

Ohio State University  
Horticulture and Crop Science

EFFECT OF SUPERB HC & DESTINY HC ON PERFORMAMANCE OF FLEXSTAR AND COBRA W ROUNDUP

Trial ID: 08ADJ Study Dir.: Anthony F. Dobbels  
Location: CLARKSBURG, OHIO Investigator: Dr. Mark M. Loux

**GENERAL TRIAL INFORMATION**

Study Director: Anthony F. Dobbels  
Investigator: Dr. Mark M. Loux

Conducted Under GLP (Y/N): N Conducted Under GEP (Y/N): N

**CROP AND WEED DESCRIPTION**

Weed Code	Common Name	Scientific Name
1. AMBTR	Giant ragweed	Ambrosia trifida
2. AMBEL	Common ragweed	Ambrosia artemisiifolia
3. CHEAL	Common lambsquarters	Chenopodium album
4. HIBTR	Venice mallow	Hibiscus trionum

Crop 1: GLXMA SOYBEAN Variety: ASGROW AG3705  
Planting Date: May/06/2008 Planting Method: JOHN DEERE 7200  
Rate: 175000 SEED/A Depth: 1 IN  
Row Spacing: 15 IN Seed Bed: CONVENTIONAL

**SITE AND DESIGN**

Plot Width, Unit: 10 FT Plot Length, Unit: 30 FT Reps: 3  
Tillage Type: CONVENTIONAL Study Design: RANDOMIZED COMPLETE BLOCK

**MAINTENANCE**

Field Prep./Maintenance: APPLIED BURNDOWN OF GRAMOXONE INTEON AT 3 PT/A + NIS 0.25% V/V ON 5-6-08

**SOIL DESCRIPTION**

% Sand: 24.5 % OM: 2.9 Texture: SILTY CLAY LOAM  
% Silt: 48.9 pH: 6.8 Soil Name: KOKOMO  
% Clay: 26.6 CEC: 11.7 Fert. Level: GOOD

**APPLICATION DESCRIPTION**

	A	B
Application Date:	Jun/12/2008	Jul/01/2008
Time of Day:	8:00 A.M.	9:00 A.M.
Application Method:	SPRAY	SPRAY
Application Timing:	6-8" GIRW	3 WKAA
Applic. Placement:	BROADCAST	BROADCAST
Air Temp., Unit:	73 F	74 F
% Relative Humidity:	63	67
Wind Velocity, Unit:	2 SE	1 SSW
Soil Temp., Unit:	69 F	69 F
Soil Moisture:	DRY/MOIST	MOIST/WET
% Cloud Cover:	3	0

**CROP STAGE AT EACH APPLICATION**

	A	B
Crop 1 Code, Stage:	GLXMA V2	GLXMA V4
Stage Scale:	DESC	DESC
Height, Unit:	5 IN	8 IN

**WEED STAGE AT EACH APPLICATION**

	A	B
Weed 1 Code, Stage:	AMBTR 4"	AMBTR 8-12"
Stage Scale:	6 LVS	12-24 LVS
Density, Unit:	64 M2	64 M2
Weed 2 Code, Stage:	AMBEL 2"	AMBEL
Stage Scale:	4 LVS	
Density, Unit:	0.33 M2	
Weed 3 Code, Stage:	CHEAL 2-3"	CHEAL
Stage Scale:	4 LVS	
Density, Unit:	5 M2	
Weed 4 Code, Stage:	HIBTR 1-2"	HIBTR
Stage Scale:	2 LVS	
Density, Unit:	6 M2	

**APPLICATION EQUIPMENT**

	A	B
Appl. Equipment:	BACKPACK	BACKPACK
Operating Pressure:	53	53
Nozzle Type:	DG	DG
Nozzle Size:	11002	11002
Nozzle Spacing, Unit:	18 IN	18 IN
Ground Speed, Unit:	3 MPH	3 MPH
Carrier:	WATER	WATER
Spray Volume, Unit:	20 GPA	20 GPA
Propellant:	CO2	CO2

