

Purdue University

DuPont products in Liberty Link Soybean.

Trial ID: 10S-THP-CTS-61 Protocol ID: 10S-THP-CTS-61
 Location: Throckmorton Study Director: White/Marquardt
 Project ID: Investigator: Dr. Bill Johnson
 Sponsor Contact: DuPont - Helen Flanigan

General Trial Information

Study Director: White/Marquardt **Title:** Research Associate
Investigator: Dr. Bill Johnson **Title:** Professor

Discipline: H herbicide
Trial Status: E established
Initiation Date: 3-18-2010

Trial Location

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

Personnel

Study Director: White/Marquardt **Title:** Research Associate
Affiliation: Purdue University
Address: 915 W State Street
Location: West Lafayette, IN, USA
Postal Code: 47907 **E-mail:** mdwhite@purdue.edu
Phone No.: 765-494-0891

Investigator: Dr. Bill Johnson **Title:** Professor
Affiliation: Purdue University
Address: 915 W State Street
Location: West Lafayette, IN, USA
Postal Code: 47907 **E-mail:** wgj@purdue.edu
Phone No.: 765-494-4656 **Mobile No.:** 765-404-9801

Cooperator/Landowner

Cooperator: Throckmorton Purdue Ag Center **Role:** Purdue Ag Center
Organization: Purdue University
Address 1: 8343 US 231 S
City: Lafayette
State/Prov.: IN
Postal Code: 47909 **E-mail:** jayyoung@purdue.edu
Country: USA United States
Phone No.: 765-538-3422
Fax No.: 765-538-3423

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: BECKS 284L **Description:** Liberty Link
BBCH Scale: BSOY **Planting Date:** 6-7-2010
Row Spacing, Unit: 30 IN
Soil Temperature, Unit: 70 F
Soil Moisture: DRY dry **Emergence Date:** 6-13-2010

Pest Description

Pest 1 Type: W **Code:** AMBTR Ambrosia trifida
Common Name: Giant ragweed

Pest 2 Type: W **Code:** SETFA Setaria faberi
Common Name: Giant foxtail

Pest 3 Type: W **Code:** ABUTH Abutilon theophrasti
Common Name: Velvetleaf

Pest 4 Type: W **Code:** IPOHE Ipomoea hederacea
Common Name: Ivyleaf morningglory

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)

Purdue University

Soil Description

Description Name: TPAC - Field 4B
% OM: 2.9 **Texture:** SIL silt loam
pH: 6.2 **Soil Name:** Toronto-Millbrook
CEC: 13.3

Application Description

	A	B	C
Application Date:	5-28-2010	6-7-2010	6-25-2010
Time of Day:	8:15 AM	8-8:15 AM	8:42 AM
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	PRE-PLA	ATPLA	POSPOS
Application Placement:	FOLIAR	FOLIAR	FOLIAR
Applied By:	MH	MH	CB
Air Temperature, Unit:	68 F	64 F	74 F
% Relative Humidity:	59	74	70
Wind Velocity, Unit:	4.3 MPH	3.5 MPH	1 MPH
Wind Direction:	SW	SW	S
Dew Presence (Y/N):	N no	Y yes	Y yes
Soil Temperature, Unit:	73 F	70 F	70 F
Soil Moisture:	DRY	DRT	WET
% Cloud Cover:	20	25	0

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY
Stage Scale Used:			BBCH
Stage Majority, Percent:			V2
Height, Unit:			8 IN
Height Minimum, Maximum:			7 9

Purdue University

Pest Stage At Each Application			
	A	B	C
Pest 1 Code, Type, Scale:	AMBTR W	AMBTR W	AMBTR W
Height, Unit:			18 IN
Height Minimum, Maximum:			10 26
Density, Unit:			15 YD2
Pest 2 Code, Type, Scale:	SETFA W	SETFA W	SETFA W
Height, Unit:			7.5 IN
Height Minimum, Maximum:			5 9
Density, Unit:			25 YD2
Pest 3 Code, Type, Scale:	ABUTH W	ABUTH W	ABUTH W
Height, Unit:			5 IN
Height Minimum, Maximum:			4 6
Density, Unit:			3 YD2
Pest 4 Code, Type, Scale:	IPOHE W	IPOHE W	IPOHE W
Height, Unit:			12.5 IN
Height Minimum, Maximum:			5 20
Density, Unit:			7 YD2

