

Conventional tillage dicamba programs for RR2X soybeans

Trial ID: 15RR2X                      Location: Western Branch F-6   Trial Year: 2015  
 Protocol ID: 15RR2X                Investigator: Dr. Mark M. Loux  
 Project ID: USA-15-157              Study Director: Anthony Dobbels  
    Sponsor Contact: Marsha Martin, DuPont

### General Trial Information

**Study Director:** Anthony Dobbels  
**Investigator:** Dr. Mark M. Loux

### Trial Location

**City:** South Charleston   **Country:** USA United States  
**State/Prov.:** Ohio  
**Postal Code:** 45368        **Climate Zone:** USWARM US Warm Continental

**Latitude of LL Corner** °: 39.85599 N  
**Longitude of LL Corner** °: 83.67155 W

**Conducted Under GLP:** No  
**Conducted Under GEP:** No

### Contacts

**Study Director:** Anthony Dobbels  
**Investigator:** Dr. Mark M. Loux

### Pest Description

**Pest 1 Type:** W   **Code:** SETFA *Setaria faberi*  
**Common Name:** Giant foxtail

**Pest 2 Type:** W   **Code:** AMBTR *Ambrosia trifida*  
**Common Name:** Giant ragweed

**Pest 3 Type:** W   **Code:** CHEAL *Chenopodium album*  
**Common Name:** Common lambsquarters

**Pest 4 Type:** W   **Code:** AMARE *Amaranthus retroflexus*  
**Common Name:** Redroot pigweed

**Pest 5 Type:** W   **Code:** ABUTH *Abutilon theophrasti*  
**Common Name:** velvetleaf

**Pest 6 Type:** W   **Code:** HIBTR *Hibiscus trionum*  
**Common Name:** Venice mallow

**Pest 7 Type:** W   **Code:** SIDSP *Sida spinosa*  
**Common Name:** Prickly sida

### Site and Design

**Treated Plot Width:** 6.67 FT  
**Treated Plot Length:** 30 FT  
**Treated Plot Area:** 200.1 FT<sup>2</sup>   **Treatments:** 10  
**Replications:** 3

**Study Design:** RACOB L Randomized Complete Block (RCB)

### Soil Description

**Description Name:** F-6  
**% OM:** 2                      **Texture:** SIC silty clay  
**pH:** 6.2                      **Soil Name:** Crosby  
**CEC:** 14.5                 **Fert. Level:** G good  
**Soil Drainage:** G good

**Application Description**

	<b>A</b>	<b>B</b>
Application Date:	5-8-2015	6-4-2015
Appl. Start Time:	11:00 AM	12:45 PM
Appl. Stop Time:	11:30 AM	1:00 PM
Application Method:	SPRAY	SPRAY
Application Timing:	PRE	POST
Application Placement:	BROSOI	BROFOL
Applied By:	Dobbels	Bethel
Air Temperature, Unit:	73 F	79 F
% Relative Humidity:	66	53
Wind Velocity, Unit:	2 MPH	6 MPH
Wind Direction:	S	E
Dew Presence (Y/N):	N no	N no
Soil Temperature, Unit:	61 F	71 F
Soil Moisture:	DRY	DRY
% Cloud Cover:	10	30
Next Moisture Occurred On:	5-11-2015	6-5-2015
Time to Next Moisture, Unit:	3 DAY	1 DAY

**Pest Stage At Each Application**

	<b>A</b>	<b>B</b>
Pest 1 Code, Type, Scale:	SETFA W	SETFA W
Stage Majority, Percent:		12 90
Stage Minimum, Percent:		12 90
Stage Maximum, Percent:		13 10
Height, Unit:		4 IN
Height Minimum, Maximum:		2 4
Density, Unit:		50 m2
Pest 2 Code, Type, Scale:	AMBTR W	AMBTR W
Stage Majority, Percent:		16 80
Stage Minimum, Percent:		14 20
Stage Maximum, Percent:		16 80
Diameter, Unit:		3 IN
Height, Unit:		4 IN
Height Minimum, Maximum:		2 4
Density, Unit:		2.67 m2
Pest 3 Code, Type, Scale:	CHEAL W	CHEAL W
Density, Unit:		2.33 m2
Pest 4 Code, Type, Scale:	AMARE W	AMARE W
Pest 5 Code, Type, Scale:	ABUTH W	ABUTH W
Density, Unit:		3.67 m2
Pest 6 Code, Type, Scale:	HIBTR W	HIBTR W
Pest 7 Code, Type, Scale:	SIDSP W	SIDSP W
Density, Unit:		0.67 m2

