

# University of Tennessee

## Evaluating Vetch Cover Crop termination timings with Glyphosate + Dicamba compared to Conventional Treatments

Trial ID: JCT - Vetch Cotton - 16      Location: Jackson, TN    Trial Year: 2015  
 Protocol ID: JCT - Vetch Cotton 16 Prt    Investigator: Dr. Larry Steckel  
 Project ID:      Study Director: Garret Montgomery  
                                  Sponsor Contact:

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 MON76981 ADJ Interlock HERB LIBERTY HERB MON76980 CULT 4" Pigweed	360 2.34 350	g/L	SL	1.5 lb ae/a 4 fl oz/a 29 fl oz/a 0.5 lb ae/a		14d PP 14d PP As needed F As needed F	A A F F	101	205	308	402	
7	HERB ROUNDUP POWERMAX HERB VALOR HERB LIBERTY HERB MON76980 CULT 4" Pigweed	4.5 51 2.34 350	LBAE/GAL %AW/W g/L	SL WG SL SL	32 fl oz/a 2 oz wt/a 29 fl oz/a 0.5 lb ae/a		14d PP 14d PP As needed F As needed F	A A F F	102	204	303	408	
3	HERB MON76981 ADJ Interlock HERB LIBERTY HERB MON76980 CULT 4" Pigweed	360 4 2.34 350	G/L	SL SL SL SL	1.5 lb ae/a 4 fl oz/a 29 fl oz/a 0.5 lb ae/a		PRE PRE As needed F As needed F	C C F F	103	206	307	401	
4	HERB MON76981 ADJ Interlock HERB LIBERTY HERB MON76980 CULT 4" Pigweed	360 4 2.34 350	G/L	SL SL SL SL	1.5 lb ae/a 16 fl oz/a 29 fl oz/a 0.5 lb ae/a		7d POST 7d POST As needed F As needed F	D D F F	104	203	305	407	
5	HERB MON76981 HERB LIBERTY HERB MON76980 CULT 4" Pigweed	360 2.34 350	G/L	SL SL SL	1.5 lb ae/a 29 fl oz/a 0.5 lb ae/a		14d POST As needed F As needed F	E F F	105	207	304	406	
6	CHK No Herbicide CULT Cover								106	201	302	404	
2	HERB MON76981 ADJ Interlock HERB LIBERTY HERB MON76980 CULT 4" Pigweed	360 2.34 350	G/L	SL SL SL	1.5 lb ae/a 4 fl oz/a 29 fl oz/a 0.5 lb ae/a		14d PP 7d PP As needed F As needed F	B B F F	107	208	306	405	
8	HERB ROUNDUP POWERMAX HERB VALOR HERB REFLEX HERB WARRANT HERB LIBERTY HERB MON76980 CULT 4" Pigweed	4.5 51 2 3 2.34 350	LBAE/GAL %AW/W LBA/GAL LB/GAL g/L	SL WG SL SL SL SL	32 fl oz/a 2 oz wt/a 12 fl oz/a 32 fl oz/a 29 fl oz/a 0.5 lb ae/a		14d PP 14d PP PRE PRE As needed F As needed F	A A C C F F	108	202	301	403	
9	HERB GRAMOXONE INTEON HERB REFLEX ADJ MSO HERB WARRANT CULT NO COVER HERB LIBERTY HERB MON76980 CULT 4" Pigweed	2 2 3 2.34 350	LBA/GAL LBA/GAL LB/GAL g/L	SL SL L SL SL	48 fl oz/a 16 fl oz/a 1 % v/v 48 fl oz/a 29 fl oz/a 0.5 lb ae/a		14d PP 14d PP 14d PP PRE As needed F As needed F	A A A C F F	109	209	309	409	
10	CHK NO HERBICIDE CULT NO COVER								110	210	310	410	

Sort Order: Replicate 1

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## Evaluating Vetch Cover Crop termination timings with Glyphosate + Dicamba compared to Conventional Treatments

Trial ID: JCT - Vetch Cotton - 16      Location: Jackson, TN    Trial Year: 2015  
 Protocol ID: JCT - Vetch Cotton 16 Prt    Investigator: Dr. Larry Steckel  
 Project ID:      Study Director: Garret Montgomery  
                                  Sponsor Contact:

### General Trial Information

**Study Director:** Garret Montgomery  
**Investigator:** Dr. Larry Steckel

**Conducted Under GLP:** No  
**Conducted Under GEP:** No

### Contacts

**Study Director:** Garret Montgomery

**Investigator:** Dr. Larry Steckel

### Site and Design

**Treated Plot Width:** 5 FT  
**Treated Plot Length:** 30 FT  
**Treated Plot Area:** 150 FT<sup>2</sup>    **Treatments:** 10  
**Replications:** 4