Application Equipment			
	A	B	C
Appl. Equipment:	CO2 Backpack	CO2 Backpack	CO2 Backpack
Operating Pressure, Unit:	17 PSI	17 PSI	17 PSI
Nozzle Type:	Flat Fan	Flat Fan	Flat Fan
Nozzle Size:	XR11002	XR11002	XR11002
Nozzle Spacing, Unit:	15 IN	15 IN	15 IN
Nozzles/Row:	6	6	6
Boom Length, Unit:	7.5 FT	7.5 FT	7.5 FT
Boom Height, Unit:	18 IN	18 IN	18 IN
Ground Speed, Unit:	3 MPH	3 MPH	3 MPH
Carrier:	H2O	H2O	MEIGS
Water Hardness (ppm CaCO3):	150	150	150
Spray Volume, Unit:	15 GAL/AC	15 GAL/AC	15 GAL/AC
Mix Size, Unit:	1.8 Liters	1.8 Liters	1.8 Liters
Propellant:	CO2	CO2	CO2
Tank Mix (Y/N):	N no	N no	N no

Purdue University

DuPont products in Liberty Link Soybean.

Trial ID: 10S-THP-CTS-61 Protocol ID: 10S-THP-CTS-61
 Location: Throckmorton Study Director: White/Marquardt
 Project ID: Investigator: Dr. Bill Johnson
 Sponsor Contact: DuPont - Helen Flanigan

Pest Type	W Weed	W Weed	W Weed	W Weed							
Pest Code	SETFA	AMBTR	AMARE	IPOHE							
Pest Scientific Name	Setaria faberi	Ambrosia trifi>	Amaranthus ret>	Ipomoea heder>							
Pest Name	Giant foxtail	Giant ragweed	Redroot pigweed	Ivyleaf mornin>							
Crop Code					GLXMA	GLXMA	GLXMA	GLXMA			
BBCH Scale					BSOY	BSOY	BSOY	BSOY			
Crop Scientific Name					Glycine max	Glycine max	Glycine max	Glycine max			
Crop Name					Soybean	Soybean	Soybean	Soybean			
Crop Variety											
Description											
Rating Date	7-2-2010	7-2-2010	7-2-2010	7-2-2010	7-2-2010	7-2-2010	7-2-2010	7-2-2010			
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	PHYLMMA	PHYNLB	STUNT	PHYNLS			
Rating Unit	%	%	%	%	%	%	%	%			
Number of Subsamples	1	1	1	1	1	1	1	1			
Crop Stage Majority	V2										
Pest Stage Majority	20"	28"	6"	7"							
Pest Density, Unit	100 YD2	7 YD2	40 YD2	4 YD2							
Assessed By	MW	MW	MW	MW	MW	MW	MW	MW			
Trt Treatment	Rate	Appl									
No. Name	Rate	Unit	Code	1	2	3	4	5	6	7	8
1 Untreated Check				0.0 c	0.0 b	0.0 b	0.0 b	0.0 c	0.0 d	0.0 b	0.0 a
2 Classic	0.34 oz ai/a	A		95.0 b	98.5 a	98.5 a	99.0 a	6.8 b	7.3 abc	1.3 b	3.3 a
Express (50 WG)	0.1 oz ai/a	A									
Ignite 280 (2.34 SL)	0.402 lb ai/a	C									
Synchrony XP (28.4 WG)	0.00666 lb ai/a	C									
AMS - Liquid	3 lb ai/a	C									
3 Classic	0.32 oz ai/a	B		97.5 a	98.0 a	99.0 a	97.0 a	6.0 b	5.8 bc	2.5 b	1.5 a
Harmony SG (50 SG)	0.1 oz ai/a	B									
Valor SX (51 WG)	1 oz ai/a	B									
Ignite 280 (2.34 SL)	0.402 lb ai/a	C									
Synchrony XP (28.4 WG)	0.00666 lb ai/a	C									
AMS - Liquid	3 lb ai/a	C									
4 Canopy	3 oz ai/a	B		98.5 a	99.0 a	99.0 a	99.0 a	5.8 b	5.0 c	6.3 a	2.0 a
Ignite 280 (2.34 SL)	0.402 lb ai/a	C									
Synchrony XP (28.4 WG)	0.00666 lb ai/a	C									
AMS - Liquid	3 lb ai/a	C									
5 Ignite 280 (2.34 SL)	0.402 lb ai/a	C		97.5 a	97.5 a	98.0 a	96.5 a	8.5 ab	8.5 ab	0.0 b	0.0 a
Synchrony XP (28.4 WG)	0.00666 lb ai/a	C									
AMS - Liquid	3 lb ai/a	C									
6 Ignite 280 (2.34 SL)	0.402 lb ai/a	C		98.0 a	95.8 a	98.0 a	96.8 a	11.3 a	10.0 a	0.0 b	0.0 a
Classic	0.0078 lb ai/a	C									
AMS - Liquid	3 lb ai/a	C									
7 Untreated Check				0.0 c	0.0 b	0.0 b	0.0 b	0.0 c	0.0 d	0.0 b	0.0 a
LSD (P=.05)				1.76	2.48	1.77	2.77	2.82	2.46	3.34	2.29
Standard Deviation				1.18	1.67	1.19	1.87	1.90	1.66	2.25	1.54
CV				1.7	2.4	1.69	2.68	34.74	31.8	157.45	159.88
Bartlett's X2				1.822	7.694	1.506	2.448	2.613	1.368	1.417	0.385
P(Bartlett's X2)				0.61	0.053	0.471	0.294	0.625	0.713	0.492	0.825
Replicate F				0.920	2.668	0.371	2.386	0.961	0.848	1.412	0.135
Replicate Prob(F)				0.4509	0.0787	0.7750	0.1030	0.4323	0.4854	0.2719	0.9377
Treatment F				6458.455	3254.277	6541.315	2604.741	19.322	22.437	4.294	2.890
Treatment Prob(F)				0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0074	0.0375

