



# Purdue University

## Pest Description

**Pest 1 Type:** W **Code:** ERICA *Conyza canadensis*  
**Common Name:** Canada horseweed

**Pest 2 Type:** W **Code:** RANAB *Ranunculus abortivus*  
**Common Name:** Smallflower buttercup

**Pest 3 Type:** W **Code:** TAROF *Taraxacum officinale*  
**Common Name:** Common dandelion

**Pest 4 Type:** W **Code:** AMBEL *Ambrosia artemisiifolia*  
**Common Name:** Common ragweed

**Pest 5 Type:** W **Code:** ALLVI *Allium vineale*  
**Common Name:** Wild garlic

**Pest 6 Type:** W **Code:** BROSS *Bromus* sp.  
**Common Name:** Bromegrass

**Pest 7 Type:** W **Code:** VERPG *Veronica peregrina*  
**Common Name:** Purslane speedwell

**Pest 8 Type:** W **Code:** PLARU *Plantago rugelii*  
**Common Name:** Blackseed plantain

**Pest 9 Type:** W **Code:** POAAN *Poa annua*  
**Common Name:** Annual bluegrass

**Pest10 Type:** W **Code:** XANST *Xanthium strumarium*  
**Common Name:** Common cocklebur

**Pest11 Type:** W **Code:** SETFA *Setaria faberi*  
**Common Name:** Giant fox tail

## Site and Design

<b>Plot Width, Unit:</b> 10 FT	<b>Site Type:</b> FIELD	field
<b>Plot Length, Unit:</b> 30 FT	<b>Experimental Unit:</b> 1	PLOT plot
<b>Plot Area, Unit:</b> 300 FT <sup>2</sup>	<b>Tillage Type:</b> NOTILL	no-till
<b>Replications:</b> 4	<b>Study Design:</b> RACOB	Randomized Complete Block (RCB)
	<b>Untreated Arrangement:</b> INCLUDED	single control randomized in each block

## Soil Description

**Description Name:** SEPAC-Field U41

<b>% OM:</b> 1.3	<b>Texture:</b> SIL silt loam
<b>pH:</b> 6.5	<b>Soil Name:</b> Avonburg
<b>CEC:</b> 5.7	<b>Fert. Level:</b> G good
	<b>Soil Drainage:</b> P poor

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### Application Description

	A	B
Application Date:	5-5-2011	6-24-2011
Time of Day:	10 AM	9 AM
Application Method:	SPRAY	SPRAY
Application Timing:	PREPLA	MIPOWE
Application Placement:	FOLIAR	FOLIAR
Applied By:	RT	RT
Air Temperature, Unit:	63 F	66 F
% Relative Humidity:	40	65
Wind Velocity, Unit:	5 MPH	4.5 MPH
Wind Direction:	S	W
Dew Presence (Y/N):	N no	Y yes
Soil Temperature, Unit:	51 F	
Soil Moisture:	WET	WET
% Cloud Cover:	5	100

### Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:		BBCH
Stage Majority, Percent:		13 90
Stage Minimum, Percent:		12 10
Stage Maximum, Percent:		13 90
Height, Unit:		5 IN
Height Minimum, Maximum:		4 6

### Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	ERICA W	ERICA W
Stage Majority, Percent:	11 100	33 100
Height, Unit:	1 IN	3.5 IN
Height Minimum, Maximum:	0 1	1 6
Density, Unit:	1.5 YD2	15 YD2
Pest 2 Code, Type, Scale:	RANAB W	RANAB W
Stage Majority, Percent:	11 100	
Height, Unit:	2 IN	
Height Minimum, Maximum:	0 4	
Density, Unit:	10 YD2	
Pest 3 Code, Type, Scale:	TAROF W	TAROF W
Stage Majority, Percent:	65 100	
Height, Unit:	5 IN	
Height Minimum, Maximum:	0 10	

