

Agrilience Adjuvants with Celebrity Plus and Steadfast.

01-ARC3-W50

OBJECTIVE: Evaluate Agrilience adjuvants for crop response and weed control with Celebrity Plus and Distinct plus Steadfast.

SUMMARY: No corn injury was observed with any treatment. Annual grass control was greatest when Celebrity Plus or Distinct plus Steadfast were tank mixed with Newtone compared to Class Act NG or Preference plus N-PAK AMS. Common ragweed, redroot pigweed, and morningglory species control was usually significantly less when Class Act NG was tank mixed with Celebrity Plus or Distinct plus Steadfast compared to Newtone or N-PAK AMS. There were no significant differences in corn yield among herbicide treated plots.

HERBICIDES / ADJUVANTS

CELEBRITY PLUS 70 WG
DISTINCT 70 WG
STEADFAST 75 WG
CLASS ACT NG 100 LIQ
NEWTONE 100 LIQ
N-PAK AMS 100 LIQ
PREFERENCE 100 LIQ

WEEDS

grasses, annual
morningglory, species
pigweed, redroot
ragweed, common

CROP

corn, field

Bryan Young

PLANT, SOIL AND GENERAL AGRICULTURE DEPARTMENT

SOUTHERN ILLINOIS UNIVERSITY

Agrilience Adjuvants with Celebrity Plus and Steadfast.

Project Code: 01-ARC3-W50 Location: Agronomy Research Center

Investigator: Bryan Young, Assistant Professor, Southern Illinois University

City State Zip Country: Belleville IL 62221 USA
Trial Status: Final Initiation Date: 5-9-01**Objective:**

Evaluate Agrilience adjuvants for crop response and weed control with Celebrity Plus and Distinct plus Steadfast.

Weed Code	Common Name	Scientific Name
1.	GGGAN grasses, annual	
2.	AMBEL ragweed, common	Ambrosia artemisiifolia L.
3.	AMARE pigweed, redroot	Amaranthus retroflexus L.
4.	IPOSS morningglory, species Ipomoea sp.	

Crop 1:	ZEAMX corn, field	Variety:	P33G26
Planting Method:	Seeded	Planting Date:	5-2-01
Rate:	28000 S/A	Depth:	1.5 IN
Row Spacing:	30 IN		

Plot Width, Unit:	10 FT	Plot Length, Unit:	30 FT	Reps:	3
Tillage Type:	Reduced-Till	Study Design:	Randomized complete block		
Previous Crop, Year:	GLXMA, 2000				
Field Prep./Maintenance:	N 150 LB/A, P205 0 LB/A, K20 0 LB/A, applied 6-5-01.				

Soil Name:	Weir	% OM:	1.6	pH:	5.9	CEC:	9
Texture:	Silt loam	Fert. Level:	P1: 118 LB/A, K: 439 LB/A				

APPLICATION DESCRIPTION

A	
Application Date:	6-6-01
Time of Day:	15:00
Application Method:	Spray
Application Timing:	6-8"CN
Applic. Placement:	BROFOL
Air Temp., Unit:	84 F
% Relative Humidity:	60
Wind Velocity, Unit:	5-10 MPH
Dew Presence (Y/N):	N
Soil Temp., Unit:	89 F
Soil Moisture:	ABONOR
% Cloud Cover:	85

CROP STAGE AT EACH APPLICATION

A	
Crop 1 Code, Stage:	ZEAMX V3
Height, Unit:	13 IN

WEED STAGE AT EACH APPLICATION

A	
Weed 1 Code:	GGGAN
Stage(leaves):	2-4
Height(inches):	6-8
Density:	Medium
Weed 2 Code:	AMBEL
Stage(leaves):	6-8
Height(inches):	4-6
Density:	Medium
Weed 3 Code:	AMARE
Stage(leaves):	4-8
Height(inches):	3-4
Density:	Medium

Weed 4 Code: IPOSS
Stage(leaves): 3-6
Height(inches): 2-3
Density: Low

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: HARVESTED 10-4-01, 2 ROWS X 28 FT.
30 minutes after the last application, a brief rainfall event occurred.

