

Two Pass Herbicide Programs.

00-21S-MMW80

OBJECTIVE: Evaluate two-pass herbicide programs in corn.

SUMMARY: Corn injury ranged from 0 to 15% at 14 days after the postemergence herbicide applications (DAPO). The greatest level of corn injury was observed from treatments that included Marksman, Distinct or Hornet. No corn injury was observed from any treatment by 56 DAPO.

All herbicide treatments except Degree followed by Permit controlled at least 92% of giant foxtail at 56 DAPO. Yellow nutsedge and velvetleaf control was good from all treatments except Frontier followed by Clarity. Treatments that included Hornet or Basis Gold provided the greatest control of ivyleaf morningglory. Common cocklebur control was at least 87% from all herbicide treatments at 28 DAPO. However, by 56 DAPO common cocklebur control had declined for most treatments, ranging from 73 to 94%.

Corn yield ranged from 83 bu/A in the nontreated plots to 184 bu/A.

HERBICIDES	WEEDS	CROP
AATREX 90 WG	COCKLEBUR, COMMON	CORN, FIELD
AIM 40 WG	FOXTAIL, GIANT	
BANVEL 4 EC	MORNINGGLORY, IVYLEAF	
BASIS 75 WG	NUTSEGE, YELLOW	
BASIS GOLD 90 WG	VELVETLEAF	
BICEP II MAGNUM 5.5 L		
BICEP LITE II MAGNUM 6 L		
CLARITY 4 EC		
DEGREE 3.8 ME		
DISTINCT 70 WG		
DUAL II MAGNUM 7.64 EC		
FRONTIER 6.0 6 EC		
HARNESS XTRA 5.6 L		
HARNESS XTRA 6 L		
HORNET 68.5 WG		
LEADOFF 5 L		
MARKSMAN 3.2 L		
NORTHSTAR 47.4 WG		
PERMIT 75 WG		
SPIRIT 57 WG		
TOPNOTCH 3.2 ME		
ZA1296 4 EC		

Bryan Young

PLANT, SOIL AND GENERAL AGRICULTURE DEPARTMENT

SOUTHERN ILLINOIS UNIVERSITY

Two Pass Herbicide Programs.

Project Code: 00-21S-MMW80 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. ABUTH	VELVETLEAF	ABUTILON THEOPHRASTI MEDIK.
4. IPOHE	MORNINGGLORY, IVYLEAF	IPOMOEA HEDERACEA (L.) JACQ.
5. XANST	COCKLEBUR, COMMON	XANTHIUM STRUMARIUM L. SSP. STRUMARIUM

Crop 1:	ZEAMX CORN, FIELD	Variety:	DK 626 RR
Planting Method:	SEEDED	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:	30 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 50 LB/A,	K ₂ O 150 LB/A

Soil Name:	EBBERT	% OM:	2.6	pH:	5.7	CEC:	14
Texture:	SILT LOAM	P ₁ :	72 LB/A,	K:	351 LB/A		

APPLICATION DESCRIPTION

	A	B	C
Application Date:	May-5-00	May-19-00	May-25-00
Time of Day:	17:00	6:30	16:00
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	PRE	3-5"CN	2-4"W
Applic. Placement:	BROSOL	BROFOL	BROFOL
Air Temp., Unit:	80 F	68 F	80 F
% Relative Humidity:	96	98	18
Wind Velocity, Unit:	5 MPH	4-6 MPH	0 MPH
Soil Moisture:	DRY	NORMAL	NORMAL
% Cloud Cover:		100	0

CROP STAGE AT EACH APPLICATION

	A	B	C
Crop 1 Code, Stage:	NA	ZEAMX V2	ZEAMX V3-V4
Height, Unit:	NA	4-5 IN	8-10 IN

