

University of Georgia

SOYBEAN RESPONSE TO HPPD RESIDUES

Trial ID: SB-03BB-22 Study Dir.:
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 Stg	Appl Code	Amt Product to Measure	Diluent	Rep 1	2	3	4
1	MAY 2-PD (29 DAT) NTC							-	101	205	304	403
2	MAY 2-PD (29 DAT) LAUDIS	3.5	SC	3.0 oz/a	PRE	A	2.344 mL/mx	1497.7 mL	102	204	305	404
3	MAY 2-PD (29 DAT) SHIELDDEX	3.33	SC	1.35 oz/a	PRE	A	1.055 mL/mx	1498.9 mL	103	201	302	405
4	MAY 2-PD (29 DAT) CALLISTO	4	SC	3.0 oz/a	PRE	A	2.344 mL/mx	1497.7 mL	104	203	301	402
5	MAY 2-PD (29 DAT) IMPACT	2.8	SC	1.25 oz/a	PRE	A	0.9766 mL/mx	1499.0 mL	105	202	303	401
6	JUNE 1-PD (59 DAT) NTC							-	106	210	307	409
7	JUNE 1-PD (59 DAT) LAUDIS	3.5	SC	3.0 oz/a	PRE	A	2.344 mL/mx	1497.7 mL	107	209	310	406
8	JUNE 1-PD (59 DAT) SHIELDDEX	3.33	SC	1.35 oz/a	PRE	A	1.055 mL/mx	1498.9 mL	108	207	309	407
9	JUNE 1-PD (59 DAT) CALLISTO	4	SC	3.0 oz/a	PRE	A	2.344 mL/mx	1497.7 mL	109	208	306	408
10	JUNE 1-PD (59 DAT) IMPACT	2.8	SC	1.25 oz/a	PRE	A	0.9766 mL/mx	1499.0 mL	110	206	308	410

Sort Order: Treatment

Trial Comments

LAST TILLAGE: 03/28/22
MAINTAIN WEED-FREE
VALOR EZ @ 2 OZ/A + DUAL MAGNUM @ 16 OZ/A OVER WHOLE TEST ON 04/04/22
ROUNDUP P-MAX3 @ 48 OZ/A - MAY 3
LIBERTY @ 32 OZ/A + ROUNDUP P-MAX3 @ 22 OZ/A + ZIDUA 85WG @ 1.5 OZ/A WHOLE PLOT AREA
ALTO @ 5.5 OZ/A + BORON @ 32 OZ/A + DIMILIN @ 2 OZ/A - JUNE 8-PD1
ROUNDUP P-MAX3 @ 64 OZ/A - JUNE 13
ROUNDUP P-MAX3 @ 32 OZ/A + ULTRA BLAZER @ 24 OZ/A - JULY 8-PD2
LIBERTY @ 32 OZ/A + DUAL MAGNUM @ 16 OZ/A - LAYBY- JULY 19-PD1 AND PD2
KARATE @ 5 OZ/A - JULY 20
LIBERTY @ 32 OZ/A + DUAL MAGNUM @ 16 OZ/A - JULY 23-PD3

CURRENT SOYBEAN ROTATION RESTRICTIONS:

LAUDIS = 8 MONTHS
SHIELDDEX = 9 MONTHS
CALLISTO = 10 MONTHS
IMPACT = 9 MONTHS

SUMMARY:

1) GENERALLY, SHIELDDEX AND IMPACT CAUSED MORE VISUAL INJURY SYMPTOMS THAN LAUDIS OR CALLISTO. IMPACT WAS MORE INJURIOUS THAN SHIELDDEX.

2) YIELD DATA INDICATED THE FOLLOWING:

A) WHEN SOYBEANS WERE PLANTED 29 DAT, ALL HERBICIDE TREATMENTS CAUSED SIGNIFICANT YIELD LOSSES EXCEPT LAUDIS. YIELD LOSSES WERE AS FOLLOWS:

SHIELDDEX - 12% YIELD LOSS
CALLISTO - 13.9% YIELD LOSS
IMPACT - 28.7% YIELD LOSS

B) WHEN SOYBEANS WERE PLANTED 59 DAT, THE ONLY HERBICIDE THAT CAUSED A SIGNIFICANT YIELD LOSS WAS

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IMPACT (13.4% YIELD LOSS).

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GENERAL TRIAL INFORMATION

Study Director: _____ 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 AG57XF1
Planting Date: _____ Planting Method: MONOSEM AIR
Rate: 126324 SEED/A Depth: 2 IN Perennial Age: _____
Row Spacing: 36 IN Spacing Within Row: _____ Seed Bed: _____
Soil Temperature: _____ Soil Moisture: _____ Emergence Date: _____

SITE AND DESIGN

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

Trial Initiation Comments: _____

	Previous Crops	Previous Pesticides	Year
1.	TOBACCO		2021

MAINTENANCE

Field Prep./Maintenance: 1.5 TONS/A LIME-PREPLANT
600 LBS/A 5-15-30-PREPLANT

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

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SOIL DESCRIPTION

% Sand: 92 % OM: 0.62 Texture: SAND
% Silt: 6 pH: 6.0 Soil Name: FUQUAY
% Clay: 2 CEC: 2.9 Fert. Level: GOOD

ADDITIONAL MEASURED ELEMENTS

Element	Quantity	Unit

MOISTURE CONDITIONS

	Date	Time	Amount	Unit	Type	Interval	Unit
1.	Apr-5-22		1.36	IN	RAINFALL		
2.	Apr-6-22		0.43	IN	RAINFALL		
3.	Apr-17-22		0.16	IN	RAINFALL		
4.	Apr-18-22		0.53	IN	RAINFALL		
5.	Apr-26-22		0.5	IN	SPRINKLER - LATERAL MOVE		
6.	May-2-22		0.35	IN	SPRINKLER - LATERAL MOVE		
7.	May-5-22		0.2	IN	SPRINKLER - LATERAL MOVE		
8.	May-6-22		0.45	IN	RAINFALL		
9.	May-10-22		0.38	IN	SPRINKLER - LATERAL MOVE		
10.	May-17-22		0.5	IN	SPRINKLER - LATERAL MOVE		
11.	May-24-22		1.8	IN	RAINFALL		
12.	May-31-22		0.5	IN	SPRINKLER - LATERAL MOVE		
13.	Jun-3-22		0.5	IN	SPRINKLER - LATERAL MOVE		
14.	Jun-7-22		0.5	IN	SPRINKLER - LATERAL MOVE		
15.	Jun-14-22		0.4	IN	SPRINKLER - LATERAL MOVE		
16.							