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Density, Unit:	2.5 YD2	
Pest 4 Code, Type, Scale:	AMBEL W	AMBEL W
Stage Majority, Percent:	12 100	14 100
Height, Unit:	1 IN	12 IN
Height Minimum, Maximum:	0 2	6 18
Density, Unit:	10 YD2	4 YD2
Pest 5 Code, Type, Scale:	ALLVI W	ALLVI W
Stage Majority, Percent:	40 100	
Height, Unit:	12 IN	
Height Minimum, Maximum:	6 18	
Density, Unit:	55 YD2	
Pest 6 Code, Type, Scale:	BROSS W	BROSS W
Stage Majority, Percent:	13 100	
Height, Unit:	3 IN	
Height Minimum, Maximum:	1 5	
Density, Unit:	50 YD2	
Pest 7 Code, Type, Scale:	VERPG W	VERPG W
Stage Majority, Percent:	32 100	
Height, Unit:	2 IN	
Height Minimum, Maximum:	1 3	
Density, Unit:	10 YD2	
Pest 8 Code, Type, Scale:	PLARU W	PLARU W
Stage Majority, Percent:	11 100	
Height, Unit:	1 IN	
Height Minimum, Maximum:	0 2	
Density, Unit:	5 YD2	
Pest 9 Code, Type, Scale:	POAAN W	POAAN W
Stage Majority, Percent:	65 100	
Height, Unit:	3.5	
Height Minimum, Maximum:	3 4	
Density, Unit:	10 YD2	
Pest10 Code, Type, Scale:	XANST W	XANST W
Stage Majority, Percent:		14 90
Height, Unit:		7 IN
Height Minimum, Maximum:		2 12
Density, Unit:		7.5 YD2
Pest11 Code, Type, Scale:	SETFA W	SETFA W
Stage Majority, Percent:		22 90
Height, Unit:		10.5 IN
Height Minimum, Maximum:		3 18
Density, Unit:		55 YD2

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### Application Equipment

	A	B
<b>Appl. Equipment:</b>	CO2 Backpack	CO2 Backpack
<b>Equipment Type:</b>	SPRBAC	SPRBAC
<b>Operation Pressure, Unit:</b>	17 PSI	17 PSI
<b>Nozzle Type:</b>	Flat Fan	Flat Fan
<b>Nozzle Size:</b>	XR11002	XR11002
<b>Nozzle Spacing, Unit:</b>	15 IN	15 IN
<b>Nozzles/Row:</b>	8	8
<b>Boom Length, Unit:</b>	10 FT	10 FT
<b>Boom Height, Unit:</b>	18 IN	18 IN
<b>Ground Speed, Unit:</b>	3 MPH	3 MPH
<b>Carrier:</b>	H2O	H2O
<b>Water Hardness (ppm CaCO3):</b>	150	150
<b>Spray Volume, Unit:</b>	15 GAL/AC	15 GAL/AC
<b>Mix Size, Unit:</b>	1.8 Liters	1.8 Liters
<b>Propellant:</b>	CO2	CO2
<b>Tank Mix (Y/N):</b>	N no	N no

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## Soybean No-Till Protocol: Kixor applied preplant burndown to soybean vs. standard programs

Trial ID: 11S-SEP-NTS-01      Protocol ID: 11S-SEP-NTS-01  
 Location: SEPAC                  Study Director: Paul Marquardt  
 Project ID:                          Investigator: Dr. Bill Johnson  
    Sponsor Contact: Gery Welker

