

BROADLEAF WEED CONTROL RESEARCH UPDATE

K.V. Hanson and B.E. Branham

Herbicide Screening 1984-1986

Fourteen herbicides were tested on six broadleaf weed species: white clover, Canada Thistle, wild violet, yellow woodsorrel, slender speedwell, and germander speedwell. Application dates ranged from mid-July to mid-August. Percent control ratings (Table 1 and 2) were taken approximately eight weeks after treatment. Canada Thistle treatments were applied twice - August 20 and September 16, 1985.

White clover was controlled by Super Trimec in 1985 and 1986 and by triclopyr ester, MCP, Trimec, Turflon amine, and Weedone DPC in 1986. Weedone DPC provided good yellow woodsorrel control in 1984, but in 1985, best results were obtained with triclopyr ester, Super Trimec, Turflon D, and Weedone DPC + Buctril. Double applications made on Canada Thistle in 1985 produced good control by several herbicides. Super Trimec, Turflon D, Weedone DPC + Buctril, MCP, and 2,4-D amine were all rated at better than 90% weed control. Wild violet proved fairly resistant to the herbicides tested. The best treatments, Buctril, triclopyr ester, and Turflon D, provided only marginal control around 67%.

Two species of speedwell (*Veronica* spp.) were included in herbicide trials in 1985 and 1986. Several treatments controlled nearly 100% of slender speedwell (*V. filiformis*) in 1985, but 1986 data produced very different results. In 1986 Super Trimec was the only herbicide that controlled weeds by more than 90% followed by Weedone DPC, MCP, and Weedone DPC + Buctril in the mid-70 to mid-80% range. The difference between years may be related to the difference in environmental conditions at each site. The 1985 test was conducted in a heavily shaded area, thus weeds present may have developed very thin leaf cuticles and subsequently absorbed unusually large amounts of herbicide. Conversely, the 1986 site was located in full sun and probably contained weeds with thicker cuticles, thus overall herbicide uptake may have declined from the previous year.

Germander speedwell (*V. chamaedrys*) proved difficult to control in 1985 with the best treatment, Dacthal, controlling 87% of the weeds present. Herbicide performance improved somewhat in 1986; triclopyr ester and Dacthal ranked in the high 90's while Turflon amine, Turflon D, and Buctril resulted in 81-87% control.

Late Fall Weed Control

As the cool weather of fall sets in, work available for lawn care companies tends to drop off, creating a lag period that lasts until the onset of wintertime snow removal. One solution to this situation may include lengthening the broadleaf weed control timing window later into the fall. A weed control study was initiated in 1986 to determine how late in the year standard broadleaf herbicides can be applied and still result in good control.

Starting in late September of 1986, label rates of Formula 40, Esteron 99, Trimec, and Super Trimec were applied to Kentucky bluegrass turf with a

TABLE 1. Control of four broadleaf weed species.

<u>Herbicide</u>	<u>Rate (lbs ai/A)</u>	<u>White Clover</u>		<u>Yellow Woodsorrel</u>		<u>Canada Thistle</u>	<u>Common Blue Violet</u>
		<u>1985</u>	<u>1986</u>	<u>1984</u>	<u>1985</u>	<u>1985</u>	<u>1985</u>
		% control					
Bucril	2.0	0	50	59	49	75	67
2,4-D ester	1.0	17	8	-	33	88	39
2,4-D amine	1.0	21	2	0	23	91	24
Triclopyr ester	0.5	63	90	73	90	84	67
MCPP	1.5	41	96	-	64	92	44
Super Trimec	.75 + .75 + .18	99	100	-	97	97	48
Trimec	1.0 + 0.5 + .12	-	99	0	-	-	-
Turflon amine	0.5 + 1.3	13	90	41	32	93	53
Turflon amine	.38 + 1.0	40	69	18	48	85	39
Turflon D	1.0 + 0.5	60	77	-	96	99	66
Weedon DPC	1.0 + 1.0	54	99	91	70	86	48
Weedone DPC + Bucril	.75 + .75 + 0.5	50	85	-	96	93	60
<u>check</u>	-	<u>20</u>	<u>15</u>	<u>0</u>	<u>22</u>	<u>43</u>	<u>21</u>
LSD .05		61	24	27	51	16	20

TABLE 2. Control of two speedwell species.

<u>Herbicide</u>	<u>Rate (lbs ai/A)</u>	<u>Slender speedwell</u>		<u>Germander speedwell</u>	
		<u>1985</u>	<u>1986</u>	<u>1985</u>	<u>1986</u>
		control			
Buctril	2.0	84	43	57	81
Dacthal 50WP	10.5	92	67	87	96
2,4-D ester	1.0	95	8	12	0
2,4-D amine	1.0	90	17	0	0
Triclopyr ester	0.5	65	11	60	98
MCPP	1.5	100	75	5	22
Super Trimec	.75 + .75 + .18	100	91	7	16
Trimec	1.0 + 0.5 + .12	-	73	-	4
Turflon amine	0.5 + 1.3	72	42	14	87
Turflon D	1.0 + 0.5	99	0	70	83
Weedone DPC	1.0 + 1.0	95	87	9	2
Weedone DPC + Buctril	.75 + .75 + 0.5	100	79	20	20
<u>check</u>	-	<u>0</u>	<u>0</u>	<u>5</u>	<u>0</u>
LSD .05		19	32	38	28