Overall Moisture Conditions: _____

Closest Weather Station: _____ Distance: _____ Unit: _____

APPLICATION DESCRIPTION

	A
Application Date:	Apr-4-22
Time of Day:	7:36 AM
Application Method:	BROADCAST
Application Timing:	PRE
Applic. Placement:	SOIL
Air Temp., Unit:	49 F
% Relative Humidity:	84
Wind Velocity, Unit:	0 MPH
Dew Presence (Y/N):	
Water Hardness:	
Soil Temp., Unit:	56 F
Soil Moisture:	WET
% Cloud Cover:	0

CROP STAGE AT EACH APPLICATION

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

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SOYBEAN RESPONSE TO HPPD RESIDUES

Trial ID: SB-03BB-22 Study Dir.:
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WEED STAGE AT EACH APPLICATION

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

APPLICATION EQUIPMENT

	A
Appl. Equipment:	BACKPACK
Operating Pressure:	37
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 RESIDUES									
Trial ID: SB-03BB-22		Study Dir.:							
Location: PONDER FARM		Investigator: Eric P. Prostko							
Crop Code	Glyma Plant, -		Glyma	Glyma	Glyma	Glyma	Glyma	Glyma	
Part Rated	Stand		Chlorosis	Stunting	Bleaching	Necrosis	Plant, -	Ht1	
Rating Data Type									
Rating Unit	#/5ft		%	%	%	%	In		
Rating Date	May-13-22		May-19-22	Jun-1-22	Jun-1-22	Jun-1-22	Jun-7-22		
Trt Treatment	Form Form	Rate Grow Appl							
No. Name	Conc Type	Rate Unit Stg Code	1	2	3	4	5	6	
TABLE OF R MEANS									
Replicate 1									
Replicate 2									
Replicate 3									
Replicate 4									
TABLE OF A (PLANTING DATE) MEANS									
1 MAY 2-PD (29 DAT)									
2 JUNE 1-PD (59 DAT)									
LSD P=.10									
Standard Deviation									
CV									
TABLE OF B (HPPD HERBICIDE) MEANS									
1 NTC									
2 LAUDIS 3.5 SC 3.0 oz/a PRE A									
3 SHIELDDEX 3.33 SC 1.35 oz/a PRE A									
4 CALLISTO 4 SC 3.0 oz/a PRE A									
5 IMPACT 2.8 SC 1.25 oz/a PRE A									
LSD P=.10									
Standard Deviation									
CV									
TABLE OF A (PLANTING DATE) B (HPPD HERBICIDE) MEANS									
1 MAY 2-PD (29 DAT)									
1 NTC									
2 JUNE 1-PD (59 DAT)									
1 NTC									
1 MAY 2-PD (29 DAT)									
2 LAUDIS 3.5 SC 3.0 oz/a PRE A									
2 JUNE 1-PD (59 DAT)									
2 LAUDIS 3.5 SC 3.0 oz/a PRE A									
1 MAY 2-PD (29 DAT)									
3 SHIELDDEX 3.33 SC 1.35 oz/a PRE A									
2 JUNE 1-PD (59 DAT)									
3 SHIELDDEX 3.33 SC 1.35 oz/a PRE A									
1 MAY 2-PD (29 DAT)									
4 CALLISTO 4 SC 3.0 oz/a PRE A									
2 JUNE 1-PD (59 DAT)									
4 CALLISTO 4 SC 3.0 oz/a PRE A									
1 MAY 2-PD (29 DAT)									
5 IMPACT 2.8 SC 1.25 oz/a PRE A									
2 JUNE 1-PD (59 DAT)									
5 IMPACT 2.8 SC 1.25 oz/a PRE A									
LSD P=.10									
Standard Deviation									
CV									

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.

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SOYBEAN RESPONSE TO HPPD RESIDUES												
Trial ID: SB-03BB-22			Study Dir.:									
Location: PONDER FARM			Investigator: Eric P. Prostko									
Crop Code			Glyma		Glyma		Glyma		Glyma		Glyma	
Part Rated			Plant, -		Plant, -		Plant, -		Plant, -		Plant, -	
Rating Data Type			Ht2		Ht3		Ht4		Ht5		AVG-HGT	
Rating Unit			In		In		In		In		In	
Rating Date			Jun-7-22		Jun-7-22		Jun-7-22		Jun-7-22		Jun-7-22	
Trt	Treatment	Form	Form	Rate	Grow	Appl						
No.	Name	Conc	Type	Rate	Unit	Stg	Code					
							7		8		9	
							10		11		12	
TABLE OF R MEANS												
Replicate 1												
Replicate 2												
Replicate 3												
Replicate 4												
TABLE OF A (PLANTING DATE) MEANS												
1 MAY 2-PD (29 DAT)												
2 JUNE 1-PD (59 DAT)												
LSD P=.10												
Standard Deviation												
CV												
TABLE OF B (HPPD HERBICIDE) MEANS												
1 NTC												
2	LAUDIS	3.5	SC	3.0	oz/a	PRE	A					
3	SHIELDEX	3.33	SC	1.35	oz/a	PRE	A					
4	CALLISTO	4	SC	3.0	oz/a	PRE	A					
5	IMPACT	2.8	SC	1.25	oz/a	PRE	A					
LSD P=.10												
Standard Deviation												
CV												
TABLE OF A (PLANTING DATE) B (HPPD HERBICIDE) MEANS												
1 MAY 2-PD (29 DAT)												
1	NTC							12.13 a	11.88 a	12.00 a	12.38 a	12.2 a 15.00 a
2 JUNE 1-PD (59 DAT)												
1	NTC							.	.	.	.	.
1	MAY 2-PD (29 DAT)							11.13 a	12.13 a	12.50 a	12.75 a	12.1 a 16.00 a
2	LAUDIS	3.5	SC	3.0	oz/a	PRE	A					
2	JUNE 1-PD (59 DAT)							.	.	.	.	.
2	LAUDIS	3.5	SC	3.0	oz/a	PRE	A					
1	MAY 2-PD (29 DAT)							10.25 a	9.50 a	10.63 a	10.25 a	10.3 a 12.88 a
3	SHIELDEX	3.33	SC	1.35	oz/a	PRE	A					
2	JUNE 1-PD (59 DAT)							.	.	.	.	.
3	SHIELDEX	3.33	SC	1.35	oz/a	PRE	A					
1	MAY 2-PD (29 DAT)							12.50 a	12.38 a	12.25 a	12.63 a	12.4 a 18.00 a
4	CALLISTO	4	SC	3.0	oz/a	PRE	A					
2	JUNE 1-PD (59 DAT)							.	.	.	.	.
4	CALLISTO	4	SC	3.0	oz/a	PRE	A					
1	MAY 2-PD (29 DAT)							9.50 a	9.38 a	10.13 a	9.00 a	9.7 a 9.25 a
5	IMPACT	2.8	SC	1.25	oz/a	PRE	A					
2	JUNE 1-PD (59 DAT)							.	.	.	.	.
5	IMPACT	2.8	SC	1.25	oz/a	PRE	A					
LSD P=.10												
Standard Deviation												
CV												
								2.384	2.358	2.088	3.065	2.17 3.845
								1.891	1.871	1.656	2.432	1.72 3.051
								17.039	16.931	14.404	21.333	15.17 21.448

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.