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	ERICA	AMBEL	BROSE	ERICA	AMBEL	XANST
Pest Scientific Name	Conyza canadensis	Ambrosia artemisiifolia	Bromus secalinus	Conyza canadensis	Ambrosia artemisiifolia	Xanthium strumarium
Pest Name	Canada horseweed	Common ragweed	Cheat	Canada horseweed	Common ragweed	Common cocklebur
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean
Crop Variety	AG2931	AG2931	AG2931	AG2931	AG2931	AG2931
Rating Date	5-20-2011	5-20-2011	5-20-2011	6-14-2011	6-14-2011	6-14-2011
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%	%
Number of Subsamples	1	1	1	1	1	1
Crop Stage Majority				VC	VC	VC
Pest Stage Majority	1-2"	1-4"	1-6"	1-3"	2-8"	3-8"
Pest Density, Unit	2.5 YD2	5 YD2	12.5 YD2	2.5 YD2	15 YD2	3 YD2
Assessed By	PM	PM	PM	CB/RH	CB/RH	CB/RH
Days After First/Last Applic.	15 15	15 15	15 15	40 40	40 40	40 40
Trt-Eval Interval	15 DA-A	15 DA-A	15 DA-A	40 DA-A	40 DA-A	40 DA-A
Plant-Eval Interval	-14 DP-1	-14 DP-1	-14 DP-1	11 DP-1	11 DP-1	11 DP-1
Days After Emergence	-19 DE	-19 DE	-19 DE	6 DE-1	6 DE-1	6 DE-1
ARM Action Codes						
Number of Decimals						
Trt Treatment	Rate	Appl				
No. Name	Rate Unit	Code	1	2	3	4
1 UNTREATED	0.0 b		0.0 b	0.0 b	0.0 b	0.0 b
2 Roundup Original	840 g ae/ha A		100.0 a	100.0 a	97.5 a	80.0 a
NIS	0.25 % v/v A					
N-Pak AMS	5 % v/v A					
Roundup Original	840 g ae/ha B					
NIS	0.25 % v/v B					
N-Pak AMS	5 % v/v B					
3 Roundup Original	840 g ae/ha A		100.0 a	100.0 a	96.3 a	91.3 a
2,4-D Ester	560 g ai/ha A					
NIS	0.25 % v/v A					
N-Pak AMS	5 % v/v A					
Roundup Original	840 g ae/ha B					
NIS	0.25 % v/v B					
N-Pak AMS	5 % v/v B					
4 Sharpen	25 g ai/ha A		100.0 a	100.0 a	97.5 a	100.0 a
Roundup Original	840 g ae/ha A					
MSO	1.0 % v/v A					
N-Pak AMS	5 % v/v A					
Roundup Original	840 g ae/ha B					
NIS	0.25 % v/v B					
N-Pak AMS	5 % v/v B					

Means followed by same letter do not significantly differ (P=0.05, Student-Newman-Keuls)  
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

