

# The Ohio State University

## OSU fall/spring marestail study using Enlist Soybean programs

Trial ID: 16 OSUFALL1      Location: F-10 West      Trial Year: 2016  
 Protocol ID: 16 OSUFALL1      Investigator: Dr. Mark M. Loux  
 Project ID: 16 OSUFALL1      Study Director: Bryan Reeb  
 Sponsor Contact: Loux

### General Trial Information

**Study Director:** Bryan Reeb  
**Investigator:** Dr. Mark M. Loux

**Latitude of LL Corner °:** 39.85877      N  
**Longitude of LL Corner °:** 83.6731      W  
**Altitude of LL Corner, Unit:** 1084.00 FT

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

### Contacts

**Study Director:** Bryan Reeb  
**Investigator:** Dr. Mark M. Loux

### Pest Description

**Pest 1 Type:** W      **Code:** LAMPU Lamium purpureum  
**Common Name:** Purple deadnettel

**Pest 2 Type:** W      **Code:** SENGL Senecio glabellus  
**Common Name:** Cressleaf groundsel

**Pest 3 Type:** W      **Code:** RANAB Ranunculus abortivus  
**Common Name:** Smallflower buttercup

**Pest 4 Type:** W      **Code:** ERICA Conyza canadensis  
**Common Name:** Canada horseweed

**Pest 5 Type:** W      **Code:** ERICA Conyza canadensis  
**Common Name:** Canada horseweed

**Pest 6 Type:** W      **Code:** ERYRE Erysimum repandum  
**Common Name:** Bushy wallflower

**Pest 7 Type:** W      **Code:** AMBTR Ambrosia trifida  
**Common Name:** Giant ragweed

**Pest 8 Type:** W      **Code:** VERAG Veronica agrestis  
**Common Name:** Field speedwell

**Pest 9 Type:** W      **Code:** LEPCA Lepidium campestre  
**Common Name:** Field pepperweed

**Pest10 Type:** W      **Code:** AMARE Amaranthus retroflexus  
**Common Name:** Redroot pigweed

**Pest11 Type:** W      **Code:** ECHSS Echinochloa sp.  
**Common Name:** Barnyardgrass

### Site and Design

**Treated Plot Width:** 6.67 FT      **Site Type:** FIELD field  
**Treated Plot Length:** 30 FT      **Experimental Unit:** 1 PLOT plot  
**Treated Plot Area:** 200.1 FT2      **Treatments:** 18      **Tillage Type:** NOTILL no-till  
**Replications:** 3      **Study Design:** RACOB� Randomized Complete Block (RCB)

### Soil Description

**Description Name:** F-10 West  
**% OM:** 1.5      **Texture:** SIL silt loam  
**pH:** 5.8      **Soil Name:** Crosby Silt Loam  
**CEC:** 13      **Fert. Level:** G good  
**Soil Drainage:** G good

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	Application Description			
	A	B	C	D
<b>Application Date:</b>	11-3-2015	4-20-2016	4-26-2016	6-28-2016
<b>Appl. Start Time:</b>	9:30 AM	9:00 AM	9:00 AM	8:30 AM
<b>Appl. Stop Time:</b>	10:00 AM	9:30 AM	9:30 AM	9:00 AM
<b>Interval to Prev. Appl., Unit:</b>		169 DAYS	6 DAYS	63 DAYS
<b>Application Method:</b>	SPRAY	SPRAY	SPRAY	SPRAY
<b>Application Timing:</b>	FALL BRNDWN	7 EPP	ATPL	POST
<b>Application Placement:</b>	BROSOI	BROSOI	BROSOI	BROLFOL
<b>Applied By:</b>	REEB/DOBBEL	REEB	ACKLEY/LAMB	BOLTE/REEB
<b>Air Temperature, Unit:</b>	63 F	55.1 F	69.8 F	70 F
<b>% Relative Humidity:</b>	61	42	60	72
<b>Wind Velocity, Unit:</b>	3 MPH	8.3 MPH	9 MPH	5 MPH
<b>Wind Direction:</b>	ENE	E	W	NW
<b>Dew Presence (Y/N):</b>	N no	N no	N no	N no
<b>Soil Temperature, Unit:</b>	48 F	50 F	58 F	72 F
<b>Soil Moisture:</b>	MOIST	DRY	DRY	MOIST
<b>% Cloud Cover:</b>	0	30	15	0
<b>Next Moisture Occurred On:</b>	11-6-2015	4-21-2016	4-28-2016	7-1-2016
<b>Time to Next Moisture, Unit:</b>	3 DAYS	1 DAY	1 DAY	2 DAYS