Purdue University

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed			
Pest Code	SETFA	AMBTR	IPOHE	ABUTH	AMARE	CHEAL				
Pest Scientific Name	Setaria faberi	Ambrosia trifida	Ipomoea hederacea	Abitilon theophrasti	Amaranthus retrofractus	Chenopodium album				
Pest Name	Giant foxtail	Giant ragweed	Ipomoea hederacea	Velvetleaf	Redroot pigweed	Common lambsquarters				
Crop Code								GLXMA		
BBCH Scale								BSOY		
Crop Scientific Name								Glycine max		
Crop Name								Soybean		
Crop Variety										
Description										
Rating Date	7-8-2010	7-8-2010	7-8-2010	7-8-2010	7-8-2010	7-8-2010	7-8-2010	7-8-2010		
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	STUNT		
Rating Unit	%	%	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1	1	1		
Crop Stage Majority	V4									
Pest Stage Majority	24"	36"	12"	18"	12"					
Pest Density, Unit	50 YD2	7 YD2	3 YD2	2 YD2	5 YD2					
Assessed By	MW	MW	MW	MW	MW	MW	MW	MW		
Trt Treatment	Rate	Appl								
No. Name	Rate	Unit	Code	9	10	11	12	13	14	15
1 Untreated Check				0.0 c	0.0 b	0.0 b	0.0 b	0.0 c	0.0 b	0.0 a
2 Classic	0.34 oz ai/a	A		91.3 ab	95.8 a	99.0 a	94.5 a	96.8 ab	99.0 a	0.0 a
Express (50 WG)	0.1 oz ai/a	A								
Ignite 280 (2.34 SL)	0.402 lb ai/a	C								
Synchrony XP (28.4 WG)	0.00666 lb ai/a	C								
AMS - Liquid	3 lb ai/a	C								
3 Classic	0.32 oz ai/a	B		94.3 a	96.3 a	93.3 a	99.0 a	99.0 a	99.0 a	1.3 a
Harmony SG (50 SG)	0.1 oz ai/a	B								
Valor SX (51 WG)	1 oz ai/a	B								
Ignite 280 (2.34 SL)	0.402 lb ai/a	C								
Synchrony XP (28.4 WG)	0.00666 lb ai/a	C								
AMS - Liquid	3 lb ai/a	C								
4 Canopy	3 oz ai/a	B		95.0 a	98.0 a	99.0 a	99.0 a	99.0 a	99.0 a	3.8 a
Ignite 280 (2.34 SL)	0.402 lb ai/a	C								
Synchrony XP (28.4 WG)	0.00666 lb ai/a	C								
AMS - Liquid	3 lb ai/a	C								
5 Ignite 280 (2.34 SL)	0.402 lb ai/a	C		90.0 b	96.0 a	94.0 a	95.0 a	95.8 ab	96.8 a	0.0 a
Synchrony XP (28.4 WG)	0.00666 lb ai/a	C								
AMS - Liquid	3 lb ai/a	C								
6 Ignite 280 (2.34 SL)	0.402 lb ai/a	C		94.3 a	96.5 a	96.8 a	95.8 a	92.3 b	94.3 a	0.0 a
Classic	0.0078 lb ai/a	C								
AMS - Liquid	3 lb ai/a	C								
7 Untreated Check				0.0 c	0.0 b	0.0 b	0.0 b	0.0 c	0.0 b	0.0 a
LSD (P=.05)	2.85	3.22				4.80	5.24	4.40	6.03	3.14
Standard Deviation	1.92	2.17				3.23	3.52	2.96	4.06	2.11
CV	2.89	3.15				4.69	5.11	4.3	5.82	295.8
Bartlett's X2	0.116	4.031				0.704	0.601	0.01	1.503	1.158
P(Bartlett's X2)	0.944	0.402				0.703	0.74	0.995	0.22	0.282
Replicate F	0.526	4.243				2.675	1.291	0.687	0.711	0.533
Replicate Prob(F)	0.6701	0.0196				0.0782	0.3079	0.5716	0.5577	0.6653
Treatment F	2233.065	1886.469				850.223	717.061	1012.870	551.742	1.800
Treatment Prob(F)	0.0001	0.0001				0.0001	0.0001	0.0001	0.0001	0.1558

