

University of Georgia

SOYBEAN RESPONSE TO HPPD HERBICIDES - 30 DAT

Trial ID: SB-01-23 Study Dir.: NICK SHAY
 Location: PONDER FARM Investigator: Eric P. Prostko

Reps: 4 Plots: 6 by 25 feet
 Appl. Amount: 15 GAL/AC Mix Size: 1.5 L (total for 4 plots; minimum=0.782 L)

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Grow Unit	Appl Stg Code	Amt Product to Measure	Diluent	Rep			
									1	2	3	4
1	NTC							-	101	203	305	403
2	CALLISTO	4	SC	3.0 oz/a	PRE	A	2.344 mL/mx	1497.7 mL	102	201	303	402
3	LAUDIS	3.5	SC	3.0 oz/a	PRE	A	2.344 mL/mx	1497.7 mL	103	205	301	405
4	IMPACT	2.8	SC	1.25 oz/a	PRE	A	0.9766 mL/mx	1499 mL	104	202	304	401
5	SHIELDEX	3.33	SC	1.35 oz/a	PRE	A	1.055 mL/mx	1498.9 mL	105	204	302	404

Sort Order: Replicate 1

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Trial Comments

LAST TILLAGE: MARCH 27, 2023

MAINTAINED WEED-FREE

APRIL 3-NOVEMBER 1 RAINFALL TOTALS: 32.14" (LONG-TERM AVERAGE = 26.19")

VALOR @ 2 OZ/A + PROWL H20 @ 32 OZ/A OVER WHOLE TEST AREA (MARCH 30)

ROUNDUP POWERMAX3 @ 22 OZ/A (APRIL 14)

LIBERTY @ 32 OZ/A (APRIL 25)

LIBERTY @ 22 OZ/A + ROUNDUP POWERMAX3 @ 22 OZ/A + ZIDUA @ 2.5 OZ/A (MAY 25)

BORON @ 32 OZ/A + DIMILIN @ 2 OZ/A + ALTO @ 5.5 OZ/A - JUNE 30

ALTO @ 5.5 OZ/A - JULY 19

ROUNDUP POWERMAX3 @ 44 OZ/A ON TRTS 4 + 5 (GRASSES) - JULY 31

GRAMOXONE @ 16 OZ/A + NIS @ 0.25% V/V - OCTOBER 18

CURRENT SOYBEAN ROTATION RESTRICTIONS:

CALLISTO = 10 MONTHS

LAUDIS = 8 MONTHS

IMPACT = 9 MONTHS

SHIELDEX = 9 MONTHS

HARVEST DATE: 11/01/23

HARVEST MOISTURE: 10.6%

YIELDS ADJUSTED TO 13%

SUMMARY:

1) CALLISTO HAD NO EFFECT ON SOYBEAN BLEACHING, STUNTING, HEIGHT, OR YIELD.

2) LAUDIS CAUSED SLIGHT BLEACHING AND STUNTING BUT HAD NO EFFECT ON YIELD.

3) IMPACT CAUSED SIGNIFICANT BLEACHING, STUNTING, HEIGHT REDUCTIONS, YIELD LOSS. IMPACT WAS THE MOST INJURIOUS HPPD HERBICIDE.

4) SHIELDEX CAUSED SIGNIFICANT BLEACHING, STUNTING, HEIGHT REDUCTIONS, AND YIELD LOSS (93%).

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GENERAL TRIAL INFORMATION

Study Director: NICK SHAY **Title:** _____
Affiliation: _____
Postal Code: _____

Investigator: Eric P. Prostko **Title:** _____
Affiliation: _____
Postal Code: _____

TRIAL LOCATION

City: _____ **Trial Status:** E
State/Prov.: _____ **Trial Reliability:** _____
Postal Code: _____ **Initiation Date:** _____
Country: _____ **Planned Completion Date:** _____
E-Longitude of LL Corner °: _____ **N-Latitude of LL Corner °:** _____
Altitude of LL Corner: _____ **Unit:** _____ **Angle y-axis to North °:** _____
Directions: _____

COOPERATOR/LANDOWNER

Cooperator: _____ **Country:** _____
Org: _____ **Phone No:** _____
Address 1: _____ **Fax No:** _____
Address 2: _____
City: _____
State/Prov: _____
Postal Code: _____

Conducted Under GLP (Y/N): N **Conducted Under GEP (Y/N):** N
Guidelines: _____ **Guideline Description:** _____

Objective: _____

Conclusions: _____

CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name
1.			

