Evaluation of UAP Adjuvants with Reflex.

00-ARC3-W70

OBJECTIVE: Evaluate crop response and weed control from Reflex combinations with various UAP adjuvants.

SUMMARY: Soybean injury at 14 days after treatment (DAT) was greatest when Reflex was tank mixed with MSO and least when Reflex was tank mixed with LI 700 (1%), LI 810 (7%), or Ag Dynamics 1 (6%). By 28 DAT, soybean injury was 1% or less from all Reflex treatments.

Giant foxtail control at 28 DAT was at least 95% from all Reflex and Select treatments except when the adjuvant was Activator 90 (85%), LI 810 at 1/2% v/v (89%), or LI 700 (0%). All treatments provided good control of common ragweed but Reflex plus LI 810 at 1% v/v controlled less common ragweed compared to other herbicide treatments. Control of morningglory species was 65 to 78% for all treatments except Reflex plus LI 700 (43%) or LI810 at 1% (53%). Similarly, all treatments controlled at least 93% of common cocklebur except Reflex plus LI 700 (89%), LI 810 at 1% v/v (70%), and Ag Dynamics 1 (86%).

HERBICIDES/ADJUVANTS	WEEDS	CROP
REFLEX 2 EC	COCKLEBUR, COMMON	SOYBEAN
SELECT 2 EC	FOXTAIL, GIANT	
ACTIVATOR 90 100 LIQ	LAMBSQUARTERS, COMMON	
AG DYNAMICS 1 100 LIQ	MORNINGGLORY, SPECIES	
AMS 100 DRY	RAGWEED, COMMON	
CHOICE 100 LIQ	VELVETLEAF	
LI 700 100 LIQ		
LI 810 100 LIQ		
MSO UAP 100 LIQ		
PHASE 100 LIQ		
TAKE-UP 100 LIQ		

Bryan Young

PLANT, SOIL AND GENERAL AGRICULTURE DEPARTMENT

SOUTHERN ILLINOIS UNIVERSITY

Evaluation of UAP Adjuvants with Reflex.

Project Code: 00-ARC3-W70 Location: Agronomy Research Center

Investigator: Bryan Young, Assistant Professor, Southern Illinois University

City State Zip Country: CARBONDALE IL 62901 USA

Weed Code	Common Name	Scientific Name
1. SETFA	FOXTAIL, GIANT	SETARIA FABERI HERRM.
2. AMBEL	RAGWEED, COMMON	AMBROSIA ARTEMISIIFOLIA L.
3. IPOSS	MORNINGGLORY, SPECIES	IPOMOEA SP.
4. XANST	COCKLEBUR, COMMON	XANTHIUM STRUMARIUM L. SSP. STRUMARIUM
5. ABUTH	VELVETLEAF	ABUTILON THEOPHRASTI MEDIK.
6. CHEAL	LAMBSQUARTERS, COMMON	CHENOPODIUM ALBUM L.

Crop 1:	GLXMA SOYBEAN	Variety:	AG 4602 RR
Planting Method:	SEEDED	Planting Date:	May-16-00
Rate:	75 LB/A	Depth:	1.0 IN
Row Spacing:	30 IN		

Plot Width, Unit:	10 FT	Plot Length, Unit:	24 FT	Reps: 3
Tillage Type:	REDUCED-TILL	Study Design:	RCB	
Previous Crop, Year:	GLXMA, 1999			

Soil Name:	WEIR	% OM: 2.3	pH: 6.3	CEC: 8.7
Texture:	SILT LOAM	P_1: 71 LB/A,	K: 367 LB/A	

APPLICATION DESCRIPTION

	A
Application Date:	Jun-14-00
Time of Day:	19:00
Application Method:	SPRAY
Application Timing:	6"W
Applic. Placement:	BROFOL
Air Temp., Unit:	85 F
Wind Velocity, Unit:	10 MPH
Dew Presence (Y/N):	N
Soil Moisture:	NORMAL

CROP STAGE AT EACH APPLICATION

	A
Crop 1 Code, Stage:	GLXMA V3
Height, Unit:	5-7 IN

WEED STAGE AT EACH APPLICATION

	A
Weed 1 Code:	SETFA
Stage(leaves):	4-5
Height(inches):	4-8
Weed 2 Code:	AMBEL
Stage(leaves):	4-8
Height(inches):	4-7
Weed 3 Code:	IPOSS
Stage(leaves):	COTL-5
Height(inches):	4-6
Weed 4 Code:	XANST
Stage(leaves):	4-6
Height(inches):	6-8
Weed 5 Code:	ABUTH
Stage(leaves):	COTL-2
Height(inches):	1-2
Weed 6 Code:	CHEAL
Stage(leaves):	COTL-2
Height(inches):	1-2

APPLICATION EQUIPMENT

	A
Appl. Equipment:	CO_2 SPRAY
Operating Pressure:	40 PSI
Nozzle Type:	FLAT FAN
Nozzle Size:	8002
Boom Length, Unit:	7.33 FT
Spray Volume, Unit:	15 GPA

NOTES:

Not harvested.