**Application Equipment**

	<b>A</b>	<b>B</b>
Appl. Equipment:	6 FOOT BOOM	6 Foot TTI
Equipment Type:	SPRBAC	SPRBAC
Operation Pressure, Unit:	46 PSI	40 PSI
Nozzle Type:	AI XR	TTI
Nozzle Size:	110015	110015
Nozzle Spacing, Unit:	18 IN	18 IN
Boom Length, Unit:	10 FT	10 FT
Boom Height, Unit:	20 IN	20 IN
Ground Speed, Unit:	3 MPH	3 MPH
Carrier:	WATER	WATER
Spray Volume, Unit:	15 GPA	15 GPA
Mix Size, Unit:	1 Liters	1 Liters
Propellant:	CO2	CO2

## Conventional tillage dicamba programs for RR2X soybeans

Trial ID: 15RR2X Location: Western Branch F-6 Trial Year: 2015  
 Protocol ID: 15RR2X Investigator: Dr. Mark M. Loux  
 Project ID: USA-15-157 Study Director: Anthony Dobbels  
 Sponsor Contact: Marsha Martin, DuPont

Pest Type	W Weed	W Weed	W Weed	W Weed
Pest Code	SETFA	AMBTR	CHEAL	AMARE
Pest Scientific Name	Setaria faberi	Ambrosia trifi>	Chenopodium al>	Amaranthus ret>
Pest Name	Giant foxtail	Giant ragweed	Common lambsqu>	Redroot pigweed
Rating Date	6-3-2015	6-3-2015	6-3-2015	6-3-2015
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%
Number of Subsamples	1	1	1	1
Rating Timing	AT POST	AT POST	AT POST	AT POST
Days After First/Last Applic.	26 26	26 26	26 26	26 26
Trt-Eval Interval	26 DA-A	26 DA-A	26 DA-A	26 DA-A
Number of Decimals	0	0	0	0

Trt	Treatment	Other	Other	Appl	Appl	1	2	3	4
No.	Name	Rate	Rate	Unit	Description				
1	Trivence 8 oz					68 bc	40 a	100 a	100 a
1	Valor SX	2 oz/a		A	PRE				
1	Classic	1.28 oz/a		A	PRE				
1	Metribuzin	4.75 oz/a		A	PRE				
1	Roundup PowerMax	22 oz/a		B	POST				
1	Clarity	1 pt/a		B	POST				
2	Trivence 8 oz					63 bcd	47 a	100 a	100 a
2	Valor SX	2 oz/a		A	PRE				
2	Classic	1.28 oz/a		A	PRE				
2	Metribuzin	4.75 oz/a		A	PRE				
2	Roundup PowerMax	22 oz/a		B	POST				
2	Cinch	1 pt/a		B	POST				
2	Clarity	1 pt/a		B	POST				
3	Envive 3.5 oz					53 de	37 a	100 a	100 a
3	Valor SX	2 oz/a		A	PRE				
3	Classic	1.28 oz/a		A	PRE				
3	Harmony	0.2 oz/a		A	PRE				
3	Roundup PowerMax	22 oz/a		B	POST				
3	Clarity	1 pt/a		B	POST				
4	Envive 3.5 oz					53 de	47 a	100 a	100 a
4	Valor SX	2 oz/a		A	PRE				
4	Classic	1.28 oz/a		A	PRE				
4	Harmony	0.2 oz/a		A	PRE				
4	Roundup PowerMax	22 oz/a		B	POST				
4	Cinch	1 pt/a		B	POST				
4	Clarity	1 pt/a		B	POST				
5	Envive 3.5 oz					57 cde	37 a	100 a	100 a
5	Valor SX	2 oz/a		A	PRE				
5	Classic	1.28 oz/a		A	PRE				
5	Harmony	0.2 oz/a		A	PRE				
5	Roundup PowerMax	22 oz/a		B	POST				
5	Prefix	2 pt/a		B	POST				
6	Canopy	6 oz/a		A	PRE	87 a	62 a	100 a	100 a
6	Cinch	1 pt/a		A	PRE				
6	Roundup PowerMax	22 oz/a		B	POST				
6	Clarity	1 pt/a		B	POST				

Means followed by same letter do not significantly differ (P=.05, LSD)

Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.  
 Could not calculate LSD (% mean diff) for columns 3,4,5,6,9,10,11,12 because error mean square = 0.

