



## Sports turf weed control on a budget



**O**VER THE PAST SEVERAL YEARS budgets for turfgrass maintenance have been reduced dramatically. Athletic field managers have all had to adjust to the struggles associated with maintaining high quality turf with less money. One could argue that sports turf managers are affected more than any other sector of the industry during these trying times. While dollars for field maintenance continue to decline, demands on field use do not.

To conquer these challenges from a weed control perspective, sports turf managers must comprehensively evaluate their management programs to determine where valuable budget dollars should be spent. The steps presented below can be used as a guide for making weed control decisions on a restricted budget.

### ✓ **PRIORITIZE**

The first step in effectively controlling weeds on a restricted budget is to realize that any pro-

gram implemented most likely will not be comprehensive. While the entire facility may have been treated in the past, with fewer dollars in the budget it is critically important that sports turf managers determine what parts of their facility need to look the best (i.e., be free of weeds). Many sports turf managers grade these areas. For example, game fields for varsity sports may be deemed A-level areas, practice fields may be deemed B-level areas, and those used for band or physical education class may be deemed C-level areas.

### ✓ **TIMING**

Once key areas have been identified, it is important to determine when these areas need to look the best. If fall sports predominate, weed control in early spring becomes less important. This especially rings true for those managing bermudagrass fields in the transition zone. There are significant costs associated with fall overseeding including the cost of seed, fertilizer, water (in some cases), labor for mowing, and herbicides for weed control. Chemically removing the overseeded turf in spring can cost as much as \$150 per acre, in addition to the cost of selective winter annual broadleaf and grassy weed control.

On fields with minimal spring play, consider not overseeding in fall and controlling weeds with a non-selective herbicide in spring while the bermudagrass is still dormant. This strategy will provide economical control of winter annual broadleaf and grassy weeds with a single herbicide application. Lack of competition from the overseeded turf will also allow bermudagrass to recuperate from fall traffic more efficiently in spring. Research conducted at the University of Tennessee in 2009 found programs delivering non-selective herbicide applications to dormant bermudagrass to provide more effective and economical weed control than those incorporating fall overseeding and selective herbicide applications.

Proper herbicide selection depends on many factors including the weed requiring control, the stage of weed maturity, and the species of turfgrass in which the weed has invaded.

## ✓ PRESSURE

Another important step in controlling weeds with less money is to determine the amount of weed pressure that warrants an herbicide application. This is directly related to the expectations of field users and the scope of the budget provided. While a 100% weed-free stand may have been the standard in the past, budgets may require that this be shifted to 85% or 90%. Another option is to ensure that A-level areas are 100% weed-free, while B and C-level areas remain at 70-80%. These adjustments may help stretch dollars for weed control further.

## ✓ CULTURAL PRACTICES TO MAINTAIN DENSITY

A dense stand of vigorously growing turf is the best defense against weed invasion. Weeds only invade turf stands if there is a void in the canopy in which to do so. With fewer budgetary dollars available for weed control, sports turf managers should thoroughly evaluate their cultural practices to ensure that everything possible is being done to maintain turf density under traffic.

Practices such as selecting traffic tolerant cultivars, applying fertilizers to meet soil test recommendations, sufficiently irrigating to meet plant needs, mowing at a proper height of cut, aerifying regularly, and applying plant growth regulators all serve to maximize turf density and consequently reduce the likelihood of weed infestations. In a world of smaller budgets, implementing cultural practices to maximize turfgrass density should be thought of as preventative weed control.

## ✓ CALIBRATION

Calibrating spraying equipment is probably the easiest way to save money when budget dollars are limited. Studies have shown that over 80% of licensed pesticide applicators have calibration and/or mixing errors greater than 5%. These errors have been found to

range from a 40% under application to a 60% over application, resulting in over 4 million dollars in lost revenue.

Sprayers should be calibrated at least one time per growing season, with nozzles changed regularly. Taking the time to check that spraying equipment is calibrated and operating properly will ensure that dollars are not wasted on improper herbicide applications.

## ✓ SELECTING THE CORRECT PRODUCT

Proper herbicide selection depends on many factors including the weed requiring control, the stage of weed maturity, and the species of turfgrass in which the weed has invaded. New herbicides are entering the marketplace with a focus on broadening the weed control spectrum of a single herbicide application. These products typically combine two or more herbicides that have been sold individually into a single formulated product. Examples include Solitare (sulfentrazone + quinclorac) and Onetime (quinclorac + MCPP + dicamba). Both of these products offer postemergence control of crabgrass and various broadleaf weeds with a single application. Using a product with a wide weed control spectrum will reduce the number of herbicide applications required during the season.

## ✓ PREPARING FOR LOSS OF MSMA

The loss of an effective, economical postemergence herbicide like MSMA will make weed control even more difficult with restricted budgets. Questions about legal applications of MSMA still linger throughout the industry. According to the EPA, registrants of MSMA for use on sports turf lost the ability to sell the product on December 31, 2009; however, distributors will be able to sell products purchased before December

31, 2009 until December 31, 2010. After December 31, 2010 existing stocks of MSMA can legally be used for weed control on sports fields until they are exhausted provided that these uses comply with the EPA-approved label and labeling of the affected product.

Considering that the window to legally apply MSMA is closing by the minute, sports field managers challenged with dallisgrass infestations should place top priority on controlling these problems as soon as possible. Researchers at the University of Tennessee are continually evaluating new compounds, as well as combinations of existing compounds, that will help soften the blow of the EPA restrictions on MSMA. To follow the latest research being conducted at the University of Tennessee, visit <http://tennesseeturfgrassweeds.org>.

All aspects of turfgrass management, including weed control, become challenging following budget cuts. Taking the time to evaluate why certain practices have been implemented in the past should help identify the key components of the maintenance program requiring attention (and budget dollars) in the future. ■

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