

University of Georgia

EARLY PREPLANT APPLICATIONS OF ZIDUA FOR WEED CONTROL IN SOYBEANS									
Trial ID: SB-16-11		Study Dir.: SANDY NEWELL/BO BALOGH							
Location: PONDER FARM		Investigator: Eric P. Prostko							

Reps: 3 Plots: 6 by 25 feet
 Spray vol: 15 gal/ac Mix size: 1.5 liters (min .58658)

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Grow Stg	Appl Code	Amt Product to Measure	Rep 1	2	3
1	ZIDUA	85 WG		2.0 oz/a	EPP	A		1.498 g/mx	101	206	301
	SHARPEN	2.85 SC		1.0 oz/a	EPP	A		0.7812 ml/mx			
	ROUNDUP W-MAX	5.5 SL		22.0 oz/a	EPP	A		17.19 ml/mx			
	MSO			1.0 % v/v	EPP	A		15.0 ml/mx			
	ROUNDUP W-MAX	5.5 SL		22.0 oz/a	POST	B		17.19 ml/mx			
2	ZIDUA	85 WG		1.5 oz/a	EPP	A		1.123 g/mx	102	201	307
	SHARPEN	2.85 SC		1.0 oz/a	EPP	A		0.7812 ml/mx			
	ROUNDUP W-MAX	5.5 SL		22.0 oz/a	EPP	A		17.19 ml/mx			
	MSO			1.0 % v/v	EPP	A		15.0 ml/mx			
	ZIDUA	85 WG		1.0 oz/a	POST	B		0.7489 g/mx			
3	ZIDUA	85 WG		2.0 oz/a	EPP	A		1.498 g/mx	103	208	310
	SHARPEN	2.85 SC		1.0 oz/a	EPP	A		0.7812 ml/mx			
	ROUNDUP W-MAX	5.5 SL		22.0 oz/a	EPP	A		17.19 ml/mx			
	MSO			1.0 % v/v	EPP	A		15.0 ml/mx			
	ZIDUA	85 WG		1.0 oz/a	POST	B		0.7489 g/mx			
4	ROUNDUP W-MAX	5.5 SL		22.0 oz/a	POST	B		17.19 ml/mx	104	202	306
	WARRANT	3 ME		1.25 qt/a	POST	B		31.25 ml/mx			
	ROUNDUP W-MAX	5.5 SL		22.0 oz/a	POST	B		17.19 ml/mx			
	ROUNDUP W-MAX	5.5 SL		22.0 oz/a	POST	B		17.19 ml/mx			
5	ZIDUA	85 WG		1.5 oz/a	EPP	A		1.123 g/mx	105	210	304
	VALOR SX	51 WG		2.0 oz/a	EPP	A		1.498 g/mx			
	ROUNDUP W-MAX	5.5 SL		22.0 oz/a	EPP	A		17.19 ml/mx			
	WARRANT	3 ME		1.25 qt/a	POST	B		31.25 ml/mx			
	ROUNDUP W-MAX	5.5 SL		22.0 oz/a	POST	B		17.19 ml/mx			
6	ROUNDUP W-MAX	5.5 SL		24.0 oz/a	EPP	A		18.75 ml/mx	106	211	302
	ROUNDUP W-MAX	5.5 SL		22.0 oz/a	POST	B		17.19 ml/mx			
7	ET	.208 EC		1.5 oz/a	EPP	A		1.172 ml/mx	107	209	311
	COC			1.0 % v/v	EPP	A		15.0 ml/mx			
8	NAI-1295	2.5 EW		1.5 oz/a	EPP	A		1.172 ml/mx	108	205	303
	COC			1.0 % v/v	EPP	A		15.0 ml/mx			
9	ROUNDUP W-MAX	5.5 SL		24.0 oz/a	EPP	A		18.75 ml/mx	109	203	309
	ET	.208 EC		1.5 oz/a	EPP	A		1.172 ml/mx			
10	ROUNDUP W-MAX	5.5 SL		24.0 oz/a	EPP	A		18.75 ml/mx	110	204	308
	NAI-1295	2.5 EW		1.5 oz/a	EPP	A		1.172 ml/mx			
11	NTC								111	207	305

Sort Order: Treatment

Trial Comments

NAI-1295 = PYRAFLUFEN

LAST TILLAGE: APRIL 4, 2011

ANNUAL GRASS = 60% TEXAS PANICUM + 40% CRABGRASS + CROWFOOTGRASS

HARVEST MOISTURE: 15.4%

YIELDS ADJUSTED TO 13%

SUMMARY:

1) EPP APPLICATIONS OF ZIDUA + VALOR CAUSED SLIGHT SOYBEAN STUNTING. HOWEVER, RELIABLE CROP INJURY RATINGS WERE DIFFICULT TO OBTAIN BECAUSE THE CHECK PLOTS WERE EXTREMELY WEEDY BEFORE PLANTING.