## The Ohio State University

Pest Type	W Weed	W Weed	W Weed	W Weed
Pest Code	SETFA	AMBTR	CHEAL	AMARE
Pest Scientific Name	Setaria faberi	Ambrosia trifida	Chenopodium album	Amaranthus retrofractus
Pest Name	Giant foxtail	Giant ragweed	Common lambsquarters	Redroot pigweed
Rating Date	6-3-2015	6-3-2015	6-3-2015	6-3-2015
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%
Number of Subsamples	1	1	1	1
Rating Timing	AT POST	AT POST	AT POST	AT POST
Days After First/Last Applic.	26 26	26 26	26 26	26 26
Trt-Eval Interval	26 DA-A	26 DA-A	26 DA-A	26 DA-A
Number of Decimals	0	0	0	0

Trt No.	Treatment Name	Other Rate	Other Rate Unit	Appl Code	Appl Description	1	2	3	4
7	Canopy	6 oz/a		A	PRE	83 a	60 a	100 a	100 a
7	Cinch	1 pt/a		A	PRE				
7	Roundup PowerMax	22 oz/a		B	POST				
7	Clarity	1 pt/a		B	POST				
7	Cinch	1 pt/a		B	POST				
8	Valor XLT 3.5 oz					47 e	53 a	100 a	100 a
8	Valor SX	2.05 oz/a		A	PRE				
8	Classic	1.45 oz/a		A	PRE				
8	Roundup PowerMax	22 oz/a		B	POST				
8	Clarity	1 pt/a		B	POST				
9	Verdict	5 oz/a		A	PRE	75 ab	60 a	100 a	100 a
9	Metribuzin	8 oz/a		A	PRE				
9	Roundup PowerMax	22 oz/a		B	POST				
9	Clarity	1 pt/a		B	POST				
10	UTC					0 f	0 b	0 b	0 b
LSD P=.05						11.9	26.6	.	.
Standard Deviation						7.0	15.5	0.0	0.0
CV						11.87	35.07	0.0	0.0
Grand Mean						58.6	44.2	90.0	90.0
Bartlett's X2						6.204	0.765	0.0	0.0
P(Bartlett's X2)						0.516	0.998	.	.
Skewness						-1.274*	-0.4863	-2.8091*	-2.8091*
Kurtosis						1.4848	0.1539	6.3081*	6.3081*
Replicate F						0.599	0.066	0.000	0.000
Replicate Prob(F)						0.5600	0.9364	1.0000	1.0000
Treatment F						37.163	4.147	0.000	0.000
Treatment Prob(F)						0.0001	0.0050	1.0000	1.0000

Pest Type	W Weed	W Weed	W Weed	W Weed
Pest Code	ABUTH	HIBTR	SETFA	AMBTR
Pest Scientific Name	Abutilon theop>	Hibiscus trion>	Setaria faberi	Ambrosia trifi>
Pest Name	velvetleaf	Venice mallow	Giant foxtail	Giant ragweed
Rating Date	6-3-2015	6-3-2015	6-30-2015	6-30-2015
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%
Number of Subsamples	1	1	1	1
Rating Timing	AT POST	AT POST	AT POST	
Days After First/Last Applic.	26 26	26 26	53 26	53 26
Trt-Eval Interval	26 DA-A	26 DA-A	26 DA-B	26 DA-B
Number of Decimals	0	0	0	0

Trt No.	Treatment Name	Other Rate	Other Rate	Appl Unit	Appl Code	Appl Description	5	6	7	8
1	Trivence 8 oz						100 a	100 a	84 b	78 cd
1	Valor SX	2 oz/a		A		PRE				
1	Classic	1.28 oz/a		A		PRE				
1	Metribuzin	4.75 oz/a		A		PRE				
1	Roundup PowerMax	22 oz/a		B		POST				
1	Clarity	1 pt/a		B		POST				
2	Trivence 8 oz						100 a	100 a	84 b	79 bcd
2	Valor SX	2 oz/a		A		PRE				
2	Classic	1.28 oz/a		A		PRE				
2	Metribuzin	4.75 oz/a		A		PRE				
2	Roundup PowerMax	22 oz/a		B		POST				
2	Cinch	1 pt/a		B		POST				
2	Clarity	1 pt/a		B		POST				
3	Envive 3.5 oz						100 a	100 a	78 c	82 abc
3	Valor SX	2 oz/a		A		PRE				
3	Classic	1.28 oz/a		A		PRE				
3	Harmony	0.2 oz/a		A		PRE				
3	Roundup PowerMax	22 oz/a		B		POST				
3	Clarity	1 pt/a		B		POST				
4	Envive 3.5 oz						100 a	100 a	84 b	89 a
4	Valor SX	2 oz/a		A		PRE				
4	Classic	1.28 oz/a		A		PRE				
4	Harmony	0.2 oz/a		A		PRE				
4	Roundup PowerMax	22 oz/a		B		POST				
4	Cinch	1 pt/a		B		POST				
4	Clarity	1 pt/a		B		POST				
5	Envive 3.5 oz						100 a	100 a	82 bc	70 d
5	Valor SX	2 oz/a		A		PRE				
5	Classic	1.28 oz/a		A		PRE				
5	Harmony	0.2 oz/a		A		PRE				
5	Roundup PowerMax	22 oz/a		B		POST				
5	Prefix	2 pt/a		B		POST				
6	Canopy	6 oz/a		A		PRE	100 a	100 a	95 a	84 abc
6	Cinch	1 pt/a		A		PRE				
6	Roundup PowerMax	22 oz/a		B		POST				
6	Clarity	1 pt/a		B		POST				

