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Identification and Control of Mugwort (*Artemisia vulgaris L.*) in Virginia

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Identification

Perennial weed with persistent rhizomes that may be spread or transported by cultivation equipment or also in burlaped nursery stock infested with rhizomes. Leaves are 2 to 4 inches long, 1 to 3 inches wide, alternately arranged on the stem, deeply lobed, and have a distinctive aroma. Leaves on the upper portions of the plant are more deeply lobed and may lack petioles. Leaf undersides are covered with soft, white to gray hairs, while upper leaf surfaces may be smooth to slightly hairy. Stems may reach 5 feet in height and often become woody with age. Flowers are inconspicuous and occur in clusters at the top of the plant. The fruit is an achene that encloses the seed; however, viable seed are rarely produced in North America (4).

Control In Corn

Experiments conducted in no-till corn fields during 1995 and 1996 in Westmoreland County, Virginia, revealed that relatively good mugwort suppression can be achieved with Stinger® and other pre-packaged herbicides that contain the active ingredient in Stinger® (2). As illustrated in Table 1, early postemergence applications of Stinger® provided greater than 70% mugwort control in 1995, and late postemergence applications of Stinger® provided greater than 70% mugwort control in 1996. In each of these years, the highest level of mugwort control was achieved when Stinger® was applied to mugwort that was approximately 8 to 10 inches in height. Additionally, the results from both years indicated that the addition of 2, 4-D to Stinger® treatments did not significantly improve mugwort control compared to Stinger® treatments alone. Similarly, the pre-packaged mix of Hornet® did not provide significantly higher levels of mugwort control than Stinger® alone.

Control In Soybeans

Relatively few options are available for the selective control of mugwort in soybeans. Diphenyl ether herbicides such as Blazer®, Reflex®, and Cobra® should pro-

Table 1. Mugwort control in no-till corn with corn herbicides during 1995 and 1996 in Westmoreland County, Virginia (3).

		End of Season Mugwort Control (0-100%)					
		1995			1996		
Herbicide	Rate/A	PRE	E-Post	L-Post	PRE	E-Post	L-Post
2,4-D	1 pt	9	43	41	1	9	53
Stinger	1/3 pt	6	75	59	40	53	74
Stinger	2/3 pt	59	85	78	58	50	85
Hornet	4 ozs	10	66	64	4	43	78
Hornet + 2, 4-D	4 ozs + 1 pt	8	53	79	45	55	76
Stinger + 2, 4-D	1/3 pt + 1 pt	10	71	65	36	39	86
Stinger + 2, 4-D	2/3 pt + 1 pt	70	81	83	39	53	93
LSD (0.05): Herbicides:			12			8	
LSD (0.05) Timing:			9			7	

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vide some suppression of mugwort via desiccation of foliage, but regrowth from underground rootstocks will occur. A more effective alternative for the control of mugwort in soybeans is the application of Roundup Ultra® to a genetically engineered Roundup Ready® soybean variety. The suppression afforded by the highest labeled rates of Roundup Ultra®, coupled with the competitive effects of good soybean canopy closure, should provide relatively good suppression of this weed.

Control In Pastures And Mayfields

As illustrated in Figure 1, mugwort can be selectively removed from grass pastures and hayfields with either Stinger® or Banvel® (1). However, extremely high rates of Banvel® will be required to provide greater than 80% mugwort control at 1 year after treatment (YAT), whereas Stinger® will provide equivalent or higher levels of mugwort control at much lower application rates. These results also indicate that relatively high application rates of Roundup Ultra® will provide good mugwort control at 1 YAT in those situations where a nonselective herbicide may be applied. Additional experiments conducted in Virginia during 1998 and 1999 revealed that sequential treatments of certain herbicides made at 7 week intervals is also an effective mugwort control strategy (2). For example, three sequential treatments of 2, 4-D amine and 2, 4-D ester at 4 qts/A provided greater than 70% mugwort control at 1 year after treatment. Similar levels of mugwort control were also achieved with 2 sequential applications of Banvel® at 2 qts/A, and only 1 application of Stinger® at 2/3 pt/A was required to achieve even higher levels of control. Other experiments conducted in Virginia revealed that overall there was no significant difference in mugwort control when herbicides were applied to vegetative- vs. flowering-stage mugwort.

