Best Management Practices for Weed Control

Dr. Douglas Buhler, Ronald Calhoun and Lauren Hathaway
Department of Crop and Soil Sciences

Common recommendations to LCO's and homeowners include mowing high and providing adequate fertility. Without proper management weed control will be at best, temporary. This study is examining mowing height, fertility, and postemergence herbicide treatment. Plots were maintained at two or four inches, and received either no fertility or 3 lb of nitrogen per 1000 ft^2 per year (holiday program – 1# Memorial Day, ½# July 4, ½# Labor Day and 1# Thanksgiving). In October of 1998 plots were treated with Trimec, Confront or no herbicide. Broadleaf weed populations have been monitored since the beginning of the experiment. The re-infestation of white clover and dandelion has been slowest in the fertilized plots and those treated with Confront. Unfertilized plots have proven to be an excellent environment for clover. The taller height of cut in conjunction with the 'holiday' fertility program has not eliminated existing weeds. However, these management practices have proven to create a more competitive turfgrass stand that better resists re-infestation after a postemergence broadleaf herbicide application. Broadleaf herbicides (same treatments as 1998) were reapplied in October, 2001. Herbicide treatments were very effective in 2001. Both herbicides provided excellent control of clover and dandelion. Weed counts are continuing in order to identify those practices that will delay additional herbicide treatments after the weeds have been eliminated. Two weed species (common mallow and smartweed) present at the beginning of the study are no longer being evaluated as they have disappeared from all plots. Smartweed pressure was moderate to high in 1998. The site was converted from a corn/soybean rotation to turfgrass in 1996. After two seasons without cultivation (i.e. plowing) the smartweed was no longer able to compete with the turfgrass. A second BMP area was established in the fall of 2001. This area has a history of heavy crabgrass and clover pressure.

Management Factors	Dandelion Persistence		Clover Persistence	
	1998	2002	1998	2002
2" ONLY	47	80	1	59
4" ONLY	22	67	5	20
2" HOLIDAY	52	33	6	16
4" HOLIDAY	39	23	11	11
2" TRIMEC[1]	45	2	2	6
4" TRIMEC[1]	34	7	20	2
2" CONFRONT[1]	32	0	12	2
4" CONFRONT[1]	32	1	22	0
2" HOLIDAY TRIMEC[1]	34	1	7	0
4" HOLIDAY TRIMEC[1]	50	2	5	0
2" HOLIDAY CONFRONT[1]	38	0	3	0
4" HOLIDAY CONFRONT[1]	38	1	5	0

[1] Broadleaf herbicides applied 10/98 and 10/01.