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Determine yield effects of tank mixes and split timings

Trial ID: 09S-THP-CTS-84 Protocol ID: 09S-THP-CTS-84
 Location: Throckmorton Study Director: Paul Marquardt/Melissa Kruger
 Project ID: Investigator: Dr. Bill Johnson
 Sponsor Contact:

General Trial Information

Study Director: Paul Marquardt/Melissa Kruger **Title:** Research Associate
Investigator: Dr. William G. Johnson **Title:** Professor

Discipline: H herbicide
Trial Status: E established
Initiation Date: 6/15/09 **Planned Completion Date:** 8/26/09

Trial Location

City: Lafayette
State/Prov.: IN
Postal Code: 47909
Country: USA

Personnel

Study Director: Paul Marquardt/Melissa Kruger **Title:** Research Associate
Affiliation: Purdue University

Address: 915 W. State Street, Department of Botany & Plant Path.

Location: West Lafayette, IN

Postal Code: 47907

E-mail: pmarquar@purdue.edu

Phone No.: 765-494-4621

Mobile No.: 765-409-6369

Investigator: Dr. William G. Johnson **Title:** Professor

Affiliation: Purdue University

Address: 915 W. State St.

Location: West Lafayette, IN USA

Postal Code: 47907

E-mail: wgj@purdue.edu

Phone No.: 765-494-4656

Cooperator/Landowner

Cooperator: Throckmorton Purdue Ag Center

Role: Farm Manager

Organization: Purdue University

Address 1: 8343 US 231 South

Phone No.: 765-538-3422

Fax No.: 765-538-3423

City: Lafayette

State/Prov: Indiana

Postal Code: 47909

E-mail: jayyoung@purdue.edu

Country: USA United States

Crop Description

Crop 1: GLXMA Glycine max Soybean

Variety: AG 3402

Description: roundup ready

BBCH Scale: BSOY

Planting Date: 6/15/09

Planting Method: DIRDRI direct drilled

Rate, Unit: 160000 s/a

Depth, Unit: 0.5 in

Row Spacing, Unit: 15 IN

Spacing Within Row, Unit: 2 IN

Seed Bed: MEDIUM medium

Emergence Date: 6/20/09

Harvested Width, Unit: 10 FT

Harvested Length, Unit: 25 FT

Site and Design

Plot Width, Unit: 10 FT

Site Type: FIELD field

Plot Length, Unit: 30 FT

Experimental Unit: 1 PLOT plot

Plot Area, Unit: 300 FT²

Tillage Type: CONTIL conventional-till

Replications: 4

Study Design: RACOB Randomized Complete Block (RCB)

Field Prep/Maintenance:

No till field due to wet weather conditions. Glyphosate blanket (1X of Powermax @ 20 oz/a) applied at planting.

Soil Description

Description Name: TPAC Field 4A

% OM: 3.1

Texture: SIL silt loam

pH: 6

Soil Name: Toronto-Millbrook

CEC: 11.1

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Application Description

	A
Application Date:	8/19/09
Time of Day:	10:00 AM
Application Method:	SPRAY
Application Timing:	POSPOS
Application Placement:	BANT
Applied By:	PM
Air Temperature, Unit:	76 F
% Relative Humidity:	68
Wind Velocity, Unit:	2.8 MPH
Wind Direction:	E
Dew Presence (Y/N):	N no
Soil Temperature, Unit:	78 F
Soil Moisture:	DRY
% Cloud Cover:	95

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	GLXMA BSOY
Stage Scale Used:	BBCH
Stage Majority, Percent:	R3 90
Stage Minimum, Percent:	R2 10
Height, Unit:	24 IN
Height Minimum, Maximum:	18

Application Equipment

	A
Appl. Equipment:	CO2 BACKPACK
Equipment Type:	SPRBAC
Operating Pressure, Unit:	17 psi
Nozzle Type:	FLAT FAN
Nozzle Size:	XR11002
Nozzle Spacing, Unit:	15 IN
Nozzles/Row:	8
Boom Length, Unit:	10 FT
Boom Height, Unit:	18 IN
Ground Speed, Unit:	3 MPH
Carrier:	H2O
Water Hardness (ppm CaCO3):	150
Spray Volume, Unit:	15 gal/ac
Mix Size, Unit:	1.8 liters
Propellant:	CO2
Tank Mix (Y/N):	N no

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Crop Code	GLXMA	GLXMA	GLXMA				
BBCH Scale	BSOY	BSOY	BSOY				
Crop Scientific Name	Glycine max	Glycine max	Glycine max				
Crop Name	Soybean	Soybean	Soybean				
Crop Variety	AG3402	AG3402	AG3402				
Description	20-24"						
Rating Date	8/27/09	10/15/09	10/15/09				
Rating Type	PHYGEN	YIELD	YIELD				
Rating Unit	%	LB	BU				
Number of Subsamples	1	1	1				
Crop Stage Majority	R4	R8	R8				
Assessed By	MK/RT	PM	PM				
Days After First/Last Applic.	8 8	57 57	57 57				
Trt-Eval Interval	8 DA-A	57 DA-A	57 DA-A				
Plant-Eval Interval	73 DP-1	122 DP-1	122 DP-1				
Days After Emergence	68 DE-	117 DE	117 DE				
ARM Action Codes			TY1				
Number of Decimals			1				
Trt No.	Treatment Name	Rate	Appl Unit	Code	1	2	3
1	Untreated				0.0 a	11.38 a	33.4 a
2	TPA 630 Diplomat Array	0.104 % v/v 0.417 % v/v 1.08 % w/w	A A A		0.0 a	10.43 a	30.6 a
3	TPA 630 Diplomat Array	0.13 % v/v 0.417 % v/v 1.08 % w/w	A A A		0.0 a	10.63 a	31.2 a
4	FFI 3393 Diplomat Array	0.313 % v/v 0.417 % v/v 1.08 % w/w	A A A		0.0 a	10.95 a	32.2 a
5	TPA 630 Proaxis Recon Diplomat Array	0.104 % v/v 0.0075 lb ai/a 6.7 % v/v 0.417 % v/v 1.08 % w/w	A A A A A		0.0 a	12.38 a	36.4 a
6	TPA 630 Proaxis Recon Diplomat Array	0.13 % v/v 0.0075 lb ai/a 6.7 % v/v 0.417 % v/v 1.08 % w/w	A A A A A		0.0 a	11.15 a	32.8 a
7	FFI 3393 Proaxis Recon Diplomat Array	0.313 % v/v 0.0075 lb ai/a 6.7 % v/v 0.417 % v/v 1.08 % w/w	A A A A A		0.0 a	10.63 a	31.2 a
LSD (P=.05)		0.00			0.00	2.722	8.00
Standard Deviation		0.00			0.00	1.832	5.38
CV		0.0			0.0	16.54	16.54
Bartlett's X2		0.0			0.0	1.877	1.877
P(Bartlett's X2)		.			.	0.931	0.931
Replicate F		0.000			0.000	7.852	7.852
Replicate Prob(F)		1.0000			1.0000	0.0015	0.0015
Treatment F		0.000			0.000	0.522	0.522
Treatment Prob(F)		1.0000			1.0000	0.7842	0.7842

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

Crop Code
 GLXMA, BSOY, Glycine max, = US
Rating Type
 PHYGEN = phytotoxicity - general / injury
 YIELD = yield
Rating Unit
 % = percent
 LB = pound
 BU = bushel
Plant-Eval Interval
 73 DP-1 = 1 6/15/09
 122 DP-1 = 1 6/15/09

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ARM Action Codes
TY1 = 2.937379*2