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### Application Equipment

	A	B	C	D
<b>Appl. Equipment:</b>	6' BACKPACK	6' BACKPACK	6' BACKPACK	6' BACKPACK
<b>Equipment Type:</b>	BACCAI	BACCAI	BACCAI	BACCAI
<b>Operation Pressure, Unit:</b>	50 PSI	44 PSI	44 PSI	44 PSI
<b>Nozzle Type:</b>	AIXR	AIXR	AIXR	AIXR
<b>Nozzle Size:</b>	11015	11015	11015	11015
<b>Nozzle Spacing, Unit:</b>	18 IN	18 IN	18 IN	18 IN
<b>Nozzles/Row:</b>	4	4	4	4
<b>Boom Length, Unit:</b>	6.67 FT	6.67 FT	6.67 FT	6.67 FT
<b>Boom Height, Unit:</b>	20 IN	20 IN	20 IN	20 IN
<b>Ground Speed, Unit:</b>	3 MPH	3 MPH	3 MPH	3 MPH
<b>Carrier:</b>	WATER	WATER	WATER	WATER
<b>Spray Volume, Unit:</b>	15 gal/ac	15 gal/ac	15 gal/ac	15 gal/ac
<b>Mix Size, Unit:</b>	1 liters	1 liters	1 liters	1 liters
<b>Propellant:</b>	COMCO2	COMCO2	COMCO2	COMCO2

	W Weed ERICA	W Weed ERICA	W Weed ERICA
Pest Type			
Pest Code			
Pest Scientific Name	Conyza canadensis	Conyza canadensis	Conyza canadensis
Pest Name	Canada horseweed	Canada horseweed	Canada horseweed
Rating Date	4-26-2016	5-11-2016	7-28-2016
Rating Type	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%
Number of Subsamples	1	1	1
SE Group No.	1	2	3
Days After First/Last Applic.	175	190	268
Number of Decimals	6	15	30

Trt No.	Treatment Name	Form Conc	Form Unit	Rate Rate	Rate Unit	Other Rate	Other Rate	Appl Unit	Code	1*	2*	3*
1	2,4-D	4	LBA/GAL	0.5	lb ai/a	1	pt/a	A	A	100.0	a	76.7
	Clarity	4	LBA/GAL	0.25	lb ai/a	0.5	pt/a	A	A			
	COC	100	%	1	% v/v	1.2	pt/a	A	A			
	N-pak ams	100	%	2.5	% v/v	3	pt/a	A	A			
	Enlist Duo	3.33	LBA/GAL	1.98	lb ai/a	4.75	pt/a	C	C			
	Sonic	70	%AW/W	0.197	lb ai/a	4.5	oz/a	C	C			
	Metribuzin	75	%AW/W	0.28	lb ai/a	6	oz/a	C	C			
	N-pak ams	100	%	2.5	% v/v	1.5	qt/a	C	C			
	Roundup Power Max	4.5	LBAE/GAL	1.5	lb ae/a	42.7	oz/a	D	D			
	N-pak ams	100	%	2.5	% v/v	1.5	qt/a	D	D			
2	2,4-D	4	LBA/GAL	0.5	lb ai/a	1	pt/a	A	A	100.0	a	90.0
	Roundup Power Max	4.5	LBAE/GAL	0.56	lb ae/a	16	oz/a	A	A			
	COC	100	%	1	% v/v	1.2	pt/a	A	A			
	N-pak ams	100	%	2.5	% v/v	3	pt/a	A	A			
	Enlist Duo	3.33	LBA/GAL	1.98	lb ai/a	4.75	pt/a	C	C			
	Sonic	70	%AW/W	0.197	lb ai/a	4.5	oz/a	C	C			
	Metribuzin	75	%AW/W	0.28	lb ai/a	6	oz/a	C	C			
	N-pak ams	100	%	2.5	% v/v	1.5	qt/a	C	C			
	Roundup Power Max	4.5	LBAE/GAL	1.5	lb ae/a	42.7	oz/a	D	D			
	N-pak ams	100	%	2.5	% v/v	1.5	qt/a	D	D			
3	2,4-D	4	LBA/GAL	0.5	lb ai/a	1	pt/a	A	A	100.0	a	76.7
	Roundup Power Max	4.5	LBAE/GAL	0.56	lb ae/a	16	oz/a	A	A			
	COC	100	%	1	% v/v	1.2	pt/a	A	A			
	N-pak ams	100	%	2.5	% v/v	3	pt/a	A	A			
	2,4-D Ester	4	LBA/GAL	1	lb ai/a	32	oz/a	B	B			
	Gramoxone Inteon	2	LBA/GAL	0.75	lb ai/a	3	pt/a	B	B			
	Sonic	70	%AW/W	0.197	lb ai/a	4.5	oz/a	B	B			
	Metribuzin	75	%AW/W	0.28	lb ai/a	6	oz/a	B	B			
	COC	100	%	1	% v/v	0.6	qt/a	B	B			
	N-pak ams	100	%	2.5	% v/v	1.5	qt/a	B	B			
	Roundup Power Max	4.5	LBAE/GAL	1.5	lb ae/a	42.7	oz/a	D	D			
	N-pak ams	100	%	2.5	% v/v	1.5	qt/a	D	D			