2) ANNUAL GRASS AND PALMER AMARANTH CONTROL WITH EPP APPLICATIONS OF ET/ NAI-1295 AND ET/NAI-1295 + ROUNDUP WAS POOR.

3) SPLIT APPLICATIONS OF ROUNDUP DID NOT PROVIDE ADEQUATE CONTROL OF PALMER AMARANTH AND ANNUAL GRASSES.

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EARLY PREPLANT APPLICATIONS OF ZIDUA

FOR WEED CONTROL IN SOYBEANS

Trial ID: SB-16-11 Study Dir.: SANDY NEWELL/BO BALOGH

Location: PONDER FARM Investigator: Eric P. Prostko

4) EPP APPLICATIONS OF ZIDUA + SHARPEN FOLLOWED BY POST APPLICATIONS OF ROUNDUP OR ROUNDUP + ZIDUA PROVIDED GOOD TO EXCELLENT CONTROL (85+%) OF PALMER AMARANTH AND ANNUAL GRASSES.

5) ALL TREATMENTS SIGNIFICANTLY IMPROVED YIELD EXCEPT THE FOLLOWING:

ROUNDUP P-MAX APPLIED EPP + POST

ET - EPP

NAI-1295 - EPP

ROUNDUP + ET - EPP

ROUNDUP + NAI-1295 - EPP

NOTE: SOYBEAN YIELDS WERE LESS THAN DESIRABLE DUE TO HIGH TEMPERATURES, DROUGHT, AND IRRIGATION SYSTEM PROBLEMS (IRRIGATION POND WENT DRY)

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EARLY PREPLANT APPLICATIONS OF ZIDUA

LEFT RELEVANT APPLICATIONS OF ZIL FOR WEED CONTROL IN SOYBEANS

Trial ID: SB-16-11 Study Dir.: SANDY NEWELL/BO BALOGH

Location: PONDER FARM Investigator: Eric P. Prostko

CROP AND PEST DESCRIPTION

CROP AND PEST DESCRIPTION		
Weed	1. AMAPA PALMER AMARANTH	2. PANTE TEXAS PANICUM

Crop 1: GLYMA	SOYBEAN	Variety: AGS 758RR	Planting Date:	May-13-11
Planting Method:	MONOSEM	Rate: 10	SEED/FT	Depth: 1.5 IN
Perennial Age: _____		Row Spacing: 36 IN	Seed Bed: _____	
Soil Temperature: _____		Soil Moisture: OPTIMUM	Emergence Date: _____	

Plot Width, Unit:	6	FT	Plot Length, Unit:	25	FT	Reps:	3
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Site Type: _____
Tillage Type: CONVENTIONAL **Study Design:** RACOB

Image Type: CONVENTIONAL **Study Design: RCT**

Trial Initiation Comments: _____

Previous: Crops	Pesticides	Year
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Reviewer: steps	Reviewer	Ref.
1.		

MAINTENANCE

Field Prep./Maintenance:

No.	Date	Treatment Name	Form	Form	Form	Rate	Unit

Ref	Date	Treatment Name	Dose	Unit	Type	Rate	Unit
1.							

SOIL DESCRIPTION

Texture: SAND	SOIL DESCRIPTION			
	% OM: 1.19	% Sand: 92	% Silt: 4	% Clay: 4

pH: 6.0 **CEC:** **Soil Name:** TIFTON **Fertility Level:** GOOD

MOISTURE CONDITIONS

On: Date	Time	Amount	Unit	Type	Interval	Unit
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Chk Date	Time	Amount	Chk type	Interval	Chk
1. May-16-11	0.75		IN SPRINKLER - LATERAL MOVE		

2. May-24-11 0.75 IN SPRINKLER - LATERAL MOVE

3. May-31-11 0.75 IN SPRINKLER - LATERAL MOVE

Overall Moisture Conditions:

