

Ohio State University Horticulture and Crop Science

WEED CONTROL IN PASTURES WITH FOREFRONT COMPARED TO COMPETITIVE STANDARDS NA07LIB024

Trial ID: 07PASTURE1
Location: WESTERN BRANCH F-9

Study Dir.: Anthony F. Dobbels
Investigator: Dr. Mark M. Loux

GENERAL TRIAL INFORMATION

Study Director: Anthony F. Dobbels
Affiliation: OSU
Investigator: Dr. Mark M. Loux
Affiliation: OSU

TRIAL LOCATION

State/Prov.: Ohio **Trial Status:** Complete
Country: USA **Initiation Date:** Apr/01/2007
Conducted Under GLP (Y/N): N **Conducted Under GEP (Y/N):** N

CROP AND WEED DESCRIPTION

Weed Code	Common Name	Scientific Name
1. AMBTR	Giant ragweed	Ambrosia trifida
2. AMBEL	Common ragweed	Ambrosia artemisiifolia
3. ERICA	Horseweed	Conyza canadensis

Crop 1: . **Variety:** .

SITE AND DESIGN

Plot Width, Unit: 6.7 FT **Plot Length, Unit:** 30 FT **Reps:** 3
Tillage Type: NO-TILL **Study Design:** RANDOMIZED COMPLETE BLOCK

SOIL DESCRIPTION

% OM: 2.8	Texture: SILT CLAY LOAM
pH: 5.7	Soil Name: KOKOMO
CEC: 20.7	

Overall Moisture Conditions: POOR

APPLICATION DESCRIPTION

A

Application Date: May/22/2007
Time of Day: 8:15 Am
Application Method: SPRAY
Application Timing: POST
Applic. Placement: BROADCAST
Air Temp., Unit: 57 F
% Relative Humidity: 69
Wind Velocity, Unit: 4 E
Soil Temp., Unit: 60 F
Soil Moisture: DRY/MOIST
% Cloud Cover: 20

CROP STAGE AT EACH APPLICATION

A

Stage Scale: .
Height, Unit: 0. .

WEED STAGE AT EACH APPLICATION

A

Weed 1 Code, Stage: AMBTR 6-8"
Stage Scale: 8 LVS
Density, Unit: 34.6 M2
Weed 2 Code, Stage: AMBEL 4-6"
Stage Scale: 2-3 LVS
Density, Unit: 10.6 M2
Weed 3 Code, Stage: ERICA 2-3"
Stage Scale: 12 LVS
Density, Unit: 1.3 M2

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APPLICATION EQUIPMENT

A

Appl. Equipment:	BACKPACK
Operating Pressure:	50
Nozzle Type:	DG
Nozzle Size:	11002
Nozzle Spacing, Unit:	18 IN
Ground Speed, Unit:	3 MPH
Carrier:	WATER
Spray Volume, Unit:	20 GPA
Propellant:	CO2

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Location: WESTERN BRANCH F-9

Study Dir.: Anthony F. Dobbels
Investigator: Dr. Mark M. Loux

Weed Code	AMBEL	AMBTR	ERICA	AMBEL	AMBTR	ERICA
Rating Data Type	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT
Rating Date	May/31/2007	May/31/2007	May/31/2007	Jun/05/2007	Jun/05/2007	Jun/05/2007
Trt-Eval Interval	9 DA-A	9 DA-A	9 DA-A	14 DA-A	14 DA-A	14 DA-A
# Subsamples, Dec.	0	0	0	0	0	0