Crop 1: GLYMA SOYBEAN **Variety:** ASGROW AG66XF2
Planting Date: May-2-23 **Planting Method:** GP 3P605NT DRILL
Rate: 140000 S/A **Depth:** 1.25 IN **Perennial Age:** _____
Row Spacing: 15 IN **Spacing Within Row:** _____ **Seed Bed:** _____
Soil Temperature: _____ **Soil Moisture:** NORMAL **Emergence Date:** _____

SITE AND DESIGN

Plot Width, Unit: 6 FT **Plot Length, Unit:** 25 FT **Reps:** 4
Site Type: _____
Tillage Type: CONVENTIONAL **Study Design:** RACOBL

Trial Initiation Comments: _____

Previous Crops	Previous Pesticides	Year
1. PEANUT		2022

MAINTENANCE

Field Prep./Maintenance: 300 LBS/A 5-15-30 PREPLANT
 1 TON/A LIME PREPLANT

No.	Date	Maintenance Treatment Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit
1.							

SOIL DESCRIPTION

% Sand: 92 **% OM:** 0.65 **Texture:** SAND
% Silt: 4 **pH:** 6.0 **Soil Name:** TIFTON
% Clay: 4 **CEC:** 2.5 **Fert. Level:** GOOD

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ADDITIONAL MEASURED ELEMENTS

Element	Quantity	Unit

MOISTURE CONDITIONS

	Date	Time	Amount	Unit	Type	Interval	Unit
1.	Apr-3-23		0.83	IN	RAINFALL		
2.	Apr-8-23		0.42	IN	RAINFALL		
3.	Apr-19-23		0.5	IN	SPRINKLER - LATERAL MOVE		
4.	Apr-21-23		0.3	IN	SPRINKLER - LATERAL MOVE		
5.	Apr-27-23		1.0	IN	RAINFALL		
6.	Apr-29-23		0.65	IN	RAINFALL		
7.	May-11-23		0.5	IN	SPRINKLER - LATERAL MOVE		
8.	May-12-23		2.5	IN	RAINFALL		
9.	May-20-23		0.1	IN	RAINFALL		
10.	May-22-23		0.75	IN	RAINFALL		
11.	May-23-23		0.3	IN	RAINFALL		
12.	May-30-23		0.5	IN	SPRINKLER - LATERAL MOVE		
13.	Jun-7-23		0.5	IN	SPRINKLER - LATERAL MOVE		
14.	Jun-7-23		0.5	IN	RAINFALL		
15.	Jun-12-23		0.65	IN	RAINFALL		
16.	Jun-13-23		0.6	IN	RAINFALL		
17.	Jun-14-23		2.0	IN	RAINFALL		
18.	Jun-15-23		2.2	IN	RAINFALL		

Overall Moisture Conditions: _____
 Closest Weather Station: _____ Distance: _____ Unit: _____

APPLICATION DESCRIPTION

	A
Application Date:	Apr-3-23
Time of Day:	7:05 AM
Application Method:	BROADCAST
Application Timing:	PRE
Applic. Placement:	SOIL
Air Temp., Unit:	58 F
% Relative Humidity:	84
Wind Velocity, Unit:	0 MPH
Dew Presence (Y/N):	N
Water Hardness:	--
Soil Temp., Unit:	63 F
Soil Moisture:	OPTIMUM
% Cloud Cover:	10

CROP STAGE AT EACH APPLICATION

	A
Crop 1 Code, Stage:	GLYMA,
Stage Scale:	
Height, Unit:	

WEED STAGE AT EACH APPLICATION

	A
Weed 1 Code, Stage:	
Stage Scale:	
Density, Unit:	