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SOYBEAN RESPONSE TO HPPD RESIDUES						
Trial ID: SB-03BB-22 Study Dir.: Location: PONDER FARM Investigator: Eric P. Prostko						
Crop Code	Part Rated	Rating Data Type	Rating Unit	Rating Date	Glyma Plant, - Wt2 In Jun-7-22	Glyma Plant, - Wt3 In Jun-7-22
Trt Treatment No. Name	Form Conc	Form Type	Rate	Grow Unit Stg	Appl Code	Glyma Plant, - Wt4 In Jun-7-22
						Glyma Plant, - Wt5 In Jun-7-22
						AVG-WDTH In Jun-7-22
						Glyma Plant, - Stunting % Jun-24-22
TABLE OF R MEANS						
Replicate 1						2.0
Replicate 2						9.5
Replicate 3						3.0
Replicate 4						8.5
TABLE OF A (PLANTING DATE) MEANS						
1 MAY 2-PD (29 DAT)						7.5 a
2 JUNE 1-PD (59 DAT)						4.0 a
LSD P=.10						8.94
Standard Deviation						12.01
CV						208.82
TABLE OF B (HPPD HERBICIDE) MEANS						
1 NTC						0.0 b
2 LAUDIS	3.5	SC	3.0 oz/a	PRE	A	1.3 b
3 SHIELDEX	3.33	SC	1.35 oz/a	PRE	A	5.6 b
4 CALLISTO	4	SC	3.0 oz/a	PRE	A	0.0 b
5 IMPACT	2.8	SC	1.25 oz/a	PRE	A	21.9 a
LSD P=.10						6.55
Standard Deviation						7.35
CV						127.87
TABLE OF A (PLANTING DATE) B (HPPD HERBICIDE) MEANS						
1 MAY 2-PD (29 DAT)						15.25 a
1 NTC						15.0 a
2 JUNE 1-PD (59 DAT)						15.50 a
1 NTC						15.0 a
1 MAY 2-PD (29 DAT)						15.2 a
2 LAUDIS	3.5	SC	3.0 oz/a	PRE	A	0.0 a
2 JUNE 1-PD (59 DAT)						15.88 a
2 LAUDIS	3.5	SC	3.0 oz/a	PRE	A	16.3 a
2 JUNE 1-PD (59 DAT)						16.00 a
2 LAUDIS	3.5	SC	3.0 oz/a	PRE	A	16.3 a
2 JUNE 1-PD (59 DAT)						16.1 a
2 LAUDIS	3.5	SC	3.0 oz/a	PRE	A	2.5 a
1 MAY 2-PD (29 DAT)						0.0 a
3 SHIELDEX	3.33	SC	1.35 oz/a	PRE	A	12.25 a
2 JUNE 1-PD (59 DAT)						12.3 a
3 SHIELDEX	3.33	SC	1.35 oz/a	PRE	A	13.00 a
2 JUNE 1-PD (59 DAT)						12.0 a
3 SHIELDEX	3.33	SC	1.35 oz/a	PRE	A	12.5 a
2 JUNE 1-PD (59 DAT)						11.3 a
3 SHIELDEX	3.33	SC	1.35 oz/a	PRE	A	0.0 a
1 MAY 2-PD (29 DAT)						0.0 a
4 CALLISTO	4	SC	3.0 oz/a	PRE	A	16.25 a
2 JUNE 1-PD (59 DAT)						16.5 a
4 CALLISTO	4	SC	3.0 oz/a	PRE	A	15.13 a
2 JUNE 1-PD (59 DAT)						17.8 a
4 CALLISTO	4	SC	3.0 oz/a	PRE	A	16.7 a
2 JUNE 1-PD (59 DAT)						0.0 a
5 IMPACT	2.8	SC	1.25 oz/a	PRE	A	9.50 a
2 JUNE 1-PD (59 DAT)						10.8 a
5 IMPACT	2.8	SC	1.25 oz/a	PRE	A	8.75 a
2 JUNE 1-PD (59 DAT)						9.0 a
5 IMPACT	2.8	SC	1.25 oz/a	PRE	A	9.5 a
2 JUNE 1-PD (59 DAT)						23.8 a
5 IMPACT	2.8	SC	1.25 oz/a	PRE	A	20.0 a
LSD P=.10						3.952
Standard Deviation						3.136
CV						22.682
						3.24
						2.57
						3.254
						2.582
						3.99
						3.17
						3.39
						2.69
						9.27
						7.35
						127.87

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Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

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SOYBEAN RESPONSE TO HPPD RESIDUES										
Trial ID: SB-03BB-22		Study Dir.:								
Location: PONDER FARM		Investigator: Eric P. Prostko								
Crop Code Part Rated Rating Data Type Rating Unit Rating Date					Glyma Plant, - Chlorosis %	Glyma Plant, - Density #/5ft	Glyma Plant, - Stunting %	Glyma Plant, - Bleaching %	GLYMA PLOT, - YIELD LBS/PLOT	GLYMA MOISTURE %
					Jun-24-22	Jul-27-22	Aug-2-22	Aug-2-22	Oct-19-22	Oct-19-22
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Grow Unit	Appl Stg	Code			
								19	20	21
								22	23	24
TABLE OF R MEANS										
Replicate 1							1.5	0.0	6.2	9.7
Replicate 2							11.5	2.0	6.6	9.7
Replicate 3							5.0	0.0	6.9	9.7
Replicate 4							9.0	5.0	6.3	9.7
TABLE OF A (PLANTING DATE) MEANS										
1	MAY 2-PD (29 DAT)							6.8 a	7.3 a	9.9 a
2	JUNE 1-PD (59 DAT)							6.8 a	5.7 b	9.4 b
LSD P=.10							8.21	3.53	0.65	.
Standard Deviation							11.03	4.74	0.88	0.00
CV							163.41	271.05	13.49	0.00
TABLE OF B (HPPD HERBICIDE) MEANS										
1	NTC							0.0 b	7.0 a	9.7 a
2	LAUDIS	3.5 SC		3.0 oz/a	PRE	A		0.0 b	7.1 a	9.7 a
3	SHIELDEX	3.33 SC		1.35 oz/a	PRE	A		7.5 b	6.5 a	9.7 a
4	CALLISTO	4 SC		3.0 oz/a	PRE	A		0.0 b	6.5 a	9.7 a
5	IMPACT	2.8 SC		1.25 oz/a	PRE	A		26.3 a	5.4 b	9.7 a
LSD P=.10							9.20	6.66	0.80	.
Standard Deviation							10.33	7.47	0.90	0.00
CV							153.01	426.98	13.82	0.00
TABLE OF A (PLANTING DATE) B (HPPD HERBICIDE) MEANS										
1	MAY 2-PD (29 DAT)							0.0 a	8.2 a	9.9 a
1	NTC									
2	JUNE 1-PD (59 DAT)							0.0 a	5.8 c	9.4 b
1	NTC									
1	MAY 2-PD (29 DAT)							0.0 a	8.3 a	9.9 a
2	LAUDIS	3.5 SC		3.0 oz/a	PRE	A				
2	JUNE 1-PD (59 DAT)							0.0 a	5.9 c	9.4 b
2	LAUDIS	3.5 SC		3.0 oz/a	PRE	A				
1	MAY 2-PD (29 DAT)							7.5 a	7.2 b	9.9 a
3	SHIELDEX	3.33 SC		1.35 oz/a	PRE	A				
2	JUNE 1-PD (59 DAT)							7.5 a	5.9 c	9.4 b
3	SHIELDEX	3.33 SC		1.35 oz/a	PRE	A				
1	MAY 2-PD (29 DAT)							0.0 a	7.1 b	9.9 a
4	CALLISTO	4 SC		3.0 oz/a	PRE	A				
2	JUNE 1-PD (59 DAT)							0.0 a	6.0 c	9.4 b
4	CALLISTO	4 SC		3.0 oz/a	PRE	A				
1	MAY 2-PD (29 DAT)							26.3 a	5.8 c	9.9 a
5	IMPACT	2.8 SC		1.25 oz/a	PRE	A				
2	JUNE 1-PD (59 DAT)							26.3 a	5.0 d	9.4 b
5	IMPACT	2.8 SC		1.25 oz/a	PRE	A				
LSD P=.10							9.69	5.98	0.61	.
Standard Deviation							7.69	4.74	0.47	0.00
CV							113.96	271.05	7.26	0.00

