

Weed Management in Roundup Ready Soybean.

01-11B

OBJECTIVE: Evaluate various treatments for use in Roundup Ready soybean with focus on application timing and rate.

SUMMARY: No soybean injury was observed in this study. All herbicide treatments controlled at least 90% of giant foxtail and common cocklebur at 14 days after the post application (DAPO). Waterhemp control 14 DAPO was at least 90% from all treatments except Roundup Ultra Max or Touchdown applied when weeds were 10 to 12 inches in height. Roundup Ultra Max or Touchdown applied at 10 to 12 inch weed height controlled only 37 to 53% of waterhemp. By 28 DAPO, only Roundup Ultra Max at 3.2 pt/A and Touchdown at 4 pt/A applied when weeds were 4 to 6 inches controlled at least 90% of waterhemp. Treatments that included a preemergence herbicide provided the greatest control of ivyleaf morningglory and velvetleaf.

Soybean yield tended to be greatest in plots that included a PRE herbicide treatment.

HERBICIDES

CANOPY XL 56.3 WG
 FIRSTRATE 84 WG
 GLYPHOMAX PLUS 3 SL
 PYTHON 80 WG
 ROUNDUP ULTRA MAX 3.7 SL
 TOUCHDOWN 3 SL
 VALOR 50 WG

WEEDS

cocklebur, common
 foxtail, giant
 morningglory, ivyleaf
 velvetleaf
 waterhemp, common

CROP

soybean

Bryan Young

PLANT, SOIL AND GENERAL AGRICULTURE DEPARTMENT

SOUTHERN ILLINOIS UNIVERSITY

Weed Management in Roundup Ready Soybean.

Project Code: 01-11B Location: Belleville Research Center

Investigator: Bryan Young, Assistant Professor, Southern Illinois University

City State Zip Country: Belleville IL 62221 USA
 Trial Status: Final Initiation Date: 4-25-01

Objective:

Evaluate various treatments for use in Roundup Ready soybean with focus on application timing and rate.

Weed Code	Common Name	Scientific Name
1.	SETFA foxtail, giant	Setaria faberi Herrm.
2.	AMATA waterhemp, common	Amaranthus rudis Sauer
3.	IPOHE morningglory, ivyleaf	Ipomoea hederacea (L.) Jacq.
4.	XANST cocklebur, common	Xanthium strumarium L.
5.	ABUTH velvetleaf	Abutilon theophrasti Medicus

Crop 1:	GLXMA soybean	Variety:	B-T 371CR
Planting Method:	Seeded	Planting Date:	5-11-01
Rate:	75 LB/A	Depth:	1.0 IN
Row Spacing:	30 IN		

Plot Width, Unit:	10 FT	Plot Length, Unit:	26 FT	Reps:	3
Tillage Type:	Reduced-Till	Study Design:	Randomized complete block		
Previous Crop, Year:	ZEAMX, 2000				
Field Prep./Maintenance:	N 0 LB/A, P205 0 LB/A, K20 150 LB/A				

Soil Name:	Ebbert	% OM:	1.5	pH:	6.5	CEC:	13
Texture:	Silt loam	Fert. Level:	P1: 96 LB/A, K: 265 LB/A				

APPLICATION DESCRIPTION

	A	B	C	D
Application Date:	5-11-01	6-18-01	6-22-01	6-25-01
Time of Day:	16:30	20:00	9:30	11:00
Application Method:	Spray	Spray	Spray	Spray
Application Timing:	PRE	4-6"W-1	4-6"W-2	10-12"W
Applic. Placement:	BROSOI	BROFOL	BROFOL	BROFOL
Air Temp., Unit:	82 F	90 F	70 F	82 F
% Relative Humidity:	44	40	72	48
Wind Velocity, Unit:	0 MPH	3-5 MPH	0-2 MPH	0-3 MPH
Soil Moisture:	BELNOR	BELNOR	ABONOR	NORMAL

CROP STAGE AT EACH APPLICATION

	A	B	C	D
Crop 1 Code, Stage:	GLXMA NA	GLXMA V3	GLXMA V5-V6	GLXMA V6
Height, Unit:	NA NA	4-7 IN	5-7 IN	9-10 IN