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APPLICATION EQUIPMENT

	A
Appl. Equipment:	BACKPACK
Operating Pressure:	38
Nozzle Type:	AIXR
Nozzle Size:	11002
Nozzle Spacing, Unit:	20 IN
Nozzles/Row:	
Band Width, Unit:	
Boom Length, Unit:	60 IN
Boom Height, Unit:	20 IN
Ground Speed, Unit:	3.5 MPH
Incorporation Equip.:	
Hours to Incorp.:	
Incorp. Depth, Unit:	
Carrier:	WATER
Spray Volume, Unit:	15 GPA
Spray pH:	
Propellant:	CO2
Tank Mix (Y/N):	

Trt No	Treatment Application Comment

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SOYBEAN RESPONSE TO HPPD HERBICIDES - 30 DAT										
Trial ID: SB-01-23 Study Dir.: NICK SHAY Location: PONDER FARM Investigator: Eric P. Prostko										
Crop Code Part Rated Rating Data Type Rating Unit Rating Date	Glyma	Glyma	Glyma	Glyma	Glyma	Glyma	Glyma	Glyma	Glyma	Glyma
	stand #/5ft May-10-23	Bleaching % May-10-23	Stunting % May-18-23	CHLOROSIS % May-18-23	Ht1 In May-30-23	Ht2 In May-30-23	Ht3 In May-30-23	Ht4 In May-30-23	Ht5 In May-30-23	AVG-HT In May-30-23
Trt Treatment Form Form Rate Grow Appl No. Name Conc Type Rate Unit Stg Code	1	2	3	4	5	6	7	8	9	10
1 NTC	18.8 -	1.3 -	0.0 d	0.0 c	6.63 b	7.13 ab	7.25 a	6.88 a	6.63 a	6.9 ab
2 CALLISTO 4 SC 3.0 oz/a PRE A	21.3 -	0.0 -	0.0 d	0.0 c	7.25 a	7.38 a	7.25 a	7.13 a	7.00 a	7.2 a
3 LAUDIS 3.5 SC 3.0 oz/a PRE A	20.0 -	1.3 -	7.5 c	0.0 c	6.50 b	6.63 bc	7.00 a	6.63 a	6.88 a	6.7 b
4 IMPACT 2.8 SC 1.25 oz/a PRE A	20.5 -	2.5 -	40.0 a	85.0 a	5.38 c	5.38 d	5.50 b	5.50 b	5.75 b	5.5 d
5 SHIELDDEX 3.33 SC 1.35 oz/a PRE A	18.8 -	3.8 -	20.0 b	37.5 b	6.13 b	6.13 c	5.75 b	5.63 b	5.63 b	5.9 c
LSD P=.10	3.95	4.57	5.40	2.82	0.606	0.575	0.488	0.822	0.584	0.34
Standard Deviation	3.13	3.62	4.28	2.24	0.481	0.456	0.387	0.652	0.463	0.27
CV	15.79	207.02	31.72	9.13	7.54	7.0	5.91	10.27	7.27	4.23
Grand Mean	19.85	1.75	13.50	24.50	6.375	6.525	6.550	6.350	6.375	6.44

Means followed by same letter or symbol do not significantly differ (P=.10, LSD).
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
 ^Calculated from residual.

