

Fall vs. Spring Application of Extreme and Backdraft.

02-2B-MW80

OBJECTIVE: Compare applications of Backdraft and Extreme applied in the fall and spring for burndown and residual activity.

SUMMARY: Common chickweed and smallflower buttercup control was 100% and wild garlic control was 93 to 100% on April 15, 2002 from all fall applied treatments. Fall applied treatments that included Backdraft and Extreme controlled 100% of little barley on April 15 compared to 30% little barley control from Canopy XL plus Express plus Salvo. Due to excessive rainfall in May that delayed planting, spring herbicide treatments occurred 45 days before planting instead of 30. Both fall and spring applications of Backdraft and Extreme provided good control of little barley and waterhemp at planting. There was also no difference between fall and spring applications of Extreme plus Authority or treatments containing Backdraft in control of giant foxtail and Pennsylvania smartweed at planting. However, fall applications of Extreme plus Salvo controlled significantly less giant foxtail and Pennsylvania smartweed compared to the same treatment applied in the spring. Common ragweed control at planting was greater from spring applications of Backdraft or Extreme compared to fall applicaitons.

HERBICIDES

AUTHORITY 75 WG
 BACKDRAFT 1.5 SL
 CANOPY XL 56.3 WG
 CLASSIC 25 WG
 EXPRESS 75 WG
 EXTREME 2.17 SL
 PROWL 3.3 EC
 ROUNDUP ULTRA MAX 3.7 SL
 SALVO 5 EC

WEEDS

barley, little
 barnyardgrass
 buttercup, smallflower
 chickweed, common
 foxtail, giant
 garlic, wild
 grasses, annual
 ragweed, common
 smartweed, Pennsylvania
 waterhemp, common

CROP

soybean

Bryan Young

PLANT, SOIL AND GENERAL AGRICULTURE DEPARTMENT

SOUTHERN ILLINOIS UNIVERSITY

Fall vs. Spring Application of Extreme and Backdraft.

Project Code: 02-2B-MW80 Location: Belleville Research

Investigator: Bryan Young, Assistant Professor, Southern Illinois University

City State Zip Country: Belleville IL 62221 USA
 Trial Status: Final Updated: 10-31-02

Objective:

Compare applications of Backdraft and Extreme applied in the fall and spring for burndown and residual activity.

Weed Code	Common Name	Scientific Name
1.	STEME chickweed, common	Stellaria media (L.) Vill.
2.	ALLVI garlic, wild	Allium vineale L.
3.	RANAB buttercup, smallflower	Ranunculus abortivus L.
4.	HORPU barley, little	Hordeum pusillum Nutt.
5.	SETFA foxtail, giant	Setaria faberi Herrm.
6.	AMBEL ragweed, common	Ambrosia artemisiifolia L.
7.	AMATA waterhemp, common	Amaranthus rudis Sauer
8.	POLPY smartweed, Pennsylvania	Polygonum pennsylvanicum L.
9.	GGGAN grasses, annual	
10.	ECHCG barnyardgrass	Echinochloa crus-galli (L.) Beauv.

Crop 1: GLXMA soybean Variety: Asgrow 4602 RR
 Planting Method: Seeded Planting Date: 5-30-02
 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, 2001

Field Prep./Maintenance: N 0 LB/A, P2O5 50 LB/A, K2O 150 LB/A

Soil Name: Weir % OM: 1.5 pH: 6.4 CEC: 9
 Texture: Silt loam Fert. Level: P1: 87 LB/A, K: 259 LB/A

APPLICATION DESCRIPTION

	A	B
Application Date:	11-16-01	4-15-02
Time of Day:	14:30	8:00
Application Method:	Spray	Spray
Application Timing:	FALL	30EPP
Applic. Placement:	BROFOL	BROFOL
Air Temp., Unit:	70 F	74 F
% Relative Humidity:	65	74
Wind Velocity, Unit:	0 MPH	5 MPH
Soil Moisture:	NORMAL	ABONOR

CROP STAGE AT EACH APPLICATION

	A	B
Crop 1 Code, Stage:	GLXMA NA	GLXMA NA
Height, Unit:	NA NA	NA NA

WEED STAGE AT EACH APPLICATION

	A	B
Weed 1 Code:	STEME	STEME
Stage(leaves):	10+	10+
Height(inches):	0-2	4-6
Density:	High	Low
Weed 2 Code:	ALLVI	ALLVI
Stage(leaves):	3-4	3-4
Height(inches):	4-6	6-10
Density:	Medium	Low
Weed 3 Code:		RANAB
Stage(leaves):		10+
Height(inches):		6-10
Density:		Medium

Weed 4 Code:	HORPU	HORPU
Stage(leaves):	5-10	5-6
Height(inches):	1-4	4-6
Density:	Low	High

APPLICATION EQUIPMENT

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

NOTES:

This study was not harvested.