WEED STAGE AT EACH APPLICATION

	A	B	C	D
Weed 1 Code:	SETFA	SETFA	SETFA	SETFA
Stage(leaves):		3-4	3-8	6-8
Height(inches):		4-6	2-5	8-12
Density:		High	Medium	High
Weed 2 Code:	AMATA	AMATA	AMATA	AMATA
Stage(leaves):			4-10	6-10+
Height(inches):			3-8	6-10
Density:			Medium	High
Weed 3 Code:	IPOHE	IPOHE	IPOHE	IPOHE
Stage(leaves):			COTL-4	6-8
Height(inches):			1-2	4-8
Density:			Low	Medium

Weed 4 Code:	XANST	XANST	XANST	XANST
Stage(leaves):		4-6	4-12	6-8
Height(inches):		4-6	2-6	8-12
Density:		High	Low	High
Weed 5 Code:	ABUTH	ABUTH	ABUTH	ABUTH
Stage(leaves):		3-4		6-8
Height(inches):		3-4		6-10
Density:		Low		Medium

APPLICATION EQUIPMENT

	A	B	C	D
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer	CO2 sprayer
Operating Pressure:	40 PSI	40 PSI	40 PSI	40 PSI
Nozzle Type:	Flat fan	Flat fan	Flat fan	Flat fan
Nozzle Size:	8002	8002	8002	8002
Boom Length, Unit:	7.5 FT	7.5 FT	7.5 FT	7.5 FT
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA	15 GPA

NOTES: HARVESTED 10-26-01, 2 ROWS X 23 FT.

Weed Management in Roundup Ready Soybean.