Closest Weather Station: _____ **Distance:** _____ **Unit:** _____

APPLICATION DESCRIPTION

	A	B	C	D	E	F
Application Date:	Apr-29-11	Jun-8-11				
Time of Day:	8:15 AM	7:30 AM				
Application Method:	BROADCAST	BROADCAST				
Application Timing:	EPP	POST				
Applic. Placement:	FOLIAGE	FOLIAGE				
Air Temp., Unit:	67 F	76 F				
% Relative Humidity:	48	73				
Wind Velocity, Unit:	2 MPH	0 MPH				
Dew Presence (Y/N):	Y	Y				
Water Hardness:	--	--				
Soil Temp., Unit:	67 F	81 F				
Soil Moisture:	DRY	DRY				
% Cloud Cover:	5	10				

CROP STAGE AT EACH APPLICATION

		A	B	C	D	E	F
Crop 1	Stage: GLYMA						
Stage Scale:		V2					
Height, Unit:		5 IN					

WEED STAGE AT EACH APPLICATION

		A	B	C	D	E	F
Weed 1	Stage: AMAPA 3-6"	5-20"					
	Stage Scale:						
	Density, Unit:						
Weed 2	Stage: PANTE 2-4"	1-4"					
	Stage Scale:						
	Density, Unit:						

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EARLY PREPLANT APPLICATIONS OF ZIDUA

FOR WEED CONTROL IN SOYBEANS

Trial ID: SB-16-11 Study Dir.: SANDY NEWELL/BO BALOGH

Location: PONDER FARM Investigator: Eric P. Prostko

		APPLICATION EQUIPMENT					
		A	B	C	D	E	F
Appl. Equipment:	BACKPACK SAME						
Operating Pressure:	38						
Nozzle Type:	FLAT FAN						
Nozzle Size:	11002DG						
Nozzle Spacing, Unit:	20	IN					
Nozzles/Row:							
Band Width, Unit:							
Boom Length, Unit:	60	IN					
Boom Height, Unit:	17	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):							