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EFFECT OF SUPERB HC & DESTINY HC ON PERFORMAMCE OF FLEXSTAR AND COBRA W ROUNDUP

Trial ID: 08ADJ Study Dir.: Anthony F. Dobbels  
Location: CLARKSBURG, OHIO Investigator: Dr. Mark M. Loux

Weed Code		AMBTR		CHEAL		HIBTR		AMBTR			
Crop Code		GLXMA		GLXMA		GLXMA		GLXMA			
Rating Data Type		PHYTO		PHYTO		PHYTO		PHYTO			
Rating Unit		PERCENT		PERCENT		PERCENT		PERCENT			
Rating Date		Jun/24/2008		Jun/24/2008		Jun/24/2008		Jul/15/2008			
Trt-Eval Interval		12 DA-A		12 DA-A		12 DA-A		14 DA-B			
# Subsamples, Dec.		0		0		0		0			
Trt No.	Treatment Name	Product Rate	Product Rate Unit	Grow Stg	Appl Code	1	2	3	4	5	6
1	ROUNDUP POWERMAX	22 oz/a		POST	A	2 a	47 b	100 a	100 a	0 d	18 d
1	ALLIANCE	1 qt/a		POST							
2	ROUNDUP POWERMAX	22 oz/a		POST	A	5 a	65 a	100 a	100 a	0 d	30 cd
2	ALLIANCE	1 qt/a		POST							
2	FLEXSTAR	20 oz/a		POST							
3	ROUNDUP POWERMAX	22 oz/a		POST	A	5 a	80 a	99 a	100 a	1 d	53 b
3	ALLIANCE	1 qt/a		POST							
3	FLEXSTAR	20 oz/a		POST							
3	SUPERB HC	0.4 qt/a		POST							
4	ROUNDUP POWERMAX	22 oz/a		POST	A	6 a	76 a	100 a	100 a	1 d	45 bc
4	ALLIANCE	1 qt/a		POST							
4	FLEXSTAR	20 oz/a		POST							
4	DESTINY HC	0.4 qt/a		POST							
5	ROUNDUP POWERMAX	22 oz/a		POST	A	6 a	72 a	100 a	100 a	0 d	43 bc
5	ALLIANCE	1 qt/a		POST							
5	FLEXSTAR	20 oz/a		POST							
5	PREFERENCE NIS	0.2 qt/a		POST							
6	ROUNDUP POWERMAX	22 oz/a		POST	A	7 a	72 a	100 a	100 a	11 b	99 a
6	ALLIANCE	1 qt/a		POST							
6	FLEXSTAR	20 oz/a		POST							
6	DESTINY HC	0.4 qt/a		POST							
6	ROUNDUP POWERMAX	22 oz/a		LPO	B						
6	ALLIANCE	1 qt/a		LPO							
6	COBRA	12 oz/a		LPO							
6	PREFERENCE NIS	6.4 oz/a		LPO							
7	ROUNDUP POWERMAX	22 oz/a		POST	A	6 a	72 a	100 a	100 a	15 a	93 a
7	ALLIANCE	1 qt/a		POST							
7	FLEXSTAR	20 oz/a		POST							
7	DESTINY HC	0.4 qt/a		POST							
7	ROUNDUP POWERMAX	22 oz/a		LPO	B						
7	ALLIANCE	1 qt/a		LPO							
7	COBRA	12 oz/a		LPO							
7	SUPERB HC	0.4 qt/a		LPO							
8	ROUNDUP POWERMAX	22 oz/a		POST	A	6 a	78 a	100 a	100 a	11 b	95 a
8	ALLIANCE	1 qt/a		POST							
8	FLEXSTAR	20 oz/a		POST							
8	DESTINY HC	0.4 qt/a		POST							
8	ROUNDUP POWERMAX	22 oz/a		LPO	B						
8	ALLIANCE	1 qt/a		LPO							
8	COBRA	12 oz/a		LPO							
8	DESTINY HC	0.4 qt/a		LPO							
9	ROUNDUP POWERMAX	22 oz/a		POST	A	4 a	83 a	100 a	100 a	12 b	97 a
9	ALLIANCE	1 qt/a		POST							
9	FLEXSTAR	20 oz/a		POST							
9	DESTINY HC	0.4 qt/a		POST							
9	ROUNDUP POWERMAX	22 oz/a		LPO	B						
9	ALLIANCE	1 qt/a		LPO							
9	COBRA	12 oz/a		LPO							
9	RIVET	0.4 qt/a		LPO							