Project Code: 01-11B Location: Belleville Research Center

Weed Code										SETFA	SETFA	SETFA	SETFA	AMATA	AMATA	AMATA	AMATA			
Crop Code										GLXMA	GLXMA	GLXMA	GLXMA	GLXMA						
Rating Data Type										Yield	Injury	Injury	Injury	Injury	Control	Control	Control	Control		
Rating Unit										bu/A	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent		
Rating Date										10-26-01	7 DAT	14 DAT	28 DAT	56 DAT	6-21-01	6-21-01	6-21-01	6-21-01		
Trt-Eval Interval										41 DA-A	14 DAT	28 DAT	56 DAT	41 DA-A	14 DAT	28 DAT	56 DAT			
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code											
1	NONTREATED									4	0	0	0	0	0	0	0	0		
2	TOUCHDOWN	3 SL		0.375 LB	AE/A	1 PT/A		4-6"W-1	B	50	0	0	0	0	99	99	99	93	85	82
2	AMS	100 DRY		1.0 %	W/W	8.5 LB/100	GAL	4-6"W-1	B											
3	TOUCHDOWN	3 SL		0.75 LB	AE/A	2 PT/A		4-6"W-1	B	45	0	0	0	0	99	99	99	98	87	82
3	AMS	100 DRY		1.0 %	W/W	8.5 LB/100	GAL	4-6"W-1	B											
4	TOUCHDOWN	3 SL		1.5 LB	AE/A	4 PT/A		4-6"W-1	B	49	0	0	0	0	99	99	98	99	92	85
4	AMS	100 DRY		1.0 %	W/W	8.5 LB/100	GAL	4-6"W-1	B											
5	TOUCHDOWN	3 SL		0.75 LB	AE/A	2 PT/A		4-6"W-1	B	48	0	0	0	0	99	99	99	99	77	75
6	TOUCHDOWN	3 SL		0.825 LB	AE/A	2.2 PT/A		4-6"W-1	B	40	0	0	0	0	99	99	99	96	67	63
7	ROUNDUP ULTRA MAX	3.7 SL		0.375 LB	AE/A	0.8 PT/A		4-6"W-1	B	50	0	0	0	0	99	99	99	99	73	73
7	AMS	100 DRY		1.0 %	W/W	8.5 LB/100	GAL	4-6"W-1	B											
8	ROUNDUP ULTRA MAX	3.7 SL		0.75 LB	AE/A	1.6 PT/A		4-6"W-1	B	49	0	0	0	0	99	99	99	99	78	77
8	AMS	100 DRY		1.0 %	W/W	8.5 LB/100	GAL	4-6"W-1	B											
9	ROUNDUP ULTRA MAX	3.7 SL		1.5 LB	AE/A	3.2 PT/A		4-6"W-1	B	55	0	0	0	0	99	99	99	99	92	88
9	AMS	100 DRY		1.0 %	W/W	8.5 LB/100	GAL	4-6"W-1	B											
10	TOUCHDOWN	3 SL		0.375 LB	AE/A	1 PT/A		10-12"W	D	48	0	0	0	0	99	99	99	47	47	40
10	AMS	100 DRY		1.0 %	W/W	8.5 LB/100	GAL	10-12"W	D											
11	TOUCHDOWN	3 SL		0.75 LB	AE/A	2 PT/A		10-12"W	D	46	0	0	0	0	99	99	99	50	57	53
12	TOUCHDOWN	3 SL		0.75 LB	AE/A	2 PT/A		10-12"W	D	54	0	0	0	0	99	99	99	53	73	73
12	AMS	100 DRY		0.5 %	W/W	4.25 LB/100	GAL	10-12"W	D											
13	TOUCHDOWN	3 SL		0.75 LB	AE/A	2 PT/A		10-12"W	D	45	0	0	0	0	99	99	99	37	52	57
13	AMS	100 DRY		1.0 %	W/W	8.5 LB/100	GAL	10-12"W	D											
14	TOUCHDOWN	3 SL		0.75 LB	AE/A	2 PT/A		10-12"W	D	49	0	0	0	0	99	99	99	40	77	77
14	AMS	100 DRY		1.5 %	W/W	12.75 LB/100	GAL	10-12"W	D											
15	TOUCHDOWN	3 SL		0.75 LB	AE/A	2 PT/A		10-12"W	D	49	0	0	0	0	99	99	99	43	73	73
15	AMS	100 DRY		2.0 %	W/W	17 LB/100	GAL	10-12"W	D											
16	TOUCHDOWN	3 SL		0.825 LB	AE/A	2.2 PT/A		10-12"W	D	52	0	0	0	0	99	99	99	40	88	88
17	TOUCHDOWN	3 SL		1.5 LB	AE/A	4 PT/A		10-12"W	D	52	0	0	0	0	99	99	99	37	85	83
17	AMS	100 DRY		1.0 %	W/W	8.5 LB/100	GAL	10-12"W	D											
18	ROUNDUP ULTRA MAX	3.7 SL		0.375 LB	AE/A	0.8 PT/A		10-12"W	D	49	0	0	0	0	99	99	99	37	65	68
18	AMS	100 DRY		1.0 %	W/W	8.5 LB/100	GAL	10-12"W	D											
19	ROUNDUP ULTRA MAX	3.7 SL		0.75 LB	AE/A	1.6 PT/A		10-12"W	D	45	0	0	0	0	99	99	99	50	67	68
19	AMS	100 DRY		1.0 %	W/W	8.5 LB/100	GAL	10-12"W	D											

Weed Code
 Crop Code
 Rating Data Type
 Rating Unit
 Rating Date
 Trt-Eval Interval

GLXMA GLXMA GLXMA GLXMA GLXMA SETFA SETFA SETFA SETFA AMATA AMATA AMATA AMATA
 Yield Injury Injury Injury Injury Control Control Control Control Control Control Control Control
 bu/A Percent Percent Percent Percent Percent Percent Percent Percent Percent Percent Percent Percent Percent Percent
 10-26-01 7 DAT 14 DAT 28 DAT 56 DAT 41 DA-A 14 DAT 28 DAT 56 DAT 41 DA-A 14 DAT 28 DAT 56 DAT