Purdue University

Pest Type				W Weed SETFA Setaria faberi Giant foxtail	W Weed AMBTR Ambrosia trifi> Giant ragweed	W Weed IPOHE Ipomoea hедера> Ivyleaf mornin>	W Weed AMARE Amaranthus ret> Redroot pigweed			
Pest Code										
Pest Scientific Name										
Pest Name										
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										
Description										
Rating Date	7-8-2010	7-8-2010	7-8-2010	7-20-2010	7-20-2010	7-20-2010	7-20-2010			
Rating Type	PHYLMA	PHYCHL	PHYNLS	CONTRO	CONTRO	CONTRO	CONTRO			
Rating Unit	%	%	%	%	%	%	%			
Number of Subsamples	1	1	1	1	1	1	1			
Crop Stage Majority				R1						
Pest Stage Majority				36"	60"	24"	18"			
Pest Density, Unit				120 YD2	6 YD2	5 YD2	4 YD2			
Assessed By	MW	MW	MW	MW	MW	MW	MW			
Trt Treatment	Rate	Appl								
No. Name	Rate	Unit	Code	16	17	18	19	20	21	22
1 Untreated Check				0.0 b	0.0 b	0.0 a	0.0 c	0.0 b	0.0 b	0.0 c
2 Classic	0.34 oz ai/a	A		6.0 a	3.3 ab	0.0 a	88.8 b	93.5 a	91.0 a	95.0 a
Express (50 WG)	0.1 oz ai/a	A								
Ignite 280 (2.34 SL)	0.402 lb ai/a	C								
Synchrony XP (28.4 WG)	0.00666 lb ai/a	C								
AMS - Liquid	3 lb ai/a	C								
3 Classic	0.32 oz ai/a	B		6.3 a	3.3 ab	0.8 a	93.0 ab	89.8 a	86.8 a	98.5 a
Harmony SG (50 SG)	0.1 oz ai/a	B								
Valor SX (51 WG)	1 oz ai/a	B								
Ignite 280 (2.34 SL)	0.402 lb ai/a	C								
Synchrony XP (28.4 WG)	0.00666 lb ai/a	C								
AMS - Liquid	3 lb ai/a	C								
4 Canopy	3 oz ai/a	B		2.5 b	2.8 ab	0.8 a	90.0 b	95.5 a	94.0 a	99.0 a
Ignite 280 (2.34 SL)	0.402 lb ai/a	C								
Synchrony XP (28.4 WG)	0.00666 lb ai/a	C								
AMS - Liquid	3 lb ai/a	C								
5 Ignite 280 (2.34 SL)	0.402 lb ai/a	C		5.5 a	4.0 ab	1.3 a	92.5 ab	88.5 a	88.0 a	88.8 ab
Synchrony XP (28.4 WG)	0.00666 lb ai/a	C								
AMS - Liquid	3 lb ai/a	C								
6 Ignite 280 (2.34 SL)	0.402 lb ai/a	C		8.0 a	5.8 a	0.8 a	95.5 a	87.3 a	96.8 a	84.8 b
Classic	0.0078 lb ai/a	C								
AMS - Liquid	3 lb ai/a	C								
7 Untreated Check				0.0 b	0.0 b	0.0 a	0.0 c	0.0 b	0.0 b	0.0 c
LSD (P=.05)	2.70	2.88	1.83	3.65	7.81	7.98	8.21			
Standard Deviation	1.82	1.94	1.23	2.46	5.26	5.37	5.53			
CV	45.05	71.38	246.89	3.75	8.1	8.23	8.3			
Bartlett's X2	4.404	0.592	1.272	4.66	0.493	4.272	9.45			
