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## Document how larger droplets used in Roundup Ready 2 Xtend cropping systems impact efficacy with Roundup and co-herbicides

Trial ID: 14 MONTIPS      Location: Western Branch      Trial Year: 2014  
 Protocol ID: 14 MONTIPS      Investigator: Dr. Mark M. Loux  
 Project ID: 2014-01-09-01      Study Director: Bryan Reeb  
 Sponsor Contact: Rod Stevenson, Monsanto

### Crop Description

Crop 1: GLXMA Glycine max Soybean  
 Variety: SC 9314  
 Planting Date: 5/8/2014  
 Planting Rate, Unit: 170000 S/A      Planting Method: PLANTD planted  
 Depth, Unit: 1 IN      Planting Equipment: FE      Field Equipment  
 Row Spacing, Unit: 15 IN      Emergence Date: 5/19/2014

### Pest Description

Pest 1 Type: W      Code: AMBTR Ambrosia trifida  
 Common Name: Giant ragweed  
 Pest 2 Type: W      Code: SETFA Setaria faberi  
 Common Name: Giant foxtail  
 Pest 3 Type: W      Code: CHEAL Chenopodium album  
 Common Name: Common lambsquarters  
 Pest 4 Type: W      Code: AMARE Amaranthus retroflexus  
 Common Name: Redroot pigweed

### Site and Design

Treated Plot Width: 6.67 FT      Site Type: FIELD field  
 Treated Plot Length: 30 FT      Experimental Unit: 1 PLOT plot  
 Treated Plot Area: 200.1 FT2      Treatments: 14      Tillage Type: CONTIL conventional-till  
 Replications: 4      Study Design: RACOBL Randomized Complete Block (RCB)

### Soil Description

Description Name: BIG E  
 % OM: 2.2      Texture: SICL      silty clay loam  
 pH: 6.1      Soil Name: KOKOMO SILTY CLAY LOAM  
 CEC: 14      Fert. Level: G      good  
 Soil Drainage: G      good

### Application Description

	A	B	C	D
Application Date:	6/5/2014	6/5/2014	6/5/2014	6/5/2014
Appl. Start Time:	10:30	10:30	10:30	10:30
Application Method:	SPRAY	SPRAY	SPRAY	SPRAY
Application Timing:	4" WDS	4" WDS	4" WDS	4" WDS
Application Placement:	BROFOL	BROFOL	BROFOL	BROFOL
Air Temperature, Unit:	66 F	66 F	66 F	66 F
% Relative Humidity:	73	73	73	73
Wind Velocity, Unit:	5.5 MPH	5.5 MPH	5.5 MPH	5.5 MPH
Wind Direction:	W	W	W	W
Dew Presence (Y/N):	N no	N no	N no	N no
Soil Temperature, Unit:	62 F	62 F	62 F	62 F
Soil Moisture:	WET	WET	WET	WET
% Cloud Cover:	10	10	10	10
Next Moisture Occurred On:	6/8/2014	6/8/2014	6/8/2014	6/8/2014
Time to Next Moisture, Unit:	3 DAY	3 DAY	3 DAY	3 DAY

### Crop Stage At Each Application

	A		B		C		D	
Crop 1 Code, BBCH Scale:	GLXMA	BSOY	GLXMA	BSOY	GLXMA	BSOY	GLXMA	BSOY
Stage Scale Used:	BBCH		BBCH		BBCH		BBCH	
Stage Majority, Percent:	12	100	12	100	12	100	12	100
Height, Unit:	4	IN	4	IN	4	IN	4	IN
Height Minimum, Maximum:	4	5	4	5	4	5	4	5

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## Pest Stage At Each Application