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Trial ID: SB-01-23 Study Dir.: NICK SHAY
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Crop Code				Glyma	Glyma	Glyma	Glyma	Glyma	Glyma	Glyma	Glyma	GLYMA	GLYMA				
Part Rated				stand	Stunting	Chlorosis	Ht1	Ht2	Ht3	Ht4	Ht5	AVG-HGT	YIELD				
Rating Data Type				#/5 ft	%	%	In	In	In	In	In	IN	LBS/PLOT				
Rating Unit				May-30-23	Jun-22-23	Jun-22-23	Jun-30-23	Jun-30-23	Jun-30-23	Jun-30-23	Jun-30-23	Jun-30-23	Nov-8-23				
Rating Date																	
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Grow Unit	Appl Stg	Code	11	12	13	14	15	16	17	18	19	20
1	NTC							20.0 -	0.0 c	0.0 c	20.88 a	22.13 a	21.25 b	22.50 a	24.00 a	22.2 ab	9.13 a
2	CALLISTO	4	SC	3.0 oz/a	PRE	A		22.5 -	0.0 c	0.0 c	23.25 a	22.50 a	23.00 a	23.75 a	25.00 a	23.5 a	8.78 a
3	LAUDIS	3.5	SC	3.0 oz/a	PRE	A		25.0 -	1.3 c	0.0 c	20.75 a	21.75 a	22.00 ab	23.00 a	22.25 b	22.0 b	8.85 a
4	IMPACT	2.8	SC	1.25 oz/a	PRE	A		23.0 -	78.8 a	75.0 a	7.00 b	8.88 b	7.50 c	7.00 b	8.13 c	7.7 c	0.00 b
5	SHIELDEX	3.33	SC	1.35 oz/a	PRE	A		23.8 -	65.0 b	63.8 b	8.50 b	10.50 b	8.88 c	8.13 b	6.63 c	8.5 c	0.58 b
LSD P=.10				4.37	6.38	1.41		3.012	4.551	1.699	2.281	1.746	1.49	2.047			
Standard Deviation				3.47	5.06	1.12		2.390	3.611	1.348	1.810	1.385	1.18	1.624			
CV				15.18	17.46	4.03		14.87	21.06	8.16	10.72	8.05	7.03	29.72			
Grand Mean				22.85	29.00	27.75		16.075	17.150	16.525	16.875	17.200	16.77	5.465			

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Trial ID: SB-01-23		Study Dir.: NICK SHAY				
Location: PONDER FARM		Investigator: Eric P. Prostko				
Crop Code	GLYMA					
Part Rated	PLOT, -					
Rating Data Type	YIELD					
Rating Unit	BU/A					
Rating Date	Nov-8-23					
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Grow Unit	Appl Stg Code
1	NTC					21 73 a
2	CALLISTO	4	SC	3.0	oz/a	PRE A 70 a
3	LAUDIS	3.5	SC	3.0	oz/a	PRE A 70 a
4	IMPACT	2.8	SC	1.25	oz/a	PRE A 0 b
5	SHIELDEX	3.33	SC	1.35	oz/a	PRE A 5 b
LSD P=.10						16.3
Standard Deviation						12.9
CV						29.72
Grand Mean						43.5

Means followed by same letter or symbol do not significantly differ (P=.10, LSD).
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 ^Calculated from residual.