Trt No.	Treatment Name	Rate	Product	Product Rate	Appl Unit	1	2	3	4	5	6
1	FOREFRONT R&P	0.56 lb ai/a	1.5 pt/a	A		75 a	75 a	75 a	80 a	60 a	80 a
1	ACTIVATOR 90	0.25 % v/v	6.4 oz/a								
2	FOREFRONT R&P	0.75 lb ai/a	2 pt/a	A		77 a	77 a	77 a	90 a	55 ab	80 a
2	ACTIVATOR 90	0.25 % v/v	6.4 oz/a								
3	FOREFRONT R&P	0.97 lb ai/a	2.6 pt/a	A		75 a	75 a	75 a	83 a	62 a	68 a
3	ACTIVATOR 90	0.25 % v/v	6.4 oz/a								
4	GRAZON P+D	0.635 lb ai/a	2 pt/a	A		77 a	77 a	77 a	92 a	48 abc	78 a
4	ACTIVATOR 90	0.25 % v/v	6.4 oz/a								
5	2,4-D	1 lb ai/a	2 pt/a	A		70 a	70 a	70 a	78 a	32 c	73 a
5	ACTIVATOR 90	0.25 % v/v	6.4 oz/a								
6	2,4-D	1 lb ai/a	2 pt/a	A		72 a	72 a	72 a	88 a	35 bc	72 a
6	ACTIVATOR 90	0.25 % v/v	6.4 oz/a								
7	CIMMARON	0.0113 lb ai/a	0.3 oz/a	A		53 b	50 b	53 b	93 a	17 d	68 a
7	ACTIVATOR 90	0.25 % v/v	6.4 oz/a								
8	BANVEL	0.5 lb ai/a	1 pt/a	A		70 a	70 a	70 a	100 a	40 abc	68 a
8	2,4-D	1 lb ai/a	2 pt/a								
8	ACTIVATOR 90	0.25 % v/v	6.4 oz/a								
9	CURTAIL	1.19 lb ai/a	2 qt/a	A		77 a	77 a	77 a	78 a	40 abc	80 a
9	ACTIVATOR 90	0.25 % v/v	6.4 oz/a								
10	UTC					0 c	0 c	0 c	0 b	0 e	0 b
	LSD (P=.05)					10.0	9.6	10.0	17.0	14.6	13.6
	Standard Deviation					5.8	5.6	5.8	9.9	8.5	8.0
	CV					9.05	8.69	9.05	12.65	21.93	11.9
	Bartlett's X2					5.482	5.538	5.482	0.954	6.9	5.159
	P(Bartlett's X2)					0.601	0.477	0.601	0.987	0.33	0.524
	Replicate F					0.293	0.107	0.293	12.122	1.460	0.092
	Replicate Prob(F)					0.7492	0.8990	0.7492	0.0005	0.2585	0.9123
	Treatment F					49.514	55.134	49.514	24.675	15.582	27.363
	Treatment Prob(F)					0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

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Weed Code	AMBEL	AMBTR	ERICA	AMBEL	AMBTR	ERICA
Rating Data Type	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT
Rating Date	Jun/12/2007	Jun/12/2007	Jun/12/2007	Jun/19/2007	Jun/19/2007	Jun/19/2007
Trt-Eval Interval	21 DA-A	21 DA-A	21 DA-A	28 DA-A	28 DA-A	28 DA-A
# Subsamples, Dec.	0	0	0	0	0	0

Trt No.	Treatment Name	Rate	Unit	Product Rate	Product Unit	Appl Code	7	8	9	10	11	12
1	FOREFRONT R&P	0.56	lb ai/a	1.5	pt/a	A	100 a	90 ab	90 a	100 a	93 a	93 a
1	ACTIVATOR 90	0.25	% v/v	6.4	oz/a							
2	FOREFRONT R&P	0.75	lb ai/a	2	pt/a	A	100 a	93 a	80 a	100 a	100 a	96 a
2	ACTIVATOR 90	0.25	% v/v	6.4	oz/a							
3	FOREFRONT R&P	0.97	lb ai/a	2.6	pt/a	A	100 a	95 a	92 a	100 a	97 a	100 a
3	ACTIVATOR 90	0.25	% v/v	6.4	oz/a							
4	GRAZON P+D	0.635	lb ai/a	2	pt/a	A	100 a	83 abc	100 a	100 a	90 a	100 a
4	ACTIVATOR 90	0.25	% v/v	6.4	oz/a							
5	2,4-D	1	lb ai/a	2	pt/a	A	100 a	75 bc	90 a	100 a	75 a	87 ab
5	ACTIVATOR 90	0.25	% v/v	6.4	oz/a							
6	2,4-D	1	lb ai/a	2	pt/a	A	100 a	65 c	62 a	98 a	90 a	72 bc
6	ACTIVATOR 90	0.25	% v/v	6.4	oz/a							
7	CIMMARON	0.0113	lb ai/a	0.3	oz/a	A	90 a	43 d	68 a	73 b	20 b	63 c
7	ACTIVATOR 90	0.25	% v/v	6.4	oz/a							
8	BANVEL	0.5	lb ai/a	1	pt/a	A	100 a	68 c	83 a	100 a	85 a	99 a
8	2,4-D	1	lb ai/a	2	pt/a							
8	ACTIVATOR 90	0.25	% v/v	6.4	oz/a							
9	CURTAIL	1.19	lb ai/a	2	qt/a	A	100 a	68 c	75 a	100 a	90 a	99 a
9	ACTIVATOR 90	0.25	% v/v	6.4	oz/a							
10	UTC						0 b	0 e	0 b	0 c	0 c	0 d
LSD (P=.05)							9.4	13.1	31.7	13.7	20.0	16.5
Standard Deviation							5.5	7.6	18.5	8.0	11.7	9.6
CV							6.15	11.18	24.98	9.18	15.74	11.88
Bartlett's X2							0.0	7.434	1.398	5.796	5.054	19.137
P(Bartlett's X2)							.	0.491	0.986	0.016*	0.537	0.004*
Replicate F							1.000	1.870	0.753	1.029	0.884	0.079
Replicate Prob(F)							0.3874	0.1829	0.4850	0.3775	0.4303	0.9244
Treatment F							98.778	42.276	7.105	47.237	26.633	31.531
Treatment Prob(F)							0.0001	0.0001	0.0002	0.0001	0.0001	0.0001

