

Finesse Grass and Broadleaf Timing Study.

Project Code: 07-1-W50 Location: Belleville Research Center
Investigator: Bryan Young

Investigator: Bryan Young, Associate Professor, Southern Illinois University

City State Zip Country: Belleville IL 62221 USA
Trial Status: Final Updated: 1-23-08

Objective:

Evaluate efficacy and crop response of Finesse Grass and Broadleaf applied at different weeds stages on winter wheat in the fall and early spring.

Weed Code	Common Name	Scientific Name
1. POAAN	bluegrass, annual	Poa annua L.
2. LAMAM	henbit	Lamium amplexicaule L.
3. STEME	chickweed, common	Stellaria media (L.) Vill.
4. RANAB	buttercup, smallflower	Ranunculus abortivus L.

Crop 1:	TRZAW	wheat, winter	Variety:	P25R78
Planting Method:	Seeded		Planting Date:	10-25-06
Rate:	1.3	mil. S/A	Depth:	1.0 IN
Row Spacing:	7.5	IN		

Crop 2:	GLXMA	soybean	Variety:	See comments
Planting Method:	Seeded		Planting Date:	6-24-07
Rate:	75	lb/A	Depth:	1.0 IN
Row Spacing:	30	IN		

Plot Width, Unit:	10	FT	Plot Length, Unit:	28	FT	Reps:	3
Tillage Type:	No-Till			Study Design:	Randomized complete block		

Previous Crop, Year: ZEAMX, 2006

Field Prep./Maintenance:

wheat: N 30 LB/A applied on 10-24-06 and N 85 LB/A applied on 1-30-07.

soybean: N 0 LB/A, P205 0 LB/A, K20 100 LB/A

Soil Name:	Weir	% OM:	1.6	pH:	6.7	CEC:	8
Texture:	Silt loam	Fert. Level:	P1: 96 LB/A, K: 327 LB/A				

APPLICATION DESCRIPTION

	A	B	C
Application Date:	11-22-06	12-5-06	3-12-07
Time of Day:	13:00	14:00	10:00
Application Method:	Spray	Spray	Spray
Application Timing:	FEP1-2L	FMP3L1T	SEP2L2T
Applic. Placement:	BROFOL	BROFOL	BROFOL
Air Temp., Unit:	60 F	44 F	55 F
% Relative Humidity:	38	64	50
Wind Velocity, Unit:	0 MPH	5 MPH	3 MPH
Soil Moisture:	ABONOR	ABONOR	NORMAL

CROP STAGE AT EACH APPLICATION

	A	B	C
Crop 1 Code, Stage:	TRZAW F1	TRZAW F1	TRZAW F2
Height, Unit:	2-3 IN	2-3 IN	3-4 IN
Crop 2 Code, Stage:	GLXMA NA	GLXMA NA	GLXMA NA
Height, Unit:	NA NA	NA NA	NA NA

WEED STAGE AT EACH APPLICATION

	A	B	C
Weed 1 Code:	POAAN	POAAN	POAAN
Stage(leaves):	1-3	1-3	3-4
Height(inches):	1-2	1-2	1-2
Density:	Medium	Medium	Medium
Weed 2 Code:	LAMAM	LAMAM	LAMAM
Stage(leaves):	2-4	2-4	4-6
Height(inches):	1-2	1-2	1-2
Density:	Medium	Medium	Medium
Weed 3 Code:	STEME	STEME	STEME
Stage(leaves):	2-6	2-6	2-6
Height(inches):	1-2	1-2	1-2
Density:	Low	Low	Low
Weed 4 Code:			RANAB
Stage(leaves):			4-6
Height(inches):			1-2
Density:			Low

APPLICATION EQUIPMENT

	A	B	C
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer
Operating Pressure:	40 PSI	40 PSI	40 PSI
Nozzle Type:	Flat fan	Flat fan	Flat fan
Nozzle Size:	XR 8002	XR 8002	XR 8002
Boom Length, Unit:	7.5 FT	7.5 FT	7.5 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA