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Trial ID:	SB-01-23	Study Dir.:	NICK SHAY			
Location:	PONDER FARM	Investigator:	Eric P. Prostko			
Randomized Complete Block (RCB) AOV For Glyma stand #/5ft May-10-23 (Data Column 1)						
Source	DF	Sum of Squares	Mean Square	F	Prob(F)	
Total	19	144.550000				
Replicate	3	7.350000	2.450000	0.249	0.8603	
Treatment	4	19.300000	4.825000	0.491	0.7425	
Error	12	117.900000	9.825000			
Randomized Complete Block (RCB) AOV For Glyma Bleaching % May-10-23 (Data Column 2)						
Source	DF	Sum of Squares	Mean Square	F	Prob(F)	
Total	19	213.750000				
Replicate	3	23.750000	7.916667	0.603	0.6253	
Treatment	4	32.500000	8.125000	0.619	0.6575	
Error	12	157.500000	13.125000			
Randomized Complete Block (RCB) AOV For Glyma Stunting % May-18-23 (Data Column 3)						
Source	DF	Sum of Squares	Mean Square	F	Prob(F)	
Total	19	4855.000000				
Replicate	3	55.000000	18.333333	1.000	0.4262	
Treatment	4	4580.000000	1145.000000	62.455	0.0001	
Error	12	220.000000	18.333333			
Randomized Complete Block (RCB) AOV For Glyma CHLOROSIS % May-18-23 (Data Column 4)						
Source	DF	Sum of Squares	Mean Square	F	Prob(F)	
Total	19	22595.000000				
Replicate	3	15.000000	5.000000	1.000	0.4262	
Treatment	4	22520.000000	5630.000000	1126.000	0.0001	
Error	12	60.000000	5.000000			
Randomized Complete Block (RCB) AOV For Glyma Ht1 In May-30-23 (Data Column 5)						
Source	DF	Sum of Squares	Mean Square	F	Prob(F)	
Total	19	10.437500				
Replicate	3	0.037500	0.012500	0.054	0.9826	
Treatment	4	7.625000	1.906250	8.243	0.0019	
Error	12	2.775000	0.231250			
Randomized Complete Block (RCB) AOV For Glyma Ht2 In May-30-23 (Data Column 6)						
Source	DF	Sum of Squares	Mean Square	F	Prob(F)	
Total	19	13.237500				
Replicate	3	0.437500	0.145833	0.700	0.5699	
Treatment	4	10.300000	2.575000	12.360	0.0003	
Error	12	2.500000	0.208333			
Randomized Complete Block (RCB) AOV For Glyma Ht3 In May-30-23 (Data Column 7)						
Source	DF	Sum of Squares	Mean Square	F	Prob(F)	
Total	19	13.950000				
Replicate	3	0.450000	0.150000	1.000	0.4262	
Treatment	4	11.700000	2.925000	19.500	0.0001	
Error	12	1.800000	0.150000			
Randomized Complete Block (RCB) AOV For Glyma Ht4 In May-30-23 (Data Column 8)						
Source	DF	Sum of Squares	Mean Square	F	Prob(F)	
Total	19	16.550000				
Replicate	3	2.650000	0.883333	2.078	0.1566	
Treatment	4	8.800000	2.200000	5.176	0.0117	
Error	12	5.100000	0.425000			
Randomized Complete Block (RCB) AOV For Glyma Ht5 In May-30-23 (Data Column 9)						
Source	DF	Sum of Squares	Mean Square	F	Prob(F)	
Total	19	9.937500				
Replicate	3	0.737500	0.245833	1.146	0.3703	
Treatment	4	6.625000	1.656250	7.718	0.0026	
Error	12	2.575000	0.214583			
Randomized Complete Block (RCB) AOV For Glyma AVG-HT In May-30-23 (Data Column 10)						
Source	DF	Sum of Squares	Mean Square	F	Prob(F)	
Total	19	9.645500				
Replicate	3	0.349500	0.116500	1.574	0.2469	
Treatment	4	8.408000	2.102000	28.405	0.0001	
Error	12	0.888000	0.074000			

