

questionable if the remaining viable nutsedge tubers were allowed to grow and quickly replenish the tuber population in the soil.

Table 1. Number of Viable Purple Nutsedge Tubers in Each Sample Area on November 7, Following an Application of Butylate 3.3 lb/A on August 28.

Treatment	Depth of Sample	Number of viable tubers*				Total	Average	
		1	2	3	4			
Butylate	0 to 6 in.	<u>1</u>	<u>2</u>	<u>18</u>	<u>26</u>	47	12	a
	6 to 12 in.	<u>7</u>	<u>8</u>	<u>63</u>	<u>25</u>	<u>103</u>	<u>26</u>	a
	Total	8	10	81	51	150	38	a
Untreated	0 to 6 in.	102	111	143	174	530	132	b
	6 to 12 in.	<u>42</u>	<u>25</u>	<u>32</u>	<u>39</u>	<u>138</u>	<u>34</u>	a
	Total	144	136	175	213	668	166	b

* Numbers in each column followed by the same letter are not significantly different at the 5% level according to Duncan's Multiple Range Test.

Response of Bermudagrass to Rotations of Selective Grass Herbicides

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Summary

Several herbicides are now available or are being tested to control grass weeds in cotton and other crops. Most labels suggest repeat applications of the same herbicide applied in a single season. Cotton growers may apply two different grass herbicides in the same season because of herbicide cost, availability, or effectiveness. Three tests in 1985 compared the effectiveness of grass herbicides applied in rotation with other grass herbicides.

Methods

In the spring of 1983 or 1984, Bermudagrass plants spaced 10 by 15 feet apart were established planting rhizome segments from a single plant at Tucson, AZ. Seed heads were removed by mowing. Each year simazine and trifluralin were applied to the soil to control annual weeds. Irrigation was similar to that given cotton.

In May of 1985, Assure at 0.5 lb/A, Verdict at 0.5 lb/A, and Fusilade 2000 at 0.25 lb/A were applied to plants on three different borders. In June, Bermudagrass was treated with Assure, Fusilade 2000, BAS 517, Verdict, Maag 17-3664, and SC-1084 at 0.25 lb/A. Herbicides were applied in 25 gallons per acre of water with 1 quart per acre of crop oil. Each plot contained four plants and treatments were replicated four times. Prior to each treatment and in late July the amount of green top growth was estimated for each plant.

Results

All herbicide treatments killed top growth of Bermudagrass within 2 to 3 weeks. There were differences in rate of top kill and regrowth when the second herbicide applications were applied in June. The best Bermudagrass control was with Fusilade 2000 and BAS 517 applied in June regardless of which herbicides was applied in May (Table 1). The degree of weed control in these tests was less than when these herbicides are applied in cotton. Weed control is greater in cotton because (1) crop competition and (2) cultivation improves the control with these grass herbicides.

Table 1. Top growth of Bermudagrass Treated with Assure, Verdict, or Fusilade 2000 in May and Six Grass Herbicides in June

Treatments			Top growth (sq. ft.) estimated		
May - 1b/A	June - 1b/A		5/3	6/24	7/30
Assure 0.5	Assure 0.25		67	10	14
Assure 0.5	Fusilade 2000 0.25		77	16	6
Assure 0.5	BAS 517 0.25		74	8	5
Assure 0.5	Verdict 0.25		81	11	19
Assure 0.5	Maag 17-3664 0.25		80	16	14
Assure 0.5	SC-1084 0.25		87	16	26
			5/3	6/28	7/30
Verdict 0.5	Assure 0.25		68	12	14
Verdict 0.5	Fusilade 2000 0.25		79	11	3
Verdict 0.5	BAS 517 0.25		95	8	9
Verdict 0.5	Verdict 0.25		70	12	19
Verdict 0.5	Maag 17-3664 0.25		73	7	8
Verdict 0.5	SC-1084 0.25		81	5	20
			5/10	6/17	7/29
Fusilade 2000 0.25	Assure 0.25		132	63	120
Fusilade 2000 0.25	Fusilade 2000 0.25		132	80	52
Fusilade 2000 0.25	BAS 517 0.25		145	69	60
Fusilade 2000 0.25	Verdict 0.25		150	81	116
Fusilade 2000 0.25	Maag 17-3664 0.25		150	91	100
Fusilade 2000 0.25	SC-1084 0.25		150	81	127