

DuPont Sales Demonstration in Conventional Corn.

02-21S-ME40

OBJECTIVE: Demonstrate the performance of DuPont herbicide programs in conventional corn.

SUMMARY: All Dupont herbicide programs that included Leadoff preemergence controlled at least 94% of giant foxtail at 28 days after the V3 to V6 herbicide application (DAPO). A single postemergence application of Steadfast plus Callisto and Aatrex controlled 95% of giant foxtail at 28 DAPO. However, the single postemergence application of Option plus Callisto and Aatrex controlled only 75% of giant foxtail. Applying Balance PRO preemergence followed by Option plus Callisto and Aatrex increased giant foxtail control to 93% at 28 DAPO. Yellow nutsedge control 28 DAPO was 83 to 91% from treatments that included Leadoff and 70% or less from single postemergence applications of Steadfast or Option with Callisto and Aatrex. All herbicide treatments except Leadoff followed by Steadfast alone and Basis plus Aatrex plus Princep provided excellent control of common cocklebur at 28 DAPO. Similarly, velvetleaf control 28 DAPO was at least 92% from all herbicide treatments except Basis plus Aatrex plus Princep. Corn yield ranged from 116 to 162 bu/A in herbicide treated plots. The lowest corn yield was observed in plots treated with Basis plus Aatrex plus Princep (116 bu/A), most likely to the overall poor weed control observed with this treatment.

HERBICIDES

AATREX 90 WG
BALANCE PRO 4 SC
BASIS 75 WG
CALLISTO 4 SC
CLARITY 4 EC
DISTINCT 70 WG
LEADOFF 5 L
MARKSMAN 3.2 L
OPTION 35 WG
PRINCEP 90 WG
STEADFAST 75 WG

WEEDS

cocklebur, common
foxtail, giant
nutsedge, yellow
velvetleaf

CROP

corn, field

Bryan Young

PLANT, SOIL AND GENERAL AGRICULTURE DEPARTMENT

SOUTHERN ILLINOIS UNIVERSITY

DuPont Sales Demonstration in Conventional Corn.

Project Code: 02-21S-ME40 Location: Belleville Research Center

Investigator: Bryan Young, Assistant Professor, Southern Illinois University

City State Zip Country: Belleville IL 62221 USA
 Trial Status: Final Updated: 10-24-02

Objective:

Demonstrate the performance of DuPont herbicide programs
 in conventional corn.

Weed Code	Common Name	Scientific Name
1. SETFA	foxtail, giant	Setaria faberi Herrm.
2. CYPES	nutsedge, yellow	Cyperus esculentus L.
3. XANST	cocklebur, common	Xanthium strumarium L.
4. ABUTH	velvetleaf	Abutilon theophrasti Medicus

Crop 1:	ZEAMX	corn, field	Variety:	Pioneer 33P69LL
Planting Method:	Seeded		Planting Date:	5-30-02
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, 2001						

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

Soil Name:	Ebbert	% OM:	1.4	pH:	5.7	CEC:	14
Texture:	Silt loam	Fert. Level:	P1: 97 LB/A, K: 291 LB/A				

APPLICATION DESCRIPTION

	A	B	C
Application Date:	5-30-02	6-6-02	6-17-02
Time of Day:	18:00	10:30	12:00
Application Method:	Spray	Spray	Spray
Application Timing:	PRE	V1	V3-6
Applic. Placement:	BROSOI	BROFOL	BROFOL
Air Temp., Unit:	84 F	72 F	78 F
% Relative Humidity:	48	58	30
Wind Velocity, Unit:	0-3 MPH	0-3 MPH	0-3 MPH
Soil Moisture:	NORMAL	NORMAL	NORMAL
% Cloud Cover:	15	60	15

CROP STAGE AT EACH APPLICATION

	A	B	C
Crop 1 Code, Stage:	ZEAMX NA	ZEAMX V1-V2	ZEAMX V4
Height, Unit:	NA NA	2-4 IN	10-12 IN