	A		B		C		D	
Pest 1 Code, Type, Scale:	AMBTR	W	AMBTR	W	AMBTR	W	AMBTR	W
Stage Majority, Percent:	16	100	16	100	16	100	16	100
Height, Unit:	2	IN	2	IN	2	IN	2	IN
Height Minimum, Maximum:	2	7	2	7	2	7	2	7
Density, Unit:	6	M2	6	M2	6	M2	6	M2
Pest 2 Code, Type, Scale:	SETFA	W	SETFA	W	SETFA	W	SETFA	W
Stage Majority, Percent:	13		13		13		13	
Height, Unit:	3	IN	3	IN	3	IN	3	IN
Height Minimum, Maximum:	3	8	3	8	3	8	3	8
Density, Unit:	90	M2	90	M2	90	M2	90	M2
Pest 3 Code, Type, Scale:	CHEAL	W	CHEAL	W	CHEAL	W	CHEAL	W
Stage Majority, Percent:	15		15		15		15	
Height, Unit:	1	IN	1	IN	1	IN	1	IN
Height Minimum, Maximum:	1	2	1	2	1	2	1	2
Density, Unit:	8	M2	8	M2	8	M2	8	M2
Pest 4 Code, Type, Scale:	AMARE	W	AMARE	W	AMARE	W	AMARE	W
Stage Majority, Percent:	12		12		12		12	
Height, Unit:	1	IN	1	IN	1	IN	1	IN
Height Minimum, Maximum:	1	1.5	1	1.5	1	1.5	1	1.5
Density, Unit:	9.5	M2	9.5	M2	9.5	M2	9.5	M2

## Application Equipment

	A		B		C		D	
Appl. Equipment:	6'	BACKPACK	6'	BACKPACK	6'	BACKPACK	6'	BACKPACK
Equipment Type:	BACCAI		BACCAI		BACCAI		BACCAI	
Operation Pressure, Unit:	50	PSI	50	PSI	50	PSI	50	PSI
Nozzle Type:	AITJ60		TTI		XR		AIXR	
Nozzle Size:							11015	
Nozzle Spacing, Unit:	18	IN	18	IN	18	IN	18	IN
Nozzles/Row:	4		4		4		4	
Boom Length, Unit:	6.67	FT	6.67	FT	6.67	FT	6.67	FT
Boom Height, Unit:	20	IN	20	IN	20	IN	20	IN
Ground Speed, Unit:	3	MPH	3	MPH	3	MPH	3	MPH
Carrier:	WATER		WATER		WATER		WATER	
Spray Volume, Unit:	15	gal/ac	15	gal/ac	15	gal/ac	15	gal/ac
Mix Size, Unit:	1	liters	1	liters	1	liters	1	liters
Propellant:	COMCO2		COMCO2		COMCO2		COMCO2	

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 Sponsor Contact: Rod Stevenson, Monsanto

Pest Type		W Weed	W Weed	W Weed
Pest Code		SETFA	AMBTR	CHEAL
Pest Scientific Name		Setaria faberi	Ambrosia trifi>	Chenopodium al>
Pest Name		Giant foxtail	Giant ragweed	Common lambsqu>
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA
BBCH Scale	BSOY	BSOY	BSOY	BSOY
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max
Crop Name	Soybean	Soybean	Soybean	Soybean
Rating Date	6/12/2014	6/12/2014	6/12/2014	6/12/2014
Rating Type	PHYNEC	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%
Number of Subsamples	1	1	1	1
Days After First/Last Applic.	7 7	7 7	7 7	7 7
Plant-Eval Interval	35 DP-1	35 DP-1	35 DP-1	35 DP-1
Days After Emergence	24 DE-1	24 DE-1	24 DE-1	24 DE-1
Number of Decimals	0	0	0	0

Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Unit	Appl Stage	Code	1	2	3	4
1	Roundup Power Max	1.13 lb ae/a	32 oz/a		POST	A		2	63	70	88
	1 MON 10	2 % v/v	0.96 qt/a		POST	A					
2	Roundup Power Max	1.13 lb ae/a	32 oz/a		POST	A		5	70	85	90
	2 Cobra	0.156 lb ai/a	10 oz/a		POST	A					
	2 NIS	0.25 % v/v	0.12 qt/a		POST	A					
	2 MON 10	2 % v/v	0.96 qt/a		POST	A					
3	Roundup Power Max	1.13 lb ae/a	32 oz/a		POST	A		4	73	78	83
	3 Flexstar	0.235 lb ai/a	16 oz/a		POST	A					
	3 NIS	0.25 % v/v	0.12 qt/a		POST	A					
	3 MON 10	2 % v/v	0.96 qt/a		POST	A					
4	Roundup Power Max	1.13 lb ae/a	32 oz/a		POST	A		5	81	74	94
	4 Warrant	1.13 lb ai/a	48 oz/a		POST	A					
	4 MON 10	2 % v/v	0.96 qt/a		POST	A					
5	Roundup Power Max	1.13 lb ae/a	32 oz/a		POST	A		8	83	88	98
	5 Warrant	1.13 lb ai/a	48 oz/a		POST	A					
	5 Cobra	0.156 lb ai/a	10 oz/a		POST	A					
	5 NIS	0.25 % v/v	0.12 qt/a		POST	A					
	5 MON 10	2 % v/v	0.96 qt/a		POST	A					
6	Roundup Power Max	1.13 lb ae/a	32 oz/a		POST	A		3	70	70	95
	6 Select Max	0.047 lb ai/a	6 oz/a		POST	A					
	6 MON 10	2 % v/v	0.96 qt/a		POST	A					
7	Roundup Power Max	1.13 lb ae/a	32 oz/a		POST	B		2	68	73	88
	7 MON 10	2 % v/v	0.96 qt/a		POST	B					
8	Roundup Power Max	1.13 lb ae/a	32 oz/a		POST	B		4	75	85	95
	8 Cobra	0.156 lb ai/a	10 oz/a		POST	B					
	8 NIS	0.25 % v/v	0.12 qt/a		POST	B					
	8 MON 10	2 % v/v	0.96 qt/a		POST	B					
9	Roundup Power Max	1.13 lb ae/a	32 oz/a		POST	B		8	78	85	93
	9 Flexstar	0.235 lb ai/a	16 oz/a		POST	B					
	9 NIS	0.25 % v/v	0.12 qt/a		POST	B					
	9 MON 10	2 % v/v	0.96 qt/a		POST	B					
10	Roundup Power Max	1.13 lb ae/a	32 oz/a		POST	B		3	71	70	98
	10 Warrant	1.13 lb ai/a	48 oz/a		POST	B					
	10 MON 10	2 % v/v	0.96 qt/a		POST	B					

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Pest Type	W Weed	W Weed	W Weed
Pest Code	SETFA	AMBTR	CHEAL
Pest Scientific Name	Setaria faberi	Ambrosia trifida	Chenopodium album
Pest Name	Giant foxtail	Giant ragweed	Common lambsquarters
Crop Code	GLXMA	GLXMA	GLXMA
BBCH Scale	BSOY	BSOY	BSOY
Crop Scientific Name	Glycine max	Glycine max	Glycine max
Crop Name	Soybean	Soybean	Soybean
Rating Date	6/12/2014	6/12/2014	6/12/2014
Rating Type	PHYNEC	CONTRO	CONTRO
Rating Unit	%	%	%
Number of Subsamples	1	1	1
Days After First/Last Applic.	7 7	7 7	7 7
Plant-Eval Interval	35 DP-1	35 DP-1	35 DP-1
Days After Emergence	24 DE-1	24 DE-1	24 DE-1
Number of Decimals	0	0	0

