Broadleaf weed control with late fall applications of Certainty herbicide
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Background/Objective: In small plot university and Monsanto strip trials, Certainty herbicide exhibited activity on common broadleaf weeds from late fall to early winter. Additional data is needed to to fully evaluate the technical fit of fall applications of Certainty for broadleaf weed control. The objectives of this study are to determine the selective control of common broadleaf weeds and determine the rate of Certainty with single and/or sequential early winter applications.

Site Information

Location:		William H. Daniel Research and Diagnostic Center
Soil Type:		Starks-Fincastle silt loam
Soil pH:		7.2
Turfgrass Species:		Kentucky bluegrass blend
Turf Condition:		fair
Turf Management:	**Mowing Height cm (in):**	6.4 (2.5)
	Fertilization:	1 lb N/M/YR
	Irrigation:	To prevent moisture stress
Testing on Site Previous Year:		none
Target Pest:		Dandelion (Taraxacum officinale) White clover (Trifolium repens)
Growth Stage:		mature

Application Information

Application Date:	27 Oct 05	11 Nov 05
Application Time:	10:00 a.m.	10:00 a.m.
Air Temperature $C^o(F^o)$:	8.4 (47)	7.3 (45)
Relative Humidity(%):	63	53
Wind Speed m s^{-1} (mph):	3.1 (7)	2.2 (5)
Soil Temperature(7.6 cm depth) $C^o(F^o)$:	8.4 (47)	7.3 (45)
Soil Moisture:	moist	moist
Spray Volume L ha^{-1} (gal 1000 ft^{-2}):	814 (2)	
Spray Pressure:	35psi	
Spray Nozzle:	8001.5	
Spray Equipment:	CO_2 backpack	
Irrigation After Application:	None	
Experimental Design:	Randomized complete block	
Replications:	3	
Plot Size m (ft):	1.5 X 1.5 (5 X 5)	

Results:

- No treatment provided control of dandelion by 21 Nov as would be expected with late fall applications (Table 1).
- All treatments provided excellent control of dandelion by 3 May.
- A consistent stand of clover is traditionally difficult to achieve for herbicide research, which was the case in this study. Thus no statistically significant effects on clover were observed from any of the treatments (Table 2).
- As expected, all applications of Certainty caused noticeable phytotoxicity on the Kentucky bluegrass (Table 3). However, the 11 Nov application of Certainty was less damaging than the earlier application at the same rate.

Table 1. Percent dandelion cover[a] in plots treated late fall 2005 with Certainty or Trimec Classic.

Treatment[b]	Rate of application	21 Nov	3 May
	oz prod/A		
Certainty 75WG	1.5	30.0	0.0
Certainty 75WG	2.0	35.0	0.0
Certainty 75WG	1.0	33.3	0.0
Certainty 75WG[c]	1.0		
Certainty 75WG[d]	2.0	26.7	0.0
Trimec Classic	3.0[e]	21.7	0.0
Check		25.0	15.0
LSD (0.05)		NS	3.7

[a] Percent of the plot area covered by dandelion.
[b] Certainty treatments included a NIS at 0.25%v/v.
[c] Indicates a two week split application, first application 27 Oct and second 11 Nov.
[d] Treatment was applied 11 Nov.
[e] Rate of application was pints/acre.

Table 2. Percent clover cover[a] in plots treated late fall 2005 with Certainty or Trimec Classic.

Treatment[b]	Rate of application	21 Nov	3 May
	oz prod/A		
Certainty 75WG	1.5	3.3	11.7
Certainty 75WG	2.0	1.7	2.7
Certainty 75WG	1.0	1.7	4.0
Certainty 75WG[c]	1.0		
Certainty 75WG[d]	2.0	2.0	7.3
Trimec Classic	3.0[e]	0.7	0.7
Check		3.0	6.7
LSD (0.05)		NS	NS

[a] Percent of the plot area covered by clover.
[b] Certainty treatments included a NIS at 0.25%v/v.
[c] Indicates a two week split application, first application 27 Oct and second 11 Nov.
[d] Treatment was applied 11 Nov.
[e] Rate of application was pints/acre.

Table 3. Phytotoxicity[a] of Kentucky bluegrass treated late fall 2005 with Certainty or Trimec Classic.

Treatment[b]	Rate of application	21 Nov
	oz prod/A	
Certainty 75WG	1.5	6.7
Certainty 75WG	2.0	6.7
Certainty 75WG	1.0	7.3
Certainty 75WG[c]	1.0	
Certainty 75WG[d]	2.0	8.3
Trimec Classic	3.0[e]	9.0
Check		9.0
LSD (0.05)		1.6

[a] Phytotoxicity was rated on a scale of 1 to 9, where 1 = completely brown, 7 = acceptable damage, and 9 = no phytotoxicity.
[b] Certainty treatments included a NIS at 0.25%v/v.
[c] Indicates a two week split application, first application 27 Oct and second 11 Nov.
[d] Treatment was applied 11 Nov.
[e] Rate of application was pints/acre.