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Weed Code	ZEAMX		ZEAMX		ZEAMX		GGGAN	GGGAN	AMBEL	AMBEL	AMARE	AMARE	IPOSS	IPOSS
Crop Code	Yield	Injury	Injury	Control	Control	Control	Control	Control	Control	Control	Control	Control	Control	Control
Rating Data Type	bu/A	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Rating Unit	10-4-01	6-20-01	7-4-01	6-20-01	7-4-01	6-20-01	7-4-01	6-20-01	7-4-01	6-20-01	7-4-01	6-20-01	7-4-01	6-20-01
Rating Date	14 DA-A	28 DA-A	14 DA-A	28 DA-A	14 DA-A	28 DA-A	14 DA-A	28 DA-A	14 DA-A	28 DA-A	14 DA-A	28 DA-A	14 DA-A	28 DA-A
Trt-Eval Interval														

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	14 DA-A	28 DA-A	14 DA-A	28 DA-A	14 DA-A	28 DA-A	14 DA-A	28 DA-A	14 DA-A	28 DA-A	
1	CELEBRITY PLUS	70	WG	0.206	LB A/A	4.7	OZ/A	6-8"CN	A	141	0	0	80	65	88	90	90	78	83	77
1	CLASS ACT NG	100	LIQ	2.5	% V/V	2.5	%V/V	6-8"CN	A											
2	CELEBRITY PLUS	70	WG	0.206	LB A/A	4.7	OZ/A	6-8"CN	A	165	0	0	88	80	90	91	98	98	87	82
2	NEWTONE	100	LIQ	1.0	% V/V	1	%V/V	6-8"CN	A											
3	CELEBRITY PLUS	70	WG	0.206	LB A/A	4.7	OZ/A	6-8"CN	A	130	0	0	82	60	90	95	98	99	83	80
3	PREFERENCE	100	LIQ	0.25	% V/V	0.25	%V/V	6-8"CN	A											
3	N-PAK AMS	100	LIQ	2.4	QT/A	2.4	QT/A	6-8"CN	A											
4	DISTINCT	70	WG	0.175	LB A/A	4	OZ/A	6-8"CN	A	144	0	0	83	57	90	78	97	99	82	73
4	STEADFAST	75	WG	0.0352	LB A/A	0.75	OZ/A	6-8"CN	A											
4	CLASS ACT NG	100	LIQ	2.5	% V/V	2.5	%V/V	6-8"CN	A											
5	NONTREATED									85	0	0	0	0	0	0	0	0	0	0
6	DISTINCT	70	WG	0.175	LB A/A	4	OZ/A	6-8"CN	A	163	0	0	93	82	92	92	98	99	87	82
6	STEADFAST	75	WG	0.0352	LB A/A	0.75	OZ/A	6-8"CN	A											
6	NEWTONE	100	LIQ	1.0	% V/V	1	%V/V	6-8"CN	A											
7	DISTINCT	70	WG	0.175	LB A/A	4	OZ/A	6-8"CN	A	124	0	0	89	70	91	93	98	98	86	73
7	STEADFAST	75	WG	0.0352	LB A/A	0.75	OZ/A	6-8"CN	A											
7	PREFERENCE	100	LIQ	0.25	% V/V	0.25	%V/V	6-8"CN	A											
7	N-PAK AMS	100	LIQ	2.4	QT/A	2.4	QT/A	6-8"CN	A											
LSD (P=.05)										71.5	0.0	0.0	3.5	6.3	2.6	9.3	3.4	11.5	4.0	10.9
Replicate F										0.561	0.000	0.000	2.487	1.219	2.431	4.950	1.686	1.627	1.431	0.411
Replicate Prob(F)										0.5849	1.0000	1.0000	0.1248	0.3297	0.1299	0.0271	0.2263	0.2370	0.2770	0.6723
Treatment F										1.358	0.000	0.000	842.125	181.094	1635.710	129.628	1102.627	96.756	612.502	69.779
Treatment Prob(F)										0.3062	1.0000	1.0000	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Agrilliance Adjuvants with Celebrity Plus and Steadfast.

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Trial Comments

1. Protocol: Agrilliance.
2. DA-A = Days after 6-8"CN application.
3. GGGAN = grasses annual, included giant foxtail and large crabgrass.