**Study Design:** RACOB L Randomized Complete Block (RCB)

### Application Description

	A	B	C	D	E	F
<b>Application Date:</b>	May-10-2016	May-19-2016	May-24-2016	May-31-2016	Jun-8-2016	
<b>Appl. Start Time:</b>	10:00 AM	6:45 AM	8:24 AM	12:01 AM	2:22 PM	
<b>Appl. Stop Time:</b>	10:15 AM	6:47 AM	8:28 AM	12:02 PM	2:23 AM	
<b>Application Method:</b>	SPRAY	SPRAY	SPRAY	SPRAY	SPRAY	
<b>Application Timing:</b>	A	B	C	D	E	
<b>Application Placement:</b>	FOLIAR	FOLIAR	FOLIAR	FOLIAR	FOLIAR	
<b>Applied By:</b>	GM	GM	GM	GM	GM	
<b>Air Temperature, Unit:</b>	77 F	52 F	72 F	87 F	90 F	
<b>% Relative Humidity:</b>	77	86	64	57	42	
<b>Wind Velocity, Unit:</b>	2 mph	3 mph	1 mph	5 mph	1 mph	
<b>Wind Direction:</b>	N	N	N	N	N	
<b>Dew Presence (Y/N):</b>	N no	Y yes	N no	N no	N no	
<b>Soil Temperature, Unit:</b>	70 F	60 F	69 F	84 F	89 F	
<b>Soil Moisture:</b>	normal	normal	normal	normal	normal	
<b>% Cloud Cover:</b>	70	10	60	10	5	

### Application Equipment

	A	B	C	D	E	F
<b>Appl. Equipment:</b>	BACKPACK	BACKPACK	BACKPACK	BACKPACK	BACKPACK	
<b>Equipment Type:</b>	BACCAI	BACCAI	BACCAI	BACCAI	BACCAI	
<b>Operation Pressure, Unit:</b>	34 PSI	36 PSI	36 PSI	36 PSI	36 PSI	
<b>Nozzle Type:</b>	TTI	TTI	TTI	TTI	TTI	
<b>Nozzle Size:</b>	110025	015	015	015	015	
<b>Nozzle Spacing, Unit:</b>	19 IN	19 IN	19 IN	19 IN	19 IN	
<b>Boom Length, Unit:</b>	6.33 FT	6.33 FT	6.33 FT	6.33 FT	6.33 FT	
<b>Boom Height, Unit:</b>	17 IN	17 IN	17 IN	17 IN	17 IN	
<b>Ground Speed, Unit:</b>	2.3 MPH	4 MPH	4 MPH	4 MPH	4 MPH	
<b>Carrier:</b>	WATER	WATER	WATER	WATER	WATER	
<b>Spray Volume, Unit:</b>	20 gal/ac	10 gal/ac	10 gal/ac	10 gal/ac	10 gal/ac	
<b>Mix Size, Unit:</b>	0.528 gallons	0.26 gallons	0.26 gallons	0.26 gallons	0.26 gallons	
<b>Propellant:</b>	COMCO2	COMCO2	COMCO2	COMCO2	COMCO2	
<b>Tank Mix (Y/N):</b>	Y yes	Y yes	Y yes	Y yes	Y yes	



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## When to apply a residual herbicide in soybeans planted into a wheat/vetch cover crop

Trial ID: JSB-CC Residual Timing      Location: Jackson      Trial Year: 2016  
 Protocol ID: Cover Crop Resid - Prt      Investigator: Dr. Larry Steckel  
 Project ID:      Study Director: Garret Montgomery  
    Sponsor Contact:

### Application Description

	A	B
<b>Application Date:</b>	May-6-2016	May-24-2016
<b>Appl. Start Time:</b>	10:15 AM	8:15 AM
<b>Appl. Stop Time:</b>	10:21 AM	8:20 AM
<b>Application Method:</b>	SPRAY	SPRAY
<b>Application Timing:</b>	A	B
<b>Application Placement:</b>	FOLIAR	FOLIAR
<b>Applied By:</b>	GM	GM
<b>Air Temperature, Unit:</b>	65 F	72 F
<b>% Relative Humidity:</b>	50	64
<b>Wind Velocity, Unit:</b>	6 mph	1 mph
<b>Wind Direction:</b>	N	NW
<b>Dew Presence (Y/N):</b>	N no	N no
<b>Soil Temperature, Unit:</b>	59 F	69 F
<b>Soil Moisture:</b>	normal	normal
<b>% Cloud Cover:</b>	0	60

