

Pasture, Alfalfa and Horticultural Crops

1-31-08 (06-Pasture)

Southern Illinois University

Broadleaf Weed Control in Pastures - 2006.

Project Code: 06-Pasture Location: Murphysboro, IL
Investigator: Bryan Young

Investigator: Bryan Young, Associate Professor, Southern Illinois University

City State Zip Country: Murphysboro IL 62966 USA
Trial Status: Final Updated: 1-25-08

Objective:

Evaluate crop response and efficacy of metsulfuron plus chlorsulfuron 4:1 in tank-mix combinations for perennial broadleaf weed control and grass response in improved pastures (introduced and native grass species), rangeland, and CRP.

Weed Code	Common Name	Scientific Name
1. VENAL	ironweed, tall	Vernonia altissima Nutt.

Crop 1: FESSP Fescue species
Planting Method: Established

Plot Width, Unit: 10 FT Plot Length, Unit: 15 FT Reps: 4
Tillage Type: No-Till Study Design: Randomized complete block
Previous Crop, Year: FESSP, 2005
Field Prep./Maintenance: N 0 LB/A, P205 0 LB/A, K20 0 LB/A

Soil Name: Alvin % OM: 1.6 pH: 5.2 CEC: 6.7
Texture: Very fine sandy loam Fert. Level: P1: 56 LB/A, K: 143 LB/A

APPLICATION DESCRIPTION

A

Application Date: 7-1-06
Time of Day: 9:30
Application Method: Spray
Application Timing: POST
Applic. Placement: BROFOL
Air Temp., Unit: 87 F
% Relative Humidity: 43
Wind Velocity, Unit: 3 MPH
Dew Presence (Y/N): N
Soil Temp., Unit: 78 F
Soil Moisture: BELNOR
% Cloud Cover: 0

CROP STAGE AT EACH APPLICATION

A

Crop 1 Code, Stage: FESSP Mature
Height, Unit: 8-20 IN

WEED STAGE AT EACH APPLICATION

A

Weed 1 Code: VENAL
Stage(leaves): 18-44
Height(inches): 12-48
Density: Medium

APPLICATION EQUIPMENT

A

Appl. Equipment: CO2 sprayer
Operating Pressure: 40 PSI
Nozzle Type: Flat fan
Nozzle Size: 8002
Boom Length, Unit: 7.5 FT
Spray Volume, Unit: 20 GPA

NOTES:

Broadleaf Weed Control in Pastures - 2006.

Project Code: 06-Pasture Location: Murphysboro, IL
 Investigator: Bryan Young

Weed Code
 Crop Code
 Rating Data Type
 Rating Unit
 Rating Date
 Trt-Eval Interval

FESSP FESSP FESSP FESSP
 Injury Injury Injury Injury
 Percent Percent Percent Percent
 7-8-06 7-15-06 7-29-06 9-23-06
 7 DA-A 14 DA-A 28 DA-A 84 DA-A