Fall vs. Spring Application of Extreme and Backdraft.

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Weed Code									STEME	ALLVI	RANAB	HORPU	HORPU	SETFA	AMBEL	AMBEL	AMATA	AMATA	POLPY	POLPY	GGGAN	
Crop Code									Control	Control	Control	Control	Control	Control	Control	Control	Control	Control	Control	Control		
Rating Data Type									Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent		
Rating Unit									4-15-02	4-15-02	4-15-02	4-15-02	5-30-02	5-30-02	5-30-02	6-27-02	5-30-02	6-27-02	5-30-02	6-27-02	6-27-02	
Rating Date									150 DA-A	150 DA-A	150 DA-A	150 DA-A	0 DAP	0 DAP	0 DAP	28 DAP	0 DAP	28 DAP	0 DAP	28 DAP	28 DAP	
Trt-Eval Interval																						
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code													
1	NONTREATED									0	0	0	0	0	0	0	0	0	0	0	0	
2	BACKDRAFT	1.5	SL	0.94	LB A/A	5	PT/A	FALL	A	100	96	100	100	99	91	88	43	99	17	96	90	37
2	SALVO	5	EC	0.75	LB AE/A	1.2	PT/A	FALL	A													
2	AMS	100	DRY	2.5	LB A/A	2.5	LB/A	FALL	A													
2	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	%V/V	FALL	A													
3	BACKDRAFT	1.5	SL	0.94	LB A/A	5	PT/A	FALL	A	100	97	100	100	99	92	82	20	99	91	96	98	33
3	SALVO	5	EC	0.75	LB AE/A	1.2	PT/A	FALL	A													
3	AUTHORITY	75	WG	0.1875	LB A/A	4	OZ/A	FALL	A													
3	AMS	100	DRY	2.5	LB A/A	2.5	LB/A	FALL	A													
3	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	%V/V	FALL	A													
4	EXTREME	2.17	SL	0.814	LB A/A	3	PT/A	FALL	A	100	93	100	100	99	75	77	10	98	0	73	33	30
4	SALVO	5	EC	0.75	LB AE/A	1.2	PT/A	FALL	A													
4	AMS	100	DRY	2.5	LB A/A	2.5	LB/A	FALL	A													
4	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	%V/V	FALL	A													
5	EXTREME	2.17	SL	0.814	LB A/A	3	PT/A	FALL	A	100	100	100	100	99	96	88	18	98	50	99	96	47
5	SALVO	5	EC	0.75	LB AE/A	1.2	PT/A	FALL	A													
5	AUTHORITY	75	WG	0.1875	LB A/A	4	OZ/A	FALL	A													
5	AMS	100	DRY	2.5	LB A/A	2.5	LB/A	FALL	A													
5	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	%V/V	FALL	A													
6	ROUNDUP ULTRA MAX	3.7	SL	0.58	LB AE/A	20	OZ/A	FALL	A	100	100	100	100	96	83	87	27	99	0	62	17	17
6	SALVO	5	EC	0.5	LB AE/A	0.8	PT/A	FALL	A													
7	CANOPY XL	56.3	WG			4.5	OZ/A	FALL	A	100	100	100	30	50	96	92	53	98	33	99	99	40
7	->CLASSIC	25	WG	0.0264	LB A/A			FALL	A													
7	->AUTHORITY	75	WG	0.132	LB A/A			FALL	A													
7	EXPRESS	75	WG	0.0078	LB A/A	0.166	OZ/A	FALL	A													
7	SALVO	5	EC	0.5	LB AE/A	0.8	PT/A	FALL	A													
7	HERBIMAX	100	LIQ	1.0	% V/V	1	%V/V	FALL	A													
8	BACKDRAFT	1.5	SL	0.94	LB A/A	5	PT/A	30EPP	B					96	96	95	30	99	0	99	99	53
8	SALVO	5	EC	0.75	LB AE/A	1.2	PT/A	30EPP	B													
8	AMS	100	DRY	2.5	LB A/A	2.5	LB/A	30EPP	B													
8	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	%V/V	30EPP	B													
9	BACKDRAFT	1.5	SL	0.94	LB A/A	5	PT/A	30EPP	B					99	96	93	27	99	50	99	96	45
9	SALVO	5	EC	0.75	LB AE/A	1.2	PT/A	30EPP	B													
9	AUTHORITY	75	WG	0.1875	LB A/A	4	OZ/A	30EPP	B													
9	AMS	100	DRY	2.5	LB A/A	2.5	LB/A	30EPP	B													
9	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	%V/V	30EPP	B													