WEED STAGE AT EACH APPLICATION

	A	B	C
Weed 1 Code:		SETFA	SETFA
Stage(leaves):		0-2	3-5
Height(inches):		0-1	4-6
Density:		Low	High
Weed 2 Code:		CYPES	CYPES
Stage(leaves):		2-4	5-7
Height(inches):		2-4	4-6
Density:		Low	Medium
Weed 3 Code:		XANST	XANST
Stage(leaves):		0-2	0-4
Height(inches):		0-2	0-5
Density:		Medium	Medium
Weed 4 Code:		ABUTH	ABUTH
Stage(leaves):		0-2	0-5
Height(inches):		0-1	0-5
Density:		Low	Low

APPLICATION EQUIPMENT

	A	B	C
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer
Operating Pressure:	40 PSI	40 PSI	40 PSI
Nozzle Type:	Flat fan	Flat fan	Flat fan
Nozzle Size:	8003	8002	8002
Boom Length, Unit:	7.5 FT	7.5 FT	7.5 FT
Spray Volume, Unit:	20 GPA	20 GPA	20 GPA

NOTES:

Harvested Oct-15-02, (2) 30 inch rows by 27 ft.

DuPont Sales Demonstration in Conventional Corn.

Project Code: 02-21S-ME40 Location: Belleville Research Center

Weed Code								SETFA		CYPES		XANST		ABUTH						
Crop Code								ZEAMX	ZEAMX	ZEAMX	Control	Control	Control	Control	Control					
Rating Data Type								Yield	Injury	Injury	Percent	Percent	Percent	Percent	Percent					
Rating Unit								bu/A	Percent	Percent	Percent	Percent	Percent	Percent	Percent					
Rating Date								10-15-02	7-1-02	7-15-02	7-1-02	7-15-02	7-1-02	7-15-02	7-1-02					
Trt-Eval Interval								14 DA-C	28 DA-C	14 DA-C	28 DA-C	14 DA-C	28 DA-C	14 DA-C	28 DA-C					
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code											
1	NONTREATED									27	0	0	0	0	0					
2	BASIS	75	WG	0.035	LB A/A	0.75	OZ/A	PRE	A	116	0	0	62	55	10	0	65	53	55	15
2	AATREX	90	WG	1.0	LB A/A	1.11	LB/A	PRE	A											
2	PRINCEP	90	WG	1.0	LB A/A	1.11	LB/A	PRE	A											
3	LEADOFF	5	L	1.56	LB A/A	2.5	PT/A	V1	B	158	0	0	98	98	85	83	96	95	99	98
3	STEADFAST	75	WG	0.035	LB A/A	0.75	OZ/A	V1	B											
3	CALLISTO	4	SC	0.047	LB A/A	1.5	OZ/A	V1	B											
3	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	%V/V	V1	B											
3	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	V1	B											
4	STEADFAST	75	WG	0.035	LB A/A	0.75	OZ/A	V3-6	C	149	0	0	92	95	83	57	99	99	99	99
4	CALLISTO	4	SC	0.0625	LB A/A	2	OZ/A	V3-6	C											
4	AATREX	90	WG	1.0	LB A/A	1.11	LB/A	V3-6	C											
4	PRIME OIL COC	100	LIQ	1.0	% V/V	1	%V/V	V3-6	C											
4	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	V3-6	C											
5	LEADOFF	5	L	0.94	LB A/A	1.5	PT/A	PRE	A	123	0	0	98	97	92	90	88	86	85	96
5	STEADFAST	75	WG	0.035	LB A/A	0.75	OZ/A	V3-6	C											
5	PRIME OIL COC	100	LIQ	1.0	% V/V	1	%V/V	V3-6	C											
5	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	V3-6	C											
6	LEADOFF	5	L	0.94	LB A/A	1.5	PT/A	PRE	A	149	0	0	94	97	88	85	97	97	87	92
6	STEADFAST	75	WG	0.035	LB A/A	0.75	OZ/A	V3-6	C											
6	CLARITY	4	EC	0.125	LB A/A	4	OZ/A	V3-6	C											
6	PRIME OIL COC	100	LIQ	1.0	% V/V	1	%V/V	V3-6	C											
6	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	V3-6	C											
7	LEADOFF	5	L	0.94	LB A/A	1.5	PT/A	PRE	A	162	0	0	97	98	94	90	98	97	98	99
7	STEADFAST	75	WG	0.035	LB A/A	0.75	OZ/A	V3-6	C											
7	DISTINCT	70	WG	0.175	LB A/A	4	OZ/A	V3-6	C											
7	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	%V/V	V3-6	C											
7	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	V3-6	C											
8	LEADOFF	5	L	0.94	LB A/A	1.5	PT/A	PRE	A	162	0	0	95	98	93	87	98	98	93	95
8	STEADFAST	75	WG	0.035	LB A/A	0.75	OZ/A	V3-6	C											
8	MARKSMAN	3.2	L	0.4	LB A/A	1	PT/A	V3-6	C											
8	PRIME OIL COC	100	LIQ	1.0	% V/V	1	%V/V	V3-6	C											
8	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	V3-6	C											