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Pest Type	W Weed	W Weed	W Weed
Pest Code	ERICA	ERICA	ERICA
Pest Scientific Name	Conyza canadensis	Conyza canadensis	Conyza canadensis
Pest Name	Canada horsewee	Canada horsewee	Canada horsewee
Rating Date	4-26-2016	5-11-2016	7-28-2016
Rating Type	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%
Number of Subsamples	1	1	1
SE Group No.	1	2	3
Days After First/Last Applic.	175 6	190 15	268 30
Number of Decimals			

Trt No.	Treatment Name	Form Conc	Form Unit	Rate	Rate Unit	Other Rate	Other Unit	Appl Code	1*	2*	3*
4	2,4-D	4 LBA/GAL		0.5 lb ai/a		1 pt/a		A	100.0 a	100.0 a	98.3 a
	Roundup Power Max	4.5 LBAE/GAL		0.56 lb ae/a		16 oz/a		A			
	COC	100 %		1 % v/v		1.2 pt/a		A			
	N-pak ams	100 %		2.5 % v/v		3 pt/a		A			
	2,4-D Ester	4 LBA/GAL		1 lb ai/a		32 oz/a		B			
	Gramoxone Inteon	2 LBA/GAL		0.75 lb ai/a		3 pt/a		B			
	Sonic	70 %AW/W		0.197 lb ai/a		4.5 oz/a		B			
	COC	100 %		1 % v/v		0.6 qt/a		B			
	N-pak ams	100 %		2.5 % v/v		1.5 qt/a		B			
	Glufosinate	2.34 LBA/GAL		0.585 lb ai/a		32 oz/a		D			
	N-pak ams	100 %		2.5 % v/v		1.5 qt/a		D			
5	Sharpen	2.85 LBA/GAL		0.0223 lb ai/a		1 oz/a		A	96.7 b	100.0 a	96.7 a
	Roundup Power Max	4.5 LBAE/GAL		0.56 lb ae/a		16 oz/a		A			
	MSO	100 %		1 % v/v		1.2 pt/a		A			
	N-pak ams	100 %		2.5 % v/v		3 pt/a		A			
	Sharpen	2.85 LBA/GAL		0.0223 lb ai/a		1 oz/a		C			
	Roundup Power Max	4.5 LBAE/GAL		0.75 lb ae/a		21.3 oz/a		C			
	Sonic	70 %AW/W		0.197 lb ai/a		4.5 oz/a		C			
	Exuro	100 %		1 % v/v		0.6 qt/a		C			
	N-pak ams	100 %		2.5 % v/v		1.5 qt/a		C			
	Enlist Duo	3.33 LBA/GAL		1.67 lb ai/a		4.0 pt/a		D			
	N-pak ams	100 %		2.5 % v/v		1.5 qt/a		D			
6	2,4-D	4 LBA/GAL		0.5 lb ai/a		1 pt/a		A	100.0 a	100.0 a	100.0 a
	Roundup Power Max	4.5 LBAE/GAL		0.56 lb ae/a		16 oz/a		A			
	COC	100 %		1 % v/v		1.2 pt/a		A			
	N-pak ams	100 %		2.5 % v/v		3 pt/a		A			
	Sharpen	2.85 LBA/GAL		0.0223 lb ai/a		1 oz/a		C			
	Roundup Power Max	4.5 LBAE/GAL		0.75 lb ae/a		21.3 oz/a		C			
	Sonic	70 %AW/W		0.197 lb ai/a		4.5 oz/a		C			
	Exuro	100 %		1 % v/v		0.6 qt/a		C			
	N-pak ams	100 %		2.5 % v/v		1.5 qt/a		C			
	Enlist Duo	3.33 LBA/GAL		1.67 lb ai/a		4.0 pt/a		D			
	N-pak ams	100 %		2.5 % v/v		1.5 qt/a		D			
7	2,4-D	4 LBA/GAL		0.5 lb ai/a		1 pt/a		A	100.0 a	100.0 a	100.0 a
	Roundup Power Max	4.5 LBAE/GAL		0.56 lb ae/a		16 oz/a		A			
	COC	100 %		1 % v/v		1.2 pt/a		A			
	N-pak ams	100 %		2.5 % v/v		3 pt/a		A			
	Sharpen	2.85 LBA/GAL		0.0223 lb ai/a		1 oz/a		C			
	Gramoxone Inteon	2 LBA/GAL		0.75 lb ai/a		3 pt/a		C			
	Sonic	70 %AW/W		0.197 lb ai/a		4.5 oz/a		C			
	Exuro	100 %		1 % v/v		0.6 qt/a		C			
	N-pak ams	100 %		2.5 % v/v		1.5 qt/a		C			
	Enlist Duo	3.33 LBA/GAL		1.67 lb ai/a		4.0 pt/a		D			
	N-pak ams	100 %		2.5 % v/v		1.5 qt/a		D			
8	Sharpen	2.85 LBA/GAL		0.0223 lb ai/a		1 oz/a		A	100.0 a	100.0 a	100.0 a
	Roundup Power Max	4.5 LBAE/GAL		0.56 lb ae/a		16 oz/a		A			
	MSO	100 %		1 % v/v		1.2 pt/a		A			
	N-pak ams	100 %		2.5 % v/v		3 pt/a		A			
	Enlist Duo	3.33 LBA/GAL		1.98 lb ai/a		4.75 pt/a		C			
	Sonic	70 %AW/W		0.197 lb ai/a		4.5 oz/a		C			
	N-pak ams	100 %		2.5 % v/v		1.5 qt/a		C			
	Enlist Duo	3.33 LBA/GAL		1.67 lb ai/a		4.0 pt/a		D			
	N-pak ams	100 %		2.5 % v/v		1.5 qt/a		D			

