

Balance Burndown in No-Till Corn.

01-2B-E40

OBJECTIVE: Evaluate the burndown activity of Balance Pro at reduced application rates.

SUMMARY: No corn injury was observed in this study. Little barley control 14 days after planting (DAP) was poor from all treatments except Balance Pro plus Aatrex plus Roundup Ultra Max (99%). All herbicide treatments provided good control of giant foxtail at 14 DAP. However, by 56 DAP control was reduced to 17 to 67%. Balance Pro alone controlled 65 to 75% of Pennsylvania smartweed at 14 DAP. Tank mixing Salvo or Aatrex with Balance Pro increased smartweed control to at least 97%. Treatments that included Aatrex provided the greatest smartweed control at 56 DAP. Common ragweed control 56 DAP was generally highest with treatments that included Balance Pro at 3 oz/A. Balance Pro alone controlled 83 to 85% of waterhemp at 56 DAP. Tank mixing Salvo with Balance Pro decreased waterhemp control by 10 to 15%.

HERBICIDES

AATREX 90 WG
BALANCE PRO 4 SC
ROUNDUP ULTRA MAX 3.7 SL
SALVO 5 EC

WEEDS

barley, little
foxtail, giant
garlic, wild
ragweed, common
smartweed, Pennsylvania
waterhemp, common

CROP

corn, field

Bryan Young

PLANT, SOIL AND GENERAL AGRICULTURE DEPARTMENT

SOUTHERN ILLINOIS UNIVERSITY

Balance Burndown in No-Till Corn.

Project Code: 01-2B-E40 Location: Belleville Research Center

Investigator: Bryan Young, Assistant Professor, Southern Illinois University

City State Zip Country: Belleville IL 62221 USA
 Trial Status: Final Initiation Date: 4-17-01

Objective:

Evaluate the burndown activity of Balance Pro at reduced application rates.

Weed Code	Common Name	Scientific Name
1.	ALLVI garlic, wild	Allium vineale L.
2.	HORPU barley, little	Hordeum pusillum Nutt.
3.	POLPY smartweed, Pennsylvania	Polygonum pennsylvanicum L.
4.	AMBEL ragweed, common	Ambrosia artemisiifolia L.
5.	SETFA foxtail, giant	Setaria faberi Herrm.
6.	AMATA waterhemp, common	Amaranthus rudis Sauer

Crop 1: ZEAMX corn, field Variety: P33G28 LL
 Planting Method: Seeded Planting Date: 5-9-01
 Rate: 28000 S/A Depth: 1.5 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: GLXMA, 2000
 Field Prep./Maintenance: N 150 LB/A, P205 0 LB/A, K20 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

Application Date: 5-2-01
 Time of Day: 7:00
 Application Method: SPRAY
 Application Timing: 7EPP
 Applic. Placement: BROFOL
 Air Temp., Unit: 69 F
 % Relative Humidity: 80
 Wind Velocity, Unit: 5 MPH
 Soil Moisture: NORMAL

CROP STAGE AT EACH APPLICATION

A

Crop 1 Code, Stage: ZEAMX NA
 Height, Unit: NA NA

WEED STAGE AT EACH APPLICATION

A

Weed 1 Code: ALLVI
 Stage(leaves): 3-4
 Height(inches): 12-30
 Density: High

Weed 2 Code: HORPU
 Stage(leaves): 5-6
 Height(inches): 4-6
 Density: Medium

Weed 3 Code: POLPY
 Stage(leaves): 3-4
 Height(inches): 2-5
 Density: Medium

Weed 4 Code: AMBEL
Stage(leaves): 5-6
Height(inches): 3-4
Density: High

Weed 5 Code: SETFA
Stage(leaves): 3-4
Height(inches): 1-3
Density: High

APPLICATION EQUIPMENT

A

Appl. Equipment: CO2 sprayer
Operating Pressure: 40 PSI
Nozzle Type: Flat fan
Nozzle Size: 8003
Boom Length, Unit: 7.5 FT
Spray Volume, Unit: 20 GPA

NOTES: NOT HARVESTED.