P(Bartlett's X2)	0.354	0.964	0.736	0.324	0.974	0.37	0.024*			
Replicate F	0.933	1.548	2.531	1.422	4.637	3.755	0.315			
Replicate Prob(F)	0.4452	0.2367	0.0896	0.2690	0.0143	0.0296	0.8143			
Treatment F	12.414	4.649	0.656	1333.682	285.721	277.035	274.326			
Treatment Prob(F)	0.0001	0.0051	0.6852	0.0001	0.0001	0.0001	0.0001			

Purdue University

Pest Type	W Weed	W Weed	W Weed	
Pest Code	ABUTH		CHEAL	
Pest Scientific Name	Abutilon theop>	VOLUNTEER CORN	Chenopodium al>	
Pest Name	Velvetleaf		Common lambsqu>	
Crop Code				GLXMA
BBCH Scale				BSOY
Crop Scientific Name				Glycine max
Crop Name				Soybean
Crop Variety				
Description				
Rating Date	7-20-2010	7-20-2010	7-20-2010	7-20-2010
Rating Type	CONTRO	CONTRO	CONTRO	STUNT
Rating Unit	%	%	%	%
Number of Subsamples	1	1	1	1
Crop Stage Majority				
Pest Stage Majority	30"			
Pest Density, Unit	5 YD2			
Assessed By	MW	MW	MW	MW
Trt Treatment	Rate	Rate	Rate	Rate
No. Name	Unit	Unit	Unit	Unit
	Code			
	23	24	25	26
1 Untreated Check	0.0 b	0.0 b	0.0 b	0.0 b
2 Classic	0.34 oz ai/a A	59.8 a	99.0 a	0.0 b
Express (50 WG)	0.1 oz ai/a A			
Ignite 280 (2.34 SL)	0.402 lb ai/a C			
Synchrony XP (28.4 WG)	0.00666 lb ai/a C			
AMS - Liquid	3 lb ai/a C			
3 Classic	0.32 oz ai/a B	64.5 a	99.0 a	2.0 ab
Harmony SG (50 SG)	0.1 oz ai/a B			
Valor SX (51 WG)	1 oz ai/a B			
Ignite 280 (2.34 SL)	0.402 lb ai/a C			
Synchrony XP (28.4 WG)	0.00666 lb ai/a C			
AMS - Liquid	3 lb ai/a C			
4 Canopy	3 oz ai/a B	47.5 ab	99.0 a	2.8 a
Ignite 280 (2.34 SL)	0.402 lb ai/a C			
Synchrony XP (28.4 WG)	0.00666 lb ai/a C			
AMS - Liquid	3 lb ai/a C			
5 Ignite 280 (2.34 SL)	0.402 lb ai/a C	17.5 ab	93.3 a	0.0 b
Synchrony XP (28.4 WG)	0.00666 lb ai/a C			
AMS - Liquid	3 lb ai/a C			
6 Ignite 280 (2.34 SL)	0.402 lb ai/a C	12.5 ab	95.0 a	0.0 b
Classic	0.0078 lb ai/a C			
AMS - Liquid	3 lb ai/a C			
7 Untreated Check	0.0 b	0.0 b	0.0 b	0.0 b
LSD (P=.05)	5.36	36.37	5.67	1.72
Standard Deviation	3.61	24.48	3.81	1.16
CV	5.31	84.95	5.5	170.42
Bartlett's X2	4.452	3.311	0.003	0.087
P(Bartlett's X2)	0.348	0.507	0.957	0.768
Replicate F	3.414	0.954	0.435	1.665
Replicate Prob(F)	0.0399	0.4355	0.7308	0.2101
Treatment F	661.835	5.154	618.155	4.157
Treatment Prob(F)	0.0001	0.0030	0.0001	0.0086