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	Yield	Injury Percent	Injury Percent	Injury Percent	Injury Percent	Control Percent	Control Percent	Control Percent	Control Percent	Control Percent	Control Percent	Control Percent	Control Percent	Control Percent
20	ROUNDUP ULTRA MAX AMS	3.7	SL	1.5	LB AE/A	3.2	PT/A	10-12"W	D	50	0	0	0	0	99	99	99	99	43	80	77		
		100	DRY	1.0	% W/W	8.5	LB/100 GAL	10-12"W	D														
21	GLYPHOMAX PLUS AMS	3	SL	0.75	LB AE/A	2	PT/A	4-6"W-1	B	51	0	0	0	0	99	99	99	99	99	82	68		
		100	DRY	2.0	% W/W	17	LB/100 GAL	4-6"W-1	B														
22	GLYPHOMAX PLUS AMS	3	SL	0.75	LB AE/A	2	PT/A	4-6"W-1	B	52	0	0	0	0	99	99	99	99	99	72	65		
	FIRSTRATE AMS	84	WG	0.016	LB A/A	0.3	OZ/A	4-6"W-1	B														
		100	DRY	2.0	% W/W	17	LB/100 GAL	4-6"W-1	B														
23	PYTHON AMS	80	WG	0.05	LB A/A	1	OZ/A	PRE	A	52	0	0	0	0	96	99	99	99	0	91	85	82	
	GLYPHOMAX PLUS AMS	3	SL	0.75	LB AE/A	2	PT/A	4-6"W-2	C														
		100	DRY	2.0	% W/W	17	LB/100 GAL	4-6"W-2	C														
24	FIRSTRATE AMS	84	WG	0.021	LB A/A	0.4	OZ/A	PRE	A	57	0	0	0	0	96	91	99	99	99	97	99	99	
	VALOR AMS	50	WG	0.078	LB A/A	2.5	OZ/A	PRE	A														
	GLYPHOMAX PLUS AMS	3	SL	0.75	LB AE/A	2	PT/A	4-6"W-2	C														
		100	DRY	2.0	% W/W	17	LB/100 GAL	4-6"W-2	C														
25	VALOR AMS	50	WG	0.063	LB A/A	2	OZ/A	PRE	A	50	0	0	0	0	92	95	99	99	99	98	99	98	
	ROUNDUP ULTRA MAX AMS	3.7	SL	0.75	LB AE/A	1.6	PT/A	4-6"W-2	C														
		100	DRY	2.0	% W/W	17	LB/100 GAL	4-6"W-2	C														
26	CANOPY XL AMS	56.3	WG			4.5	OZ/A	PRE	A	55	0	0	0	0	93	94	99	99	99	98	99	99	
	->CLASSIC	25	WG	0.0264	LB A/A			PRE	A														
	->AUTHORITY	75	WG	0.1319	LB A/A			PRE	A														
	ROUNDUP ULTRA MAX AMS	3.7	SL	0.75	LB AE/A	1.6	PT/A	4-6"W-2	C														
		100	DRY	2.0	% W/W	17	LB/100 GAL	4-6"W-2	C														
LSD (P=.05)										7.1	0.0	0.0	0.0	0.0	7.7	2.2	0.0	0.4	0.0	16.9	23.3	24.0	
Replicate F										1.964	0.000	0.000	0.000	0.000	0.174	0.476	0.000	1.000	0.000	2.697	0.351	1.894	
Replicate Prob(F)										0.1510	1.0000	1.0000	1.0000	1.0000	0.8440	0.6242	1.0000	0.3751	1.0000	0.0772	0.7055	0.1611	
Treatment F										15.295	0.000	0.000	0.000	0.000	446.244	623.000	0.000	22041.369	0.000	27.167	6.325	5.795	
Treatment Prob(F)										0.0001	1.0000	1.0000	1.0000	1.0000	0.0001	0.0001	1.0000	0.0001	1.0000	0.0001	0.0001	0.0001	

Weed Management in Roundup Ready Soybean.