NOTES:

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

RR	RR	RR/STS	RR/STS	GLXMA	GLXMA	TRZAW	TRZAW	TRZAW
GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA
Moisture	Yield	Moisture	Yield	Injury	Injury	Injury	Injury	Injury
Percent	bu/A	Percent	bu/A	Percent	Percent	Percent	Percent	Percent
10-30-07	10-30-07	10-30-07	10-30-07	7-17-07	8-8-07	14 DAT	21 DAT	3-15-07
				21 DAP	42 DAP			

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code								
1	FINESSE GR+BL	71.7	WG			0.75	oz/a	FEP1-2L	A	12.9	bc	37	a	13.3	ab	41	a
1	->EVEREST	70	WG	0.0219	lb ai/a			FEP1-2L	A							0	a
1	->GLEAN PX	75	WG	0.0117	lb ai/a			FEP1-2L	A							0	a
1	ACTIVATOR 90	100	LIQ	0.25	% v/v	0.25	% v/v	FEP1-2L	A							0	d
2	FINESSE GR+BL	71.7	WG			0.9	oz/a	FEP1-2L	A	13.3	ab	45	a	13.2	ab	41	a
2	->EVEREST	70	WG	0.0267	lb ai/a			FEP1-2L	A							0	a
2	->GLEAN PX	75	WG	0.014	lb ai/a			FEP1-2L	A							0	d
2	ACTIVATOR 90	100	LIQ	0.25	% v/v	0.25	% v/v	FEP1-2L	A							0	b
3	OSPREY	4.5	WG	0.0134	lb ai/a	4.75	oz/a	FEP1-2L	A	13.0	abc	35	a	13.5	ab	37	a
3	ACTIVATOR 90	100	LIQ	0.5	% v/v	0.5	% v/v	FEP1-2L	A							0	a
3	AMS	100	DRY	2.0	lb/a	2	lb/a	FEP1-2L	A							0	d
4	FINESSE GR+BL	71.7	WG			0.75	oz/a	FMP3L1T	B	13.1	abc	39	a	13.2	ab	41	a
4	->EVEREST	70	WG	0.0219	lb ai/a			FMP3L1T	B							0	a
4	->GLEAN PX	75	WG	0.0117	lb ai/a			FMP3L1T	B							0	a
4	ACTIVATOR 90	100	LIQ	0.25	% v/v	0.25	% v/v	FMP3L1T	B							0	d
5	FINESSE GR+BL	71.7	WG			0.9	oz/a	FMP3L1T	B	13.1	abc	39	a	13.2	ab	44	a
5	->EVEREST	70	WG	0.0267	lb ai/a			FMP3L1T	B							0	a
5	->GLEAN PX	75	WG	0.014	lb ai/a			FMP3L1T	B							0	a
5	ACTIVATOR 90	100	LIQ	0.25	% v/v	0.25	% v/v	FMP3L1T	B							0	d
6	OSPREY	4.5	WG	0.0134	lb ai/a	4.75	oz/a	FMP3L1T	B	13.0	abc	41	a	13.4	ab	46	a
6	ACTIVATOR 90	100	LIQ	0.5	% v/v	0.5	% v/v	FMP3L1T	B							0	a
6	AMS	100	DRY	2.0	lb/a	2	lb/a	FMP3L1T	B							0	d
7	FINESSE GR+BL	71.7	WG			0.75	oz/a	SEP2L2T	C	13.1	abc	34	a	13.5	ab	41	a
7	->EVEREST	70	WG	0.0219	lb ai/a			SEP2L2T	C							0	a
7	->GLEAN PX	75	WG	0.0117	lb ai/a			SEP2L2T	C							0	a
7	ACTIVATOR 90	100	LIQ	0.25	% v/v	0.25	% v/v	SEP2L2T	C							10	b
8	FINESSE GR+BL	71.7	WG			0.9	oz/a	SEP2L2T	C	12.8	c	36	a	13.1	b	48	a
8	->EVEREST	70	WG	0.0267	lb ai/a			SEP2L2T	C							7	c
8	->GLEAN PX	75	WG	0.014	lb ai/a			SEP2L2T	C							3	b
8	ACTIVATOR 90	100	LIQ	0.25	% v/v	0.25	% v/v	SEP2L2T	C								
9	OSPREY	4.5	WG	0.0134	lb ai/a	4.75	oz/a	SEP2L2T	C	13.0	abc	40	a	13.6	a	42	a
9	ACTIVATOR 90	100	LIQ	0.5	% v/v	0.5	% v/v	SEP2L2T	C							25	a
9	AMS	100	DRY	2.0	lb/a	2	lb/a	SEP2L2T	C							15	a
10	NONTREATED									13.3	a	46	a	13.5	ab	48	a
LSD (P=.05)										0.39		12.7		0.46		12.7	
Replicate F										1.283		1.366		1.540		4.381	
Replicate Prob(F)										0.3012		0.2804		0.2414		0.0282	
Treatment F										1.445		0.880		1.177		0.666	
Treatment Prob(F)										0.2417		0.5597		0.3652		0.7287	