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

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SOYBEAN RESPONSE TO HPPD RESIDUES						
Trial ID: SB-03BB-22		Study Dir.:				
Location: PONDER FARM		Investigator: Eric P. Prostko				
Crop Code Part Rated Rating Data Type Rating Unit Rating Date					GLYMA PLOT, - YIELD BU/A Oct-19-22	
Trt No.	Treatment Name	Form Conc	Form Type	Rate Unit	Grow Stg	Appl Code
						25
TABLE OF R MEANS						
Replicate 1					31.3	
Replicate 2					33.2	
Replicate 3					34.5	
Replicate 4					31.7	
TABLE OF A (PLANTING DATE) MEANS						
1	MAY 2-PD (29 DAT)				36.6 a	
2	JUNE 1-PD (59 DAT)				28.7 b	
LSD P=.10					3.27	
Standard Deviation					4.40	
CV					13.47	
TABLE OF B (HPPD HERBICIDE) MEANS						
1	NTC				35.0 a	
2	LAUDIS	3.5	SC	3.0 oz/a	PRE	A
3	SHIELDEX	3.33	SC	1.35 oz/a	PRE	A
4	CALLISTO	4	SC	3.0 oz/a	PRE	A
5	IMPACT	2.8	SC	1.25 oz/a	PRE	A
LSD P=.10					4.02	
Standard Deviation					4.51	
CV					13.81	
TABLE OF A (PLANTING DATE) B (HPPD HERBICIDE) MEANS						
1	MAY 2-PD (29 DAT)				41.0 a	
1	NTC					
2	JUNE 1-PD (59 DAT)				29.1 c	
1	NTC					
1	MAY 2-PD (29 DAT)				41.5 a	
2	LAUDIS	3.5	SC	3.0 oz/a	PRE	A
2	JUNE 1-PD (59 DAT)				29.6 c	
2	LAUDIS	3.5	SC	3.0 oz/a	PRE	A
1	MAY 2-PD (29 DAT)				36.1 b	
3	SHIELDEX	3.33	SC	1.35 oz/a	PRE	A
2	JUNE 1-PD (59 DAT)				29.6 c	
3	SHIELDEX	3.33	SC	1.35 oz/a	PRE	A
1	MAY 2-PD (29 DAT)				35.3 b	
4	CALLISTO	4	SC	3.0 oz/a	PRE	A
2	JUNE 1-PD (59 DAT)				30.0 c	
4	CALLISTO	4	SC	3.0 oz/a	PRE	A
1	MAY 2-PD (29 DAT)				29.2 c	
5	IMPACT	2.8	SC	1.25 oz/a	PRE	A
2	JUNE 1-PD (59 DAT)				25.2 d	
5	IMPACT	2.8	SC	1.25 oz/a	PRE	A
LSD P=.10					3.03	
Standard Deviation					2.36	
CV					7.23	

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.

University of Georgia

SOYBEAN RESPONSE TO HPPD RESIDUES

Trial ID: SB-03BB-22 Study Dir.:
Location: PONDER FARM Investigator: Eric P. Prostko

Randomized Complete Block (RCB) AOV For Glyma Plant Stand #/5ft May-13-22 (Data Column 1) Missing factor A levels prevents analyzing column 1 as Factorial (RCB) design

Source	DF	Sum of Squares	Mean Square	F	Prob(F)
Total	19	149.200000			
Replicate	3	10.800000	3.600000	0.476	0.7046
Treatment	4	47.700000	11.925000	1.578	0.2430
ERROR	12	90.700000	7.558333		

Randomized Complete Block (RCB) AOV For Glyma Chlorosis % May-19-22 (Data Column 2) Missing factor A levels prevents analyzing column 2 as Factorial (RCB) design

Source	DF	Sum of Squares	Mean Square	F	Prob(F)
Total	19	1305.000000			
Replicate	3	285.000000	95.000000	2.111	0.1522
Treatment	4	480.000000	120.000000	2.667	0.0842
ERROR	12	540.000000	45.000000		

Randomized Complete Block (RCB) AOV For Glyma Stunting % Jun-1-22 (Data Column 3) Missing factor A levels prevents analyzing column 3 as Factorial (RCB) design

Source	DF	Sum of Squares	Mean Square	F	Prob(F)
Total	19	3823.750000			
Replicate	3	643.750000	214.583333	2.575	0.1026
Treatment	4	2180.000000	545.000000	6.540	0.0049
ERROR	12	1000.000000	83.333333		

Randomized Complete Block (RCB) AOV For Glymay Bleaching % Jun-1-22 (Data Column 4) Missing factor A levels prevents analyzing column 4 as Factorial (RCB) design

Source	DF	Sum of Squares	Mean Square	F	Prob(F)
Total	19	3873.750000			
Replicate	3	773.750000	257.916667	2.437	0.1151
Treatment	4	1830.000000	457.500000	4.323	0.0215
ERROR	12	1270.000000	105.833333		

Randomized Complete Block (RCB) AOV For Glyma Necrosis % Jun-1-22 (Data Column 5) Missing factor A levels prevents analyzing column 5 as Factorial (RCB) design

Source	DF	Sum of Squares	Mean Square	F	Prob(F)
Total	19	93.750000			
Replicate	3	13.750000	4.583333	1.833	0.1948
Treatment	4	50.000000	12.500000	5.000	0.0132
ERROR	12	30.000000	2.500000		

Randomized Complete Block (RCB) AOV For Glyma Plant Ht1 In Jun-7-22 (Data Column 6) Missing factor A levels prevents analyzing column 6 as Factorial (RCB) design

Source	DF	Sum of Squares	Mean Square	F	Prob(F)
Total	19	112.550000			
Replicate	3	50.650000	16.883333	4.034	0.0338
Treatment	4	11.675000	2.918750	0.697	0.6083
ERROR	12	50.225000	4.185417		

Randomized Complete Block (RCB) AOV For Glyma Plant Ht2 In Jun-7-22 (Data Column 7) Missing factor A levels prevents analyzing column 7 as Factorial (RCB) design

Source	DF	Sum of Squares	Mean Square	F	Prob(F)
Total	19	97.800000			
Replicate	3	29.700000	9.900000	2.768	0.0876
Treatment	4	25.175000	6.293750	1.759	0.2018
ERROR	12	42.925000	3.577083		

Randomized Complete Block (RCB) AOV For Glyma Plant Ht3 In Jun-7-22 (Data Column 8) Missing factor A levels prevents analyzing column 8 as Factorial (RCB) design

Source	DF	Sum of Squares	Mean Square	F	Prob(F)
Total	19	103.450000			
Replicate	3	26.250000	8.750000	2.500	0.1092
Treatment	4	35.200000	8.800000	2.514	0.0969
ERROR	12	42.000000	3.500000		

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.