Project Code: 01-11B

Location: Belleville Research Center

Tri No.	Treatment Name	Form Conc	Form Type	Rate Rate	Unit Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	IPOHE	IPOHE	IPOHE	IPOHE	XANST	XANST	XANST	XANST	ABUTH	ABUTH	ABUTH	
										Control Percent 6-21-01 41 DA-A	Control Percent 6-21-01 14 DAT	Control Percent 6-21-01 28 DAT	Control Percent 6-21-01 56 DAT	Control Percent 6-21-01 41 DA-A	Control Percent 6-21-01 14 DAT	Control Percent 6-21-01 28 DAT	Control Percent 6-21-01 56 DAT	Control Percent 6-21-01 14 DAT	Control Percent 6-21-01 28 DAT	Control Percent 6-21-01 56 DAT	
1	NONTREATED											0	0	0		0	0	0	0	0	0
2	TOUCHDOWN	3	SL	0.375	LB AE/A	1	PT/A	4-6"W-1	B			83	88	80		99	99	99	40	72	72
2	AMS	100	DRY	1.0	% W/W	8.5	LB/100 GAL	4-6"W-1	B												
3	TOUCHDOWN	3	SL	0.75	LB AE/A	2	PT/A	4-6"W-1	B			90	92	90		99	99	98	60	83	80
3	AMS	100	DRY	1.0	% W/W	8.5	LB/100 GAL	4-6"W-1	B												
4	TOUCHDOWN	3	SL	1.5	LB AE/A	4	PT/A	4-6"W-1	B			95	93	83		99	99	99	65	87	83
4	AMS	100	DRY	1.0	% W/W	8.5	LB/100 GAL	4-6"W-1	B												
5	TOUCHDOWN	3	SL	0.75	LB AE/A	2	PT/A	4-6"W-1	B			90	90	85		99	99	99	50	80	53
6	TOUCHDOWN	3	SL	0.825	LB AE/A	2.2	PT/A	4-6"W-1	B			70	88	87		99	99	99	47	73	60
7	ROUNDUP ULTRA MAX	3.7	SL	0.375	LB AE/A	0.8	PT/A	4-6"W-1	B			70	88	88		99	99	99	53	82	78
7	AMS	100	DRY	1.0	% W/W	8.5	LB/100 GAL	4-6"W-1	B												
8	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	4-6"W-1	B			90	92	90		99	99	98	47	85	85
8	AMS	100	DRY	1.0	% W/W	8.5	LB/100 GAL	4-6"W-1	B												
9	ROUNDUP ULTRA MAX	3.7	SL	1.5	LB AE/A	3.2	PT/A	4-6"W-1	B			91	93	93		99	99	99	67	94	94
9	AMS	100	DRY	1.0	% W/W	8.5	LB/100 GAL	4-6"W-1	B												
10	TOUCHDOWN	3	SL	0.375	LB AE/A	1	PT/A	10-12"W	D			20	50	48		96	99	98	67	68	67
10	AMS	100	DRY	1.0	% W/W	8.5	LB/100 GAL	10-12"W	D												
11	TOUCHDOWN	3	SL	0.75	LB AE/A	2	PT/A	10-12"W	D			37	68	76		93	99	91	53	70	65
12	TOUCHDOWN	3	SL	0.75	LB AE/A	2	PT/A	10-12"W	D			40	78	78		99	99	99	88	87	87
12	AMS	100	DRY	0.5	% W/W	4.25	LB/100 GAL	10-12"W	D												
13	TOUCHDOWN	3	SL	0.75	LB AE/A	2	PT/A	10-12"W	D			23	73	73		98	99	99	87	80	75
13	AMS	100	DRY	1.0	% W/W	8.5	LB/100 GAL	10-12"W	D												
14	TOUCHDOWN	3	SL	0.75	LB AE/A	2	PT/A	10-12"W	D			35	85	85		99	99	99	82	90	90
14	AMS	100	DRY	1.5	% W/W	12.75	LB/100 GAL	10-12"W	D												
15	TOUCHDOWN	3	SL	0.75	LB AE/A	2	PT/A	10-12"W	D			33	83	87		99	98	98	80	90	88
15	AMS	100	DRY	2.0	% W/W	17	LB/100 GAL	10-12"W	D												
16	TOUCHDOWN	3	SL	0.825	LB AE/A	2.2	PT/A	10-12"W	D			37	90	90		99	99	99	77	85	85
17	TOUCHDOWN	3	SL	1.5	LB AE/A	4	PT/A	10-12"W	D			40	92	92		99	99	98	83	92	88
17	AMS	100	DRY	1.0	% W/W	8.5	LB/100 GAL	10-12"W	D												
18	ROUNDUP ULTRA MAX	3.7	SL	0.375	LB AE/A	0.8	PT/A	10-12"W	D			27	63	67		96	99	99	67	80	80
18	AMS	100	DRY	1.0	% W/W	8.5	LB/100 GAL	10-12"W	D												
19	ROUNDUP ULTRA MAX	3.7	SL	0.75	LB AE/A	1.6	PT/A	10-12"W	D			22	85	91		99	99	93	60	85	85
19	AMS	100	DRY	1.0	% W/W	8.5	LB/100 GAL	10-12"W	D												
20	ROUNDUP ULTRA MAX	3.7	SL	1.5	LB AE/A	3.2	PT/A	10-12"W	D			17	90	88		99	99	99	88	93	92
20	AMS	100	DRY	1.0	% W/W	8.5	LB/100 GAL	10-12"W	D												