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

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										POAAN	POAAN	POAAN	LAMAM	LAMAM	STEME	STEME	STEME	RANAB
Weed Code										Control	Control	Control	Control	Control	Control	Control	Control	Control
Crop Code										Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Rating Data Type												3-15-07			3-15-07			3-15-07
Rating Unit																		
Rating Date																		
Trt-Eval Interval										21 DAT	35 DAT		21 DAT	35 DAT		21 DAT	35 DAT	
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code									
1	FINESSE GR+BL	71.7	WG			0.75	oz/a	FEP1-2L	A	50 b	50 b	93 a	0 b	50 b	99 a	0 b	50 b	99 a
1	->EVEREST	70	WG	0.0219	lb ai/a			FEP1-2L	A									
1	->GLEAN PX	75	WG	0.0117	lb ai/a			FEP1-2L	A									
1	ACTIVATOR 90	100	LIQ	0.25	% v/v	0.25	% v/v	FEP1-2L	A									
2	FINESSE GR+BL	71.7	WG			0.9	oz/a	FEP1-2L	A	50 b	50 b	93 a	0 b	50 b	99 a	0 b	50 b	99 a
2	->EVEREST	70	WG	0.0267	lb ai/a			FEP1-2L	A									
2	->GLEAN PX	75	WG	0.014	lb ai/a			FEP1-2L	A									
2	ACTIVATOR 90	100	LIQ	0.25	% v/v	0.25	% v/v	FEP1-2L	A									
3	OSPREY	4.5	WG	0.0134	lb ai/a	4.75	oz/a	FEP1-2L	A	50 b	50 b	93 a	0 b	50 b	96 a	0 b	50 b	96 a
3	ACTIVATOR 90	100	LIQ	0.5	% v/v	0.5	% v/v	FEP1-2L	A									
3	AMS	100	DRY	2.0	lb/a	2	lb/a	FEP1-2L	A									
4	FINESSE GR+BL	71.7	WG			0.75	oz/a	FMP3L1T	B	50 b	50 b	90 a	0 b	0 c	99 a	0 b	0 c	99 a
4	->EVEREST	70	WG	0.0219	lb ai/a			FMP3L1T	B									
4	->GLEAN PX	75	WG	0.0117	lb ai/a			FMP3L1T	B									
4	ACTIVATOR 90	100	LIQ	0.25	% v/v	0.25	% v/v	FMP3L1T	B									
5	FINESSE GR+BL	71.7	WG			0.9	oz/a	FMP3L1T	B	50 b	50 b	96 a	0 b	0 c	99 a	0 b	0 c	99 a
5	->EVEREST	70	WG	0.0267	lb ai/a			FMP3L1T	B									
5	->GLEAN PX	75	WG	0.014	lb ai/a			FMP3L1T	B									
5	ACTIVATOR 90	100	LIQ	0.25	% v/v	0.25	% v/v	FMP3L1T	B									
6	OSPREY	4.5	WG	0.0134	lb ai/a	4.75	oz/a	FMP3L1T	B	42 c	50 b	95 a	0 b	0 c	92 a	0 b	0 c	96 a
6	ACTIVATOR 90	100	LIQ	0.5	% v/v	0.5	% v/v	FMP3L1T	B									
6	AMS	100	DRY	2.0	lb/a	2	lb/a	FMP3L1T	B									
7	FINESSE GR+BL	71.7	WG			0.75	oz/a	SEP2L2T	C	90 a	90 a		99 a	99 a		99 a	99 a	
7	->EVEREST	70	WG	0.0219	lb ai/a			SEP2L2T	C									
7	->GLEAN PX	75	WG	0.0117	lb ai/a			SEP2L2T	C									
7	ACTIVATOR 90	100	LIQ	0.25	% v/v	0.25	% v/v	SEP2L2T	C									
8	FINESSE GR+BL	71.7	WG			0.9	oz/a	SEP2L2T	C	90 a	90 a		99 a	99 a		99 a	99 a	
8	->EVEREST	70	WG	0.0267	lb ai/a			SEP2L2T	C									
8	->GLEAN PX	75	WG	0.014	lb ai/a			SEP2L2T	C									
8	ACTIVATOR 90	100	LIQ	0.25	% v/v	0.25	% v/v	SEP2L2T	C									
9	OSPREY	4.5	WG	0.0134	lb ai/a	4.75	oz/a	SEP2L2T	C	90 a	90 a		99 a	99 a		99 a	99 a	
9	ACTIVATOR 90	100	LIQ	0.5	% v/v	0.5	% v/v	SEP2L2T	C									
9	AMS	100	DRY	2.0	lb/a	2	lb/a	SEP2L2T	C									
10	NONTREATED									0 d	0 c	0 b	0 b	0 c	0 b	0 b	0 c	0 b
LSD (P=.05)										7.8	0.0	9.7	0.0	0.0	8.3	0.0	0.0	4.9
Replicate F										1.000	0.000	4.260	0.000	0.000	0.477	0.000	0.000	0.302
Replicate Prob(F)										0.3874	1.0000	0.0400	1.0000	1.0000	0.6321	1.0000	1.0000	0.7447
Treatment F										111.827	0.000	124.831	0.000	0.000	186.469	0.000	0.000	532.759
Treatment Prob(F)										0.0001	1.0000	0.0001	1.0000	1.0000	0.0001	1.0000	1.0000	0.0001