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	7 DA-A	14 DA-A	28 DA-A	84 DA-A
1	CIMARRON PLUS	63	WG			0.625	oz/a	POST	A	7 ab	7 bcd	5 bcd	3 a
1	->ALLY	60	WG	0.01875	lb ai/a			POST	A				
1	->GLEAN	75	WG	.005863	lb ai/a			POST	A				
1	TORDON 22 K	2	SL	0.125	lb ai/a	0.5	pt/a	POST	A				
1	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	POST	A				
2	CIMARRON PLUS	63	WG			1.25	oz/a	POST	A	2 de	8 a-d	4 bcd	3 a
2	->ALLY	60	WG	0.0375	lb ai/a			POST	A				
2	->GLEAN	75	WG	0.01175	lb ai/a			POST	A				
2	TORDON 22 K	2	SL	0.125	lb ai/a	0.5	pt/a	POST	A				
2	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	POST	A				
3	CIMARRON PLUS	63	WG			0.625	oz/a	POST	A	7 abc	10 a	6 abc	3 a
3	->ALLY	60	WG	0.01875	lb ai/a			POST	A				
3	->GLEAN	75	WG	.005863	lb ai/a			POST	A				
3	RECLAIM	3	SL	0.25	lb ai/a	0.67	pt/a	POST	A				
3	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	POST	A				
4	CIMARRON PLUS	63	WG			1.25	oz/a	POST	A	9 a	6 cd	6 abc	3 a
4	->ALLY	60	WG	0.0375	lb ai/a			POST	A				
4	->GLEAN	75	WG	0.01175	lb ai/a			POST	A				
4	RECLAIM	3	SL	0.25	lb ai/a	0.67	pt/a	POST	A				
4	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	POST	A				
5	CIMARRON PLUS	63	WG			0.625	oz/a	POST	A	9 a	8 abc	8 a	0 b
5	->ALLY	60	WG	0.01875	lb ai/a			POST	A				
5	->GLEAN	75	WG	.005863	lb ai/a			POST	A				
5	MILESTONE	2	SL	0.094	lb ai/a	6	fl oz/a	POST	A				
5	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	POST	A				
6	CIMARRON PLUS	63	WG			1.25	oz/a	POST	A	4 cd	8 abc	5 bcd	0 b
6	->ALLY	60	WG	0.0375	lb ai/a			POST	A				
6	->GLEAN	75	WG	0.01175	lb ai/a			POST	A				
6	MILESTONE	2	SL	0.094	lb ai/a	6	fl oz/a	POST	A				
6	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	POST	A				
7	CIMARRON PLUS	63	WG			1.25	oz/a	POST	A	1 e	6 cd	4 cd	0 b
7	->ALLY	60	WG	0.0375	lb ai/a			POST	A				
7	->GLEAN	75	WG	0.01175	lb ai/a			POST	A				
7	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	POST	A				
8	CIMARRON MAX (MULTI-PACK)							POST	A	6 abc	9 ab	6 abc	0 b
8	=>CIMARRON MAX PART A	60	WG	0.0187	lb ai/a	0.5	oz/a	POST	A				
8	=>CIMARRON MAX PART B	3.87	EC	0.97	lb ai/a	2	pt/a	POST	A				
8	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	POST	A				
9	DPX PASTURE	25	WP	0.0312	lb ai/a	2	oz/a	POST	A	0 e	3 e	3 cd	0 b
9	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	POST	A				
10	DPX PASTURE	25	WP	0.0624	lb ai/a	4	oz/a	POST	A	1 e	3 e	4 cd	0 b
10	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	POST	A				
11	CIMARRON PLUS	63	WG			1.25	oz/a	POST	A	6 bc	6 d	7 ab	0 b
11	->ALLY	60	WG	0.0375	lb ai/a			POST	A				
11	->GLEAN	75	WG	0.01175	lb ai/a			POST	A				
11	DPX PASTURE	25	WP	0.0312	lb ai/a	2	oz/a	POST	A				
11	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	POST	A				
12	CROSSBOW	3	EC	1.5	lb ae/a	2.0	qt/a	POST	A	5 bc	8 bcd	3 de	0 b
12	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	POST	A				
13	NONTREATED									0 e	0 f	0 e	0 b
LSD (P=.05)										2.8	2.3	2.8	2.1
Replicate F										0.754	7.127	11.076	5.181
Replicate Prob(F)										0.5271	0.0007	0.0001	0.0044
Treatment F										10.430	12.417	4.421	2.930
Treatment Prob(F)										0.0001	0.0001	0.0003	0.0062

Means followed by same letter do not significantly differ (P=.05, LSD)

Broadleaf Weed Control in Pastures - 2006.

Project Code: 06-Pasture Location: Murphysboro, IL
 Investigator: Bryan Young

Weed Code	VENAL	VENAL	VENAL	VENAL
Crop Code				
Rating Data Type	Control	Control	Control	Control
Rating Unit	Percent	Percent	Percent	Percent
Rating Date	7-15-06	7-29-06	9-23-06	6-26-07
Trt-Eval Interval	14 DA-A	28 DA-A	84 DA-A	360 DA-A