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Pest Type	W Weed	W Weed	W Weed
Pest Code	ERICA	ERICA	ERICA
Pest Scientific Name	Conyza canadensis	Conyza canadensis	Conyza canadensis
Pest Name	Canada horseweed	Canada horseweed	Canada horseweed
Rating Date	4-26-2016	5-11-2016	7-28-2016
Rating Type	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%
Number of Subsamples	1	1	1
SE Group No.	1	2	3
Days After First/Last Applic.	175 6	190 15	268 30
Number of Decimals			

Trt No.	Treatment Name	Form Conc	Form Unit	Rate	Rate Unit	Other Rate	Other Unit	Appl Code	1*	2*	3*
9	Roundup Power Max	4.5 LBAE/GAL		0.56 lb ae/a		16 oz/a		A	100.0 a	100.0 a	100.0 a
	Clarity	4 LBA/GAL		0.25 lb ai/a		0.5 pt/a		A			
	COC	100 %		1 % v/v		1.2 pt/a		A			
	N-pak ams	100 %		2.5 % v/v		3 pt/a		A			
	Enlist Duo	3.33 LBA/GAL		1.98 lb ai/a		4.75 pt/a		C			
	Sonic	70 %AW/W		0.197 lb ai/a		4.5 oz/a		C			
	N-pak ams	100 %		2.5 % v/v		1.5 qt/a		C			
	Enlist Duo	3.33 LBA/GAL		1.67 lb ai/a		4.0 pt/a		D			
	N-pak ams	100 %		2.5 % v/v		1.5 qt/a		D			
10	Sharpen	2.85 LBA/GAL		0.0223 lb ai/a		1 oz/a		A	100.0 a	100.0 a	96.7 a
	Roundup Power Max	4.5 LBAE/GAL		0.56 lb ae/a		16 oz/a		A			
	MSO	100 %		1 % v/v		1.2 pt/a		A			
	N-pak ams	100 %		2.5 % v/v		3 pt/a		A			
	2,4-D Ester	4 LBA/GAL		1 lb ai/a		32 oz/a		B			
	Gramoxone Inteon	2 LBA/GAL		0.75 lb ai/a		3 pt/a		B			
	Sonic	70 %AW/W		0.197 lb ai/a		4.5 oz/a		B			
	COC	100 %		1 % v/v		0.6 qt/a		B			
	N-pak ams	100 %		2.5 % v/v		1.5 qt/a		B			
	Enlist Duo	3.33 LBA/GAL		1.67 lb ai/a		4.0 pt/a		D			
	N-pak ams	100 %		2.5 % v/v		1.5 qt/a		D			
11	Roundup Power Max	4.5 LBAE/GAL		0.56 lb ae/a		16 oz/a		A	100.0 a	100.0 a	100.0 a
	Clarity	4 LBA/GAL		0.25 lb ai/a		0.5 pt/a		A			
	COC	100 %		1 % v/v		1.2 pt/a		A			
	N-pak ams	100 %		2.5 % v/v		3 pt/a		A			
	Enlist Duo	3.33 LBA/GAL		1.98 lb ai/a		4.75 pt/a		C			
	Sonic	70 %AW/W		0.197 lb ai/a		4.5 oz/a		C			
	N-pak ams	100 %		2.5 % v/v		1.5 qt/a		C			
	Glufosinate	2.34 LBA/GAL		0.585 lb ai/a		32 oz/a		D			
	N-pak ams	100 %		2.5 % v/v		1.5 qt/a		D			
12	Sharpen	2.85 LBA/GAL		0.0223 lb ai/a		1 oz/a		C	0.0 c	100.0 a	100.0 a