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EARLY PREPLANT APPLICATIONS OF ZIDUA FOR WEED CONTROL IN SOYBEANS														
Trial ID: SB-16-11			Study Dir.: SANDY NEWELL/BO BALOGH											
Location: PONDER FARM			Investigator: Eric P. Prostko											
Weed Code						PANTE	AMAPA	AMAPA	PANTE	----	AMAPA	PANTE		
Crop Code						---	----	-----	-----	GLYMA	----	-----		
Rating Data Type						CONTROL	CONTROL	CONTROL	CONTROL	STUNT	CONTROL	CONTROL		
Rating Unit						PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT		
Rating Date						May-5-11	May-5-11	May-20-11	May-20-11	May-25-11	Jun-7-11	Jun-7-11		
PRM Data Type														
# Subsamples, Dec.														
Trt	Treatment	Form	Form	Rate	Grow	Appl								
No.	Name	Conc	Type	Rate	Unit	Stg	Code	1	2	3	4	5	6	7
1	ZIDUA	85	WG	2.0	oz/a	EPP	A	91.7 b	96.3 a	95.0 a	91.7 a	3.3 c	93.3 a	80.0 a
	SHARPEN	2.85	SC	1.0	oz/a	EPP	A							
	ROUNDUP W-MAX	5.5	SL	22.0	oz/a	EPP	A							
	MSO			1.0	% v/v	EPP	A							
	ROUNDUP W-MAX	5.5	SL	22.0	oz/a	POST	B							
2	ZIDUA	85	WG	1.5	oz/a	EPP	A	95.0 ab	96.3 a	91.7 a	88.3 a	0.0 c	88.3 a	75.0 a
	SHARPEN	2.85	SC	1.0	oz/a	EPP	A							
	ROUNDUP W-MAX	5.5	SL	22.0	oz/a	EPP	A							
	MSO			1.0	% v/v	EPP	A							
	ZIDUA	85	WG	1.0	oz/a	POST	B							
	ROUNDUP W-MAX	5.5	SL	22.0	oz/a	POST	B							
3	ZIDUA	85	WG	2.0	oz/a	EPP	A	93.3 ab	95.0 ab	95.0 a	83.3 ab	3.3 c	91.7 a	68.3 a
	SHARPEN	2.85	SC	1.0	oz/a	EPP	A							
	ROUNDUP W-MAX	5.5	SL	22.0	oz/a	EPP	A							
	MSO			1.0	% v/v	EPP	A							
	ZIDUA	85	WG	1.0	oz/a	POST	B							
	ROUNDUP W-MAX	5.5	SL	22.0	oz/a	POST	B							
4	VALOR SX	51	WG	2.0	oz/a	EPP	A	96.3 a	91.7 abc	91.7 a	91.7 a	10.0 b	90.0 a	76.7 a
	ROUNDUP W-MAX	5.5	SL	22.0	oz/a	EPP	A							
	WARRANT	3	ME	1.25	qt/a	POST	B							
	ROUNDUP W-MAX	5.5	SL	22.0	oz/a	POST	B							
5	ZIDUA	85	WG	1.5	oz/a	EPP	A	96.3 a	88.3 bcd	86.7 a	93.3 a	16.7 a	73.3 a	81.7 a
	VALOR SX	51	WG	2.0	oz/a	EPP	A							
	ROUNDUP W-MAX	5.5	SL	22.0	oz/a	EPP	A							
	WARRANT	3	ME	1.25	qt/a	POST	B							
	ROUNDUP W-MAX	5.5	SL	22.0	oz/a	POST	B							
6	ROUNDUP W-MAX	5.5	SL	24.0	oz/a	EPP	A	96.3 a	96.3 a	93.3 a	73.3 b	0.0 c	33.3 b	30.0 b
	ROUNDUP W-MAX	5.5	SL	22.0	oz/a	POST	B							
7	ET	.208	EC	1.5	oz/a	EPP	A	0.0 c	85.0 cd	65.0 bc	0.0 c	0.0 c	33.3 b	10.0 bc
	COC			1.0	% v/v	EPP	A							
8	NAI-1295	2.5	EW	1.5	oz/a	EPP	A	0.0 c	81.7 d	60.0 c	0.0 c	0.0 c	30.0 b	16.7 bc
	COC			1.0	% v/v	EPP	A							
9	ROUNDUP W-MAX	5.5	SL	24.0	oz/a	EPP	A	93.3 ab	88.3 bcd	81.7 ab	75.0 b	0.0 c	33.3 b	23.3 bc
	ET	.208	EC	1.5	oz/a	EPP	A							
10	ROUNDUP W-MAX	5.5	SL	24.0	oz/a	EPP	A	96.3 a	88.3 bcd	80.0 ab	73.3 b	0.0 c	26.7 b	20.0 bc
	NAI-1295	2.5	EW	1.5	oz/a	EPP	A							
11	NTC							0.0 c	0.0 e	0.0 d	0.0 c	0.0 c	0.0 c	0.0 c
LSD (P=.10)								3.18	6.85	17.48	11.29	5.40	26.04	24.17
Standard Deviation								2.25	4.86	12.41	8.02	3.83	18.49	17.16
CV								3.27	5.9	16.25	13.16	126.51	34.28	39.19
Grand Mean								68.97	82.48	76.36	60.91	3.03	53.94	43.79
Bartlett's X2								3.274	10.126	17.05	9.377	1.98	16.0	8.277
P(Bartlett's X2)								0.774	0.256	0.017*	0.227	0.576	0.067	0.507
Replicate F								4.029	1.945	1.476	4.139	0.206	2.994	1.175
Replicate Prob(F)								0.0339	0.1691	0.2523	0.0313	0.8154	0.0729	0.3291
Treatment F								1159.057	97.994	15.253	73.948	6.103	9.948	10.565
Treatment Prob(F)								0.0001	0.0001	0.0001	0.0001	0.0003	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.10, Duncan's New MRT)