## Purdue University

	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Type	ERICA	AMBEL	BROSE	ERICA	AMBEL	XANST
Pest Code	ERICA	AMBEL	BROSE	ERICA	AMBEL	XANST
Pest Scientific Name	Conyza canadensis	Ambrosia artemisiifolia	Bromus secalinus	Conyza canadensis	Ambrosia artemisiifolia	Xanthium strumarium
Pest Name	Canada horseweed	Common ragweed	Cheat	Canada horseweed	Common ragweed	Common cocklebur
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean
Crop Variety	AG2931	AG2931	AG2931	AG2931	AG2931	AG2931
Rating Date	5-20-2011	5-20-2011	5-20-2011	6-14-2011	6-14-2011	6-14-2011
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%	%
Number of Subsamples	1	1	1	1	1	1
Crop Stage Majority				VC	VC	VC
Pest Stage Majority	1-2"	1-4"	1-6"	1-3"	2-8"	3-8"
Pest Density, Unit	2.5 YD2	5 YD2	12.5 YD2	2.5 YD2	15 YD2	3 YD2
Assessed By	PM	PM	PM	CB/RH	CB/RH	CB/RH
Days After First/Last Applic.	15 15	15 15	15 15	40 40	40 40	40 40
Trt-Eval Interval	15 DA-A	15 DA-A	15 DA-A	40 DA-A	40 DA-A	40 DA-A
Plant-Eval Interval	-14 DP-1	-14 DP-1	-14 DP-1	11 DP-1	11 DP-1	11 DP-1
Days After Emergence	-19 DE	-19 DE	-19 DE	6 DE-1	6 DE-1	6 DE-1
ARM Action Codes						
Number of Decimals						
Trt Treatment						
No. Name	1	2	3	4	5	6
Rate						
Appl						
Rate Unit	a	a	a	a	a	a
Code						
5 Optill	100.0 a	100.0 a	95.0 a	100.0 a	93.0 a	92.8 a
Roundup Original	95.3 g ai/ha A	100.0 a	95.0 a	100.0 a	93.0 a	92.8 a
MSO	840 g ae/ha A					
N-Pak AMS	1.0 % v/v A					
Roundup Original	5 % v/v A					
NIS	840 g ae/ha B					
N-Pak AMS	0.25 % v/v B					
6 Verdict	100.0 a	100.0 a	98.8 a	100.0 a	85.0 a	82.5 a
Roundup Original	244 g ai/ha A	100.0 a	98.8 a	100.0 a	85.0 a	82.5 a
MSO	840 g ae/ha A					
N-Pak AMS	1.0 % v/v A					
Roundup Original	5 % v/v A					
NIS	840 g ae/ha B					
N-Pak AMS	0.25 % v/v B					
7 Sharpen	100.0 a	100.0 a	100.0 a	100.0 a	89.8 a	70.0 a
Prowl H20	25 g ai/ha A	100.0 a	100.0 a	100.0 a	89.8 a	70.0 a
Roundup Original	1390 g ai/ha A					
MSO	840 g ae/ha A					
N-Pak AMS	1.0 % v/v A					
Roundup Original	5 % v/v A					
NIS	840 g ae/ha B					
N-Pak AMS	0.25 % v/v B					
LSD (P=.05)	0.00	0.00	5.06	14.63	18.48	29.77
Standard Deviation	0.00	0.00	3.41	9.85	12.44	20.04
CV	0.0	0.0	4.08	12.06	16.24	35.38
Bartlett's X2	0.0	0.0	2.664	1.437	15.111	9.317
P(Bartlett's X2)	.	.	0.615	0.231	0.01*	0.097
Replicate F	0.000	0.000	2.256	1.631	0.601	1.878
Replicate Prob(F)	1.0000	1.0000	0.1167	0.2175	0.6227	0.1695
Treatment F	0.000	0.000	468.897	55.772	30.230	12.078
Treatment Prob(F)	1.0000	1.0000	0.0001	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-New man-Keuls)  
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed					
Pest Code	IPOSS	GGGAN	AMBEL	XANST	IPOSS					
Pest Scientific Name	Ipomoea sp.	Annual grasses	Ambrosia artem>	Xanthium strum>	Ipomoea sp.					
Pest Name	Morning glory	Annual grasses	Common ragweed	Common cockleb>	Morning glory					
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA			
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY			
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max			
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean			
Crop Variety	AG2931	AG2931	AG2931	AG2931	AG2931	AG2931	AG2931			
Rating Date	6-14-2011	7-14-2011	7-14-2011	7-14-2011	7-14-2011	7-14-2011	8-18-2011			
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	PHYGEN	PHYGEN			
Rating Unit	%	%	%	%	%	%	%			
Number of Subsamples	1	1	1	1	1	1	1			
Crop Stage Majority	VC	R2	R2	R2	R2	R2	R5			
Pest Stage Majority	2-5"	10 IN	18 IN	6 IN	12 IN					
Pest Density, Unit	2.5 YD2	27 YD2	7 YD2	2 YD2	1.5 YD2					
Assessed By	CB/RH	RH	RH	RH	RH	RH	PM			
Days After First/Last Applic.	40 40	70 20	70 20	70 20	70 20	70 20	105 55			
Trt-Eval Interval	40 DA-A									
Plant-Eval Interval	11 DP-1	41 DP-1	41 DP-1	41 DP-1	41 DP-1	41 DP-1	76 DP-1			
Days After Emergence	6 DE-1	36 DE-	36 DE-	36 DE-	36 DE-	36 DE-	71 DE-			
ARM Action Codes										
Number of Decimals										
Trt Treatment	Rate	Appl								
No. Name	Rate Unit	Code	7	8	9	10	11	12	13	
1 UNTREATED	0.0 b		0.0 c		0.0 b		0.0 b		0.0 a	0.0 a
2 Roundup Original	840 g ae/ha A		86.3 a	97.3 a	100.0 a	62.5 a	75.0 a	0.0 a	0.0 a	
NIS	0.25 % v/v A									
N-Pak AMS	5 % v/v A									
Roundup Original	840 g ae/ha B									
NIS	0.25 % v/v B									
N-Pak AMS	5 % v/v B									
3 Roundup Original	840 g ae/ha A		74.3 a	96.0 a	100.0 a	48.3 a	75.8 a	0.0 a	0.0 a	
2,4-D Ester	560 g ai/ha A									
NIS	0.25 % v/v A									
N-Pak AMS	5 % v/v A									
Roundup Original	840 g ae/ha B									
NIS	0.25 % v/v B									
N-Pak AMS	5 % v/v B									
4 Sharpen	25 g ai/ha A		95.3 a	95.5 a	100.0 a	72.0 a	86.8 a	0.0 a	0.0 a	
Roundup Original	840 g ae/ha A									
MSO	1.0 % v/v A									
N-Pak AMS	5 % v/v A									
Roundup Original	840 g ae/ha B									
NIS	0.25 % v/v B									
N-Pak AMS	5 % v/v B									