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Randomized Complete Block (RCB) AOV For Glyma stand #/5 ft May-30-23 (Data Column 11)						
Source	DF	Sum of Squares	Mean Square	F	Prob(F)	
Total	19	210.550000				
Replicate	3	11.350000	3.783333	0.314	0.8147	
Treatment	4	54.800000	13.700000	1.139	0.3846	
Error	12	144.400000	12.033333			
Randomized Complete Block (RCB) AOV For Glyma Stunting % Jun-22-23 (Data Column 12)						
Source	DF	Sum of Squares	Mean Square	F	Prob(F)	
Total	19	25380.000000				
Replicate	3	180.000000	60.000000	2.341	0.1248	
Treatment	4	24892.500000	6223.125000	242.854	0.0001	
Error	12	307.500000	25.625000			
Randomized Complete Block (RCB) AOV For Glyma Chlorosis % Jun-22-23 (Data Column 13)						
Source	DF	Sum of Squares	Mean Square	F	Prob(F)	
Total	19	23373.750000				
Replicate	3	3.750000	1.250000	1.000	0.4262	
Treatment	4	23355.000000	5838.750000	4671.000	0.0001	
Error	12	15.000000	1.250000			
Randomized Complete Block (RCB) AOV For Glyma Ht1 In Jun-30-23 (Data Column 14)						
Source	DF	Sum of Squares	Mean Square	F	Prob(F)	
Total	19	1021.137500				
Replicate	3	8.137500	2.712500	0.475	0.7056	
Treatment	4	944.450000	236.112500	41.333	0.0001	
Error	12	68.550000	5.712500			
Randomized Complete Block (RCB) AOV For Glyma Ht2 In Jun-30-23 (Data Column 15)						
Source	DF	Sum of Squares	Mean Square	F	Prob(F)	
Total	19	930.050000				
Replicate	3	24.650000	8.216667	0.630	0.6094	
Treatment	4	748.925000	187.231250	14.359	0.0002	
Error	12	156.475000	13.039583			
Randomized Complete Block (RCB) AOV For Glyma Ht3 In Jun-30-23 (Data Column 16)						
Source	DF	Sum of Squares	Mean Square	F	Prob(F)	
Total	19	977.237500				
Replicate	3	18.637500	6.212500	3.420	0.0527	
Treatment	4	936.800000	234.200000	128.917	0.0001	
Error	12	21.800000	1.816667			
Randomized Complete Block (RCB) AOV For Glyma Ht4 In Jun-30-23 (Data Column 17)						
Source	DF	Sum of Squares	Mean Square	F	Prob(F)	
Total	19	1217.937500				
Replicate	3	16.637500	5.545833	1.693	0.2212	
Treatment	4	1162.000000	290.500000	88.702	0.0001	
Error	12	39.300000	3.275000			
Randomized Complete Block (RCB) AOV For Glyma Ht5 In Jun-30-23 (Data Column 18)						
Source	DF	Sum of Squares	Mean Square	F	Prob(F)	
Total	19	1345.200000				
Replicate	3	15.100000	5.033333	2.623	0.0986	
Treatment	4	1307.075000	326.768750	170.303	0.0001	
Error	12	23.025000	1.918750			
Randomized Complete Block (RCB) AOV For GLYMA AVG-HGT IN Jun-30-23 (Data Column 19)						
Source	DF	Sum of Squares	Mean Square	F	Prob(F)	
Total	19	1030.325500				
Replicate	3	8.405500	2.801833	2.018	0.1652	
Treatment	4	1005.258000	251.314500	180.997	0.0001	
Error	12	16.662000	1.388500			
Randomized Complete Block (RCB) AOV For GLYMA PLOT YIELD LBS/PLOT Nov-8-23 (Data Column 20)						
Source	DF	Sum of Squares	Mean Square	F	Prob(F)	
Total	19	405.245500				
Replicate	3	15.241500	5.080500	1.926	0.1792	
Treatment	4	358.353000	89.588250	33.966	0.0001	
Error	12	31.651000	2.637583			

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Randomized Complete Block (RCB) AOV For GLYMA PLOT YIELD BU/A Nov-8-23 (Data Column 21)

Source	DF	Sum of Squares	Mean Square	F	Prob(F)
Total	19	25661.699931			
Replicate	3	965.150260	321.716753	1.926	0.1792
Treatment	4	22692.286911	5673.071728	33.966	0.0001
Error	12	2004.262760	167.021897		

Rating Unit

% = PERCENT

In = INCH

ARM Action Codes

T1 = ([5]+[6]+[7]+[8]+[9])/5

T2 = ([14]+[15]+[16]+[17]+[18])/5

TY3 = 7.95762759*[20]

