when post activity is needed. However products like Dimension and Drive XLR8 offer more in control of several broadleaf weeds as well. One advantage offered by Acclaim Extra is its suppression of bermudagrass, if bermudagrass is targeted as a weed.

As stated earlier, our biggest arsenal of post-emergent products has been for broadleaf weed control and believe me; this is the short list. Keep in mind that various active ingredients and combinations of active ingredients offer a diverse number of uses and weed spectrums. Therefore, it is important to view labels in great detail before purchasing any weed control product (see table bottom left).

Many of the grass and broadleaf control products will fall into the sulfonyl-urea class of chemistry: Certainty, Katana, Manor, Monument, and Revolver. These are primarily used in warm-season turfgrasses for the removal of annual and perennial grassy weeds; however, most will control a spectrum of broadleaf weeds. These are often called “transition products” as they are used to remove cool-season grasses from warm-season grasses during spring transition.

Several combination products specifically designed and marketed as grass and broadleaf control products include quinclorac as one of their active ingredients: Onetime, Q4 Plus, Quincept, and Solitare. Manufacturers were quick to formulate and re-formulate products with the loss of MSMA and the addition of quinclorac is an excellent substitution.

Tenacity provides excellent control of many grassy and broadleaf weeds as a post-emergent and can be used on established or newly seeded turfgrasses (see table on top of page 11).

Sedge control products remain strong and offer excellent versatility for both warm and cool-season grasses. Prosedge and Sedghammer provide control of sedges in cool-season grasses, where Certainty and Monument not only provide excellent sedge control in warm-season grasses, but also control annual and perennial grasses and some broadleaf weeds (see second table on page 11).

All herbicide information is presented with the understanding that no endorsement of named products is intended by STMA or the University of Missouri, nor criticism implied of similar products that are not mentioned. This article is not a substitution for any product label. Before using any herbicide please read the label carefully for directions on application procedures, application rates, first aid, storage and disposal. Make sure that the herbicide is properly registered for the intended use. Carefully

Broadleaf Weed Control Products

Trade Name	Common Name	Turfgrass Species*
4-Speed XT	2,4-D + triclopyr + dicamba + pyraflufen-ethyl	B, Bh, Z, KB, TF, PR
Cool Power	MCPA + triclopyr + dicamba	B, Bh, Z, KB, TF, PR
Escalade 2	2,4-D + fluroxypyr + dicamba	B, Bh, Z, KB, TF, PR
Millennium Ultra 2	2,4-D + clopyralid + dicamba	B, Bh, Z, KB, TF, PR
Speed Zone	carfentrazone-ethyl + 2,4-D ester + MCPP-p + dicamba	B, Z, KB, TF, PR
Speed Zone Southern	carfentrazone-ethyl + 2,4-D ester + MCPP-p + dicamba	B, Bh, C, K, SP, StA (common only), KB, TF, PR
Spotlight	fluroxypyr	B, Bh, C, StA (except FL), Z, KB, TF, PR
T-Zone	triclopyr + sulfentrazone + 2,4-D ester + dicamba	B, Bh, Z, KB, TF, PR
Trimec 1000 Low Odor	2,4-D (DEA) + 2,4-D (DMA) + MCPP-p + dicamba	B, Bh, Z, KB, TF, PR
Trimec Classic	2,4-D + mcpa = dicamba	B, Bh, Z, KB, TF, PR
Triplet Low Odor	2,4-D + MCPP-p + dicamba	B, Bh, C, StA, Z, KB, TF, PR
Turflon II Amine	2,4-D + triclopyr	KB, TF, PR
Turflon ester	triclopyr	KB, TF, PR

Grass and Broadleaf Weed Control Products

Trade Name	Common Name	Turfgrass Species*
Certainty	sulfosulfuron	B, Bh, C, K, SP, StA, Z
Dimension Ultra	dithiopyr	B, C, K, SP, StA, Z, KB, TF, PR
Drive XLR8	quinclorac	B, SP, Z, KB, TF, PR
Katana	flazasulfuron	B, C, SP, Z
Manor	metsulfuron-methyl	B, C, StA, Z, KB
Monument 75WG	trifloxysulfuron	B, Z
Onetime	quinclorac + MCPP + dicamba	B, SP, Z, KB, TF, PR
Q4 Plus	quinclorac + sulfentrazone + 2,4-D + dicamba	B, KB, TF, PR
Quincept	2,4-D + quinclorac + dicamba	B, Z, KB, TF, PR
Revolver	foramsulfuron	B, Z
Solitaire	sulfentrazone + quinclorac	B, C, SP, Z, KB, TF, PR
Tenacity	mesotrione	C, KB, TF, PR

Sedge Control Products

Trade Name	Common Name	Turfgrass Species*
Certainty	sulfosulfuron	B, Bh, C, K, SP, StA, Z
Monument	trifloxysulfuron	B, Z
Prosedge	halosulfuron-methyl	B, Bh, C, K, SP, StA, Z, KB, TF, PR
Sedgehammer	halosulfuron-methyl	B, Bh, C, K, SP, StA, Z, KB, TF, PR

read all precautions on turfgrass sensitivity to products and timings.

Company websites readily allow access to and the downloading of product labels and MSDS's. Manufacturers and suppliers maintain toll-free numbers for the purpose of providing answers to any technical question you may have on their specific products. You can also contact your local extension office. ■

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TURFGRASS KEY:

*Bermuda (B),
Bahigrass (Bh),
Centipede (C),
Kikuyugrass (K),
Seashore Paspalum (SP),
St. Augustine (StA),
Zoysia (Z),
Ky. Bluegrass (KB),
Tall Fescue (TF),
Perennial Ryegrass (PR)



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