Weed Code		STEME	ALLVI	RANAB	HORPU	HORPU	SETFA	AMBEL	AMBEL	AMATA	AMATA	POLPY	POLPY	GGGAN								
Crop Code		Control	Control	Control	Control	Control	Control	Control	Control	Control	Control	Control	Control	Control								
Rating Data Type		Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent								
Rating Unit		4-15-02	4-15-02	4-15-02	4-15-02	5-30-02	5-30-02	5-30-02	6-27-02	5-30-02	6-27-02	5-30-02	6-27-02	6-27-02								
Rating Date		150 DA-A	150 DA-A	150 DA-A	150 DA-A	0 DAP	0 DAP	0 DAP	28 DAP	0 DAP	28 DAP	0 DAP	28 DAP	28 DAP								
Trt-Eval Interval																						
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code													
10	EXTREME	2.17	SL	0.814	LB A/A	3	PT/A	30EPP	B													
10	SALVO	5	EC	0.75	LB AE/A	1.2	PT/A	30EPP	B	97	98	96	32	98 10 99 96 48								
10	AMS	100	DRY	2.5	LB A/A	2.5	LB/A	30EPP	B													
10	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	%V/V	30EPP	B													
11	EXTREME	2.17	SL	0.814	LB A/A	3	PT/A	30EPP	B	99	98	94	30	99 47 98 88 58								
11	SALVO	5	EC	0.75	LB AE/A	1.2	PT/A	30EPP	B													
11	AUTHORITY	75	WG	0.1875	LB A/A	4	OZ/A	30EPP	B													
11	AMS	100	DRY	2.5	LB A/A	2.5	LB/A	30EPP	B													
11	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	%V/V	30EPP	B													
12	PROWL	3.3	EC	1.24	LB A/A	3	PT/A	30EPP	B	96	98	95	40	99 0 99 96 65								
12	BACKDRAFT	1.5	SL	0.94	LB A/A	5	PT/A	30EPP	B													
12	SALVO	5	EC	0.75	LB AE/A	1.2	PT/A	30EPP	B													
12	AMS	100	DRY	2.5	LB A/A	2.5	LB/A	30EPP	B													
12	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	%V/V	30EPP	B													
13	PROWL	3.3	EC	1.24	LB A/A	3	PT/A	30EPP	B	99	98	95	30	99 0 97 47 45								
13	EXTREME	2.17	SL	0.814	LB A/A	3	PT/A	30EPP	B													
13	SALVO	5	EC	0.75	LB AE/A	1.2	PT/A	30EPP	B													
13	AMS	100	DRY	2.5	LB A/A	2.5	LB/A	30EPP	B													
13	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	%V/V	30EPP	B													
14	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	26	OZ/A	30EPP	B	99	80	92	0	99 0 78 0 0								
14	SALVO	5	EC	0.5	LB AE/A	0.8	PT/A	30EPP	B													
15	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	26	OZ/A	30EPP	B	99	99	98	83	99 23 99 99 78								
15	CANOPY XL	56.3	WG			4.5	OZ/A	30EPP	B													
15	->CLASSIC	25	WG	0.0264	LB A/A			30EPP	B													
15	->AUTHORITY	75	WG	0.132	LB A/A			30EPP	B													
LSD (P=.05)										0.0	5.7	0.0	34.9	19.7	18.2	6.7	25.8	1.9	37.9	29.8	34.1	20.4
Replicate F										0.000	3.147	0.000	1.000	1.278	3.876	3.379	0.234	1.849	0.053	1.832	0.282	1.572
Replicate Prob(F)										1.0000	0.0796	1.0000	0.3966	0.2943	0.0327	0.0485	0.7931	0.1761	0.9481	0.1787	0.7560	0.2254
Treatment F										0.000	396.890	0.000	13.963	16.378	15.840	110.118	5.522	1445.903	4.434	6.651	10.950	9.609
Treatment Prob(F)										1.0000	0.0001	1.0000	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0004	0.0001	0.0001	0.0001

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Trial Comments

1. Protocol: BASF.
2. Blanket application of Roundup Ultra Max + AMS at 0.75 lbae/A + 2.0% w/w applied to all plots (including the nontreated) at 35 DAP on 6-27-02.
3. DA-A = days after FALL application. On 4-15-02, 150 DA-A, ratings were at 30EPP application. DAP = days after planting. 0 DAP = at planting.
4. GGGAN = grasses, annual, a mixture of SETFA and ECHCG.
5. Planned 56 DAP weed control ratings were not possible due to blanket application at 35 DAP.