Weed Code									SETFA	SETFA	CYPES	CYPES	XANST	XANST	ABUTH	ABUTH				
Crop Code									ZEAMX	ZEAMX	ZEAMX									
Rating Data Type									Yield	Injury	Injury	Control	Control	Control	Control	Control				
Rating Unit									bu/A	Percent	Percent	Percent	Percent	Percent	Percent	Percent				
Rating Date									10-15-02	7-1-02	7-15-02	7-1-02	7-15-02	7-1-02	7-15-02	7-1-02				
Trt-Eval Interval									14 DA-C	28 DA-C	14 DA-C	28 DA-C	14 DA-C	28 DA-C	14 DA-C	28 DA-C				
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code											
9	LEADOFF	5	L	0.94	LB A/A	1.5	PT/A	PRE	A	154	0	0	97	97	96	91	98	99	99	99
9	STEADFAST	75	WG	0.035	LB A/A	0.75	OZ/A	V3-6	C											
9	CALLISTO	4	SC	0.047	LB A/A	1.5	OZ/A	V3-6	C											
9	AATREX	90	WG	0.5	LB A/A	8.9	OZ/A	V3-6	C											
9	PRIME OIL COC	100	LIQ	1.0	% V/V	1	%V/V	V3-6	C											
9	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	V3-6	C											
10	OPTION	35	WG	0.0328	LB A/A	1.5	OZ/A	V3-6	C	132	0	0	88	73	68	70	99	99	99	99
10	CALLISTO	4	SC	0.0625	LB A/A	2	OZ/A	V3-6	C											
10	AATREX	90	WG	1.0	LB A/A	1.11	LB/A	V3-6	C											
10	PRIME OIL COC	100	LIQ	1.0	% V/V	1	%V/V	V3-6	C											
10	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	V3-6	C											
11	BALANCE PRO	4	SC	0.047	LB A/A	1.5	OZ/A	PRE	A	152	0	0	96	93	67	37	99	99	99	99
11	OPTION	35	WG	0.0328	LB A/A	1.5	OZ/A	V3-6	C											
11	AATREX	90	WG	1.0	LB A/A	1.11	LB/A	V3-6	C											
11	DESTINY MSO	100	LIQ	1.0	% V/V	1	%V/V	V3-6	C											
11	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	V3-6	C											
12	NONTREATED									33	0	0	0	0	0	0	0	0	0	0
LSD (P=.05)										31.7	0.0	0.0	5.5	7.3	10.5	9.6	3.1	4.1	3.3	8.5
Replicate F										2.446	0.000	0.000	1.504	0.227	1.998	2.196	0.603	0.448	1.159	0.772
Replicate Prob(F)										0.1099	1.0000	1.0000	0.2442	0.7990	0.1594	0.1351	0.5558	0.6445	0.3341	0.4749
Treatment F										19.201	0.000	0.000	387.340	228.104	115.095	136.826	1270.077	756.662	1129.970	209.996
Treatment Prob(F)										0.0001	1.0000	1.0000	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

DuPont Sales Demonstration in Conventional Corn.

Project Code: 02-21S-ME40 Location: Belleville Research Center

Trial Comments

1. Protocol: DuPont.
2. DA-C = days after V3-6 application.
3. 14 DA-C was also 32 and 25 days after PRE and V1 applications, respectively.
28 DA-C was also 46 and 39 days after PRE and V1 applications, respectively.