

University of Tennessee

ENGENIA COTTON WEED CONTROL NO-TILL/ MEDIUM SOIL (DELTA)

Trial ID: MKD-H-2016-US-F05-A-01.1 Location: JACKSON TN Trial Year: 2016
 Protocol ID: MKD-H-2016-US-F05-A-01.1 Investigator: Dr. Larry Steckel
 Project ID: Study Director: LARRY STECKEL
 Sponsor Contact: Greg Stapleton

Trt No.	Treatment Type Name	Form Conc	Form Unit	Form Type	Rate Rate	Rate Unit	Growth Stage	Appl Code	Rep 1	2	3	4	Notes
1	HERB ROUNDUP POWERMAX ADJ AMS	540.0 100 %	GA/L %	SL SG	32.0 20.4	oz/a oz/a	PRE PRE	A A	101	208	302	405	
	HERB ROUNDUP POWERMAX ADJ AMS	540.0 100 %	GA/L %	SL SG	32.0 20.4	oz/a oz/a	EPOST EPOST	B B					
2	HERB GRAMOXONE SL HERB COTORAN 4 L ADJ NIS	240 480 100 %	GA/L GA/L %	SL SC SL	48.0 32.0 0.25	oz/a oz/a % v/v	PRE PRE PRE	A A A	102	203	307	408	
	HERB ROUNDUP POWERMAX HERB LIBERTY 280 SL HERB DUAL MAGNUM ADJ AMS	540.0 280 915 21.0 %	GA/L GA/L GA/L %	SL SL EC SG	32.0 29.0 21.0 20.4	oz/a oz/a oz/a oz/a	EPOST EPOST EPOST EPOST	B B B B					
	HERB ROUNDUP POWERMAX HERB LIBERTY 280 SL HERB DUAL MAGNUM ADJ AMS	540.0 280.0 915 100 %	GA/L GA/L GA/L %	SL SL EC SG	32.0 29.0 21.0 20.4	oz/a oz/a oz/a oz/a	MPOST MPOST MPOST MPOST	C C C C					
3	HERB ROUNDUP POWERMAX HERB ENGENIA HERB PROWL H2O HERB COTORAN 4 L	540.0 600.0 455 480	GA/L GA/L GA/L GA/L	SL SL CS SC	32.0 12.8 32.0 32.0	oz/a oz/a oz/a oz/a	PRE PRE PRE PRE	A A A A	103	209	305	402	
	HERB ROUNDUP POWERMAX HERB ENGENIA HERB OUTLOOK HERB LIBERTY 280 SL HERB DUAL MAGNUM ADJ AMS	540.0 600.0 720.0 280.0 915.0 21.0 %	GA/L GA/L GA/L GA/L GA/L %	SL SL EC SL EC SG	32.0 12.8 12.0 29.0 21.0 20.4	oz/a oz/a oz/a oz/a oz/a oz/a	EPOST EPOST EPOST MPOST MPOST MPOST	B B B C C C					
4	HERB ROUNDUP POWERMAX HERB ENGENIA HERB PROWL H2O HERB COTORAN 4 L	540.0 600.0 455 480	GA/L GA/L GA/L GA/L	SL SL CS SC	32.0 12.8 32.0 32.0	oz/a oz/a oz/a oz/a	PRE PRE PRE PRE	A A A A	104	201	310	404	
	HERB ENGENIA HERB ROUNDUP POWERMAX HERB OUTLOOK HERB ZIDUA HERB LIBERTY 280 SL ADJ AMS	600.0 540.0 720 85 % 280.0 21.0 %	GA/L GA/L GA/L % GA/L %	SL SL EC WG SL SG	12.8 32.0 12.0 1.5 29.0 20.4	oz/a oz/a oz/a oz/a oz/a oz/a	EPOST EPOST EPOST LAYBY LAYBY LAYBY	B B B D D D					
5	HERB ROUNDUP POWERMAX HERB ENGENIA HERB PROWL H2O HERB COTORAN 4 L	540.0 600.0 455.0 480	GA/L GA/L GA/L GA/L	SL SL CS SC	32.0 12.8 32.0 32.0	oz/a oz/a oz/a oz/a	PRE PRE PRE PRE	A A A A	105	204	309	401	
	HERB ROUNDUP POWERMAX HERB ENGENIA HERB ROUNDUP POWERMAX HERB ENGENIA	540.0 600.0 540.0 600.0	GA/L GA/L GA/L GA/L	SL SL SL SL	32.0 12.8 32.0 12.8	oz/a oz/a oz/a oz/a	EPOST EPOST MPOST MPOST	B B C C					
6	HERB ROUNDUP POWERMAX HERB ENGENIA HERB PROWL H2O HERB COTORAN 4 L	540.0 600.0 455.0 480.0	GA/L GA/L GA/L GA/L	SL SL CS SC	32.0 12.8 32.0 32.0	oz/a oz/a oz/a oz/a	PRE PRE PRE PRE	A A A A	106	202	303	409	
	HERB LIBERTY 280 SL HERB OUTLOOK ADJ AMS HERB ROUNDUP POWERMAX HERB ENGENIA HERB DUAL MAGNUM	280.0 720.0 21.0 % 540.0 600.0 915.0	GA/L GA/L % GA/L GA/L GA/L	SL EC SG SL SL EC	29.0 12.0 20.4 32.0 12.8 21.0	oz/a oz/a oz/a oz/a oz/a oz/a	EPOST EPOST EPOST MPOST MPOST MPOST	B B B C C C					
7	HERB ROUNDUP POWERMAX HERB ENGENIA HERB ENGENIA HERB ROUNDUP POWERMAX	540.0 600.0 600.0 540.0	GA/L GA/L GA/L GA/L	SL SL SL SL	32.0 12.8 12.8 32.0	oz/a oz/a oz/a oz/a	PRE PRE EPOST EPOST	A A B B	107	206	301	406	
	HERB OUTLOOK	720.0	GA/L	EC	12.0	oz/a	EPOST	B					
8	HERB ROUNDUP POWERMAX HERB ENGENIA HERB ENGENIA HERB ROUNDUP POWERMAX	540.0 600.0 600.0 540.0	GA/L GA/L GA/L GA/L	SL SL SL SL	32.0 12.8 12.8 32.0	oz/a oz/a oz/a oz/a	PRE PRE EPOST EPOST	A A B B	108	207	306	410	
	HERB OUTLOOK	720.0	GA/L	EC	12.0	oz/a	EPOST	B					