WEED STAGE AT EACH APPLICATION

	A	B	C
Weed 1 Code:		SETFA	SETFA
Stage(leaves):		2-3	3-4
Height(inches):		1-2	2-3
Density:		high	LOW
Weed 2 Code:		CYPES	CYPES
Stage(leaves):		4-5	4-5
Height(inches):		2-3	3-5
Density:		MEDIUM	LOW
Weed 3 Code:		ABUTH	ABUTH
Stage(leaves):		1-2	3-4
Height(inches):		1-2	2-3
Density:		MEDIUM	LOW
Weed 4 Code:		IPOHE	IPOHE
Stage(leaves):		COTL-1	2-4
Height(inches):		1-2	2-3
Density:		MEDIUM	MEDIUM
Weed 5 Code:		XANST	XANST
Stage(leaves):		2-3	4-5
Height(inches):		2-3	2-4
Density:		HIGH	MEDIUM

APPLICATION EQUIPMENT

	A	B	C
Appl. Equipment:	CO, SPRAY	CO, SPRAY	CO, SPRAY
Operating Pressure:	40 PSI	40 PSI	40 PSI
Nozzle Type:	FLAT FAN	FLAT FAN	FLAT FAN
Nozzle Size:	8003	8002	8002
Boom Length, Unit:	7.33 FT	7.33 FT	7.33 FT
Spray Volume, Unit:	20 GPA	20 GPA	20 GPA

NOTES:

Harvested Sep-27-00, (2) 30 inch rows by 22 ft.

TABLE. TWO PASS HERBICIDE PROGRAMS. PROJECT CODE:00-21S-MMW80

TREATMENT	FORM.	RATE	UNIT	PROD RATE	APPL TIME	APPL CODE	YIELD	CONTROL															
								ZEAMX INJURY								SETFA				XANST			
								AT		DAT				AT		DAT		AT		DAT			
								3-5"CN	14	28	56	3-5"CN	14	28	56	3-5"CN	14	28	56				
							BU/A	%	%	%	%	%	%	%	%	%	%	%	%				
1 NONTREATED							83	0	0	0	0	0	0	0	0	0	0	0	0	0			
2 DUAL II MAGNUM	7.64 EC	1.27 LB A/A	1.33 PT/A	PRE	A	144	144	0	7	0	0	99	98	99	95	0	85	92	83				
2 NORTHSTAR	47.4 WG	0.148 LB A/A	5.0 OZ/A	2-4"W	C																		
2 ACTIVATOR 90	100 LIQ	0.25 % V/V	0.25 %V/V	2-4"W	C																		
2 AMS	100 DRY	2.5 LB/A	2.5 LB/A	2-4"W	C																		
3 DUAL II MAGNUM	7.64 EC	1.27 LB A/A	1.33 PT/A	PRE	A	156	156	0	3	0	0	99	97	98	95	0	87	94	83				
3 SPIRIT	57 WG	0.0356 LB A/A	1.0 OZ/A	2-4"W	C																		
3 PRIME OIL COC	100 LIQ	2.0 PT/A	2.0 PT/A	2-4"W	C																		
3 AMS	100 DRY	2.5 LB/A	2.5 LB/A	2-4"W	C																		
4 BICEP LITE II MAGNUM	6 L	2.25 LB A/A	3.0 PT/A	PRE	A	165	165	0	3	0	0	99	99	98	95	73	93	93	91				