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						AMBTR	CHEAL	HIBTR	AMBTR		
Weed Code	Crop Code	GLXMA		PHYTO		CONTROL	CONTROL	CONTROL	CONTROL		
Rating Data Type	Rating Unit	PERCENT		PERCENT		PERCENT	PERCENT	PERCENT	PERCENT		
Rating Date	Trt-Eval Interval	Jun/24/2008		Jun/24/2008		Jun/24/2008	Jun/24/2008	Jun/24/2008	Jul/15/2008		
# Subsamples, Dec.		12 DA-A		12 DA-A		12 DA-A	12 DA-A	12 DA-A	14 DA-B		
		0		0		0	0	0	0		
Trt No.	Treatment Name	Product Rate	Product Rate Unit	Grow Stg	Appl Code	1	2	3	4	5	6
10	ROUNDUP POWERMAX	22 oz/a		POST	A	7 a	76 a	100 a	100 a	7 c	93 a
10	ALLIANCE	1 qt/a		POST							
10	FLEXSTAR	20 oz/a		POST							
10	DESTINY HC	0.4 qt/a		POST							
10	ROUNDUP POWERMAX	22 oz/a		LPO	B						
10	ALLIANCE	1 qt/a		LPO							
10	COBRA	12 oz/a		LPO							
LSD (P=.05)						3.7	15.4	0.6	0.0	2.4	15.0
Standard Deviation						2.2	9.0	0.4	0.0	1.4	8.8
CV						41.62	12.51	0.37	0.0	24.11	13.13
Bartlett's X2						4.637	4.221	0.0	0.0	4.22	9.995
P(Bartlett's X2)						0.865	0.896	.	.	0.518	0.351
Replicate F						12.358	7.072	1.000	0.000	6.349	3.905
Replicate Prob(F)						0.0004	0.0054	0.3874	1.0000	0.0082	0.0390
Treatment F						1.328	3.860	1.000	0.000	57.163	39.363
Treatment Prob(F)						0.2900	0.0071	0.4742	1.0000	0.0001	0.0001

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.

