

Basis Gold Adjuvant Study in Corn.

00-10C-E100

OBJECTIVE: Evaluate various experimental adjuvants for use with Basis Gold.

SUMMARY: No corn injury was observed from any treatment. Giant foxtail control 28 days after treatment was 53% from Basis Gold plus AMS. The addition of any adjuvant to Basis Gold plus AMS increased giant foxtail control to 90 to 96%. Yellow nutsedge control was variable ranging from 35 to 70%. Basis Gold plus AMS and Basis Gold plus PX763s at 0.375% v/v plus AMS controlled only 35 and 40% of yellow nutsedge, respectively. Basis Gold plus PX763C at 0.375% v/v plus AMS provided the greatest control of common cocklebur (93%). Common waterhemp control ranged from 42 to 80% with Basis Gold plus PX3482C at 0.5% v/v providing the greatest level of control.

Corn yield ranged from 17 bu/A in nontreated plots to 136 bu/A. No significant differences in corn yield were observed in herbicide treated plots.

HERBICIDE/ADJUVANTS

BASIS GOLD 90 WG
AG DYNAMICS 1 100 LIQ
AMS 100 DRY
COC-PL 100 LIQ
IMPRESSIVE DB 100 DRY
ORTEC COC 80/20 100 LIQ
PX3482C 100 LIQ
PX3482S 100 LIQ
PX402 100 LIQ
PX763C 100 LIQ
PX763S 100 LIQ
TAKE-UP 100 LIQ

WEEDS

COCKLEBUR, COMMON
FOXTAIL, GIANT
NUTSEDGE, YELLOW
WATERHEMP, COMMON

CROP

CORN, FIELD

Bryan Young

PLANT, SOIL AND GENERAL AGRICULTURE DEPARTMENT

SOUTHERN ILLINOIS UNIVERSITY

Basis Gold Adjuvant Study in Corn.

Project Code: 00-10C-E100 Location: Belleville Research Center

Investigator: Bryan Young, Assistant Professor, Southern Illinois University

Weed Code	Common Name	Scientific Name
1. SETFA	FOXTAIL, GIANT	SETARIA FABERI HERRM.
2. CYPES	NUTSEDGE, YELLOW	CYPERUS ESCULENTUS L.
3. AMATA	WATERHEMP, COMMON	AMARANTHUS RUDIS SAUER
4. XANST	COCKLEBUR, COMMON	XANTHIUM STRUMARIUM L. SSP. STRUMARIUM

Crop 1:	ZEAMX CORN, FIELD	Variety:	P33G28 LL
Planting Method:	SEED	Planting Date:	May-4-00
Rate:	28000 S/A	Depth:	1.5 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	Fertilizer applied:	N 150 LB/A,	P ₂ O ₅ 0 LB/A,	K ₂ O 0 LB/A

Soil Name:	WEIR	% OM:	2.4	pH:	6.1	CEC:	11
Texture:	SILT LOAM	P ₁ :	78 LB/A,	K:	413 LB/A		

APPLICATION DESCRIPTION

Application Date:	May-25-00
Time of Day:	11:00
Application Method:	SPRAY
Application Timing:	4"GR
Applic. Placement:	BROFOL
Air Temp., Unit:	72 F
% Relative Humidity:	22
Wind Velocity, Unit:	2-3 MPH
Soil Moisture:	NORMAL
% Cloud Cover:	0

CROP STAGE AT EACH APPLICATION

Crop 1 Code, Stage:	ZEAMX V3
Height, Unit:	7-9 IN

WEED STAGE AT EACH APPLICATION

Weed 1 Code:	SETFA
Stage(leaves):	3-5
Height(inches):	3-6
Density:	HIGH
Weed 2 Code:	CYPES
Stage(leaves):	4-5
Height(inches):	2-4
Density:	MEDIUM
Weed 3 Code:	AMATA
Stage(leaves):	5-6
Height(inches):	2-3
Density:	HIGH
Weed 4 Code:	XANST
Stage(leaves):	4-5
Height(inches):	3-4

APPLICATION EQUIPMENT

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:

Harvested Oct-02-00, (2) 30 inch rows by 21 ft.