### Application Equipment

	A	B
<b>Appl. Equipment:</b>	BACKPACK	BACKPACK
<b>Equipment Type:</b>	BACCAI	BACCAI
<b>Operation Pressure, Unit:</b>	30 PSI	30 PSI
<b>Nozzle Type:</b>	AIXR	AIXR
<b>Nozzle Size:</b>	11003	11003
<b>Nozzle Spacing, Unit:</b>	20 IN	20 IN
<b>Nozzles/Row:</b>	2	2
<b>Boom ID:</b>	15GPA@4MPH	15GPA@4MPH
<b>Boom Length, Unit:</b>	5 FT	5 FT
<b>Boom Height, Unit:</b>	16 IN	16 IN
<b>Ground Speed, Unit:</b>	4 MPH	4 MPH
<b>Carrier:</b>	WATER	WATER
<b>Water Hardness (ppm CaCO3):</b>	15	15
<b>Spray Volume, Unit:</b>	15 GAL/AC	15 GAL/AC
<b>Mix Size, Unit:</b>	gallons	gallons
<b>Propellant:</b>	COMCO2	COMCO2
<b>Tank Mix (Y/N):</b>	Y yes	Y yes

# University of Tennessee

## Evaluating Vetch/Wheat Cover crop termination timing effects on Palmer Amaranth

Trial ID: JSB-Dicamba SB Prt      Location: Jackson, TN      Trial Year: 2015  
 Protocol ID: JSB-Dicamba SB Prt      Investigator: Dr. Larry Steckel  
 Project ID:      Study Director: Garret Montgomery  
 Sponsor Contact:

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	CULT 14 DB PLANTING HERB MON76981 HERB MON76981 CULT 4" Pigweeds	360 g/L 360 g/L		SL SL	1.5 lb ae/a 1.5 lb ae/a		14d PP 14d PP As needed F As needed F	A A F F	101	202	310	402	
2	CULT 14 DB PLANTING HERB MON76981 HERB FLEXSTAR GT 3.5 CULT 4" Pigweeds	360 g/L 3.22		SL SL	1.5 lb ae/a 56 fl oz/a		14d PP 14d PP As needed F As needed F	A A F F	102	201	309	401	
3	CULT 7 DB PLANTING HERB MON76981 HERB MON76981 CULT 4" Pigweeds	360 g/L 360 g/L		SL SL	1.5 lb ae/a 1.5 lb ae/a		7d PP 7d PP As needed F As needed F	B B F F	103	203	304	403	
4	CULT 7 DB PLANTING HERB MON76981 HERB FLEXSTAR GT 3.5 CULT 4" Pigweeds	360 g/L 3.22		SL SL	1.5 lb ae/a 56 fl oz/a		7d PP 7d PP As needed F As needed F	B B F F	104	204	303	404	
5	CULT AT PLANTING HERB MON76981 HERB MON76981 CULT 4" Pigweeds	360 g/L 360 g/L		SL SL	1.5 lb ae/a 1.5 lb ae/a		At Planting At Planting As needed F As needed F	C C F F	105	206	306	410	
6	CULT AT PLANTING HERB MON76981 HERB FLEXSTAR GT 3.5 CULT 4" Pigweeds	360 g/L 3.22		SL SL	1.5 lb ae/a 56 fl oz/a		At Planting At Planting As needed F As needed F	C C F F	106	205	305	409	
7	CULT 7 DA PLANTING HERB MON76981 HERB MON76981 CULT 4" Pigweeds	360 g/L 360 g/L		SL SL	1.5 lb ae/a 1.5 lb ae/a		7d POST 7d POST As needed F As needed F	D D F F	107	207	307	405	
8	CULT 7 DA PLANTING HERB MON76981 HERB FLEXSTAR GT 3.5 CULT 4" Pigweeds	360 g/L 3.22		SL SL	1.5 lb ae/a 56 fl oz/a		7d POST 7d POST As needed F As needed F	D D F F	108	208	308	406	
9	CULT 14 DA PLANTING HERB MON76981 HERB MON76981 CULT 4" Pigweeds	360 g/L 360 g/L		SL SL	1.5 lb ae/a 1.5 lb ae/a		14d POST 14d POST As needed F As needed F	E E F F	109	209	302	407	
10	CULT 14 DA PLANTING HERB MON76981 HERB FLEXSTAR GT 3.5 CULT 4" Pigweeds	360 g/L 3.22		SL SL	1.5 lb ae/a 56 fl oz/a		14d POST 14d POST As needed F As needed F	E E F F	110	210	301	408	