University of Georgia

SOYBEAN RESPONSE TO HPPD RESIDUES

Trial ID: SB-03BB-22 Study Dir.:
Location: PONDER FARM Investigator: Eric P. Prostko

Randomized Complete Block (RCB) AOV For Glyma Plant Ht4 In Jun-7-22 (Data Column 9) Missing factor A levels prevents analyzing column 9 as Factorial (RCB) design

Source	DF	Sum of Squares	Mean Square	F	Prob(F)
Total	19	73.500000			
Replicate	3	22.700000	7.566667	2.758	0.0883
Treatment	4	17.875000	4.468750	1.629	0.2306
ERROR	12	32.925000	2.743750		

Randomized Complete Block (RCB) AOV For Glyma Plant Ht5 In Jun-7-22 (Data Column 10) Missing factor A levels prevents analyzing column 10 as Factorial (RCB) design

Source	DF	Sum of Squares	Mean Square	F	Prob(F)
Total	19	145.300000			
Replicate	3	28.900000	9.633333	1.629	0.2348
Treatment	4	45.425000	11.356250	1.920	0.1717
ERROR	12	70.975000	5.914583		

Randomized Complete Block (RCB) AOV For Glyma Plant AVG-HGT In Jun-7-22 (Data Column 11) Missing factor A levels prevents analyzing column 11 as Factorial (RCB) design

Source	DF	Sum of Squares	Mean Square	F	Prob(F)
Total	19	90.148000			
Replicate	3	30.096000	10.032000	3.388	0.0540
Treatment	4	24.523000	6.130750	2.071	0.1480
ERROR	12	35.529000	2.960750		

Randomized Complete Block (RCB) AOV For Glyma Plant Wt1 In Jun-7-22 (Data Column 12) Missing factor A levels prevents analyzing column 12 as Factorial (RCB) design

Source	DF	Sum of Squares	Mean Square	F	Prob(F)
Total	19	448.237500			
Replicate	3	158.237500	52.745833	5.667	0.0118
Treatment	4	178.300000	44.575000	4.789	0.0153
ERROR	12	111.700000	9.308333		

Randomized Complete Block (RCB) AOV For Glyma Plant Wt2 In Jun-7-22 (Data Column 13) Missing factor A levels prevents analyzing column 13 as Factorial (RCB) design

Source	DF	Sum of Squares	Mean Square	F	Prob(F)
Total	19	319.637500			
Replicate	3	68.437500	22.812500	2.320	0.1271
Treatment	4	133.200000	33.300000	3.386	0.0449
ERROR	12	118.000000	9.833333		

Randomized Complete Block (RCB) AOV For Glyma Plant Wt3 In Jun-7-22 (Data Column 14) Missing factor A levels prevents analyzing column 14 as Factorial (RCB) design

Source	DF	Sum of Squares	Mean Square	F	Prob(F)
Total	19	272.550000			
Replicate	3	90.150000	30.050000	4.559	0.0236
Treatment	4	103.300000	25.825000	3.918	0.0293
ERROR	12	79.100000	6.591667		

Randomized Complete Block (RCB) AOV For Glyma Plant Wt4 In Jun-7-22 (Data Column 15) Missing factor A levels prevents analyzing column 15 as Factorial (RCB) design

Source	DF	Sum of Squares	Mean Square	F	Prob(F)
Total	19	311.137500			
Replicate	3	88.937500	29.645833	4.447	0.0255
Treatment	4	142.200000	35.550000	5.333	0.0105
ERROR	12	80.000000	6.666667		

Randomized Complete Block (RCB) AOV For Glyma Plant Wt5 In Jun-7-22 (Data Column 16) Missing factor A levels prevents analyzing column 16 as Factorial (RCB) design

Source	DF	Sum of Squares	Mean Square	F	Prob(F)
Total	19	378.000000			
Replicate	3	61.200000	20.400000	2.035	0.1627
Treatment	4	196.500000	49.125000	4.900	0.0142
ERROR	12	120.300000	10.025000		

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.

University of Georgia

SOYBEAN RESPONSE TO HPPD RESIDUES

Trial ID: SB-03BB-22 Study Dir.:
Location: PONDER FARM Investigator: Eric P. Prostko

Randomized Complete Block (RCB) AOV For Glyma Plant AVG-WDTH In Jun-7-22 (Data Column 17) Missing factor A levels prevents analyzing column 17 as Factorial (RCB) design

Source	DF	Sum of Squares	Mean Square	F	Prob(F)
Total	19	317.177500			
Replicate	3	85.941500	28.647167	3.955	0.0357
Treatment	4	144.315000	36.078750	4.981	0.0134
ERROR	12	86.921000	7.243417		

COMPLETE FACTORIAL AOV For Glyma Plant Stunting % Jun-24-22 (Data Column 18)

Source	DF	Sum of Squares	Mean Square	F	Prob(F)	LSD (.10)
Total	39	5227.500000				
R	3	432.500000	144.166667	2.667	0.0951	
A	1	122.500000	122.500000	0.850	0.4246	8.9
RA	3	432.500000	144.166667			
B	4	2771.250000	692.812500	12.815	0.0003	6.6
RB	12	648.750000	54.062500			
AB	4	171.250000	42.812500	0.792	0.5525	9.3
RAB	12	648.750000	54.062500			

COMPLETE FACTORIAL AOV For Glyma Plant Chlorosis % Jun-24-22 (Data Column 19)

Source	DF	Sum of Squares	Mean Square	F	Prob(F)	LSD (.10)
Total	39	7077.500000				
R	3	582.500000	194.166667	3.282	0.0585	
A	1	0.000000	0.000000	0.000	1.0000	8.2
RA	3	365.000000	121.666667			
B	4	4140.000000	1035.000000	9.703	0.0010	9.2
RB	12	1280.000000	106.666667			
AB	4	0.000000	0.000000	0.000	1.0000	9.7
RAB	12	710.000000	59.166667			

Randomized Complete Block (RCB) AOV For Glyma Plant Density #/5ft Jul-27-22 (Data Column 20) Missing factor A levels prevents analyzing column 20 as Factorial (RCB) design

Source	DF	Sum of Squares	Mean Square	F	Prob(F)
Total	19	114.200000			
Replicate	3	11.400000	3.800000	0.566	0.6480
Treatment	4	22.200000	5.550000	0.826	0.5333
ERROR	12	80.600000	6.716667		

COMPLETE FACTORIAL AOV For Glyma Plant Stunting % Aug-2-22 (Data Column 21)

Source	DF	Sum of Squares	Mean Square	F	Prob(F)	LSD (.10)
Total	39	5427.500000				
R	3	322.500000	107.500000	2.085	0.1557	
A	1	22.500000	22.500000	0.164	0.7129	8.7
RA	3	412.500000	137.500000			
B	4	2908.750000	727.187500	7.783	0.0025	8.6
RB	12	1121.250000	93.437500			
AB	4	21.250000	5.312500	0.103	0.9793	9.0
RAB	12	618.750000	51.562500			

COMPLETE FACTORIAL AOV For Glyma Plant Bleaching % Aug-2-22 (Data Column 22)

Source	DF	Sum of Squares	Mean Square	F	Prob(F)	LSD (.10)
Total	39	1777.500000				
R	3	167.500000	55.833333	2.481	0.1109	
A	1	22.500000	22.500000	1.000	0.3910	3.5
RA	3	67.500000	22.500000			
B	4	490.000000	122.500000	2.194	0.1312	6.7
RB	12	670.000000	55.833333			
AB	4	90.000000	22.500000	1.000	0.4449	6.0
RAB	12	270.000000	22.500000			

Means followed by same letter or symbol do not significantly differ ($P \geq .10$, LSD).