4 NORTHSTAR	47.4 WG	0.148 LB A/A	5.0 OZ/A	2-4"W	C																		
4 ACTIVATOR 90	100 LIQ	0.25 % V/V	0.25 %V/V	2-4"W	C																		
4 AMS	100 DRY	2.5 LB/A	2.5 LB/A	2-4"W	C																		
5 BICEP LITE II MAGNUM	6 L	2.25 LB A/A	3.0 PT/A	PRE	A	166	166	0	0	0	0	99	99	99	95	77	93	97	89				
5 SPIRIT	57 WG	0.0356 LB A/A	1.0 OZ/A	2-4"W	C																		
5 PRIME OIL COC	100 LIQ	2.0 PT/A	2.0 PT/A	2-4"W	C																		
5 AMS	100 DRY	2.5 LB/A	2.5 LB/A	2-4"W	C																		
6 FRONTIER 6.0	6 EC	1.17 LB A/A	25.0 OZ/A	PRE	A	149	149	0	5	0	0	99	96	99	93	0	82	87	73				
6 CLARITY	4 EC	0.25 LB A/A	0.5 PT/A	2-4"W	C																		
6 ACTIVATOR 90	100 LIQ	0.25 % V/V	0.25 %V/V	2-4"W	C																		
6 AMS	100 DRY	2.5 LB/A	2.5 LB/A	2-4"W	C																		
7 FRONTIER 6.0	6 EC	1.17 LB A/A	25.0 OZ/A	PRE	A	141	141	0	15	3	2	99	98	99	95	0	96	98	91				
7 MARKSMAN	3.2 L	1.2 LB A/A	3.0 PT/A	2-4"W	C																		
7 ACTIVATOR 90	100 LIQ	0.25 % V/V	0.25 %V/V	2-4"W	C																		
7 AMS	100 DRY	2.5 LB/A	2.5 LB/A	2-4"W	C																		
8 FRONTIER 6.0	6 EC	1.17 LB A/A	25.0 OZ/A	PRE	A	156	156	0	12	0	0	99	99	99	95	0	88	87	86				
8 DISTINCT	70 WG	0.2625 LB A/A	6.0 OZ/A	2-4"W	C																		
8 ACTIVATOR 90	100 LIQ	0.25 % V/V	0.25 %V/V	2-4"W	C																		
8 AMS	100 DRY	2.5 LB/A	2.5 LB/A	2-4"W	C																		
9 TOPNOTCH	3.2 ME	1.6 LB A/A	4.0 PT/A	PRE	A	174	174	0	7	0	0	99	98	99	95	0	85	99	85				
9 HORNET	68.5 WG	0.128 LB A/A	3.0 OZ/A	2-4"W	C																		
9 ACTIVATOR 90	100 LIQ	0.25 % V/V	0.25 %V/V	2-4"W	C																		
9 AMS	100 DRY	2.5 LB/A	2.5 LB/A	2-4"W	C																		
10 HARNESS XTRA	6 L	2.7 LB A/A	3.6 PT/A	PRE	A	164	164	0	0	0	0	99	99	98	95	83	96	96	93				
10 PERMIT	75 WG	0.031 LB A/A	0.66 OZ/A	2-4"W	C																		
10 PRIME OIL COC	100 LIQ	2.0 PT/A	2.0 PT/A	2-4"W	C																		
10 AMS	100 DRY	2.5 LB/A	2.5 LB/A	2-4"W	C																		