TABLE. EVALUATION OF UAP ADJUVANTS WITH REFLEX. PROJECT CODE:00-ARC3-W70

	TREATMENT	FORM.	RATE	UNIT	PROD RATE	APPL TIME	APPL CODE	GLXMA INJURY, DA 6"W 3	7	14	28	CONTROL, DAYS AFTER 6"W SETFA 7	14	28	AMBEL 7	14	28	IPOSS 7	14	28	XANST 7	14	28	ABUTH 14	28	CHEAL 14	28
								%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
1	REFLEX	2 EC	0.313	LB A/A	1.25 PT/A	6"W	A	10	10	5	0	77	93	85	99	98	95	94	93	78	98	99	99	96	93	33	20
1	SELECT	2 EC	0.094	LB A/A	6.0 OZ/A	6"W	A																				
1	ACTIVATOR 90	100 LIQ	0.25	% V/V	0.25 %V/V	6"W	A																				
1	AMS	100 DRY	2.0	LB/A	2.0 LB/A	6"W	A																				
2	REFLEX	2 EC	0.313	LB A/A	1.25 PT/A	6"W	A	7	10	4	0	75	93	89	98	98	96	95	88	70	98	99	96	93	99	30	7
2	SELECT	2 EC	0.094	LB A/A	6.0 OZ/A	6"W	A																				
2	LI 810	100 LIQ	0.25	% V/V	0.25 %V/V	6"W	A																				
2	AMS	100 DRY	2.0	LB/A	2.0 LB/A	6"W	A																				
3	REFLEX	2 EC	0.313	LB A/A	1.25 PT/A	6"W	A	6	7	2	0	73	92	96	99	99	98	96	87	68	99	98	96	89	89	33	10
3	SELECT	2 EC	0.094	LB A/A	6.0 OZ/A	6"W	A																				
3	LI 810	100 LIQ	0.5	% V/V	0.5 %V/V	6"W	A																				
3	AMS	100 DRY	2.0	LB/A	2.0 LB/A	6"W	A																				
4	REFLEX	2 EC	0.313	LB A/A	1.25 PT/A	6"W	A	10	9	4	0	75	93	97	98	99	97	94	95	78	99	99	99	86	86	40	13
4	SELECT	2 EC	0.094	LB A/A	6.0 OZ/A	6"W	A																				
4	LI 810	100 LIQ	1.0	% V/V	1.0 %V/V	6"W	A																				
4	AMS	100 DRY	2.0	LB/A	2.0 LB/A	6"W	A																				
5	REFLEX	2 EC	0.313	LB A/A	1.25 PT/A	6"W	A	12	15	7	1	82	95	97	99	99	99	96	90	77	99	99	98	94	89	40	7
5	SELECT	2 EC	0.094	LB A/A	6.0 OZ/A	6"W	A																				
5	MSO UAP	100 LIQ	1.0	% V/V	1.0 %V/V	6"W	A																				
5	AMS	100 DRY	2.0	LB/A	2.0 LB/A	6"W	A																				
6	REFLEX	2 EC	0.313	LB A/A	1.25 PT/A	6"W	A	10	11	7	1	78	94	95	98	99	98	96	85	65	99	99	93	88	89	23	7
6	SELECT	2 EC	0.094	LB A/A	6.0 OZ/A	6"W	A																				
6	PHASE	100 LIQ	0.5	% V/V	0.5 %V/V	6"W	A																				
6	AMS	100 DRY	2.0	LB/A	2.0 LB/A	6"W	A																				
7	REFLEX	2 EC	0.313	LB A/A	1.25 PT/A	6"W	A	3	1	2	0	40	10	0	98	96	99	89	68	43	98	79	89	60	72	37	33
7	SELECT	2 EC	0.094	LB A/A	6.0 OZ/A	6"W	A																				
7	LI 700	100 LIQ	0.5	% V/V	0.5 %V/V	6"W	A																				
7	AMS	100 DRY	2.0	LB/A	2.0 LB/A	6"W	A																				
8	REFLEX	2 EC	0.313	LB A/A	1.25 PT/A	6"W	A	7	7	6	0	73	92	96	99	96	90	90	80	53	95	78	70	86	73	27	13
8	SELECT	2 EC	0.094	LB A/A	6.0 OZ/A	6"W	A																				
8	LI 810	100 LIQ	1.0	% V/V	1.0 %V/V	6"W	A																				
8	CHOICE	100 LIQ	0.5	% V/V	0.5 %V/V	6"W	A																				
9	REFLEX	2 EC	0.313	LB A/A	1.25 PT/A	6"W	A	6	6	2	0	78	94	96	97	97	94	93	86	67	97	99	86	90	86	13	3
9	SELECT	2 EC	0.094	LB A/A	6.0 OZ/A	6"W	A																				
9	AG DYNAMICS 1	100 LIQ	1.0	% V/V	1.0 %V/V	6"W	A																				
9	AMS	100 DRY	2.0	LB/A	2.0 LB/A	6"W	A																				
10	REFLEX	2 EC	0.313	LB A/A	1.25 PT/A	6"W	A	10	11	6	0	78	95	95	99	98	98	93	88	65	99	99	96	89	89	27	10
10	SELECT	2 EC	0.094	LB A/A	6.0 OZ/A	6"W	A																				
10	ACTIVATOR 90	100 LIQ	0.25	% V/V	0.25 %V/V	6"W	A																				
10	TAKE-UP	100 LIQ	1.5	PT/A	1.5 PT/A	6"W	A																				
10	AMS	100 DRY	2.0	LB/A	2.0 LB/A	6"W	A																				
11	NONTREATED							0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LSD								2	2	4	1	12	11	5	2	3	3	5	18	16	2	22	12	20	25	16	21
P								0.01	0.01	0.01	0.5	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.2

1. PROTOCOL: UAP.
2. RATING DATES:
   3 DA 6"W, 7 DA 6"W, 14 DA 6"W, AND 28 DA 6"W ON JUN-17-00, JUN-21-00, JUN-28-00, AND JUL-12-00, RESPECTIVELY.