References

Bradley, K. W. and E. S. Hagood, Jr. 2001. Evaluation of selected herbicides and rates for long-term mugwort (Artemisia vulgaris) control. Weed Technol. 15.

Table 2. Mugwort control at 1 year after treatment (YAT) following three sequential herbicide treatments during 1998 and 1999 (2).

		Treatment Regime [a]		
Treatment	Rate	1 Application	2 Applications	3 Applications
	product/A	% Control (0-100%) [b]		
2, 4-D Amine	4 qts	12	39	70
2, 4-D Ester	4 qts	17	46	73
Banvel/Clarity	2 qts	26	70	71
Remedy	2 qts	0	38	36
Stinger	2/3 pt	84	82	89
Ally	2/10 oz	33	48	49
Liberty	4 qts	22	49	58
Roundup Ultra	4 qts	63	54	76
Untreated	----	0	0	0
LSD (0.05): herbicide treatments (columns):				23
LSD(0.05): applications (rows):				12

[a] Indicates sequential herbicide applications made at 7-week intervals.
[b] Based on % reduction in shoot weight at 1YAT.

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Commercial products are named in this publication for informational purposes only. Virginia Cooperative Extension does not endorse these products and does not intend discrimination against other products which also may be suitable.

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Because pesticide labels can change rapidly, you should read the label directions carefully before buying and using any pesticides.

Regardless of the information provided here, you should always follow the latest product label when using any pesticide. If you have any doubt, please contact your local Extension agent, VDACS regulatory inspector, or pesticide dealer for the latest information on pesticide label changes.

Bradley, K. W. and E. S. Hagood, Jr. 2001. Influence of sequential herbicide treatment, herbicide application timing, and mowing on mugwort (Artemisia vulgaris) control. Weed Technol. 15.

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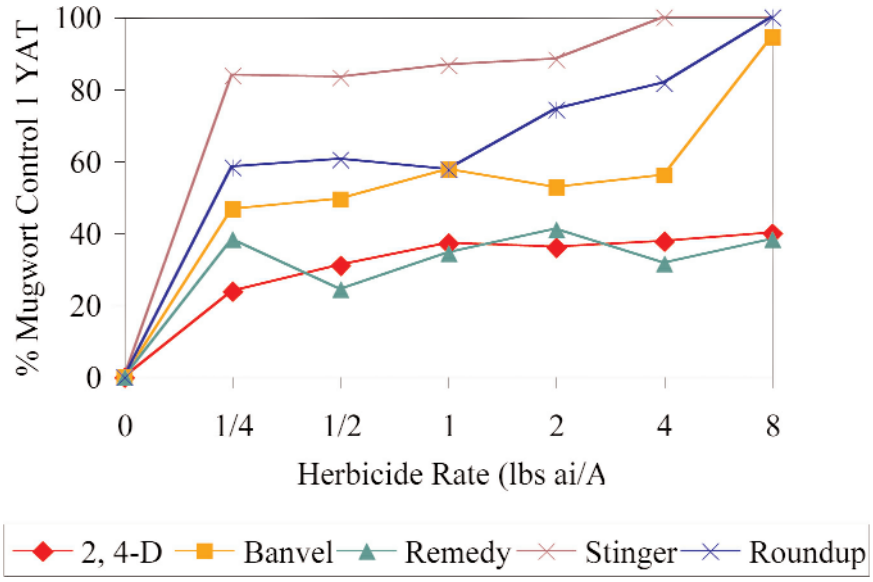
Figure 1. Mugwort Control at 1 Year After Treatment (1YAT) in Virginia Pastures During 1998 and 1999



Mugwort Images