Trt	Treatment	Rate	Other	Other	Growth	Appl	1	2	3	4	
No.	Name	Rate	Unit	Rate	Unit	Stage	Code				
11	Roundup Power Max	1.13 lb	ae/a	32 oz/a		POST	B	10	80	89	93
11	Warrant	1.13 lb	ai/a	48 oz/a		POST	B				
11	Cobra	0.156 lb	ai/a	10 oz/a		POST	B				
11	NIS	0.25 %	v/v	0.12 qt/a		POST	B				
11	MON 10	2 %	v/v	0.96 qt/a		POST	B				
12	Roundup Power Max	1.13 lb	ae/a	32 oz/a		POST	B	2	63	70	84
12	Select Max	0.047 lb	ai/a	6 oz/a		POST	B				
12	MON 10	2 %	v/v	0.96 qt/a		POST	B				
13	Roundup Power Max	1.13 lb	ae/a	32 oz/a		POST	C	10	82	91	95
13	Cobra	0.156 lb	ai/a	10 oz/a		POST	C				
13	NIS	0.25 %	v/v	0.12 qt/a		POST	C				
13	MON 10	2 %	v/v	0.96 qt/a		POST	C				
14	Roundup Power Max	1.13 lb	ae/a	32 oz/a		POST	D	8	78	89	88
14	Cobra	0.156 lb	ai/a	10 oz/a		POST	D				
14	NIS	0.25 %	v/v	0.12 qt/a		POST	D				
14	MON 10	2 %	v/v	0.96 qt/a		POST	D				
LSD (P=.05)								3.0	10.6	7.0	17.0
Standard Deviation								2.1	7.4	4.9	11.9
CV								41.09	10.07	6.15	13.02
Bartlett's X2								9.93	3.978	3.56	10.032
P(Bartlett's X2)								0.356	0.991	0.938	0.691
Replicate F								8.756	31.992	0.198	2.081
Replicate Prob(F)								0.0001	0.0001	0.8968	0.1185
Treatment F								7.114	3.314	11.679	0.657
Treatment Prob(F)								0.0001	0.0019	0.0001	0.7907

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Pest Type	W Weed	W Weed	W Weed
Pest Code	AMARE	SETFA	AMBTR
Pest Scientific Name	Amaranthus ret>	Setaria faberi	Ambrosia trifi>
Pest Name	Redroot pigweed	Giant foxtail	Giant ragweed
Crop Code	GLXMA	GLXMA	GLXMA
BBCH Scale	BSOY	BSOY	BSOY
Crop Scientific Name	Glycine max	Glycine max	Glycine max
Crop Name	Soybean	Soybean	Soybean
Rating Date	6/12/2014	6/17/2014	6/17/2014
Rating Type	CONTRO	PHYNEC	CONTRO
Rating Unit	%	%	%
Number of Subsamples	1	1	1
Days After First/Last Applic.	7 7	12 12	12 12
Plant-Eval Interval	35 DP-1	40 DP-1	40 DP-1
Days After Emergence	24 DE-1	29 DE-1	29 DE-1
Number of Decimals	0	0	0

Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	5	6	7	8
1	Roundup Power Max	1.13 lb ae/a	32 oz/a		POST	A	88	0	91	92
1	MON 10	2 % v/v	0.96 qt/a		POST	A				
2	Roundup Power Max	1.13 lb ae/a	32 oz/a		POST	A	90	4	86	85
2	Cobra	0.156 lb ai/a	10 oz/a		POST	A				
2	NIS	0.25 % v/v	0.12 qt/a		POST	A				
2	MON 10	2 % v/v	0.96 qt/a		POST	A				
3	Roundup Power Max	1.13 lb ae/a	32 oz/a		POST	A	80	3	85	89
3	Flexstar	0.235 lb ai/a	16 oz/a		POST	A				
3	NIS	0.25 % v/v	0.12 qt/a		POST	A				
3	MON 10	2 % v/v	0.96 qt/a		POST	A				
4	Roundup Power Max	1.13 lb ae/a	32 oz/a		POST	A	95	4	99	92
4	Warrant	1.13 lb ai/a	48 oz/a		POST	A				
4	MON 10	2 % v/v	0.96 qt/a		POST	A				
5	Roundup Power Max	1.13 lb ae/a	32 oz/a		POST	A	100	8	100	88
5	Warrant	1.13 lb ai/a	48 oz/a		POST	A				
5	Cobra	0.156 lb ai/a	10 oz/a		POST	A				
5	NIS	0.25 % v/v	0.12 qt/a		POST	A				
5	MON 10	2 % v/v	0.96 qt/a		POST	A				
6	Roundup Power Max	1.13 lb ae/a	32 oz/a		POST	A	95	2	92	83
6	Select Max	0.047 lb ai/a	6 oz/a		POST	A				
6	MON 10	2 % v/v	0.96 qt/a		POST	A				
7	Roundup Power Max	1.13 lb ae/a	32 oz/a		POST	B	90	0	95	98
7	MON 10	2 % v/v	0.96 qt/a		POST	B				
8	Roundup Power Max	1.13 lb ae/a	32 oz/a		POST	B	95	4	91	97
8	Cobra	0.156 lb ai/a	10 oz/a		POST	B				
8	NIS	0.25 % v/v	0.12 qt/a		POST	B				
8	MON 10	2 % v/v	0.96 qt/a		POST	B				
9	Roundup Power Max	1.13 lb ae/a	32 oz/a		POST	B	95	4	90	96
9	Flexstar	0.235 lb ai/a	16 oz/a		POST	B				
9	NIS	0.25 % v/v	0.12 qt/a		POST	B				
9	MON 10	2 % v/v	0.96 qt/a		POST	B				
10	Roundup Power Max	1.13 lb ae/a	32 oz/a		POST	B	100	3	95	83
10	Warrant	1.13 lb ai/a	48 oz/a		POST	B				
10	MON 10	2 % v/v	0.96 qt/a		POST	B				