(CONTINUED)

TABLE. TWO PASS HERBICIDE PROGRAMS. PROJECT CODE:00-21S-MMW80 (CONTINUED)

TREATMENT	FORM.	RATE	UNIT	PROD RATE	APPL TIME	APPL CODE	YIELD	CONTROL												
								ZEAMX INJURY				SETFA				XANST				
								AT	DAT			AT	DAT			AT	DAT			
3-5"CN	14	28	56	3-5"CN	14	28	56	3-5"CN	14	28	56									
							BU/A	%	%	%	%	%	%	%	%	%	%	%		
11 LEADOFF	5 L	1.25	LB A/A	2.0	PT/A	PRE	A	163	0	0	0	0	99	99	99	95	63	96	98	93
11 79406	75 WG	0.0234	LB A/A	0.5	OZ/A	2-4"W	C													
11 HORNET	68.5 WG	0.128	LB A/A	3.0	OZ/A	2-4"W	C													
11 ACTIVATOR 90	100 LIQ	0.25	% V/V	0.25	%V/V	2-4"W	C													
11 AMS	100 DRY	2.5	LB/A	2.5	LB/A	2-4"W	C													
12 LEADOFF	5 L	1.25	LB A/A	2.0	PT/A	PRE	A	171	0	3	0	0	99	98	99	95	75	83	82	75
12 BASIS GOLD	90 WG	0.7875	LB A/A	14.0	OZ/A	2-4"W	C													
12 PRIME OIL COC	100 LIQ	2.0	PT/A	2.0	PT/A	2-4"W	C													
12 AMS	100 DRY	2.5	LB/A	2.5	LB/A	2-4"W	C													
13 DEGREE	3.8 ME	1.543	LB A/A	3.25	PT/A	PRE	A	162	0	5	0	0	99	90	96	85	0	90	99	87
13 PERMIT	75 WG	0.031	LB A/A	0.66	OZ/A	2-4"W	C													
13 PRIME OIL COC	100 LIQ	2.0	PT/A	2.0	PT/A	2-4"W	C													
13 AMS	100 DRY	2.5	LB/A	2.5	LB/A	2-4"W	C													
14 HARNESS XTRA	5.6 L	2.8	LB A/A	4.0	PT/A	PRE	A	173	0	2	0	0	99	99	98	95	87	96	96	90
14 PERMIT	75 WG	0.031	LB A/A	0.66	OZ/A	2-4"W	C													
14 PRIME OIL COC	100 LIQ	2.0	PT/A	2.0	PT/A	2-4"W	C													
14 AMS	100 DRY	2.5	LB/A	2.5	LB/A	2-4"W	C													
15 TOPNOTCH	3.2 ME	1.6	LB A/A	4.0	PT/A	PRE	A	177	0	5	0	0	99	99	99	95	0	96	98	93
15 ZA1296	4 EC	0.094	LB A/A	3.0	OZ/A	2-4"W	C													
15 PRIME OIL COC	100 LIQ	2.0	PT/A	2.0	PT/A	2-4"W	C													
15 AMS	100 DRY	2.5	LB/A	2.5	LB/A	2-4"W	C													
16 DUAL II MAGNUM	7.64 EC	1.27	LB A/A	1.33	PT/A	PRE	A	168	0	10	0	0	99	96	99	95	0	83	87	73
16 AIM	40 WG	0.008	LB A/A	0.32	OZ/A	2-4"W	C													
16 AATREX	90 WG	0.75	LB A/A	13.3	OZ/A	2-4"W	C													
16 ACTIVATOR 90	100 LIQ	0.25	% V/V	0.25	%V/V	2-4"W	C													
17 DUAL II MAGNUM	7.64 EC	1.27	LB A/A	1.33	PT/A	PRE	A	168	0	7	0	0	99	96	97	95	0	90	88	81
17 AIM	40 WG	0.008	LB A/A	0.32	OZ/A	2-4"W	C													
17 BANVEL	4 EC	0.125	LB A/A	4.0	OZ/A	2-4"W	C													
17 ACTIVATOR 90	100 LIQ	0.25	% V/V	0.25	%V/V	2-4"W	C													
18 DUAL II MAGNUM	7.64 EC	1.27	LB A/A	1.33	PT/A	PRE	A	184	0	7	0	0	99	98	99	95	0	92	92	83
18 AIM	40 WG	0.008	LB A/A	0.32	OZ/A	2-4"W	C													
18 BASIS GOLD	90 WG	0.78	LB A/A	14.0	OZ/A	2-4"W	C													
18 PRIME OIL COC	100 LIQ	1.0	% V/V	1.0	%V/V	2-4"W	C													
18 28% UAN	100 LIQ	4.0	QT/A	4.0	QT/A	2-4"W	C													
19 DUAL II MAGNUM	7.64 EC	1.27	LB A/A	1.33	PT/A	PRE	A	162	0	10	0	0	99	95	97	92	0	82	78	68
19 AIM	40 WG	0.008	LB A/A	0.32	OZ/A	2-4"W	C													
19 HORNET	68.5 WG	0.128	LB A/A	3.0	OZ/A	2-4"W	C													
19 ACTIVATOR 90	100 LIQ	0.25	% V/V	0.25	%V/V	2-4"W	C													
19 AMS	100 DRY	2.0	% W/W	2.0	%W/W	2-4"W	C													

(CONTINUED)

TABLE. TWO PASS HERBICIDE PROGRAMS. PROJECT CODE:00-21S-MMW80 (CONTINUED)