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Crop Code				Glyma	Glyma	Glyma	Glyma	Glyma	Glyma	Glyma	Glyma	Glyma					
Part Rated				stand	Bleaching	Stunting	CHLOROSIS	Ht1	Ht2	Ht3	Ht4	Ht5					
Rating Data Type				#/5ft	%	%	%	In	In	In	In	In					
Rating Unit				May-10-23	May-10-23	May-18-23	May-18-23	May-30-23	May-30-23	May-30-23	May-30-23	May-30-23					
Rating Date																	
Trt	Treatment	Form	Form	Rate	Grow	Appl											
No.	Name	Conc	Type	Rate	Unit	Stg	Code	Plot	1	2	3	4	5	6	7	8	9
1	NTC							101	21.0	0.0	0.0	0.0	6.50	8.00	7.50	8.50	6.50
								203	18.0	0.0	0.0	0.0	6.50	7.00	7.00	7.00	6.50
								305	16.0	0.0	0.0	0.0	6.50	6.50	7.00	6.00	6.50
								403	20.0	5.0	0.0	0.0	7.00	7.00	7.50	6.00	7.00
								Mean =	18.8	1.3	0.0	0.0	6.63	7.13	7.25	6.88	6.63
2	CALLISTO	4	SC	3.0	oz/a	PRE	A	102	24.0	0.0	0.0	0.0	7.00	7.50	7.50	6.50	6.00
								201	24.0	0.0	0.0	0.0	8.00	7.50	7.50	8.00	7.50
								303	19.0	0.0	0.0	0.0	7.00	7.50	6.50	7.00	7.00
								402	18.0	0.0	0.0	0.0	7.00	7.00	7.50	7.00	7.50
								Mean =	21.3	0.0	0.0	0.0	7.25	7.38	7.25	7.13	7.00
3	LAUDIS	3.5	SC	3.0	oz/a	PRE	A	103	16.0	0.0	10.0	0.0	6.50	6.50	7.00	6.50	7.00
								205	22.0	5.0	0.0	0.0	7.00	6.50	7.00	7.50	6.50
								301	25.0	0.0	10.0	0.0	6.50	7.00	7.00	6.50	7.00
								405	17.0	0.0	10.0	0.0	6.00	6.50	7.00	6.00	7.00
								Mean =	20.0	1.3	7.5	0.0	6.50	6.63	7.00	6.63	6.88
4	IMPACT	2.8	SC	1.25	oz/a	PRE	A	104	20.0	0.0	50.0	85.0	6.00	5.50	6.00	5.50	5.50
								202	18.0	0.0	40.0	85.0	4.50	5.00	5.50	6.00	6.00
								304	22.0	10.0	40.0	85.0	5.50	5.00	5.00	5.00	5.50
								401	22.0	0.0	30.0	85.0	5.50	6.00	5.50	5.50	6.00
								Mean =	20.5	2.5	40.0	85.0	5.38	5.38	5.50	5.50	5.75
5	SHIELDEX	3.33	SC	1.35	oz/a	PRE	A	105	20.0	0.0	20.0	30.0	6.00	6.00	5.00	6.00	5.50
								204	21.0	5.0	20.0	40.0	6.00	6.50	6.00	5.50	6.50
								302	16.0	0.0	20.0	40.0	6.00	5.50	6.00	5.00	5.50
								404	18.0	10.0	20.0	40.0	6.50	6.50	6.00	6.00	5.00
								Mean =	18.8	3.8	20.0	37.5	6.13	6.13	5.75	5.63	5.63