## The Ohio State University

Pest Type	W Weed	W Weed	W Weed	W Weed
Pest Code	ABUTH	HIBTR	SETFA	AMBTR
Pest Scientific Name	Abutilon theop>	Hibiscus trion>	Setaria faberi	Ambrosia trifi>
Pest Name	velvetleaf	Venice mallow	Giant foxtail	Giant ragweed
Rating Date	6-3-2015	6-3-2015	6-30-2015	6-30-2015
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%
Number of Subsamples	1	1	1	1
Rating Timing	AT POST	AT POST	AT POST	
Days After First/Last Applic.	26 26	26 26	53 26	53 26
Trt-Eval Interval	26 DA-A	26 DA-A	26 DA-B	26 DA-B
Number of Decimals	0	0	0	0

Trt	Treatment	Other	Other	Appl	Appl	5	6	7	8	
No.	Name	Rate	Rate	Unit	Code	Description				
7	Canopy	6 oz/a		A	PRE		100 a	100 a	84 b	87 ab
7	Cinch	1 pt/a		A	PRE					
7	Roundup PowerMax	22 oz/a		B	POST					
7	Clarity	1 pt/a		B	POST					
7	Cinch	1 pt/a		B	POST					
8	Valor XLT 3.5 oz						100 a	100 a	80 bc	89 a
8	Valor SX	2.05 oz/a		A	PRE					
8	Classic	1.45 oz/a		A	PRE					
8	Roundup PowerMax	22 oz/a		B	POST					
8	Clarity	1 pt/a		B	POST					
9	Verdict	5 oz/a		A	PRE		100 a	100 a	70 d	72 d
9	Metribuzin	8 oz/a		A	PRE					
9	Roundup PowerMax	22 oz/a		B	POST					
9	Clarity	1 pt/a		B	POST					
10	UTC						0 b	0 b	0 e	0 e
LSD	P=.05						.	.	4.8	9.4
Standard Deviation							0.0	0.0	2.8	5.5
CV							0.0	0.0	3.77	7.47
Grand Mean							90.0	90.0	74.1	73.1
Bartlett's X2							0.0	0.0	10.187	5.743
P(Bartlett's X2)							.	.	0.178	0.57
Skewness							-2.8091*	-2.8091*	-2.4904*	-2.2301*
Kurtosis							6.3081*	6.3081*	5.2378*	4.4669*
Replicate F							0.000	0.000	0.397	6.848
Replicate Prob(F)							1.0000	1.0000	0.6779	0.0061
Treatment F							0.000	0.000	275.425	71.020
Treatment Prob(F)							1.0000	1.0000	0.0001	0.0001

Pest Type	W Weed	W Weed	W Weed	W Weed
Pest Code	CHEAL	AMARE	ABUTH	HIBTR
Pest Scientific Name	Chenopodium al	Amaranthus ret	Abutilon theop	Hibiscus trion
Pest Name	Common lambsqu	Redroot pigweed	velvetleaf	Venice mallow
Rating Date	6-30-2015	6-30-2015	6-30-2015	6-30-2015
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%
Number of Subsamples	1	1	1	1
Rating Timing				
Days After First/Last Applic.	53 26	53 26	53 26	53 26
Trt-Eval Interval	26 DA-B	26 DA-B	26 DA-B	26 DA-B
Number of Decimals	0	0	0	0