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed				
Pest Code	IPOSS	GGGAN	AMBEL	XANST	IPOSS				
Pest Scientific Name	Ipomoea sp.	Annual grasses	Ambrosia artem>	Xanthium strum>	Ipomoea sp.				
Pest Name	Morning glory	Annual grasses	Common ragweed	Common cockleb>	Morning glory				
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA		
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean		
Crop Variety	AG2931	AG2931	AG2931	AG2931	AG2931	AG2931	AG2931		
Rating Date	6-14-2011	7-14-2011	7-14-2011	7-14-2011	7-14-2011	7-14-2011	8-18-2011		
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	PHYGEN	PHYGEN		
Rating Unit	%	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1	1		
Crop Stage Majority	VC	R2	R2	R2	R2	R2	R5		
Pest Stage Majority	2-5"	10 IN	18 IN	6 IN	12 IN				
Pest Density, Unit	2.5 YD2	27 YD2	7 YD2	2 YD2	1.5 YD2				
Assessed By	CB/RH	RH	RH	RH	RH	RH	PM		
Days After First/Last Applic.	40 40	70 20	70 20	70 20	70 20	70 20	105 55		
Trt-Eval Interval	40 DA-A								
Plant-Eval Interval	11 DP-1	41 DP-1	41 DP-1	41 DP-1	41 DP-1	41 DP-1	76 DP-1		
Days After Emergence	6 DE-1	36 DE-	36 DE-	36 DE-	36 DE-	36 DE-	71 DE-		
ARM Action Codes									
Number of Decimals									
Trt Treatment	Rate	Appl							
No. Name	Rate Unit	Code	7	8	9	10	11	12	13
5 Optill	95.3 g ai/ha	A	93.3 a	93.3 a	100.0 a	87.0 a	97.3 a	0.0 a	0.0 a
Roundup Original	840 g ae/ha	A							
MSO	1.0 % v/v	A							
N-Pak AMS	5 % v/v	A							
Roundup Original	840 g ae/ha	B							
NIS	0.25 % v/v	B							
N-Pak AMS	5 % v/v	B							
6 Verdict	244 g ai/ha	A	90.0 a	97.0 a	100.0 a	64.3 a	63.8 a	0.0 a	0.0 a
Roundup Original	840 g ae/ha	A							
MSO	1.0 % v/v	A							
N-Pak AMS	5 % v/v	A							
Roundup Original	840 g ae/ha	B							
NIS	0.25 % v/v	B							
N-Pak AMS	5 % v/v	B							
7 Sharpen	25 g ai/ha	A	82.5 a	89.8 b	100.0 a	54.3 a	93.3 a	0.0 a	0.0 a
Prowl H20	1390 g ai/ha	A							
Roundup Original	840 g ae/ha	A							
MSO	1.0 % v/v	A							
N-Pak AMS	5 % v/v	A							
Roundup Original	840 g ae/ha	B							
NIS	0.25 % v/v	B							
N-Pak AMS	5 % v/v	B							
LSD (P=.05)			18.92	2.79	0.00	31.35	27.98	0.00	0.00
Standard Deviation			12.73	1.88	0.00	21.10	18.83	0.00	0.00
CV			17.09	2.31	0.0	38.05	26.8	0.0	0.0
Bartlett's X2			13.531	4.342	0.0	3.289	18.483	0.0	0.0
P(Bartlett's X2)			0.019*	0.362	.	0.656	0.002*	.	.
Replicate F			2.052	3.389	0.000	3.218	1.831	0.000	0.000
Replicate Prob(F)			0.1426	0.0408	1.0000	0.0475	0.1777	1.0000	1.0000
Treatment F			27.859	1464.797	0.000	6.772	12.334	0.000	0.000
Treatment Prob(F)			0.0001	0.0001	1.0000	0.0007	0.0001	1.0000	1.0000