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Pest Type	W Weed	W Weed	W Weed
Pest Code	AMARE	SETFA	AMBTR
Pest Scientific Name	Amaranthus ret>	Setaria faberi	Ambrosia trifi>
Pest Name	Redroot pigweed	Giant foxtail	Giant ragweed
Crop Code	GLXMA	GLXMA	GLXMA
BBCH Scale	BSOY	BSOY	BSOY
Crop Scientific Name	Glycine max	Glycine max	Glycine max
Crop Name	Soybean	Soybean	Soybean
Rating Date	6/12/2014	6/17/2014	6/17/2014
Rating Type	CONTRO	PHYNEC	CONTRO
Rating Unit	%	%	%
Number of Subsamples	1	1	1
Days After First/Last Applic.	7 7	12 12	12 12
Plant-Eval Interval	35 DP-1	40 DP-1	40 DP-1
Days After Emergence	24 DE-1	29 DE-1	29 DE-1
Number of Decimals	0	0	0

Trt	Treatment	Rate	Other	Other	Growth	Appl						
No.	Name	Rate	Unit	Rate	Rate	Unit	Stage	Code	5	6	7	8
11	Roundup Power Max	1.13 lb	ae/a	32 oz/a			POST	B	93	9	95	95
11	Warrant	1.13 lb	ai/a	48 oz/a			POST	B				
11	Cobra	0.156 lb	ai/a	10 oz/a			POST	B				
11	NIS	0.25 %	v/v	0.12 qt/a			POST	B				
11	MON 10	2 %	v/v	0.96 qt/a			POST	B				
12	Roundup Power Max	1.13 lb	ae/a	32 oz/a			POST	B	88	0	94	89
12	Select Max	0.047 lb	ai/a	6 oz/a			POST	B				
12	MON 10	2 %	v/v	0.96 qt/a			POST	B				
13	Roundup Power Max	1.13 lb	ae/a	32 oz/a			POST	C	95	8	98	92
13	Cobra	0.156 lb	ai/a	10 oz/a			POST	C				
13	NIS	0.25 %	v/v	0.12 qt/a			POST	C				
13	MON 10	2 %	v/v	0.96 qt/a			POST	C				
14	Roundup Power Max	1.13 lb	ae/a	32 oz/a			POST	D	90	6	93	93
14	Cobra	0.156 lb	ai/a	10 oz/a			POST	D				
14	NIS	0.25 %	v/v	0.12 qt/a			POST	D				
14	MON 10	2 %	v/v	0.96 qt/a			POST	D				
LSD (P=.05)									15.7	2.6	11.6	12.9
Standard Deviation									11.0	1.8	8.1	9.0
CV									11.92	47.36	8.74	9.96
Bartlett's X2									3.535	19.4	28.94	18.031
P(Bartlett's X2)									0.982	0.054	0.007*	0.156
Replicate F									3.871	2.204	6.597	0.792
Replicate Prob(F)									0.0162	0.1030	0.0010	0.5057
Treatment F									0.936	9.970	1.171	1.219
Treatment Prob(F)									0.5266	0.0001	0.3354	0.3032