Trt No.	Treatment Name	Other Rate	Other Rate	Appl Unit	Appl Code	Appl Description	9	10	11	12
1	Trivence 8 oz						100 a	100 a	100 a	100 a
1	Valor SX	2 oz/a		A		PRE				
1	Classic	1.28 oz/a		A		PRE				
1	Metribuzin	4.75 oz/a		A		PRE				
1	Roundup PowerMax	22 oz/a		B		POST				
1	Clarity	1 pt/a		B		POST				
2	Trivence 8 oz						100 a	100 a	100 a	100 a
2	Valor SX	2 oz/a		A		PRE				
2	Classic	1.28 oz/a		A		PRE				
2	Metribuzin	4.75 oz/a		A		PRE				
2	Roundup PowerMax	22 oz/a		B		POST				
2	Cinch	1 pt/a		B		POST				
2	Clarity	1 pt/a		B		POST				
3	Envive 3.5 oz						100 a	100 a	100 a	100 a
3	Valor SX	2 oz/a		A		PRE				
3	Classic	1.28 oz/a		A		PRE				
3	Harmony	0.2 oz/a		A		PRE				
3	Roundup PowerMax	22 oz/a		B		POST				
3	Clarity	1 pt/a		B		POST				
4	Envive 3.5 oz						100 a	100 a	100 a	100 a
4	Valor SX	2 oz/a		A		PRE				
4	Classic	1.28 oz/a		A		PRE				
4	Harmony	0.2 oz/a		A		PRE				
4	Roundup PowerMax	22 oz/a		B		POST				
4	Cinch	1 pt/a		B		POST				
4	Clarity	1 pt/a		B		POST				
5	Envive 3.5 oz						100 a	100 a	100 a	100 a
5	Valor SX	2 oz/a		A		PRE				
5	Classic	1.28 oz/a		A		PRE				
5	Harmony	0.2 oz/a		A		PRE				
5	Roundup PowerMax	22 oz/a		B		POST				
5	Prefix	2 pt/a		B		POST				
6	Canopy	6 oz/a		A		PRE	100 a	100 a	100 a	100 a
6	Cinch	1 pt/a		A		PRE				
6	Roundup PowerMax	22 oz/a		B		POST				
6	Clarity	1 pt/a		B		POST				

Pest Type	W Weed	W Weed	W Weed	W Weed					
Pest Code	CHEAL	AMARE	ABUTH	HIBTR					
Pest Scientific Name	Chenopodium al-	Amaranthus ret-	Abutilon theop-	Hibiscus trion-					
Pest Name	Common lambsqu-	Redroot pigweed	velvetleaf	Venice mallow					
Rating Date	6-30-2015	6-30-2015	6-30-2015	6-30-2015					
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO					
Rating Unit	%	%	%	%					
Number of Subsamples	1	1	1	1					
Rating Timing									
Days After First/Last Applic.	53 26	53 26	53 26	53 26					
Trt-Eval Interval	26 DA-B	26 DA-B	26 DA-B	26 DA-B					
Number of Decimals	0	0	0	0					
Trt Treatment No. Name	Other Rate	Other Rate	Unit	Appl Code	Appl Description	9	10	11	12
7 Canopy	6 oz/a		A	PRE		100 a	100 a	100 a	100 a
7 Cinch	1 pt/a		A	PRE					
7 Roundup PowerMax	22 oz/a		B	POST					
7 Clarity	1 pt/a		B	POST					
7 Cinch	1 pt/a		B	POST					
8 Valor XLT 3.5 oz						100 a	100 a	100 a	100 a
8 Valor SX	2.05 oz/a		A	PRE					
8 Classic	1.45 oz/a		A	PRE					
8 Roundup PowerMax	22 oz/a		B	POST					
8 Clarity	1 pt/a		B	POST					
9 Verdict	5 oz/a		A	PRE		100 a	100 a	100 a	100 a
9 Metribuzin	8 oz/a		A	PRE					
9 Roundup PowerMax	22 oz/a		B	POST					
9 Clarity	1 pt/a		B	POST					
10 UTC						0 b	0 b	0 b	0 b
LSD P=.05						.	.	.	.
Standard Deviation						0.0	0.0	0.0	0.0
CV						0.0	0.0	0.0	0.0
Grand Mean						90.0	90.0	90.0	90.0
Bartlett's X2						0.0	0.0	0.0	0.0
P(Bartlett's X2)						.	.	.	.
Skewness						-2.8091*	-2.8091*	-2.8091*	-2.8091*
Kurtosis						6.3081*	6.3081*	6.3081*	6.3081*
Replicate F						0.000	0.000	0.000	0.000
Replicate Prob(F)						1.0000	1.0000	1.0000	1.0000
Treatment F						0.000	0.000	0.000	0.000
Treatment Prob(F)						1.0000	1.0000	1.0000	1.0000



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Project ID: USA-15-157              Study Director: Anthony Dobbels  
   Sponsor Contact: Marsha Martin, DuPont

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

ABUTH, *Abutilon theophrasti*, = US

HIBTR, *Hibiscus trionum*, = US

Rating Type

CONTRO = control / burndown or knockdown

Rating Unit

% = percent