Mean comparisons performed only when AOV Treatment $P(F)$ is significant at mean comparison OSL.

University of Georgia

SOYBEAN RESPONSE TO HPPD RESIDUES

Trial ID: SB-03BB-22 Study Dir.:
Location: PONDER FARM Investigator: Eric P. Prostko

COMPLETE FACTORIAL AOV For GLYMA PLOT YIELD LBS/PLOT Oct-19-22 (Data Column 23) Missing values in column 23 results in unbalanced data, Least Squares Analysis is preferred

Source	DF	Sum of Squares	Mean Square	F	Prob(F)	LSD (.10)
Total	37	61.141083				
R	3	2.626750	0.875583	3.928	0.0433	
A	1	25.974694	25.974694	33.800	0.0101	0.7
RA	3	2.305417	0.768472			
B	4	13.884278	3.471069	4.302	0.0218	0.8
RB	12	9.682833	0.806903			
AB	4	4.437944	1.109486	4.977	0.0181	0.6
RAB	10	2.229167	0.222917			

COMPLETE FACTORIAL AOV For GLYMA MOISTURE % Oct-19-22 (Data Column 24)

Source	DF	Sum of Squares	Mean Square	F	Prob(F)	LSD (.10)
Total	39	2.500000				
R	3	0.000000	0.000000	0.000	1.0000	
A	1	2.500000	2.500000	0.000	1.0000	.
RA	3	0.000000	0.000000			
B	4	0.000000	0.000000	0.000	1.0000	.
RB	12	0.000000	0.000000			
AB	4	0.000000	0.000000	0.000	1.0000	.
RAB	12	0.000000	0.000000			

COMPLETE FACTORIAL AOV For GLYMA PLOT YIELD BU/A Oct-19-22 (Data Column 25) Missing values in column 25 results in unbalanced data, Least Squares Analysis is preferred

Source	DF	Sum of Squares	Mean Square	F	Prob(F)	LSD (.10)
Total	37	1512.310786				
R	3	66.133866	22.044622	3.952	0.0426	
A	1	627.271611	627.271611	32.436	0.0107	3.3
RA	3	58.015643	19.338548			
B	4	349.842259	87.460565	4.300	0.0218	4.0
RB	12	244.084895	20.340408			
AB	4	111.188393	27.797098	4.984	0.0180	3.0
RAB	10	55.774119	5.577412			

Part Rated

Plant = PLANT / PLANT BIOMASS (includes Shrub, Tree, Turf)

Rating Unit

% = PERCENT

In = INCH

ARM Action Codes

T1 = ([6]+[7]+[8]+[9]+[10])/5

T2 = ([12]+[13]+[14]+[15]+[16])/5

TY3 = 4.84*[23]*(100-[24])/87

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.

University of Georgia

SOYBEAN RESPONSE TO HPPD RESIDUES

Trial ID: SB-03BB-22 Study Dir.:
Location: PONDER FARM Investigator: Eric P. Prostko

Crop Code Part Rated Rating Data Type Rating Unit Rating Date							Glyma Plant, - Stand #/5ft May-13-22	Glyma Chlorosis % May-19-22	Glyma Stunting % Jun-1-22	Glymay Bleaching % Jun-1-22	Glyma Necrosis % Jun-1-22	Glyma Plant, - Ht1 In Jun-7-22
Trt	Treatment	Form	Form	Rate	Grow	Appl						
No.	Name	Conc	Type	Rate	Unit	Stg	Code	Plot				
1	MAY 2-PD (29 DAT) NTC						101	38.0	0.0	0.0	0.0	15.00
							205	40.0	0.0	0.0	0.0	10.50
							304	32.0	0.0	0.0	0.0	12.00
							403	34.0	0.0	0.0	0.0	12.00
							Mean =	36.0	0.0	0.0	0.0	12.38
2	MAY 2-PD (29 DAT) LAUDIS	3.5	SC	3.0	oz/a	PRE	A	102	42.0	0.0	0.0	14.00
							204	36.0	0.0	0.0	0.0	13.00
							305	41.0	0.0	0.0	0.0	11.00
							404	37.0	0.0	0.0	0.0	10.00
							Mean =	39.0	0.0	0.0	0.0	12.00
3	MAY 2-PD (29 DAT) SHIELDEX	3.33	SC	1.35	oz/a	PRE	A	103	37.0	0.0	0.0	13.00
							201	34.0	15.0	30.0	5.0	7.00
							302	37.0	0.0	0.0	0.0	14.00
							405	35.0	5.0	20.0	5.0	10.00
							Mean =	35.8	5.0	12.5	2.5	11.00
4	MAY 2-PD (29 DAT) CALLISTO	4	SC	3.0	oz/a	PRE	A	104	38.0	0.0	0.0	13.00
							203	35.0	0.0	0.0	0.0	12.50
							301	42.0	0.0	0.0	0.0	12.00
							402	38.0	0.0	0.0	0.0	12.00
							Mean =	38.3	0.0	0.0	0.0	12.38
5	MAY 2-PD (29 DAT) IMPACT	2.8	SC	1.25	oz/a	PRE	A	105	34.0	0.0	10.0	13.50
							202	36.0	30.0	50.0	5.0	7.00
							303	34.0	0.0	15.0	5.0	14.50
							401	36.0	20.0	30.0	5.0	7.00
							Mean =	35.0	12.5	26.3	3.8	10.50
6	JUNE 1-PD (59 DAT) NTC						106	.	.	.	.	.
							210	.	.	.	.	.
							307	.	.	.	.	.
							409	.	.	.	.	.
							Mean =	.	.	.	.	.
7	JUNE 1-PD (59 DAT) LAUDIS	3.5	SC	3.0	oz/a	PRE	A	107	.	.	.	.
							209	.	.	.	.	.
							310	.	.	.	.	.
							406	.	.	.	.	.
							Mean =	.	.	.	.	.
8	JUNE 1-PD (59 DAT) SHIELDEX	3.33	SC	1.35	oz/a	PRE	A	108	.	.	.	.
							207	.	.	.	.	.
							309	.	.	.	.	.
							407	.	.	.	.	.
							Mean =	.	.	.	.	.
9	JUNE 1-PD (59 DAT) CALLISTO	4	SC	3.0	oz/a	PRE	A	109	.	.	.	.
							208	.	.	.	.	.
							306	.	.	.	.	.
							408	.	.	.	.	.
							Mean =	.	.	.	.	.
10	JUNE 1-PD (59 DAT) IMPACT	2.8	SC	1.25	oz/a	PRE	A	110	.	.	.	.
							206	.	.	.	.	.
							308	.	.	.	.	.
							410	.	.	.	.	.
							Mean =	.	.	.	.	.