Sort Order: Replicate 1

General Trial Information
<b>Study Director:</b> Garret Montgomery <b>Investigator:</b> Dr. Larry Steckel  <b>Conducted Under GLP:</b> No <b>Conducted Under GEP:</b> No

Contacts
<b>Study Director:</b> Garret Montgomery <b>Investigator:</b> Dr. Larry Steckel

Crop Description
<b>Crop 1:</b> GLXMA      Glycine max      Soybean <b>Variety:</b> 46X6 <b>BBCH Scale:</b> BSOY <b>Planting Date:</b> May-16-2016 <b>Planting Rate, Unit:</b> 140000 S/A <b>Planting Method:</b> PLANTD planted <b>Depth, Unit:</b> 1 in <b>Planting Equipment:</b> PP      Plot Planter

# University of Tennessee

## Evaluating Vetch/Wheat Cover crop termination timing effects on Palmer Amaranth

Trial ID: JSB-Dicamba SB Prt      Location: Jackson, TN      Trial Year: 2015  
 Protocol ID: JSB-Dicamba SB Prt      Investigator: Dr. Larry Steckel  
 Project ID:      Study Director: Garret Montgomery  
    Sponsor Contact:

### Site and Design

Treated Plot Width: 5 FT  
 Treated Plot Length: 30 FT  
 Treated Plot Area: 150 FT<sup>2</sup>      Treatments: 10  
 Replications: 4      Study Design: SPLPLO Split-Plot

### Application Description

	A	B	C	D	E	F
Application Date:	Apr-28-2016	May-4-2016	May-16-2016	May-24-2016	May-31-2016	
Appl. Start Time:	2:50 PM	2:05 PM	9:20 AM	8:31 AM	12:11 PM	
Appl. Stop Time:	3:00 PM	2:10 PM	9:24 AM	8:34 AM	12:12 PM	
Application Method:	SPRAY	SPRAY	SPRAY	SPRAY	SPRAY	
Application Timing:	A	B	C	D	E	
Application Placement:	FOLIAR	FOLIAR	FOLIAR	FOLIAR	FOLIAR	
Applied By:	GM	GM	GM	GM	GM	
Air Temperature, Unit:	86 F	78 F	58 F	72 F	87 F	
% Relative Humidity:	33	40	53	64	57	
Wind Velocity, Unit:	5 mph	2 mph	9 mph	1 mph	5 mph	
Wind Direction:	SW	N	N	NW	N	
Dew Presence (Y/N):	N no	N no	N no	N no	N no	
Soil Temperature, Unit:	75 F	71 F	59 F	69 F	84 F	
Soil Moisture:	normal	normal	normal	normal	normal	
% Cloud Cover:	0	75	100	60	10	

### Crop Stage At Each Application

	A	B	C	D	E	F
Crop 1 Code, BBCH Scale:	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY

### Application Equipment

	A	B	C	D	E	F
Appl. Equipment:	BACKPACK	BACKPACK	BACKPACK	BACKPACK	BACKPACK	
Equipment Type:	BACCAI	BACCAI	BACCAI	BACCAI	BACCAI	
Operation Pressure, Unit:	35 PSI	35 PSI	35 PSI	35 PSI	35 PSI	
Nozzle Type:	TTI	TTI	TTI	TTI	TTI	
Nozzle Size:	11025	11025	11025	11025	11025	
Nozzle Spacing, Unit:	20 IN	20 IN	20 IN	20 IN	20 IN	
Nozzles/Row:	2	2	2	2	2	
Boom ID:	15GPA@4MPH	15GPA@4MPH	15GPA@4MPH	15GPA@4MPH	15GPA@4MPH	
Boom Length, Unit:	5 FT	5 FT	5 FT	5 FT	5 FT	
Boom Height, Unit:	16 IN	16 IN	16 IN	16 IN	16 IN	
Ground Speed, Unit:	4 MPH	4 MPH	4 MPH	4 MPH	4 MPH	
Carrier:	WATER	WATER	WATER	WATER	WATER	
Water Hardness (ppm CaCO <sub>3</sub> ):	15	15	15	15	15	
Spray Volume, Unit:	15 GAL/AC	15 GAL/AC	15 GAL/AC	15 GAL/AC	15 GAL/AC	
Mix Size, Unit:	2 liters	2 liters	2 liters	2 liters	2 liters	
Propellant:	COMCO2	COMCO2		COMCO2	COMCO2	
Tank Mix (Y/N):	Y yes			Y yes	Y yes	