

TANK MIXING POST/BROADLEAF HERBICIDES ON KENTUCKY BLUEGRASS

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Tank mixing herbicides is a common and economical method for controlling broad spectrum weed problems in turf. The use of these mixtures widens the variety of weeds controlled, but it also could alter the selectivity of the herbicides involved. Antagonism occurs when the weed control response induced by the herbicide combination is less than the expected results of those chemicals applied alone.

The intent of this research was to determine the effectiveness of combining two new postemergence herbicides, Acclaim and Curfew, with commonly used broadleaf chemicals (bromoxynil, dicamba, MCPP, 2,4-D, Trimec, Turflon D, 2,4-DP, DPX-M6316 and fluroxypyr. Antagonism was assessed by comparing the efficacy of Acclaim and Curfew applied alone to the efficacy of the tank mixed combinations.

This study was performed at the Fairview Driving Range in Okemos, Michigan, and designed as a RCB. The area was cored in two directions on July 1st to alleviate compaction. Treatments were made on July 22nd to 4 x 6 foot plots with a spray volume of 56 GPA. Each treatment was replicated three times. The area had approximately 25 to 60% crabgrass groundcover (3 leaf to 5 tiller).

The results (TABLE 1) demonstrate that excellent control was attained by Acclaim at both rates alone, and in combination with DPX-M6316, dicamba, fluroxypyr, bromoxynil, and MCPP. As expected, combinations of Acclaim with Trimec, bromoxynil + 2,4-D, Turflon D, and 2,4-D produced noticeable antagonism. Therefore, applications of Acclaim should be spaced approximately one to two weeks apart from phenoxy herbicide treatments to obtain the best results.

Curfew in combination with the same herbicides did not produce antagonism. The 2.0 lb/A rate gave better crabgrass control than the 1.0 rate, but took approximately six weeks to obtain average control.

Future plans in 1987 include testing various formulations of 2,4-D with Acclaim.

TABLE 1 : Tank Mixing Post/Broadleaf Herbicides on Kentucky Bluegrass
Fairview Driving Range (7-22-86)

TREATMENT	RATE lb/A	Z CONTROL			
		2 WAT	4 WAT	6 WAT	8 WAT
1. Acclaim + Bromoxynil + 2,4-D	.18 + .25 + .25	58	89	77	52
2. Acclaim + Turflon D	.18 + .375	60	83	58	47
3. Acclaim + Trimec	.18 + 1.0	40	8	0	0
4. Acclaim + 2,4-DP	.18 + 1.0	69	87	86	77
5. Acclaim + DPX-M6316	.18 + .19 oz/A	89	100	100	100
6. Acclaim	.18	93	100	96	99
7. Acclaim + 2,4-D	.18 + 1.0	46	43	0	6
8. Acclaim + Dicamba	.18 + .50	89	95	98	99
9. Acclaim + Fluroxypyr	.18 + .50	99	100	100	100
10. Acclaim + Bromoxynil	.18 + .25	97	96	97	100
11. Acclaim + MCPP	.18 + 1.0	87	100	95	91
12. Acclaim + 2,4-D	.35 + 1.0	73	77	48	13
13. Acclaim + Dicamba	.35 + .50	96	100	100	100
14. Acclaim + Fluroxypyr	.35 + .50	100	100	100	100
15. Acclaim + Bromoxynil	.35 + .25	98	100	99	99
16. Acclaim	.35	100	100	100	100
17. Acclaim + MCPP	.35 + 1.0	100	100	100	100
18. XRM-4763*	2.0	28	72	83	88
19. XRM-4763 + 2,4-D	2.0 + 1.0	39	70	78	58
20. XRM-4763 + Dicamba	2.0 + .50	21	71	80	54
21. XRM-4763 + Fluroxypyr	2.0 + .50	54	79	82	95
22. XRM-4763 + Bromoxynil	2.0 + .25	57	80	75	51
23. XRM-4763 + MCPP	2.0 + 1.0	54	79	84	82
24. XRM-4763	1.0	13	37	63	11
25. XRM-4763 + 2,4-D	1.0 + 1.0	12	33	48	33
26. XRM-4763 + Dicamba	1.0 + .50	33	54	33	16
27. XRM-4763 + Fluroxypyr	1.0 + .50	50	71	67	52
28. XRM-4763 + Bromoxynil	1.0 + .25	13	21	16	15
29. XRM-4763 + MCPP	1.0 + 1.0	37	53	28	28
30. 2,4-D	1.0	30	19	0	0
31. Dicamba	.50	38	15	0	0
32. Fluroxypyr	.50	26	58	13	0
33. Bromoxynil	.25	4	0	0	0
34. MCPP	1.0	0	0	0	0
35. CHECK	-	15	0	3	0
	LSD (0.05)	34	25	34	27

*(XRM-4763 is the experimental designation for Curfew)