TABLE. BASIS GOLD ADJUVANT STUDY IN CORN. PROJECT CODE:00-10C-E100

TREATMENT	FORM.	RATE	UNIT	PROD RATE	APPL TIME	APPL CODE	YIELD	ZEAMX		CONTROL, DAYS AFTER 4"GR							
								INJURY, DAT		SETFA		CYPES		XANST		AMATA	
								14	28	14	28	14	28	14	28	14	28
1 NONTREATED							17	0	0	0	0	0	0	0	0	0	0
2 BASIS GOLD	90 WG	0.591	LB A/A	10.5 OZ/A	4"GR	A	111	0	0	70	53	28	35	58	53	0	0
2 AMS	100 DRY	2.0	LB/A	2.0 LB/A	4"GR	A											
3 BASIS GOLD	90 WG	0.591	LB A/A	10.5 OZ/A	4"GR	A	134	0	0	78	90	38	70	35	80	0	75
3 COC-PL	100 LIQ	1.0	% V/V	1.0 %V/V	4"GR	A											
3 AMS	100 DRY	2.0	LB/A	2.0 LB/A	4"GR	A											
4 BASIS GOLD	90 WG	0.591	LB A/A	10.5 OZ/A	4"GR	A	127	0	0	80	92	40	70	75	85	0	63
4 PX402	100 LIQ	0.375	% V/V	0.375 %V/V	4"GR	A											
4 AMS	100 DRY	2.0	LB/A	2.0 LB/A	4"GR	A											
5 BASIS GOLD	90 WG	0.591	LB A/A	10.5 OZ/A	4"GR	A	116	0	0	83	95	35	58	63	93	0	70
5 PX763C	100 LIQ	0.375	% V/V	0.375 %V/V	4"GR	A											
5 AMS	100 DRY	2.0	LB/A	2.0 LB/A	4"GR	A											
6 BASIS GOLD	90 WG	0.591	LB A/A	10.5 OZ/A	4"GR	A	136	0	0	85	96	40	72	55	82	0	73
6 PX763C	100 LIQ	0.5	% V/V	0.5 %V/V	4"GR	A											
6 AMS	100 DRY	2.0	LB/A	2.0 LB/A	4"GR	A											
7 BASIS GOLD	90 WG	0.591	LB A/A	10.5 OZ/A	4"GR	A	121	0	0	82	93	43	55	75	85	0	58
7 PX3482C	100 LIQ	0.375	% V/V	0.375 %V/V	4"GR	A											
7 AMS	100 DRY	2.0	LB/A	2.0 LB/A	4"GR	A											
8 BASIS GOLD	90 WG	0.591	LB A/A	10.5 OZ/A	4"GR	A	132	0	0	85	96	57	60	60	82	0	80
8 PX3482C	100 LIQ	0.5	% V/V	0.5 %V/V	4"GR	A											
8 AMS	100 DRY	2.0	LB/A	2.0 LB/A	4"GR	A											
9 BASIS GOLD	90 WG	0.591	LB A/A	10.5 OZ/A	4"GR	A	106	0	0	80	96	45	40	47	89	0	68
9 PX763S	100 LIQ	0.375	% V/V	0.375 %V/V	4"GR	A											
9 AMS	100 DRY	2.0	LB/A	2.0 LB/A	4"GR	A											
10 BASIS GOLD	90 WG	0.591	LB A/A	10.5 OZ/A	4"GR	A	111	0	0	85	96	63	65	60	88	0	63
10 PX763S	100 LIQ	0.5	% V/V	0.5 %V/V	4"GR	A											
10 AMS	100 DRY	2.0	LB/A	2.0 LB/A	4"GR	A											
11 BASIS GOLD	90 WG	0.591	LB A/A	10.5 OZ/A	4"GR	A	117	0	0	78	92	47	68	47	70	0	52
11 PX3482S	100 LIQ	0.375	% V/V	0.375 %V/V	4"GR	A											
11 AMS	100 DRY	2.0	LB/A	2.0 LB/A	4"GR	A											

(CONTINUED)

TABLE. BASIS GOLD ADJUVANT STUDY IN CORN. PROJECT CODE:00-10C-E100 (CONTINUED)

TREATMENT	FORM.	RATE UNIT	PROD RATE	APPL TIME	APPL CODE	YIELD	ZEAMX		CONTROL, DAYS AFTER 4"GR							
							INJURY, DAT		SETFA		CYPES		XANST		AMATA	
							14	28	14	28	14	28	14	28	14	28
						BU/A	%	%	%	%	%	%	%	%	%	%
12 BASIS GOLD	90 WG	0.591 LB A/A	10.5 OZ/A	4"GR	A	115	0	0	82	93	53	60	55	80	7	65
12 PX3482S	100 LIQ	0.5 % V/V	0.5 %V/V	4"GR	A											
12 AMS	100 DRY	2.0 LB/A	2.0 LB/A	4"GR	A											
13 BASIS GOLD	90 WG	0.591 LB A/A	10.5 OZ/A	4"GR	A	125	0	0	80	93	40	60	60	77	0	42
13 AG DYNAMICS 1	100 LIQ	1.0 % V/V	1.0 %V/V	4"GR	A											
13 AMS	100 DRY	2.0 LB/A	2.0 LB/A	4"GR	A											
14 BASIS GOLD	90 WG	0.591 LB A/A	10.5 OZ/A	4"GR	A	118	0	0	85	96	48	67	55	81	0	60
14 ORTEC COC 80/20	100 LIQ	1.0 % V/V	1.0 %V/V	4"GR	A											
14 AMS	100 DRY	2.0 LB/A	2.0 LB/A	4"GR	A											
15 BASIS GOLD	90 WG	0.591 LB A/A	10.5 OZ/A	4"GR	A	126	0	0	80	93	37	68	52	87	0	58
15 COC-PL	100 LIQ	1.0 % V/V	1.0 %V/V	4"GR	A											
15 TAKE-UP	100 LIQ	1.5 PT/A	1.5 PT/A	4"GR	A											
15 AMS	100 DRY	2.0 LB/A	2.0 LB/A	4"GR	A											
16 BASIS GOLD	90 WG	0.591 LB A/A	10.5 OZ/A	4"GR	A	130	0	0	78	92	42	67	53	77	0	55
16 IMPRESSIVE DB	100 DRY	2.25 LB/A	2.25 LB/A	4"GR	A											
LSD						33	0	0	8	6	21	22	25	26	5	30
P						0.01	1.0	1.0	0.01	0.01	0.01	0.01	0.01	0.01	0.5	0.01

1. PROTOCOL: PRECISION LABS.
2. RATING DATES:
14 DAYS AFTER 4"GR, AND 28 DAYS AFTER 4"GR ON JUN-8-00, AND JUN-22-00, RESPECTIVELY.