Means followed by same letter do not significantly differ (P=.05, Student-New man-Keuls)  
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

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Pest Type	W Weed	W Weed	W Weed						
Pest Code	XANST	ERICA	AMBEL						
Pest Scientific Name	Xanthium strum>	Conyza canadens>	Ambrosia artem>						
Pest Name	Common cockleb>	Canada horsewe>	Common ragweed						
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA		
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean		
Crop Variety	AG2931	AG2931	AG2931	AG2931	AG2931	AG2931	AG2931		
Rating Date	8-18-2011	8-18-2011	8-18-2011	10-25-2011	10-25-2011	10-25-2011	10-25-2011		
Rating Type	CONTRO	CONTRO	CONTRO	YIELD	MOISTURE	YIELD	YIELD		
Rating Unit	%	%	%	LB	%	BU	KG		
Number of Subsamples	1	1	1	1	1	1	1		
Crop Stage Majority	R5	R5	R5						
Pest Stage Majority	24 IN	48 IN	38 IN						
Pest Density, Unit	10 YD2	5 YD2	20 YD2						
Assessed By	PM	PM	PM	PM	PM	PM	PM		
Days After First/Last Applic.	105 55	105 55	105 55	173 123	173 123	173 123	173 123		
Trt-Eval Interval									
Plant-Eval Interval	76 DP-1	76 DP-1	76 DP-1	144 DP-1	144 DP-1	144 DP-1	144 DP-1		
Days After Emergence	71 DE-	71 DE-	71 DE-	139 DE	139 DE	139 DE	139 DE		
ARM Action Codes						TY1	TY2		
Number of Decimals						1	1		
Trt Treatment	Rate	Appl							
No. Name	Rate Unit	Code	14	15	16	17	18	19	20
1 UNTREATED	0.0 a		0.0 b	0.0 a	0.0 a	8.5729474 b	14.3277354 a	24.5 b	1646.0 b
2 Roundup Original NIS N-Pak AMS Roundup Original NIS N-Pak AMS	840 g ae/ha A 0.25 % v/v A 5 % v/v A 840 g ae/ha B 0.25 % v/v B 5 % v/v B		20.0 a	100.0 a	100.0 a	12.4697507 a	14.9866939 a	35.4 a	2378.0 a
3 Roundup Original 2,4-D Ester NIS N-Pak AMS Roundup Original NIS N-Pak AMS	840 g ae/ha A 560 g ai/ha A 0.25 % v/v A 5 % v/v A 840 g ae/ha B 0.25 % v/v B 5 % v/v B		22.5 a	100.0 a	100.0 a	11.4888298 a	14.7703681 a	32.7 a	2197.5 a
4 Sharpen Roundup Original MSO N-Pak AMS Roundup Original NIS N-Pak AMS	25 g ai/ha A 840 g ae/ha A 1.0 % v/v A 5 % v/v A 840 g ae/ha B 0.25 % v/v B 5 % v/v B		22.5 a	100.0 a	97.5 a	13.3566107 a	15.1368633 a	37.8 a	2543.7 a

Means followed by same letter do not significantly differ (P=0.05, Student-New man-Keuls)  
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