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

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EARLY PREPLANT APPLICATIONS OF ZIDUA FOR WEED CONTROL IN SOYBEANS						
Trial ID: SB-16-11 Study Dir.: SANDY NEWELL/BO BALOGH Location: PONDER FARM Investigator: Eric P. Prostko						
Weed Code	AMAPA	ANNUAL	AMAPA	ANNUAL	GLYMA	GLYMA
Crop Code	-----	GRASS	-----	GRASS	YIELD	YIELD
Rating Data Type	CONTROL	CONTROL	CONTROL	CONTROL		
Rating Unit	PERCENT	PERCENT	PERCENT	PERCENT	LBS/PLOT	BU/A
Rating Date	Jun-21-11	Jun-21-11	Jul-11-11	Jul-11-11	Nov-8-11	Nov-8-11
PRM Data Type						TY1
# Subsamples, Dec.					- 2	- 0
Trt Treatment	Form	Form	Rate	Grow	Appl	
No. Name	Conc	Type	Rate Unit	Stg	Code	
1 ZIDUA	85 WG	2.0 oz/a	EPP A			
SHARPEN	2.85 SC	1.0 oz/a	EPP A			
ROUNDUP W-MAX	5.5 SL	22.0 oz/a	EPP A			
MSO		1.0 % v/v	EPP A			
ROUNDUP W-MAX	5.5 SL	22.0 oz/a	POST B			
2 ZIDUA	85 WG	1.5 oz/a	EPP A			
SHARPEN	2.85 SC	1.0 oz/a	EPP A			
ROUNDUP W-MAX	5.5 SL	22.0 oz/a	EPP A			
MSO		1.0 % v/v	EPP A			
ZIDUA	85 WG	1.0 oz/a	POST B			
ROUNDUP W-MAX	5.5 SL	22.0 oz/a	POST B			
3 ZIDUA	85 WG	2.0 oz/a	EPP A			
SHARPEN	2.85 SC	1.0 oz/a	EPP A			
ROUNDUP W-MAX	5.5 SL	22.0 oz/a	EPP A			
MSO		1.0 % v/v	EPP A			
ZIDUA	85 WG	1.0 oz/a	POST B			
ROUNDUP W-MAX	5.5 SL	22.0 oz/a	POST B			
4 VALOR SX	51 WG	2.0 oz/a	EPP A			
ROUNDUP W-MAX	5.5 SL	22.0 oz/a	EPP A			
WARRANT	3 ME	1.25 qt/a	POST B			
ROUNDUP W-MAX	5.5 SL	22.0 oz/a	POST B			
5 ZIDUA	85 WG	1.5 oz/a	EPP A			
VALOR SX	51 WG	2.0 oz/a	EPP A			
ROUNDUP W-MAX	5.5 SL	22.0 oz/a	EPP A			
WARRANT	3 ME	1.25 qt/a	POST B			
ROUNDUP W-MAX	5.5 SL	22.0 oz/a	POST B			
6 ROUNDUP W-MAX	5.5 SL	24.0 oz/a	EPP A			
ROUNDUP W-MAX	5.5 SL	22.0 oz/a	POST B			
7 ET	.208 EC	1.5 oz/a	EPP A			
COC		1.0 % v/v	EPP A			
8 NAI-1295	2.5 EW	1.5 oz/a	EPP A			
COC		1.0 % v/v	EPP A			
9 ROUNDUP W-MAX	5.5 SL	24.0 oz/a	EPP A			
ET	.208 EC	1.5 oz/a	EPP A			
10 ROUNDUP W-MAX	5.5 SL	24.0 oz/a	EPP A			
NAI-1295	2.5 EW	1.5 oz/a	EPP A			
11 NTC						
LSD (P=.10)	14.84	2.38	23.27	8.21	1.383	6.5
Standard Deviation	10.53	1.69	16.52	5.83	0.982	4.6
CV	23.05	3.28	38.12	12.44	56.05	56.05
Grand Mean	45.7	51.48	43.33	46.82	1.75	8.24
Bartlett's X2	11.157	0.162	11.982	2.33	9.303	9.303
P(Bartlett's X2)	0.048*	0.997	0.035*	0.802	0.157	0.157
Replicate F	5.639	0.393	5.366	0.804	3.601	3.601
Replicate Prob(F)	0.0114	0.6803	0.0136	0.4617	0.0462	0.0462
Treatment F	55.165	2593.370	20.622	183.290	8.550	8.550
Treatment Prob(F)	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.10, Duncan's New MRT)

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

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Trial ID: SB-16-11	Study Dir.: SANDY NEWELL/BO BALOGH
Location: PONDER FARM Investigator: Eric P. Prostko	
<u>Weed Code</u> PANTE = PANICUM, TEXAS / PANICUM TEXANUM BUCKL. AMAPA = AMARANTH, PALMER / AMARANTHUS PALMERI S.WATS. <u>PRM Data Type</u> TY1 = 4.706483*[12]	