TREATMENT	FORM.	RATE	UNIT	PROD RATE	APPL TIME	APPL CODE	YIELD	CONTROL												
								ZEAMX INJURY				SETFA				XANST				
								AT	DAT			AT	DAT			AT	DAT			
3-5"CN	14	28	56	3-5"CN	14	28	56	3-5"CN	14	28	56									
							BU/A	%	%	%	%	%	%	%	%	%	%	%		
20 DUAL II MAGNUM	7.64 EC	1.27	LB A/A	1.33	PT/A	PRE	A	167	0	8	0	0	99	96	98	93	0	92	94	85
20 AIM	40 WG	0.008	LB A/A	0.32	OZ/A	2-4"W	C													
20 NORTHSTAR	47.4 WG	0.15	LB A/A	5.1	OZ/A	2-4"W	C													
20 ACTIVATOR 90	100 LIQ	0.25	% V/V	0.25	%V/V	2-4"W	C													
21 BICEP II MAGNUM	5.5 L	2.89	LB A/A	2.1	QT/A	3-5"CN	B	167		12	12	0		98	96	99		97	96	94
21 HORNET	68.5 WG	0.128	LB A/A	3.0	OZ/A	3-5"CN	B													
21 PRIME OIL COC	100 LIQ	1.0	% V/V	1.0	%V/V	3-5"CN	B													
21 AMS	100 DRY	2.0	% W/W	2.0	%W/W	3-5"CN	B													
22 DUAL II MAGNUM	7.64 EC	1.27	LB A/A	1.33	PT/A	PRE	A	161	0	5	0	0	99	99	99	95	0	88	99	89
22 HORNET	68.5 WG	0.128	LB A/A	3.0	OZ/A	2-4"W	C													
22 AATREX	90 WG	1.0	LB A/A	1.11	LB/A	2-4"W	C													
22 PRIME OIL COC	100 LIQ	1.0	% V/V	1.0	%V/V	2-4"W	C													
22 AMS	100 DRY	2.0	% W/W	2.0	%W/W	2-4"W	C													
23 DUAL II MAGNUM	7.64 EC	1.27	LB A/A	1.33	PT/A	PRE	A	162	0	3	0	0	99	97	98	95	0	87	99	86
23 HORNET	68.5 WG	0.128	LB A/A	3.0	OZ/A	2-4"W	C													
23 CLARITY	4 EC	0.125	LB A/A	4.0	OZ/A	2-4"W	C													
23 ACTIVATOR 90	100 LIQ	0.25	% V/V	0.25	%V/V	2-4"W	C													
23 AMS	100 DRY	2.0	% W/W	2.0	%W/W	2-4"W	C													
24 BASIS	75 WG	0.02344	LB A/A	0.5	OZ/A	PRE	A	172	0	5	0	0	98	98	99	95	88	90	87	81
24 AATREX	90 WG	1.5	LB A/A	1.67	LB/A	PRE	A													
24 BASIS GOLD	90 WG	0.78	LB A/A	14.0	OZ/A	2-4"W	C													
24 PRIME OIL COC	100 LIQ	1.0	% V/V	1.0	%V/V	2-4"W	C													
24 28% UAN	100 LIQ	2.5	% V/V	2.5	%V/V	2-4"W	C													
LSD								18	0	7	2	1	1	3	2	2	13	7	8	9
P								0.01	1.0	0.01	0.01	0.5	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01

(CONTINUED)

TABLE. TWO PASS HERBICIDE PROGRAMS. PROJECT CODE:00-21S-MMW80 (CONTINUED)