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

Trial Comments

- Protocol: DuPont.
- Ratings: CI 14-21 DAT, continue evaluations at 14 day intervals if injury persists.
WC 21-28 DAT and 35-42 DAT, WC at spring greenup.
- Split treatment plots and recrop to conventional and STS soybean.
Record soybean injury at 21 and 42 DAP.
- Wheat and soybean crop yields are not necessary.
- FEP1-2L = Fall Early POST at 1-2 leaf weeds.
FMP3L1T = Fall Mid POST at 3 leaf to 1 tiller weeds.
SEP2L2T = Spring Early POST at 2 leaf to 2 tiller weeds.
DAT = Days after treatment.
- Ratings at 14 days after FEP3L1T, FMP3L1T, and SEP2L2T applications were on 12-6-06, 12-19-06, and 3-26-07, respectively.
Ratings at 21 days after FEP3L1T, FMP3L1T, and SEP2L2T applications were on 12-13-06, 12-26-06, and 4-2-07, respectively.
Ratings at 35 days after FEP3L1T, FMP3L1T, and SEP2L2T applications were on 12-27-06, 1-9-06, and 4-16-07, respectively.
Ratings on 3-15-07 were at spring greenup.
- It was not possible to rate wheat injury at 35 DAT due to severe freeze damage.
- Wheat was not harvested.
- DAP = Days after soybean planting.
- For soybean harvest; RR = Asgrow 4403 RR, RR/STS = Asgrow 4404 RR/STS.
- Soybean was harvested 10-30-07, (1) 30 inch row by 22 ft.