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SOYBEAN RESPONSE TO HPPD HERBICIDES - 30 DAT																		
Trial ID: SB-01-23		Study Dir.: NICK SHAY																
Location: PONDER FARM		Investigator: Eric P. Prostko																
Crop Code	Part Rated	Rating Data Type	Rating Unit	Rating Date	Glyma AVG-HT In May-30-23	Glyma stand #/5 ft May-30-23	Glyma Stunting % Jun-22-23	Glyma Chlorosis % Jun-22-23	Glyma Ht1 In Jun-30-23	Glyma Ht2 In Jun-30-23	Glyma Ht3 In Jun-30-23	Glyma Ht4 In Jun-30-23	Glyma Ht5 In Jun-30-23	GLYMA AVG-HGT IN Jun-30-23				
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Grow Unit	Appl Stg	Code	Plot	10	11	12	13	14	15	16	17	18	19
1	NTC							101	7.4	17.0	0.0	0.0	19.00	17.00	19.50	21.50	25.00	20.4
								203	6.8	18.0	0.0	0.0	20.00	21.00	23.50	23.00	22.00	21.9
								305	6.5	25.0	0.0	0.0	24.50	26.50	20.00	22.00	24.00	23.4
								403	6.9	20.0	0.0	0.0	20.00	24.00	22.00	23.50	25.00	22.9
								Mean =	6.9	20.0	0.0	0.0	20.88	22.13	21.25	22.50	24.00	22.2
2	CALLISTO	4 SC		3.0 oz/a	PRE	A		102	6.9	25.0	0.0	0.0	24.00	22.00	23.00	23.00	22.00	22.8
								201	7.7	20.0	0.0	0.0	27.00	24.00	23.00	25.00	25.00	24.8
								303	7.0	22.0	0.0	0.0	18.00	21.00	23.00	21.00	27.00	22.0
								402	7.2	23.0	0.0	0.0	24.00	23.00	23.00	26.00	26.00	24.4
								Mean =	7.2	22.5	0.0	0.0	23.25	22.50	23.00	23.75	25.00	23.5
3	LAUDIS	3.5 SC		3.0 oz/a	PRE	A		103	6.7	30.0	5.0	0.0	19.00	21.00	23.00	20.00	21.00	20.8
								205	6.9	24.0	0.0	0.0	21.00	23.00	23.00	26.00	21.00	22.8
								301	6.8	23.0	0.0	0.0	21.00	25.00	23.00	24.00	25.00	23.6
								405	6.5	23.0	0.0	0.0	22.00	18.00	19.00	22.00	22.00	20.6
								Mean =	6.7	25.0	1.3	0.0	20.75	21.75	22.00	23.00	22.25	22.0
4	IMPACT	2.8 SC		1.25 oz/a	PRE	A		104	5.7	25.0	90.0	75.0	6.00	5.00	6.00	7.50	7.00	6.3
								202	5.4	24.0	80.0	75.0	7.00	16.50	10.00	8.50	7.50	9.9
								304	5.2	24.0	80.0	75.0	7.00	7.00	7.00	5.00	8.00	6.8
								401	5.7	19.0	65.0	75.0	8.00	7.00	7.00	7.00	10.00	7.8
								Mean =	5.5	23.0	78.8	75.0	7.00	8.88	7.50	7.00	8.13	7.7
5	SHIELDDEX	3.33 SC		1.35 oz/a	PRE	A		105	5.7	18.0	75.0	65.0	10.00	13.00	8.00	7.00	5.50	8.7
								204	6.1	24.0	60.0	60.0	9.00	7.00	11.00	9.00	7.50	8.7
								302	5.6	26.0	60.0	65.0	6.00	11.00	9.50	10.50	6.50	8.7
								404	6.0	27.0	65.0	65.0	9.00	11.00	7.00	6.00	7.00	8.0
								Mean =	5.9	23.8	65.0	63.8	8.50	10.50	8.88	8.13	6.63	8.5

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SOYBEAN RESPONSE TO HPPD HERBICIDES - 30 DAT

Trial ID: SB-01-23 Study Dir.: NICK SHAY
 Location: PONDER FARM Investigator: Eric P. Prostko

Crop Code		GLYMA	GLYMA							
Part Rated		PLOT, -	PLOT, -							
Rating Data Type		YIELD	YIELD							
Rating Unit		LBS/PLOT	BU/A							
Rating Date		Nov-8-23	Nov-8-23							
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Grow Unit	Appl Stg	Code	Plot	20	21
1	NTC							101	7.20	57
								203	9.80	78
								305	8.40	67
								403	11.10	88
								Mean =	9.13	73
2	CALLISTO	4 SC		3.0 oz/a	PRE	A		102	7.80	62
								201	11.30	90
								303	9.30	74
								402	6.70	53
								Mean =	8.78	70
3	LAUDIS	3.5 SC		3.0 oz/a	PRE	A		103	7.30	58
								205	11.10	88
								301	5.50	44
								405	11.50	92
								Mean =	8.85	70
4	IMPACT	2.8 SC		1.25 oz/a	PRE	A		104	0.00	0
								202	0.00	0
								304	0.00	0
								401	0.00	0
								Mean =	0.00	0
5	SHIELDDEX	3.33 SC		1.35 oz/a	PRE	A		105	0.80	6
								204	1.10	9
								302	0.00	0
								404	0.40	3
								Mean =	0.58	5

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SOYBEAN RESPONSE TO HPPD HERBICIDES - 30 DAT

Trial ID: SB-01-23 Study Dir.: NICK SHAY
Location: PONDER FARM Investigator: Eric P. Prostko

Rating Unit

% = PERCENT

In = INCH

ARM Action Codes

T1 = ([5]+[6]+[7]+[8]+[9])/5

T2 = ([14]+[15]+[16]+[17]+[18])/5

TY3 = 7.95762759*[20]