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							ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ALLVI	HORPU	SETFA	SETFA	POLPY	POLPY	AMBEL	AMBEL			
							Injury	Injury	Injury	Stunt	Stunt	Stunt	Control	Control	Control	Control	Control	Control	Control	Control	Control		
							Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent		
							5-23-01	6-6-01	7-4-01	5-23-01	6-6-01	7-4-01	5-23-01	5-23-01	5-23-01	7-4-01	5-23-01	7-4-01	5-23-01	7-4-01			
							14 DAP	28 DAP	56 DAP	14 DAP	28 DAP	56 DAP	14 DAP	14 DAP	14 DAP	56 DAP	14 DAP	56 DAP	14 DAP	56 DAP	14 DAP	56 DAP	
Trt No.	Treatment Name	Form Conc	Form Type	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code															
1	NONTREATED								0	0	0	0	0	0	0	0	0	0	0	0	0		
2	BALANCE PRO	4	SC	0.0703 LB A/A	2.25	OZ/A	7EPP	A	0	0	0	0	0	8	8	96	17	97	78	98	75		
	SALVO	5	EC	0.475 LB A/A	0.76	PT/A	7EPP	A															
2	PRIME OIL COC	100	LIQ	1.0 QT/A	1	QT/A	7EPP	A															
3	BALANCE PRO	4	SC	0.0703 LB A/A	2.25	OZ/A	7EPP	A	0	0	0	0	0	20	98	67	99	82	98	77			
	AATREX	90	WG	1.0 LB A/A	17.8	OZ/A	7EPP	A															
	SALVO	5	EC	0.475 LB A/A	0.76	PT/A	7EPP	A															
3	PRIME OIL COC	100	LIQ	1.0 QT/A	1	QT/A	7EPP	A															
4	BALANCE PRO	4	SC	0.0703 LB A/A	2.25	OZ/A	7EPP	A	0	0	0	0	0	13	93	53	65	30	96	75			
	PRIME OIL COC	100	LIQ	1.0 QT/A	1	QT/A	7EPP	A															
5	BALANCE PRO	4	SC	0.0703 LB A/A	2.25	OZ/A	7EPP	A	0	0	0	0	0	18	37	95	55	99	89	98	89		
	AATREX	90	WG	1.0 LB A/A	17.8	OZ/A	7EPP	A															
5	PRIME OIL COC	100	LIQ	1.0 QT/A	1	QT/A	7EPP	A															
6	BALANCE PRO	4	SC	0.094 LB A/A	3	OZ/A	7EPP	A	0	0	0	0	0	7	0	95	23	75	86	95	87		
	PRIME OIL COC	100	LIQ	1.0 QT/A	1	QT/A	7EPP	A															
7	BALANCE PRO	4	SC	0.094 LB A/A	3	OZ/A	7EPP	A	0	0	0	0	0	5	57	95	38	99	88	99	85		
	AATREX	90	WG	1.0 LB A/A	17.8	OZ/A	7EPP	A															
7	PRIME OIL COC	100	LIQ	1.0 QT/A	1	QT/A	7EPP	A															
8	BALANCE PRO	4	SC	0.0703 LB A/A	2.25	OZ/A	7EPP	A	0	0	0	0	0	48	99	96	37	99	89	99	90		
	AATREX	90	WG	1.0 LB A/A	17.8	OZ/A	7EPP	A															
	ROUNDUP ULTRA MAX	3.7	SL	0.56 LB AE/A	1.2	PT/A	7EPP	A															
8	AMS	100	DRY	2.0 % W/W	17	LB/100 GAL	7EPP	A															
LSD (P=.05)							0.0	0.0	0.0	0.0	0.0	0.0	17.6	30.3	2.5	12.2	6.4	24.6	1.4	7.0			
Replicate F							0.000	0.000	0.000	0.000	0.000	0.000	3.227	0.698	0.782	1.734	1.723	0.278	2.761	1.059			
Replicate Prob(F)							1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0704	0.5140	0.4763	0.2124	0.2143	0.7615	0.0975	0.3729			
Treatment F							0.000	0.000	0.000	0.000	0.000	0.000	7.941	11.662	1739.831	30.275	267.617	17.292	5522.046	165.700			
Treatment Prob(F)							1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0006	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001		

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

AMATA
 Control
 Percent
 7-4-01
 56 DAP

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	
1	NONTREATED									0
2	BALANCE PRO	4	SC	0.0703	LB A/A	2.25	OZ/A	7EPP	A	70
2	SALVO	5	EC	0.475	LB A/A	0.76	PT/A	7EPP	A	
2	PRIME OIL COC	100	LIQ	1.0	QT/A	1	QT/A	7EPP	A	
3	BALANCE PRO	4	SC	0.0703	LB A/A	2.25	OZ/A	7EPP	A	75
3	AATREX	90	WG	1.0	LB A/A	17.8	OZ/A	7EPP	A	
3	SALVO	5	EC	0.475	LB A/A	0.76	PT/A	7EPP	A	
3	PRIME OIL COC	100	LIQ	1.0	QT/A	1	QT/A	7EPP	A	
4	BALANCE PRO	4	SC	0.0703	LB A/A	2.25	OZ/A	7EPP	A	85
4	PRIME OIL COC	100	LIQ	1.0	QT/A	1	QT/A	7EPP	A	
5	BALANCE PRO	4	SC	0.0703	LB A/A	2.25	OZ/A	7EPP	A	92
5	AATREX	90	WG	1.0	LB A/A	17.8	OZ/A	7EPP	A	
5	PRIME OIL COC	100	LIQ	1.0	QT/A	1	QT/A	7EPP	A	
6	BALANCE PRO	4	SC	0.094	LB A/A	3	OZ/A	7EPP	A	83
6	PRIME OIL COC	100	LIQ	1.0	QT/A	1	QT/A	7EPP	A	
7	BALANCE PRO	4	SC	0.094	LB A/A	3	OZ/A	7EPP	A	87
7	AATREX	90	WG	1.0	LB A/A	17.8	OZ/A	7EPP	A	
7	PRIME OIL COC	100	LIQ	1.0	QT/A	1	QT/A	7EPP	A	
8	BALANCE PRO	4	SC	0.0703	LB A/A	2.25	OZ/A	7EPP	A	87
8	AATREX	90	WG	1.0	LB A/A	17.8	OZ/A	7EPP	A	
8	ROUNDUP ULTRA MAX	3.7	SL	0.56	LB AE/A	1.2	PT/A	7EPP	A	
8	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	7EPP	A	
LSD (P=.05)										6.8
Replicate F										2.337
Replicate Prob(F)										0.1331
Treatment F										179.230
Treatment Prob(F)										0.0001

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Trial Comments

- 1. Protocol: Aventis.
- 2. DAP = days after planting.