TREATMENT	FORM.	RATE	UNIT	PROD RATE	APPL TIME	APPL CODE	CONTROL											
							IPOHE				ABUTH				CYPES			
							AT	DAT			AT	DAT			DAT			
							3-5"CN	14	28	56	3-5"CN	14	28	56	14	28	56	
												%	%	%	%	%	%	%
1 NONTREATED							0	0	0	0	0	0	0	0	0	0	0	0
2 DUAL II MAGNUM	7.64 EC	1.27	LB A/A	1.33	PT/A	PRE	A	0	75	82	73	0	92	93	90	96	95	93
2 NORTHSTAR	47.4 WG	0.148	LB A/A	5.0	OZ/A	2-4"W	C											
2 ACTIVATOR 90	100 LIQ	0.25	% V/V	0.25	%V/V	2-4"W	C											
2 AMS	100 DRY	2.5	LB/A	2.5	LB/A	2-4"W	C											
3 DUAL II MAGNUM	7.64 EC	1.27	LB A/A	1.33	PT/A	PRE	A	0	75	70	68	0	98	98	95	96	98	93
3 SPIRIT	57 WG	0.0356	LB A/A	1.0	OZ/A	2-4"W	C											
3 PRIME OIL COC	100 LIQ	2.0	PT/A	2.0	PT/A	2-4"W	C											
3 AMS	100 DRY	2.5	LB/A	2.5	LB/A	2-4"W	C											
4 BICEP LITE II MAGNUM	6 L	2.25	LB A/A	3.0	PT/A	PRE	A	93	93	80	90	93	98	95	93	97	98	93
4 NORTHSTAR	47.4 WG	0.148	LB A/A	5.0	OZ/A	2-4"W	C											
4 ACTIVATOR 90	100 LIQ	0.25	% V/V	0.25	%V/V	2-4"W	C											
4 AMS	100 DRY	2.5	LB/A	2.5	LB/A	2-4"W	C											
5 BICEP LITE II MAGNUM	6 L	2.25	LB A/A	3.0	PT/A	PRE	A	93	95	88	89	93	98	97	95	96	95	95
5 SPIRIT	57 WG	0.0356	LB A/A	1.0	OZ/A	2-4"W	C											
5 PRIME OIL COC	100 LIQ	2.0	PT/A	2.0	PT/A	2-4"W	C											
5 AMS	100 DRY	2.5	LB/A	2.5	LB/A	2-4"W	C											
6 FRONTIER 6.0	6 EC	1.17	LB A/A	25.0	OZ/A	PRE	A	0	75	68	57	0	65	53	60	93	78	78
6 CLARITY	4 EC	0.25	LB A/A	0.5	PT/A	2-4"W	C											
6 ACTIVATOR 90	100 LIQ	0.25	% V/V	0.25	%V/V	2-4"W	C											
6 AMS	100 DRY	2.5	LB/A	2.5	LB/A	2-4"W	C											
7 FRONTIER 6.0	6 EC	1.17	LB A/A	25.0	OZ/A	PRE	A	0	97	95	91	0	91	95	93	95	90	93
7 MARKSMAN	3.2 L	1.2	LB A/A	3.0	PT/A	2-4"W	C											
7 ACTIVATOR 90	100 LIQ	0.25	% V/V	0.25	%V/V	2-4"W	C											
7 AMS	100 DRY	2.5	LB/A	2.5	LB/A	2-4"W	C											
8 FRONTIER 6.0	6 EC	1.17	LB A/A	25.0	OZ/A	PRE	A	0	82	73	70	0	83	86	83	97	87	93
8 DISTINCT	70 WG	0.2625	LB A/A	6.0	OZ/A	2-4"W	C											
8 ACTIVATOR 90	100 LIQ	0.25	% V/V	0.25	%V/V	2-4"W	C											
8 AMS	100 DRY	2.5	LB/A	2.5	LB/A	2-4"W	C											
9 TOPNOTCH	3.2 ME	1.6	LB A/A	4.0	PT/A	PRE	A	0	85	78	80	0	95	95	93	90	80	88
9 HORNET	68.5 WG	0.128	LB A/A	3.0	OZ/A	2-4"W	C											
9 ACTIVATOR 90	100 LIQ	0.25	% V/V	0.25	%V/V	2-4"W	C											
9 AMS	100 DRY	2.5	LB/A	2.5	LB/A	2-4"W	C											
10 HARNESS XTRA	6 L	2.7	LB A/A	3.6	PT/A	PRE	A	96	92	87	89	96	97	96	95	97	99	95
10 PERMIT	75 WG	0.031	LB A/A	0.66	OZ/A	2-4"W	C											
10 PRIME OIL COC	100 LIQ	2.0	PT/A	2.0	PT/A	2-4"W	C											
10 AMS	100 DRY	2.5	LB/A	2.5	LB/A	2-4"W	C											

(CONTINUED)