Weed Code		Rating Data Type		Rating Unit		Rating Date		Trt-Eval Interval		IPOHE	IPOHE	IPOHE	IPOHE	XANST	XANST	XANST	XANST	ABUTH	ABUTH	ABUTH
										Control	Control	Control	Control	Control	Control	Control	Control	Control	Control	Control
										Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
										6-21-01	6-21-01	6-21-01	6-21-01	6-21-01	6-21-01	6-21-01	6-21-01	6-21-01	6-21-01	6-21-01
										41 DA-A	14 DAT	28 DAT	56 DAT	41 DA-A	14 DAT	28 DAT	56 DAT	14 DAT	28 DAT	56 DAT
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code											
21	GLYPHOMAX PLUS AMS	3	SL DRY	0.75	LB AE/A % W/W	2	PT/A LB/100 GAL	4-6"W-1	B		85	88	88		99	99	99	75	88	82
22	GLYPHOMAX PLUS FIRSTRATE AMS	3	SL DRY	0.75	LB AE/A % W/W	2	PT/A LB/100 GAL	4-6"W-1	B		82	85	83		99	99	99	68	90	90
23	PYTHON GLYPHOMAX PLUS AMS	80	WG DRY	0.05	LB A/A % W/W	1	OZ/A LB/100 GAL	PRE	A	0	88	99	99	0	99	99	99	99	99	99
24	FIRSTRATE VALOR GLYPHOMAX PLUS AMS	84	WG DRY	0.021	LB A/A % W/W	0.4	OZ/A LB/100 GAL	PRE	A	96	95	99	98	99	98	99	99	98	99	98
25	VALOR ROUNDUP ULTRA MAX AMS	50	WG DRY	0.063	LB A/A % W/W	2	OZ/A LB/100 GAL	PRE	A	95	95	99	98	0	97	99	99	99	99	99
26	CANOPY XL ->CLASSIC ->AUTHORITY ROUNDUP ULTRA MAX AMS	56.3	WG DRY	0.0264	LB A/A % W/W	4.5	OZ/A LB/100 GAL	PRE	A	98	95	99	99	96	95	99	99	99	99	98
LSD (P=.05)										4.7	15.7	19.9	22.6	5.2	4.6	0.8	5.9	23.6	16.1	19.2
Replicate F										2.367	3.570	2.512	2.297	1.000	6.670	1.263	1.577	2.864	2.579	3.084
Replicate Prob(F)										0.1747	0.0355	0.0913	0.1111	0.4219	0.0027	0.2918	0.2167	0.0664	0.0859	0.0546
Treatment F										1254.005	33.852	8.607	6.399	1409.000	142.168	4446.321	88.058	7.522	11.443	9.011
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Weed Management in Roundup Ready Soybean.

Project Code: 01-11B

Location: Belleville Research Center

Trial Comments

1. Protocol: Syngenta (HZ2763X4 trts 1-20); Dow (trts 21-24); and Valent (trts 25-26).
2. DAT = days after postemergence application. DA-A days after PRE application, ratings on 6-21-01 were prior to postemergence application (treatments 23-26).
7 days after 4-6"W-1, 4-6"W-2 and 10-12"W applications was on 6-25-01, 6-29-01 and 7-2-01, respectively.
14 days after 4-6"W-1, 4-6"W-2 and 10-12"W applications was on 7-2-01, 7-6-01 and 7-9-01, respectively.
28 days after 4-6"W-1, 4-6"W-2 and 10-12"W applications was on 7-16-01, 7-20-01 and 7-23-01, respectively.
56 days after 4-6"W-1, 4-6"W-2 and 10-12"W applications was on 8-13-01, 8-17-01 and 8-20-01, respectively.