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SOYBEAN RESPONSE TO HPPD RESIDUES

Trial ID: SB-03BB-22 Study Dir.:
Location: PONDER FARM Investigator: Eric P. Prostko

Crop Code Part Rated Rating Data Type Rating Unit Rating Date								Glyma Plant, - Ht2 In Jun-7-22	Glyma Plant, - Ht3 In Jun-7-22	Glyma Plant, - Ht4 In Jun-7-22	Glyma Plant, - Ht5 In Jun-7-22	Glyma Plant, - AVG-HGT In Jun-7-22	Glyma Plant, - Wt1 In Jun-7-22		
Trt	Treatment	Form	Form	Rate	Grow	Appl									
No.	Name	Conc	Type	Rate	Unit	Stg	Code	Plot	7	8	9	10	11	12	
1	MAY 2-PD (29 DAT) NTC						101		12.00	11.50	12.50	13.00	12.8	19.00	
							205	13.00	12.00	11.00	13.00	11.9	13.00		
							304	12.00	13.00	12.50	10.50	12.0	14.00		
							403	11.50	11.00	12.00	13.00	11.9	14.00		
							Mean =	12.13	11.88	12.00	12.38	12.2	15.00		
2	MAY 2-PD (29 DAT) LAUDIS	3.5	SC	3.0	oz/a	PRE	A	102	13.00	14.00	12.00	13.50	13.3	19.00	
								204	11.00	13.00	13.00	13.00	12.6	16.00	
								305	10.50	11.50	13.00	13.50	11.9	14.00	
								404	10.00	10.00	12.00	11.00	10.6	15.00	
								Mean =	11.13	12.13	12.50	12.75	12.1	16.00	
3	MAY 2-PD (29 DAT) SHIELDEX	3.33	SC	1.35	oz/a	PRE	A	103	13.00	11.00	13.00	13.00	12.6	18.00	
								201	8.00	8.00	8.50	6.00	7.5	5.00	
								302	11.00	13.50	13.00	14.00	13.1	19.00	
								405	9.00	5.50	8.00	8.00	8.1	9.50	
								Mean =	10.25	9.50	10.63	10.25	10.3	12.88	
4	MAY 2-PD (29 DAT) CALLISTO	4	SC	3.0	oz/a	PRE	A	104	12.00	13.00	12.00	12.00	12.4	20.00	
								203	11.50	13.00	12.00	12.50	12.3	17.00	
								301	13.50	11.50	12.00	12.00	12.2	18.00	
								402	13.00	12.00	13.00	14.00	12.8	17.00	
								Mean =	12.50	12.38	12.25	12.63	12.4	18.00	
5	MAY 2-PD (29 DAT) IMPACT	2.8	SC	1.25	oz/a	PRE	A	105	13.00	11.50	13.00	12.00	12.6	14.00	
								202	6.00	6.00	6.50	6.50	6.4	4.00	
								303	13.00	11.00	12.50	12.50	12.7	14.00	
								401	6.00	9.00	8.50	5.00	7.1	5.00	
								Mean =	9.50	9.38	10.13	9.00	9.7	9.25	
6	JUNE 1-PD (59 DAT) NTC							106	.	.	.	.	.	.	
								210	.	.	.	.	.	.	.
								307	.	.	.	.	.	.	.
								409	.	.	.	.	.	.	.
								Mean =	.	.	.	.	.	.	.
7	JUNE 1-PD (59 DAT) LAUDIS	3.5	SC	3.0	oz/a	PRE	A	107	.	.	.	.	.	.	
								209	.	.	.	.	.	.	.
								310	.	.	.	.	.	.	.
								406	.	.	.	.	.	.	.
								Mean =	.	.	.	.	.	.	.
8	JUNE 1-PD (59 DAT) SHIELDEX	3.33	SC	1.35	oz/a	PRE	A	108	.	.	.	.	.	.	
								207	.	.	.	.	.	.	.
								309	.	.	.	.	.	.	.
								407	.	.	.	.	.	.	.
								Mean =	.	.	.	.	.	.	.
9	JUNE 1-PD (59 DAT) CALLISTO	4	SC	3.0	oz/a	PRE	A	109	.	.	.	.	.	.	
								208	.	.	.	.	.	.	.
								306	.	.	.	.	.	.	.
								408	.	.	.	.	.	.	.
								Mean =	.	.	.	.	.	.	.
10	JUNE 1-PD (59 DAT) IMPACT	2.8	SC	1.25	oz/a	PRE	A	110	.	.	.	.	.	.	
								206	.	.	.	.	.	.	.
								308	.	.	.	.	.	.	.
								410	.	.	.	.	.	.	.
								Mean =	.	.	.	.	.	.	.

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SOYBEAN RESPONSE TO HPPD RESIDUES											
Trial ID: SB-03BB-22 Study Dir.: Location: PONDER FARM Investigator: Eric P. Prostko											
Crop Code Part Rated Rating Data Type Rating Unit Rating Date						Glyma Plant, - Wt2 In Jun-7-22	Glyma Plant, - Wt3 In Jun-7-22	Glyma Plant, - Wt4 In Jun-7-22	Glyma Plant, - Wt5 In Jun-7-22	Glyma Plant, - AVG-WDTH In Jun-7-22	Glyma Plant, - Stunting % Jun-24-22
Trt	Treatment	Form	Form	Rate	Grow	Appl					
No.	Name	Conc	Type	Rate	Unit	Stg	Code	Plot			
1	MAY 2-PD (29 DAT) NTC										
							101	20.00	18.0	21.00	19.0
							205	16.00	16.0	16.00	15.0
							304	12.00	15.0	13.00	13.0
							403	13.00	11.0	12.00	13.0
							Mean =	15.25	15.0	15.50	15.0
2	MAY 2-PD (29 DAT) LAUDIS	3.5	SC	3.0	oz/a	PRE	A				
							102	18.50	20.0	20.00	19.0
							204	17.00	17.0	16.00	17.0
							305	14.00	15.0	14.00	14.0
							404	14.00	13.0	14.00	15.0
							Mean =	15.88	16.3	16.00	16.3
3	MAY 2-PD (29 DAT) SHIELDEX	3.33	SC	1.35	oz/a	PRE	A				
							103	15.00	17.0	17.00	14.0
							201	7.00	9.0	8.00	8.0
							302	17.00	15.0	15.00	16.0
							405	10.00	8.0	12.00	10.0
							Mean =	12.25	12.3	13.00	12.0
4	MAY 2-PD (29 DAT) CALLISTO	4	SC	3.0	oz/a	PRE	A				
							104	16.00	17.0	16.00	15.0
							203	16.00	16.0	15.00	16.0
							301	15.00	14.0	13.00	20.0
							402	18.00	19.0	16.50	20.0
							Mean =	16.25	16.5	15.13	17.8
5	MAY 2-PD (29 DAT) IMPACT	2.8	SC	1.25	oz/a	PRE	A				
							105	14.00	15.0	12.00	14.0
							202	5.00	8.0	5.00	4.0
							303	13.00	13.0	12.00	13.0
							401	6.00	7.0	6.00	5.0
							Mean =	9.50	10.8	8.75	9.0
6	JUNE 1-PD (59 DAT) NTC										
							106	.	.	.	.
							210	.	.	.	.
							307	.	.	.	.
							409	.	.	.	.
							Mean =	.	.	.	.
7	JUNE 1-PD (59 DAT) LAUDIS	3.5	SC	3.0	oz/a	PRE	A				
							107	.	.	.	.
							209	.	.	.	.
							310	.	.	.	.
							406	.	.	.	.
							Mean =	.	.	.	.
8	JUNE 1-PD (59 DAT) SHIELDEX	3.33	SC	1.35	oz/a	PRE	A				
							108	.	.	.	.
							207	.	.	.	.
							309	.	.	.	.
							407	.	.	.	.
							Mean =	.	.	.	.
9	JUNE 1-PD (59 DAT) CALLISTO	4	SC	3.0	oz/a	PRE	A				
							109	.	.	.	.
							208	.	.	.	.
							306	.	.	.	.
							408	.	.	.	.
							Mean =	.	.	.	.
10	JUNE 1-PD (59 DAT) IMPACT	2.8	SC	1.25	oz/a	PRE	A				
							110	.	.	.	.
							206	.	.	.	.
							308	.	.	.	.
							410	.	.	.	.
							Mean =	.	.	.	.