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Weed Code	AMBEL	AMBTR	ERICA
Rating Data Type	CONTROL	CONTROL	CONTROL
Rating Unit	PERCENT	PERCENT	PERCENT
Rating Date	Aug/20/2007	Aug/20/2007	Aug/20/2007
Trt-Eval Interval	90 DA-A	90 DA-A	90 DA-A
# Subsamples, Dec.	0	0	0

Trt No.	Treatment Name	Rate	Unit	Product Rate	Product Unit	Appl Code	13	14	15
1	FOREFRONT R&P	0.56	lb ai/a	1.5	pt/a	A	100 a	87 a	83 a
1	ACTIVATOR 90	0.25	% v/v	6.4	oz/a				
2	FOREFRONT R&P	0.75	lb ai/a	2	pt/a	A	100 a	100 a	97 a
2	ACTIVATOR 90	0.25	% v/v	6.4	oz/a				
3	FOREFRONT R&P	0.97	lb ai/a	2.6	pt/a	A	100 a	97 a	100 a
3	ACTIVATOR 90	0.25	% v/v	6.4	oz/a				
4	GRAZON P+D	0.635	lb ai/a	2	pt/a	A	100 a	87 a	97 a
4	ACTIVATOR 90	0.25	% v/v	6.4	oz/a				
5	2,4-D	1	lb ai/a	2	pt/a	A	87 a	63 a	73 a
5	ACTIVATOR 90	0.25	% v/v	6.4	oz/a				
6	2,4-D	1	lb ai/a	2	pt/a	A	100 a	77 a	43 b
6	ACTIVATOR 90	0.25	% v/v	6.4	oz/a				
7	CIMMARON	0.0113	lb ai/a	0.3	oz/a	A	27 b	20 b	23 bc
7	ACTIVATOR 90	0.25	% v/v	6.4	oz/a				
8	BANVEL	0.5	lb ai/a	1	pt/a	A	100 a	90 a	97 a
8	2,4-D	1	lb ai/a	2	pt/a				
8	ACTIVATOR 90	0.25	% v/v	6.4	oz/a				
9	CURTAIL	1.19	lb ai/a	2	qt/a	A	100 a	97 a	100 a
9	ACTIVATOR 90	0.25	% v/v	6.4	oz/a				
10	UTC						0 c	0 b	0 c
LSD (P=.05)							19.3	31.0	25.1
Standard Deviation							11.3	18.1	14.6
CV							13.86	25.24	20.48
Bartlett's X2							0.014	7.356	9.123
P(Bartlett's X2)							0.905	0.393	0.167
Replicate F							0.184	0.400	1.000
Replicate Prob(F)							0.8337	0.6762	0.3874
Treatment F							31.673	10.943	18.583
Treatment Prob(F)							0.0001	0.0001	0.0001

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