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code				
1	CIMARRON PLUS	63	WG			0.625	oz/a	POST	A	34	a-d	36	cd
1	->ALLY	60	WG	0.01875	lb ai/a			POST	A			92	ab
1	->GLEAN	75	WG	.005863	lb ai/a			POST	A			80	b
1	TORDON 22 K	2	SL	0.125	lb ai/a	0.5	pt/a	POST	A				
1	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	POST	A				
2	CIMARRON PLUS	63	WG			1.25	oz/a	POST	A	33	a-d	48	abc
2	->ALLY	60	WG	0.0375	lb ai/a			POST	A			92	ab
2	->GLEAN	75	WG	0.01175	lb ai/a			POST	A			94	a
2	TORDON 22 K	2	SL	0.125	lb ai/a	0.5	pt/a	POST	A				
2	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	POST	A				
3	CIMARRON PLUS	63	WG			0.625	oz/a	POST	A	30	cd	34	cd
3	->ALLY	60	WG	0.01875	lb ai/a			POST	A			95	a
3	->GLEAN	75	WG	.005863	lb ai/a			POST	A			21	d
3	RECLAIM	3	SL	0.25	lb ai/a	0.67	pt/a	POST	A				
3	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	POST	A				
4	CIMARRON PLUS	63	WG			1.25	oz/a	POST	A	31	bcd	44	bcd
4	->ALLY	60	WG	0.0375	lb ai/a			POST	A			97	a
4	->GLEAN	75	WG	0.01175	lb ai/a			POST	A			25	d
4	RECLAIM	3	SL	0.25	lb ai/a	0.67	pt/a	POST	A				
4	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	POST	A				
5	CIMARRON PLUS	63	WG			0.625	oz/a	POST	A	29	d	30	d
5	->ALLY	60	WG	0.01875	lb ai/a			POST	A			92	ab
5	->GLEAN	75	WG	.005863	lb ai/a			POST	A			51	c
5	MILESTONE	2	SL	0.094	lb ai/a	6	fl oz/a	POST	A				
5	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	POST	A				
6	CIMARRON PLUS	63	WG			1.25	oz/a	POST	A	38	ab	45	abc
6	->ALLY	60	WG	0.0375	lb ai/a			POST	A			96	a
6	->GLEAN	75	WG	0.01175	lb ai/a			POST	A			90	ab
6	MILESTONE	2	SL	0.094	lb ai/a	6	fl oz/a	POST	A				
6	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	POST	A				
7	CIMARRON PLUS	63	WG			1.25	oz/a	POST	A	29	d	45	abc
7	->ALLY	60	WG	0.0375	lb ai/a			POST	A			91	ab
7	->GLEAN	75	WG	0.01175	lb ai/a			POST	A			18	d
7	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	POST	A				
8	CIMARRON MAX (MULTI-PACK)							POST	A	34	a-d	34	cd
8	=>CIMARRON MAX PART A	60	WG	0.0187	lb ai/a	0.5	oz/a	POST	A			83	b
8	=>CIMARRON MAX PART B	3.87	EC	0.97	lb ai/a	2	pt/a	POST	A			98	a
8	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	POST	A				
9	DPX PASTURE	25	WP	0.0312	lb ai/a	2	oz/a	POST	A	29	d	41	bcd
9	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	POST	A			98	a
10	DPX PASTURE	25	WP	0.0624	lb ai/a	4	oz/a	POST	A	39	a	59	a
10	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	POST	A			96	a
11	CIMARRON PLUS	63	WG			1.25	oz/a	POST	A	36	abc	55	ab
11	->ALLY	60	WG	0.0375	lb ai/a			POST	A			97	a
11	->GLEAN	75	WG	0.01175	lb ai/a			POST	A			98	a
11	DPX PASTURE	25	WP	0.0312	lb ai/a	2	oz/a	POST	A				
11	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	POST	A				
12	CROSSBOW	3	EC	1.5	lb ae/a	2.0	qt/a	POST	A	39	a	48	abc
12	PRIME OIL COC	100	LIQ	1.0	% v/v	1	% v/v	POST	A			95	a
13	NONTREATED									0	e	0	e
	LSD (P=.05)									6.8		13.9	
	Replicate F									1.553		1.151	
	Replicate Prob(F)									0.2176		0.3417	
	Treatment F									17.454		9.020	
	Treatment Prob(F)									0.0001		0.0001	

Means followed by same letter do not significantly differ (P=.05, LSD)

Broadleaf Weed Control in Pastures - 2006.

Project Code: 06-Pasture Location: Murphysboro, IL
Investigator: Bryan Young

Trial Comments

1. Protocol: DuPont.
2. Ratings: CI 7, 14 and 28 DAT; WC 14, 28 and 56 DAT.
3. If target is perennial, record % defoliation at 14, 28 and 56 DAT and as % of control the following season.
4. FESSS = Fescue species.
5. Tall ironweed population was 0.75 plants per 0.25 square meter.
Weed control ratings at 14 and 28 DAT was comprised of discoloration and stunting, not defoliation.
No ratings were made at 56 DAT.
By 84 DAT the tall ironweed was naturally senescing.