TABLE. TWO PASS HERBICIDE PROGRAMS. PROJECT CODE:00-21S-MMW80 (CONTINUED)

TREATMENT	FORM.	RATE	UNIT	PROD RATE	APPL TIME	APPL CODE	CONTROL											
							IPOHE				ABUTH				CYPES			
							AT	DAT			AT	DAT			DAT			
							3-5"CN	14	28	56	3-5"CN	14	28	56	14	28	56	
							%	%	%	%					%	%	%	
20 DUAL II MAGNUM	7.64 EC	1.27	LB A/A	1.33	PT/A	PRE	A	0	92	90	86	0	97	95	92	95	88	92
20 AIM	40 WG	0.008	LB A/A	0.32	OZ/A	2-4"W	C											
20 NORTHSTAR	47.4 WG	0.15	LB A/A	5.1	OZ/A	2-4"W	C											
20 ACTIVATOR 90	100 LIQ	0.25	% V/V	0.25	%V/V	2-4"W	C											
21 BICEP II MAGNUM	5.5 L	2.89	LB A/A	2.1	QT/A	3-5"CN	B		95	93	95		99	96	99	98	98	99
21 HORNET	68.5 WG	0.128	LB A/A	3.0	OZ/A	3-5"CN	B											
21 PRIME OIL COC	100 LIQ	1.0	% V/V	1.0	%V/V	3-5"CN	B											
21 AMS	100 DRY	2.0	% W/W	2.0	%W/W	3-5"CN	B											
22 DUAL II MAGNUM	7.64 EC	1.27	LB A/A	1.33	PT/A	PRE	A	0	93	95	88	0	92	98	92	97	94	95
22 HORNET	68.5 WG	0.128	LB A/A	3.0	OZ/A	2-4"W	C											
22 AATREX	90 WG	1.0	LB A/A	1.11	LB/A	2-4"W	C											
22 PRIME OIL COC	100 LIQ	1.0	% V/V	1.0	%V/V	2-4"W	C											
22 AMS	100 DRY	2.0	% W/W	2.0	%W/W	2-4"W	C											
23 DUAL II MAGNUM	7.64 EC	1.27	LB A/A	1.33	PT/A	PRE	A	0	80	83	78	0	97	99	95	96	90	96
23 HORNET	68.5 WG	0.128	LB A/A	3.0	OZ/A	2-4"W	C											
23 CLARITY	4 EC	0.125	LB A/A	4.0	OZ/A	2-4"W	C											
23 ACTIVATOR 90	100 LIQ	0.25	% V/V	0.25	%V/V	2-4"W	C											
23 AMS	100 DRY	2.0	% W/W	2.0	%W/W	2-4"W	C											
24 BASIS	75 WG	0.02344	LB A/A	0.5	OZ/A	PRE	A	97	96	93	89	96	97	99	95	94	80	93
24 AATREX	90 WG	1.5	LB A/A	1.67	LB/A	PRE	A											
24 BASIS GOLD	90 WG	0.78	LB A/A	14.0	OZ/A	2-4"W	C											
24 PRIME OIL COC	100 LIQ	1.0	% V/V	1.0	%V/V	2-4"W	C											
24 28% UAN	100 LIQ	2.5	% V/V	2.5	%V/V	2-4"W	C											
LSD								6	8	11	7	5	10	6	11	5	7	9
P								0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01

1. PROTOCOL: NOVATIS TRTS 1-15 (SPC02A); FMC TRTS 16-20; DOW TRTS 19, 21-23; DUPONT TRT 24.
2. RATING DATES:
 AT 3-5"CN WAS ON MAY-19-00.
 14 DAYS AFTER 3-5"CN AND 2-4"W APPLICATIONS ON JUN-2-00 AND JUN-8-00, RESPECTIVELY.
 28 DAYS AFTER 3-5"CN AND 2-4"W APPLICATIONS ON JUN-16-00 AND JUN-22-00, RESPECTIVELY.
 56 DAYS AFTER 3-5"CN AND 2-4"W APPLICATIONS ON JUL-14-00 AND JUL-20-00, RESPECTIVELY.