University of Tennessee

ENGENIA COTTON WEED CONTROL NO-TILL/ MEDIUM SOIL (DELTA)

Trial ID: MKD-H-2016-US-F05-A-01.1 Location: JACKSON TN Trial Year: 2016
 Protocol ID: MKD-H-2016-US-F05-A-01.1 Investigator: Dr. Larry Steckel
 Project ID: Study Director: LARRY STECKEL
 Sponsor Contact: Greg Stapleton

Trt No.	Treatment Type Name	Form Conc	Form Unit	Form Type	Rate Rate	Rate Unit	Growth Stage	Appl Code	Rep 1	Rep 2	Rep 3	Rep 4	Notes
9	HERB ROUNDUP POWERMAX	540.0	GA/L	SL	32.0	oz/a	PRE	A	109	210	308	403	
	HERB ENGENIA	600.0	GA/L	SL	12.8	oz/a	PRE	A					
	HERB LIBERTY 280 SL	280.0	GA/L	SL	29.0	oz/a	EPOST	B					
	HERB ROUNDUP POWERMAX	540.0	GA/L	SL	32.0	oz/a	EPOST	B					
	HERB DUAL MAGNUM	915.0	GA/L	EC	21.0	oz/a	EPOST	B					
10	HERB ROUNDUP POWERMAX	540.0	GA/L	SL	32.0	oz/a	PRE	A	110	205	304	407	
	HERB ENGENIA	600.0	GA/L	SL	12.8	oz/a	PRE	A					
	HERB ENGENIA	600.0	GA/L	SL	12.8	oz/a	MPOST	C					
	HERB ROUNDUP POWERMAX	540.0	GA/L	SL	32.0	oz/a	MPOST	C					
	HERB OUTLOOK	720.0	GA/L	EC	12.0	oz/a	MPOST	C					

Sort Order: Replicate 1

General Trial Information

Study Director: LARRY STECKEL
Investigator: Dr. Larry Steckel

Trial Location

Country: USA United States

Conducted Under GLP: No
Conducted Under GEP: No

Objectives:

Demonstrate Engenia weed control system(s) benefits in DGT-cotton vs. non-DGT cotton market competitors.
 Collect weed control efficacy data, collect yield data, capture images of weed control.

