

Common Lespedeza Control in Cavalier Zoysiagrass

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Common lespedeza in flower

Photo by John Boyd

Summary. Common lespedeza is a turfgrass weed that is not controlled by 2,4-D amine. The objective of this study was to determine which postemergence broadleaf herbicides are most effective for control. Herbicide treatments included Lontrel, Spotlight, Manor, Trimec Southern, Confront, Escalade Low Odor, Millenium Ultra, Drive, Turflon Ester, Atrazine, Katana, Monument, Forefront and Dismiss. Spotlight, Confront, Turflon Ester, and Manor

alone or in combination products provided complete control of common lespedeza at 71 days after application. Percent control with Millenium Ultra, Trimec Southern, and Forefront was 63, 65, and 83% respectively. Lontrel, Drive, Atrazine, Katana, Dismiss, and Monument were ineffective.

Abbreviations: DAA, days after application

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Common lespedeza (*Lespedeza striata*) (Figs. 1 and 2) is an aggressive summer annual that forms a tough taproot. It is commonly found in areas of thin, poorly fertilized turfgrass. This weed has wiry stems and forms low-growing mats. Common lespedeza is very tolerant of 2, 4-D amine (Yelverton and Warren, 2005), a major component of many postemergence broadleaf herbicides used in turfgrass. In fact, lespedeza seed growers routinely use 2, 4-D amine to control other broadleaf weeds in their fields. The objective of this study was to screen additional herbicide ingredients for their ability to control common lespedeza.

Materials and Methods

Research was conducted at Quail Valley Sod Farm near Little Rock, Arkansas. The treatments (Table 1) were sprayed on 3 July 2007. Experimental design was a randomized complete block with four replications of each treatment. Individual plots were 5 by 10 ft. Activator 90 non-ionic surfactant was added to all treatments at 0.25% v/v. Herbicides were applied at 30 gal/A with a CO₂-powered sprayer at 21 psi. Percent weed control was rated visually on a 0 to 100 scale where 0 = no control and 100 = completely dead weeds.

Results and Discussion

There were significant differences in the level of lespedeza control among the herbicides evaluated (Table 1). Spotlight, Confront, Escalade, Turflon Ester, and Manor were effective for common lespedeza control (Fig. 3). Lontrel and Forefront, which provide excellent control of many legume species, were ineffective for control of common lespedeza. Yelverton and Warren (2005, 2007) also found that products containing fluroxypyr (Escalade and Spotlight) provided excellent control of common lespedeza while Dismiss and Katana were ineffective. Our results for Trimec Southern (80% control) and Manor (100% control) were consistent with the results of Yelverton and Warren (2005) for these two herbicides.

Literature Cited

- Yelverton, F.H. and L.S. Warren. 2005. Postemergence common lespedeza control with Spotlight 1.5EC combinations in common bermudagrass. 2005. Turfgrass Research Report: Weed Control and PGR's. Crop Science Department, North Carolina State University, Raleigh, N.C.
- Yelverton, F.H. and L.S. Warren. 2007. Postemergence common lespedeza control using flazasulfuron combinations. 2007 Turfgrass Research Report: Weed Control and PGR's. Crop Science Department, North Carolina State University, Raleigh, N.C.



Fig. 1. Common lespedeza.



Fig. 2. Trifoliate leaves of common lespedeza.



Fig. 3. Common lespedeza control with Spotlight at 16 fl oz per acre.

Table 1. Common lespedeza control in Cavalier zoysiagrass.

Treatment	active ingredient	oz product / A	17 DAA ^z	28 DAA	41 DAA	71 DAA
			% Control			
Turflon Ester	triclopyr	16	90 a	99 ab	100 a	100 a
Spotlight	fluroxypyr	8	53 d	53 d	78 cd	100 a
Spotlight	fluroxypyr	16	75 abc	90 ab	100 a	100 a
Spotlight	fluroxypyr	24	74 abc	100 a	100 a	100 a
Manor	metsulfuron	0.25	73 abc	83 abc	88 a-d	100 a
Manor	metsulfuron	0.5	63 bcd	83 abc	98 ab	100 a
Escalade Low Odor	2,4-D + fluroxypyr + dicamba	32	75 ab	86 ab	95 abc	100 a
Confront	triclopyr + clopyralid	16	58 bcd	80 bc	100 a	100 a
Confront	triclopyr + clopyralid	32	83 a	95 ab	100 a	100 a
Trimec Southern	2,4-D + MCPP + dicamba	64	55 cd	68 cd	80 bcd	83 ab
Forefront	aminopyralid + 2,4-D	24	50 d	53 d	58 ef	65 bc
Millenium Ultra	2,4-D + clopyralid +dicamba	48	53 d	55 d	70 de	63 bc
Aatrex 90DF	atrazine	27	76 ab	58 d	48 f	43 cd
Katana	flazasulfuron	3.0	20 ef	18 efg	23 g	23 de
Drive	quinclorac	16	28 e	33 e	20 g	15 e
Monument	trifloxysulfuron	0.56	15 ef	13 fg	15 gh	0 e
Lontrel	clopyralid	4	10 ef	13 fg	8 gh	0 e
Lontrel	clopyralid	8	5 f	5 g	0 h	0 e
Lontrel	clopyralid	16	15 ef	13 fg	0 h	0 e
Katana	flazasulfuron	1.5	20 ef	13 fg	13 gh	0 e
Dismiss	sulfentrazone	12	20 ef	30 ef	0 h	0 e
CV			25	21	21	26
LSD 0.05			17	16	16	22

^zDays after application.