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Weed Code						CHEAL	HIBTR	AMBTR	CHEAL	HIBTR
Crop Code						CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Data Type						PERCENT	PERCENT	PERCENT	PERCENT	PERCENT
Rating Unit						Jul/15/2008	Jul/15/2008	Aug/06/2008	Aug/06/2008	Aug/06/2008
Rating Date						14 DA-B	14 DA-B	36 DA-B	36 DA-B	36 DA-B
Trt-Eval Interval						0	0	0	0	0
# Subsamples, Dec.										
Trt No.	Treatment Name	Product Rate	Product Unit	Grow Stg	Appl Code	7	8	9	10	11
1	ROUNDUP POWERMAX	22 oz/a		POST	A	100 a	97 a	10 c	100 a	100 a
1	ALLIANCE	1 qt/a		POST						
2	ROUNDUP POWERMAX	22 oz/a		POST	A	100 a	100 a	17 c	100 a	100 a
2	ALLIANCE	1 qt/a		POST						
2	FLEXSTAR	20 oz/a		POST						
3	ROUNDUP POWERMAX	22 oz/a		POST	A	83 a	93 a	47 b	100 a	100 a
3	ALLIANCE	1 qt/a		POST						
3	FLEXSTAR	20 oz/a		POST						
3	SUPERB HC	0.4 qt/a		POST						
4	ROUNDUP POWERMAX	22 oz/a		POST	A	100 a	93 a	37 bc	100 a	100 a
4	ALLIANCE	1 qt/a		POST						
4	FLEXSTAR	20 oz/a		POST						
4	DESTINY HC	0.4 qt/a		POST						
5	ROUNDUP POWERMAX	22 oz/a		POST	A	100 a	93 a	27 bc	100 a	100 a
5	ALLIANCE	1 qt/a		POST						
5	FLEXSTAR	20 oz/a		POST						
5	PREFERENCE NIS	0.2 qt/a		POST						
6	ROUNDUP POWERMAX	22 oz/a		POST	A	100 a	100 a	95 a	100 a	100 a
6	ALLIANCE	1 qt/a		POST						
6	FLEXSTAR	20 oz/a		POST						
6	DESTINY HC	0.4 qt/a		POST						
6	ROUNDUP POWERMAX	22 oz/a		LPO	B					
6	ALLIANCE	1 qt/a		LPO						
6	COBRA	12 oz/a		LPO						
6	PREFERENCE NIS	6.4 oz/a		LPO						
7	ROUNDUP POWERMAX	22 oz/a		POST	A	100 a	100 a	95 a	100 a	100 a
7	ALLIANCE	1 qt/a		POST						
7	FLEXSTAR	20 oz/a		POST						
7	DESTINY HC	0.4 qt/a		POST						
7	ROUNDUP POWERMAX	22 oz/a		LPO	B					
7	ALLIANCE	1 qt/a		LPO						
7	COBRA	12 oz/a		LPO						
7	SUPERB HC	0.4 qt/a		LPO						
8	ROUNDUP POWERMAX	22 oz/a		POST	A	100 a	100 a	93 a	100 a	100 a
8	ALLIANCE	1 qt/a		POST						
8	FLEXSTAR	20 oz/a		POST						
8	DESTINY HC	0.4 qt/a		POST						
8	ROUNDUP POWERMAX	22 oz/a		LPO	B					
8	ALLIANCE	1 qt/a		LPO						
8	COBRA	12 oz/a		LPO						
8	DESTINY HC	0.4 qt/a		LPO						
9	ROUNDUP POWERMAX	22 oz/a		POST	A	100 a	100 a	96 a	100 a	100 a
9	ALLIANCE	1 qt/a		POST						
9	FLEXSTAR	20 oz/a		POST						
9	DESTINY HC	0.4 qt/a		POST						
9	ROUNDUP POWERMAX	22 oz/a		LPO	B					
9	ALLIANCE	1 qt/a		LPO						
9	COBRA	12 oz/a		LPO						
9	RIVET	0.4 qt/a		LPO						
10	ROUNDUP POWERMAX	22 oz/a		POST	A	100 a	100 a	94 a	100 a	100 a
10	ALLIANCE	1 qt/a		POST						
10	FLEXSTAR	20 oz/a		POST						
10	DESTINY HC	0.4 qt/a		POST						
10	ROUNDUP POWERMAX	22 oz/a		LPO	B					
10	ALLIANCE	1 qt/a		LPO						
10	COBRA	12 oz/a		LPO						

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					CHEAL	HIBTR	AMBTR	CHEAL	HIBTR	
Weed Code	Crop Code	Rating Data Type	Rating Unit	Rating Date	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	
Trt-Eval Interval	# Subsamples, Dec.				PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	
Trt No.	Treatment Name	Product Rate	Product Rate Unit	Grow Stg	Appl Code	7	8	9	10	11
						0	0	0	0	0
						14 DA-B	14 DA-B	36 DA-B	36 DA-B	36 DA-B
						0	0	0	0	0
LSD (P=.05)						11.3	11.3	20.0	0.0	0.0
Standard Deviation						6.6	6.6	11.7	0.0	0.0
CV						6.69	6.74	19.13	0.0	0.0
Bartlett's X2						0.0	1.046	5.188	0.0	0.0
P(Bartlett's X2)						.	0.79	0.818	.	.
Replicate F						1.000	1.000	0.785	0.000	0.000
Replicate Prob(F)						0.3874	0.3874	0.4712	1.0000	1.0000
Treatment F						1.923	0.692	29.894	0.000	0.000
Treatment Prob(F)						0.1136	0.7075	0.0001	1.0000	1.0000

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)  
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