# Purdue University

Pest Type	W Weed	W Weed	W Weed				
Pest Code	XANST	ERICA	AMBEL				
Pest Scientific Name	Xanthium strum>	Conyza canadens>	Ambrosia artem>				
Pest Name	Common cockleb>	Canada horsewe>	Common ragweed				
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean
Crop Variety	AG2931	AG2931	AG2931	AG2931	AG2931	AG2931	AG2931
Rating Date	8-18-2011	8-18-2011	8-18-2011	10-25-2011	10-25-2011	10-25-2011	10-25-2011
Rating Type	CONTRO	CONTRO	CONTRO	YIELD	MOISTURE	YIELD	YIELD
Rating Unit	%	%	%	LB	%	BU	KG
Number of Subsamples	1	1	1	1	1	1	1
Crop Stage Majority	R5	R5	R5				
Pest Stage Majority	24 IN	48 IN	38 IN				
Pest Density, Unit	10 YD2	5 YD2	20 YD2				
Assessed By	PM	PM	PM	PM	PM	PM	PM
Days After First/Last Applic.	105 55	105 55	105 55	173 123	173 123	173 123	173 123
Trt-Eval Interval							
Plant-Eval Interval	76 DP-1	76 DP-1	76 DP-1	144 DP-1	144 DP-1	144 DP-1	144 DP-1
Days After Emergence	71 DE-	71 DE-	71 DE-	139 DE	139 DE	139 DE	139 DE
ARM Action Codes						TY1	TY2
Number of Decimals						1	1
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code	14	15	16	17	18
5 Optill	95.3 g ai/ha A		36.3 a	100.0 a	100.0 a	13.6387915 a	14.8945156 a
Roundup Original	840 g ae/ha A						
MSO	1.0 % v/v A						
N-Pak AMS	5 % v/v A						
Roundup Original	840 g ae/ha B						
NIS	0.25 % v/v B						
N-Pak AMS	5 % v/v B						
6 Verdict	244 g ai/ha A		0.0 a	100.0 a	97.5 a	14.0419135 a	15.0664469 a
Roundup Original	840 g ae/ha A						
MSO	1.0 % v/v A						
N-Pak AMS	5 % v/v A						
Roundup Original	840 g ae/ha B						
NIS	0.25 % v/v B						
N-Pak AMS	5 % v/v B						
7 Sharpen	25 g ai/ha A		20.0 a	100.0 a	97.5 a	12.8325590 a	14.9968363 a
Prowl H20	1390 g ai/ha A						
Roundup Original	840 g ae/ha A						
MSO	1.0 % v/v A						
N-Pak AMS	5 % v/v A						
Roundup Original	840 g ae/ha B						
NIS	0.25 % v/v B						
N-Pak AMS	5 % v/v B						
LSD (P=.05)	44.57	0.00	4.77	2.38045764	0.75814344	6.74	453.53
Standard Deviation	30.00	0.00	3.21	1.60232059	0.51031732	4.54	305.28
CV	173.21	0.0	3.79	12.98	3.43	12.95	12.95
Bartlett's X2	0.11	0.0	0.0	9.863	8.919	10.421	10.421
P(Bartlett's X2)	0.999	.	.	0.131	0.178	0.108	0.108
Replicate F	3.747	0.000	1.269	3.649	3.731	3.408	3.408
Replicate Prob(F)	0.0298	1.0000	0.3148	0.0324	0.0302	0.0400	0.0401
Treatment F	0.760	0.000	540.692	5.399	1.134	5.286	5.286
Treatment Prob(F)	0.6102	1.0000	0.0001	0.0024	0.3827	0.0027	0.0027

Means followed by same letter do not significantly differ (P=.05, Student-New man-Keuls)  
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

## Purdue University

### Soybean No-Till Protocol: Kixor applied preplant burndown to soybean vs. standard programs

Trial ID: 11S-SEP-NTS-01	Protocol ID: 11S-SEP-NTS-01
Location: SEPAC	Study Director: Paul Marquardt
Project ID:	Investigator: Dr. Bill Johnson
	Sponsor Contact: Gery Welker

#### Pest Type

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

#### Pest Code

ERICA, Conyza canadensis, = US  
 AMBEL, Ambrosia artemisiifolia, = US  
 BROSE, Bromus secalinus, = US  
 XANST, Xanthium strumarium, = US  
 IPOSS, Ipomoea sp., = US  
 GGGAN, Annual grasses, = US

#### Crop Code

GLXMA, BSOY, Glycine max., = US

#### Rating Type

CONTRO = control / burndown or knockdown  
 PHYGEN = phytotoxicity - general / injury  
 YIELD = yield

#### Rating Unit

% = percent  
 LB = pound  
 BU = bushel  
 KG = kilogram

YD2 = per square yard

#### Plant-Eval Interval

-14 DP-1 = 1 GLXMA 6-3-2011  
 11 DP-1 = 1 GLXMA 6-3-2011  
 41 DP-1 = 1 GLXMA 6-3-2011  
 76 DP-1 = 1 GLXMA 6-3-2011  
 144 DP-1 = 1 GLXMA 6-3-2011

#### ARM Action Codes

TY1 =  $2.904 * [17] * (100 - [18]) / 87$   
 TY2 =  $195.2984 * [17] * (100 - [18]) / 87$