

## Limpopgrass Tolerance to Herbicides

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Dicamba (Banvel) has been the standard recommendation for weed control in limpopgrass, because Weedmaster contains 2,4-D, which has been reported to cause significant limpopgrass injury. Over the past couple of years, we have had several herbicides labeled in the pasture market including: Cimarron, Telar, Pasturegard, Overdrive, and Milestone. Little information regarding the tolerance of limpopgrass to these herbicides has been recorded.

In a study initiated on 12 April, 2005, 2,4-D amine at 2, 4, and 8 pints/acre, Remedy at 1, 2, and 4 pints/acre, and Milestone at 3, 5, and 7 fluid ounces/acre resulted in no visual injury (chlorosis and necrosis) three months after application to either non-mowed or mowed (10 inch regrowth at application) limpopgrass. When not mowed prior to herbicide application, these herbicide treatments did not impact limpopgrass production 6 months after treatment. However, if mowed prior to herbicide treatment, a 17 to 23% yield reduction was observed from 4 and 8 pints of 2,4-D amine as well as 2 and 4 pints of Remedy. Milestone caused a 15%-30% yield reduction when limpopgrass was mowed prior to application.

The lack of limpopgrass injury from applying 2 pints of 2,4-D was surprising. Therefore, a second study was initiated on 16 September, 2005. Cimarron at 0.1, 0.2, and 0.4 oz/acre, Telar at 0.5 and 1.0 oz/acre, Pasturegard at 2, 3, and 4 pints/acre, Weedmaster at 1, 2, and 4 pints/acre, Banvel at 0.3, 0.5, and 1 pint/acre, and 2,4-D amine at 0.8, 1.5, and 3.0 pints/acre were applied to 10 inch limpopgrass. Applications of Cimarron, Telar, Pasturegard at 2 and 3 pints, Banvel, 2,4-D at 0.75 pints, and WeedMaster at 1 and 2 pints caused less than 15% injury (chlorosis and necrosis) 1 month after treatment (Table 1). By 2 months after treatment, no chlorosis or necrosis was present from any herbicide application. Although chlorosis was not present, limpopgrass height was reduced by at least 15% from applications of Pasturegard at 4 pints, 2,4-D at 3 pints, and WeedMaster at 4 pints. Biomass was not recorded in this study.

Currently we are in the process of a multi-year project attempting to determine if there is a certain time of the year when all herbicides can be safely applied to limpopgrass. At this point in time, we still do not recommend spraying anything containing 2,4-D during hot and humid conditions. However, if temperatures are cool and relative humidity is low, most herbicides can be applied with minimal injury to the limpopgrass sward.

Table 1. Response of limpgrass to herbicides applied on September 16, 2005.

Herbicide	Rate	30 days after treatment		60 days after treatment	
		chlorosis	height	chlorosis	height
		-----%-----	% reduction	-----%-----	% reduction
Untreated		0	0	0	0
Cimarron	0.1 oz/A	5	3	0	1
Cimarron	0.2 oz/A	6	3	0	3
Cimarron	0.4 oz/A	6	4	0	0
Cimarron	0.8 oz/A	6	1	0	0
Cimarron	1.0 oz/A	9	14	0	1
Telar	0.5 oz/A	5	5	0	1
Telar	1.0 oz/A	6	6	0	3
Pasturegard	2 pt/A	9	20	0	6
Pasturegard	3 pt/A	9	21	0	4
Pasturegard	4 pt/A	16	28	0	14
Banvel	0.25 pt/A	6	1	0	5
Banvel	0.5 pt/A	4	1	0	1
Banvel	1.0 pt/A	3	1	0	0
2,4-D amine	0.8 pt/A	8	8	0	1
2,4-D amine	1.5 pt/A	13	13	0	6
2,4-D amine	3.0 pt/A	26	26	0	25
Weedmaster	1 pt/A	6	9	0	5
Weedmaster	2 pt/A	9	16	0	11
Weedmaster	4 pt/A	19	28	0	21