Purdue University

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.

Column 1: Weed or volunteer crop; US; control / burndown or knockdown; percent; V2; 20"; per square yard; MW
 Column 2: Weed or volunteer crop; US; control / burndown or knockdown; percent; 28"; per square yard; MW
 Column 3: Weed or volunteer crop; US; control / burndown or knockdown; percent; 6"; per square yard; MW
 Column 4: Weed or volunteer crop; US; control / burndown or knockdown; percent; 7"; per square yard; MW
 Column 5: US; phytotoxicity - leaf malformation; percent; MW
 Column 6: US; phytotoxicity - necrosis, leaf blotch; percent; MW
 Column 7: US; STUNT; percent; MW
 Column 8: US; phytotoxicity - necrosis, leaf spot; percent; MW
 Column 9: Weed or volunteer crop; US; control / burndown or knockdown; percent; V4; 24"; per square yard; MW
 Column 10: Weed or volunteer crop; US; control / burndown or knockdown; percent; 36"; per square yard; MW
 Column 11: Weed or volunteer crop; US; control / burndown or knockdown; percent; 12"; per square yard; MW
 Column 12: Weed or volunteer crop; US; control / burndown or knockdown; percent; 18"; per square yard; MW
 Column 13: Weed or volunteer crop; US; control / burndown or knockdown; percent; 12"; per square yard; MW
 Column 14: Weed or volunteer crop; US; control / burndown or knockdown; percent; MW
 Column 15: US; STUNT; percent; MW
 Column 16: US; phytotoxicity - leaf malformation; percent; MW
 Column 17: US; phytotoxicity - chlorosis; percent; MW
 Column 18: US; phytotoxicity - necrosis, leaf spot; percent; MW
 Column 19: Weed or volunteer crop; US; control / burndown or knockdown; percent; R1; 36"; per square yard; MW
 Column 20: Weed or volunteer crop; US; control / burndown or knockdown; percent; 60"; per square yard; MW
 Column 21: Weed or volunteer crop; US; control / burndown or knockdown; percent; 24"; per square yard; MW
 Column 22: Weed or volunteer crop; US; control / burndown or knockdown; percent; 18"; per square yard; MW
 Column 23: Weed or volunteer crop; US; control / burndown or knockdown; percent; 30"; per square yard; MW
 Column 24: Weed or volunteer crop; control / burndown or knockdown; percent; MW
 Column 25: Weed or volunteer crop; US; control / burndown or knockdown; percent; MW
 Column 26: US; STUNT; percent; MW