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Pest Type	W Weed	W Weed	W Weed	
Pest Code	CHEAL	AMARE	SETFA	
Pest Scientific Name	Chenopodium al-	Amaranthus ret-	Setaria faberi	
Pest Name	Common lambsqu-	Redroot pigweed	Giant foxtail	
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA
BBCH Scale	BSOY	BSOY	BSOY	BSOY
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max
Crop Name	Soybean	Soybean	Soybean	Soybean
Rating Date	6/17/2014	6/17/2014	6/26/2014	6/26/2014
Rating Type	CONTRO	CONTRO	PHYNEC	CONTRO
Rating Unit	%	%	%	%
Number of Subsamples	1	1	1	1
Days After First/Last Applic.	12 12	12 12	21 21	21 21
Plant-Eval Interval	40 DP-1	40 DP-1	49 DP-1	49 DP-1
Days After Emergence	29 DE-1	29 DE-1	38 DE-1	38 DE-1
Number of Decimals	0	0	0	0

Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Unit	Appl Stage	Code	9	10	11	12
1	Roundup Power Max	1.13 lb ae/a	32 oz/a			POST	A	90	81	0	54
1	MON 10	2 % v/v	0.96 qt/a			POST	A				
2	Roundup Power Max	1.13 lb ae/a	32 oz/a			POST	A	90	80	0	50
2	Cobra	0.156 lb ai/a	10 oz/a			POST	A				
2	NIS	0.25 % v/v	0.12 qt/a			POST	A				
2	MON 10	2 % v/v	0.96 qt/a			POST	A				
3	Roundup Power Max	1.13 lb ae/a	32 oz/a			POST	A	75	71	0	58
3	Flexstar	0.235 lb ai/a	16 oz/a			POST	A				
3	NIS	0.25 % v/v	0.12 qt/a			POST	A				
3	MON 10	2 % v/v	0.96 qt/a			POST	A				
4	Roundup Power Max	1.13 lb ae/a	32 oz/a			POST	A	98	98	0	92
4	Warrant	1.13 lb ai/a	48 oz/a			POST	A				
4	MON 10	2 % v/v	0.96 qt/a			POST	A				
5	Roundup Power Max	1.13 lb ae/a	32 oz/a			POST	A	100	100	0	93
5	Warrant	1.13 lb ai/a	48 oz/a			POST	A				
5	Cobra	0.156 lb ai/a	10 oz/a			POST	A				
5	NIS	0.25 % v/v	0.12 qt/a			POST	A				
5	MON 10	2 % v/v	0.96 qt/a			POST	A				
6	Roundup Power Max	1.13 lb ae/a	32 oz/a			POST	A	92	88	0	68
6	Select Max	0.047 lb ai/a	6 oz/a			POST	A				
6	MON 10	2 % v/v	0.96 qt/a			POST	A				
7	Roundup Power Max	1.13 lb ae/a	32 oz/a			POST	B	91	89	0	66
7	MON 10	2 % v/v	0.96 qt/a			POST	B				
8	Roundup Power Max	1.13 lb ae/a	32 oz/a			POST	B	93	89	0	63
8	Cobra	0.156 lb ai/a	10 oz/a			POST	B				
8	NIS	0.25 % v/v	0.12 qt/a			POST	B				
8	MON 10	2 % v/v	0.96 qt/a			POST	B				
9	Roundup Power Max	1.13 lb ae/a	32 oz/a			POST	B	89	85	0	68
9	Flexstar	0.235 lb ai/a	16 oz/a			POST	B				
9	NIS	0.25 % v/v	0.12 qt/a			POST	B				
9	MON 10	2 % v/v	0.96 qt/a			POST	B				
10	Roundup Power Max	1.13 lb ae/a	32 oz/a			POST	B	93	90	0	80
10	Warrant	1.13 lb ai/a	48 oz/a			POST	B				
10	MON 10	2 % v/v	0.96 qt/a			POST	B				