Contacts

Study Director: LARRY STECKEL

Investigator: Dr. Larry Steckel

Crop Description

Crop 1: GOSHI Gossypium hirsutum American upland cotton
Variety: DP 1522BXF **BBCH Scale:** BCOT
Description: XTENDFLEX
Planting Rate, Unit: 4 S/FT **Planting Date:** Apr-25-2016
Depth, Unit: 0.75 IN **Planting Method:** PLANTD planted
Row Spacing, Unit: 38 IN **Emergence Date:** May-1-2016

Pest Description

Pest 1 Type: W **Code:** ANNGR Annual Grasses
Pest 2 Type: W **Code:** TAROF Taraxacum officinale
Common Name: Common dandelion
Pest 3 Type: W **Code:** ERESS Erechtites sp.
Common Name: Burnweed
Pest 4 Type: W **Code:** AMAPA Amaranthus palmeri
Common Name: Palmer amaranth

Site and Design

Treated Plot Width: 6.33 FT
Treated Plot Length: 30 FT
Treated Plot Area: 189.9 FT² **Treatments:** 10 **Tillage Type:** NOTILL no-till
Replications: 4 **Study Design:** RACOBL Randomized Complete Block (RCB)

Field Prep./Maintenance:

March 7 - 32 oz RoundUp Powermax and 8 oz/a Clarity

May 5 - 2 oz karate, .25 lb orthene

University of Tennessee

ENGENIA COTTON WEED CONTROL NO-TILL/ MEDIUM SOIL (DELTA)

Trial ID: MKD-H-2016-US-F05-A-01.1 Location: JACKSON TN Trial Year: 2016
 Protocol ID: MKD-H-2016-US-F05-A-01.1 Investigator: Dr. Larry Steckel
 Project ID: Study Director: LARRY STECKEL
 Sponsor Contact: Greg Stapleton

Application Description

	A	B	C	D
Application Date:	Apr-25-2016	May-26-2016	Jun-14-2016	
Appl. Start Time:	11:25	8:02	7:34	
Appl. Stop Time:	11:45 AM	8:17 AM	7:45 AM	
Application Method:	SPRAY	SPRAY	SPRAY	
Application Timing:	VA	NA3	NA3	LB
Application Placement:	BROSOI	BROSOI	BROSOI	
Applied By:	JR	JR	HH	
Air Temperature, Unit:	79 F	73 F	82.2 F	
% Relative Humidity:	44	82	70	
Wind Velocity, Unit:	5 MPH	4.5 MPH	1 MPH	
Wind Direction:	SSE	S	S	
Dew Presence (Y/N):	N no	Y yes	Y yes	
Soil Temperature, Unit:	74 F	69 F	81	
Soil Moisture:	NORMAL	MOIST	DRY	
% Cloud Cover:	3	0	5	

Crop Stage At Each Application

	A	B	C	D
Crop 1 Code, BBCH Scale:	GOSHI BCOT	GOSHI BCOT	GOSHI BCOT	GOSHI BCOT

Pest Stage At Each Application

	A	B	C	D
Pest 1 Code, Type, Scale:	ANNGR W	ANNGR W	ANNGR W	ANNGR W
Stage Majority, Percent:	1 LF			
Height, Unit:	1 IN			
Pest 2 Code, Type, Scale:	TAROF W	TAROF W	TAROF W	TAROF W
Stage Majority, Percent:	10 LF			
Diameter, Unit:	2 IN			
Height, Unit:	2 IN			
Pest 3 Code, Type, Scale:	ERESS W	ERESS W	ERESS W	ERESS W
Stage Majority, Percent:	4LF			
Height, Unit:	2 IN			
Pest 4 Code, Type, Scale:	AMAPA W	AMAPA W	AMAPA W	AMAPA W
Stage Majority, Percent:	4 LF			
Height, Unit:	1 IN			

University of Tennessee

ENGENIA COTTON WEED CONTROL NO-TILL/ MEDIUM SOIL (DELTA)

Trial ID: MKD-H-2016-US-F05-A-01.1
 Protocol ID: MKD-H-2016-US-F05-A-01.1
 Project ID:

Location: JACKSON TN Trial Year: 2016
 Investigator: Dr. Larry Steckel
 Study Director: LARRY STECKEL
 Sponsor Contact: Greg Stapleton

Application Equipment

	A	B	C	D
Appl. Equipment:	BACKPACK	BACKPACK	BACKPACK	
Equipment Type:	BACCAI	BACCAI	BACCAI	
Operation Pressure, Unit:	30 PSI	30 PSI	30 PSI	
Nozzle Type:	TTI	TTI	TTI	
Nozzle Size:	003	003	003	
Nozzle Spacing, Unit:	19 IN	19 IN	19 IN	
Nozzles/Row:	2	2	2	
Boom Length, Unit:	6.33 FT	6.33 FT	6.33 FT	
Boom Height, Unit:	16 IN	16 IN	16 IN	
Ground Speed, Unit:	4 MPH	4 MPH	4 MPH	
Hours to Incorp.:	0	0	0	
Carrier:	WATER	WATER	WATER	
Spray Volume, Unit:	15 GAL/AC	15 GAL/AC	15 GAL/AC	
Mix Size, Unit:	0.528 gallons	0.528 gallons	0.528 gallons	
Propellant:	COMCO2	COMCO2	COMCO2	