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SOYBEAN RESPONSE TO HPPD RESIDUES										
Trial ID: SB-03BB-22		Study Dir.:								
Location: PONDER FARM		Investigator: Eric P. Prostko								
Crop Code Part Rated Rating Data Type Rating Unit Rating Date					Glyma Plant, - Chlorosis %	Glyma Plant, - Density #/5ft	Glyma Plant, - Stunting %	Glyma Plant, - Bleaching %	GLYMA PLOT, - YIELD LBS/PLOT	
					Jun-24-22	Jul-27-22	Aug-2-22	Aug-2-22	Oct-19-22	
Trt	Treatment	Form	Form	Rate	Grow	Appl				
No.	Name	Conc	Type	Rate	Unit	Stg	Code	Plot		
1	MAY 2-PD (29 DAT) NTC						101	0.0		7.3
							205	0.0		8.8
							304	0.0		8.1
							403	0.0		8.5
							Mean =	0.0		8.2
2	MAY 2-PD (29 DAT) LAUDIS	3.5	SC	3.0	oz/a	PRE	A	102	0.0	6.8
							204	0.0		8.1
							305	0.0		9.7
							404	0.0		8.5
							Mean =	0.0		8.3
3	MAY 2-PD (29 DAT) SHIELDEX	3.33	SC	1.35	oz/a	PRE	A	103	0.0	6.6
							201	15.0		7.5
							302	0.0		7.5
							405	15.0		
							Mean =	7.5		7.2
4	MAY 2-PD (29 DAT) CALLISTO	4	SC	3.0	oz/a	PRE	A	104	0.0	6.4
							203	0.0		6.7
							301	0.0		7.6
							402	0.0		7.5
							Mean =	0.0		7.1
5	MAY 2-PD (29 DAT) IMPACT	2.8	SC	1.25	oz/a	PRE	A	105	0.0	6.9
							202	50.0		4.9
							303	5.0		7.3
							401	50.0		4.2
							Mean =	26.3		5.8
6	JUNE 1-PD (59 DAT) NTC						106	0.0	34.0	5.4
							210	0.0	31.0	6.3
							307	0.0	36.0	5.9
							409	0.0	34.0	5.5
							Mean =	0.0	33.8	5.8
7	JUNE 1-PD (59 DAT) LAUDIS	3.5	SC	3.0	oz/a	PRE	A	107	0.0	5.6
							209	0.0	35.0	5.9
							310	0.0	38.0	6.1
							406	0.0	34.0	
							Mean =	0.0	36.3	5.9
8	JUNE 1-PD (59 DAT) SHIELDEX	3.33	SC	1.35	oz/a	PRE	A	108	0.0	5.7
							207	15.0	41.0	6.7
							309	15.0	34.0	5.4
							407	0.0	35.0	5.7
							Mean =	7.5	36.3	5.9
9	JUNE 1-PD (59 DAT) CALLISTO	4	SC	3.0	oz/a	PRE	A	109	0.0	5.8
							208	0.0	38.0	6.2
							306	0.0	36.0	5.9
							408	0.0	37.0	5.9
							Mean =	0.0	36.8	6.0
10	JUNE 1-PD (59 DAT) IMPACT	2.8	SC	1.25	oz/a	PRE	A	110	15.0	5.7
							206	35.0	35.0	4.9
							308	30.0	40.0	5.2
							410	25.0	35.0	4.2
							Mean =	26.3	35.5	5.0

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SOYBEAN RESPONSE TO HPPD RESIDUES

Trial ID: SB-03BB-22 Study Dir.:
Location: PONDER FARM Investigator: Eric P. Prostko

Crop Code Part Rated Rating Data Type Rating Unit Rating Date							GLYMA MOISTURE % Oct-19-22	GLYMA PLOT, - YIELD BU/A Oct-19-22
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Grow Unit	Appl Stg Code Plot	24	25
1	MAY 2-PD (29 DAT) NTC					101 205 304 403 Mean =	9.9 9.9 9.9 9.9 9.9	36.6 44.1 40.6 42.6 41.0
2	MAY 2-PD (29 DAT) LAUDIS	3.5	SC	3.0 oz/a	PRE	A 102 204 305 404 Mean =	9.9 9.9 9.9 9.9 9.9	34.1 40.6 48.6 42.6 41.5
3	MAY 2-PD (29 DAT) SHIELDEX	3.33	SC	1.35 oz/a	PRE	A 103 201 302 405 Mean =	9.9 9.9 9.9 9.9 9.9	33.1 37.6 37.6 . 36.1
4	MAY 2-PD (29 DAT) CALLISTO	4	SC	3.0 oz/a	PRE	A 104 203 301 402 Mean =	9.9 9.9 9.9 9.9 9.9	32.1 33.6 38.1 37.6 35.3
5	MAY 2-PD (29 DAT) IMPACT	2.8	SC	1.25 oz/a	PRE	A 105 202 303 401 Mean =	9.9 9.9 9.9 9.9 9.9	34.6 24.6 36.6 21.1 29.2
6	JUNE 1-PD (59 DAT) NTC					106 210 307 409 Mean =	9.4 9.4 9.4 9.4 9.4	27.2 31.8 29.7 27.7 29.1
7	JUNE 1-PD (59 DAT) LAUDIS	3.5	SC	3.0 oz/a	PRE	A 107 209 310 406 Mean =	9.4 9.4 9.4 9.4 9.4	28.2 29.7 30.7 . 29.6
8	JUNE 1-PD (59 DAT) SHIELDEX	3.33	SC	1.35 oz/a	PRE	A 108 207 309 407 Mean =	9.4 9.4 9.4 9.4 9.4	28.7 33.8 27.2 28.7 29.6
9	JUNE 1-PD (59 DAT) CALLISTO	4	SC	3.0 oz/a	PRE	A 109 208 306 408 Mean =	9.4 9.4 9.4 9.4 9.4	29.2 31.2 29.7 29.7 30.0
10	JUNE 1-PD (59 DAT) IMPACT	2.8	SC	1.25 oz/a	PRE	A 110 206 308 410 Mean =	9.4 9.4 9.4 9.4 9.4	28.7 24.7 26.2 21.2 25.2

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SOYBEAN RESPONSE TO HPPD RESIDUES

Trial ID: SB-03BB-22 Study Dir.:
Location: PONDER FARM Investigator: Eric P. Prostko

Part Rated

Plant = PLANT / PLANT BIOMASS (includes Shrub, Tree, Turf)

Rating Unit

% = PERCENT

In = INCH

ARM Action Codes

T1 = ([6]+[7]+[8]+[9]+[10])/5

T2 = ([12]+[13]+[14]+[15]+[16])/5

TY3 = $4.84 \times [23] \times (100 - [24]) / 87$