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Pest Type	W Weed	W Weed	W Weed	
Pest Code	CHEAL	AMARE	SETFA	
Pest Scientific Name	Chenopodium al>	Amaranthus ret>	Setaria faberi	
Pest Name	Common lambsqu>	Redroot pigweed	Giant foxtail	
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA
BBCH Scale	BSOY	BSOY	BSOY	BSOY
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max
Crop Name	Soybean	Soybean	Soybean	Soybean
Rating Date	6/17/2014	6/17/2014	6/26/2014	6/26/2014
Rating Type	CONTRO	CONTRO	PHYNEC	CONTRO
Rating Unit	%	%	%	%
Number of Subsamples	1	1	1	1
Days After First/Last Applic.	12 12	12 12	21 21	21 21
Plant-Eval Interval	40 DP-1	40 DP-1	49 DP-1	49 DP-1
Days After Emergence	29 DE-1	29 DE-1	38 DE-1	38 DE-1
Number of Decimals	0	0	0	0

Trt	Treatment	Rate	Other	Other	Growth	Appl						
No.	Name	Rate	Unit	Rate	Rate	Unit	Stage	Code	9	10	11	12
11	Roundup Power Max	1.13 lb	ae/a	32 oz/a			POST	B	94	94	0	85
11	Warrant	1.13 lb	ai/a	48 oz/a			POST	B				
11	Cobra	0.156 lb	ai/a	10 oz/a			POST	B				
11	NIS	0.25 %	v/v	0.12 qt/a			POST	B				
11	MON 10	2 %	v/v	0.96 qt/a			POST	B				
12	Roundup Power Max	1.13 lb	ae/a	32 oz/a			POST	B	85	78	0	63
12	Select Max	0.047 lb	ai/a	6 oz/a			POST	B				
12	MON 10	2 %	v/v	0.96 qt/a			POST	B				
13	Roundup Power Max	1.13 lb	ae/a	32 oz/a			POST	C	94	94	0	69
13	Cobra	0.156 lb	ai/a	10 oz/a			POST	C				
13	NIS	0.25 %	v/v	0.12 qt/a			POST	C				
13	MON 10	2 %	v/v	0.96 qt/a			POST	C				
14	Roundup Power Max	1.13 lb	ae/a	32 oz/a			POST	D	79	78	0	66
14	Cobra	0.156 lb	ai/a	10 oz/a			POST	D				
14	NIS	0.25 %	v/v	0.12 qt/a			POST	D				
14	MON 10	2 %	v/v	0.96 qt/a			POST	D				
LSD (P=.05)									17.8	15.1	0.0	16.3
Standard Deviation									12.5	10.6	0.0	11.4
CV									13.85	12.19	0.0	16.4
Bartlett's X2									5.653	5.642	0.0	10.502
P(Bartlett's X2)									0.933	0.933	.	0.652
Replicate F									1.906	7.675	0.000	12.385
Replicate Prob(F)									0.1445	0.0004	1.0000	0.0001
Treatment F									1.147	2.480	0.000	5.425
Treatment Prob(F)									0.3527	0.0143	1.0000	0.0001



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Pest Type	W Weed	W Weed	W Weed
Pest Code	AMBTR	CHEAL	AMARE
Pest Scientific Name	Ambrosia trifi>	Chenopodium al>	Amaranthus ret>
Pest Name	Giant ragweed	Common lambsqu>	Redroot pigweed
Crop Code	GLXMA	GLXMA	GLXMA
BBCH Scale	BSOY	BSOY	BSOY
Crop Scientific Name	Glycine max	Glycine max	Glycine max
Crop Name	Soybean	Soybean	Soybean
Rating Date	6/26/2014	6/26/2014	6/26/2014
Rating Type	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%
Number of Subsamples	1	1	1
Days After First/Last Applic.	21 21	21 21	21 21
Plant-Eval Interval	49 DP-1	49 DP-1	49 DP-1
Days After Emergence	38 DE-1	38 DE-1	38 DE-1
Number of Decimals	0	0	0

Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage	Appl Code	13	14	15
1	Roundup Power Max	1.13 lb ae/a	32 oz/a		POST	A	50	74	55
1	MON 10	2 % v/v	0.96 qt/a		POST	A			
2	Roundup Power Max	1.13 lb ae/a	32 oz/a		POST	A	50	70	65
2	Cobra	0.156 lb ai/a	10 oz/a		POST	A			
2	NIS	0.25 % v/v	0.12 qt/a		POST	A			
2	MON 10	2 % v/v	0.96 qt/a		POST	A			
3	Roundup Power Max	1.13 lb ae/a	32 oz/a		POST	A	60	61	53
3	Flexstar	0.235 lb ai/a	16 oz/a		POST	A			
3	NIS	0.25 % v/v	0.12 qt/a		POST	A			
3	MON 10	2 % v/v	0.96 qt/a		POST	A			
4	Roundup Power Max	1.13 lb ae/a	32 oz/a		POST	A	75	90	91
4	Warrant	1.13 lb ai/a	48 oz/a		POST	A			
4	MON 10	2 % v/v	0.96 qt/a		POST	A			
5	Roundup Power Max	1.13 lb ae/a	32 oz/a		POST	A	71	95	90
5	Warrant	1.13 lb ai/a	48 oz/a		POST	A			
5	Cobra	0.156 lb ai/a	10 oz/a		POST	A			
5	NIS	0.25 % v/v	0.12 qt/a		POST	A			
5	MON 10	2 % v/v	0.96 qt/a		POST	A			
6	Roundup Power Max	1.13 lb ae/a	32 oz/a		POST	A	64	83	55
6	Select Max	0.047 lb ai/a	6 oz/a		POST	A			
6	MON 10	2 % v/v	0.96 qt/a		POST	A			
7	Roundup Power Max	1.13 lb ae/a	32 oz/a		POST	B	71	75	60
7	MON 10	2 % v/v	0.96 qt/a		POST	B			
8	Roundup Power Max	1.13 lb ae/a	32 oz/a		POST	B	56	74	58
8	Cobra	0.156 lb ai/a	10 oz/a		POST	B			
8	NIS	0.25 % v/v	0.12 qt/a		POST	B			
8	MON 10	2 % v/v	0.96 qt/a		POST	B			
9	Roundup Power Max	1.13 lb ae/a	32 oz/a		POST	B	64	75	58
9	Flexstar	0.235 lb ai/a	16 oz/a		POST	B			
9	NIS	0.25 % v/v	0.12 qt/a		POST	B			
9	MON 10	2 % v/v	0.96 qt/a		POST	B			
10	Roundup Power Max	1.13 lb ae/a	32 oz/a		POST	B	64	71	73
10	Warrant	1.13 lb ai/a	48 oz/a		POST	B			
10	MON 10	2 % v/v	0.96 qt/a		POST	B			



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## Document how larger droplets used in Roundup Ready 2 Xtend cropping systems impact efficacy with Roundup and co-herbicides

Trial ID: 14 MONTIPS                      Location: Western Branch   Trial Year: 2014  
Protocol ID: 14 MONTIPS                Investigator: Dr. Mark M. Loux  
Project ID: 2014-01-09-01               Study Director: Bryan Reeb  
   Sponsor Contact: Rod Stevenson, Monsanto

Pest Type

W, Weed, G-BYRW7, G-WedStg = Weed or volunteer crop

Pest Code

SETFA, Setaria faberi, = US

AMBTR, Ambrosia trifida, = US

CHEAL, Chenopodium album, = US

AMARE, Amaranthus retroflexus, = US

Crop Code

GLXMA, BSOY, Glycine max, = US

Rating Type

PHYNEC = phytotoxicity - necrosis /burn

CONTRO = control / burndown or knockdown

Rating Unit

% = percent

Plant-Eval Interval

35 DP-1 = 1 GLXMA 5/8/2014

40 DP-1 = 1 GLXMA 5/8/2014

49 DP-1 = 1 GLXMA 5/8/2014