	Enlist Duo	3.33 LBA/GAL		1.98 lb ai/a		4.75 pt/a		C			
	Sonic	70 %AW/W		0.197 lb ai/a		4.5 oz/a		C			
	Metribuzin	75 %AW/W		0.28 lb ai/a		6 oz/a		C			
	Exuro	100 %		1 % v/v		0.6 qt/a		C			
	N-pak ams	100 %		2.5 % v/v		1.5 qt/a		C			
	Roundup Power Max	4.5 LBAE/GAL		1.5 lb ae/a		42.7 oz/a		D			
	N-pak ams	100 %		2.5 % v/v		1.5 qt/a		D			
13	Sharpen	2.85 LBA/GAL		0.0223 lb ai/a		1 oz/a		C	0.0 c	100.0 a	93.3 a
	Enlist Duo	3.33 LBA/GAL		1.98 lb ai/a		4.75 pt/a		C			
	Sonic	70 %AW/W		0.197 lb ai/a		4.5 oz/a		C			
	Exuro	100 %		1 % v/v		0.6 qt/a		C			
	N-pak ams	100 %		2.5 % v/v		1.5 qt/a		C			
	Glufosinate	2.34 LBA/GAL		0.585 lb ai/a		32 oz/a		D			
	N-pak ams	100 %		2.5 % v/v		1.5 qt/a		D			
14	Sharpen	2.85 LBA/GAL		0.0223 lb ai/a		1 oz/a		C	0.0 c	100.0 a	100.0 a
	Enlist Duo	3.33 LBA/GAL		1.98 lb ai/a		4.75 pt/a		C			
	Sonic	70 %AW/W		0.197 lb ai/a		4.5 oz/a		C			
	Exuro	100 %		1 % v/v		0.6 qt/a		C			
	N-pak ams	100 %		2.5 % v/v		1.5 qt/a		C			
	Enlist Duo	3.33 LBA/GAL		1.67 lb ai/a		4.0 pt/a		D			
	N-pak ams	100 %		2.5 % v/v		1.5 qt/a		D			

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	ERICA	ERICA	ERICA
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Pest Code	Canada horsewe	Canada horsewe	Canada horsewe
Pest Scientific Name	Conyza canadensis	Conyza canadensis	Conyza canadensis
Pest Name	Canada horsewe	Canada horsewe	Canada horsewe
Rating Date	4-26-2016	5-11-2016	7-28-2016
Rating Type	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%
Number of Subsamples	1	1	1
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Days After First/Last Applic.	175 6	190 15	268 30
Number of Decimals			

Trt No.	Treatment Name	Form Conc	Form Unit	Rate	Rate Unit	Other Rate	Other Rate Unit	Appl Code	1*	2*	3*
15	Sharpen	2.85	LBA/GAL	0.0223	lb ai/a	1	oz/a	C	0.0 c	100.0 a	100.0 a
	Enlist Duo	3.33	LBA/GAL	1.98	lb ai/a	4.75	pt/a	C			
	Sonic	70	%AW/W	0.197	lb ai/a	4.5	oz/a	C			
	Exuro	100	%	1	% v/v	0.6	qt/a	C			
	N-pak ams	100	%	2.5	% v/v	1.5	qt/a	C			
	Glufosinate	2.34	LBA/GAL	0.585	lb ai/a	32	oz/a	D			
	2,4-D Ester	4	LBA/GAL	0.8	lb ai/a	25.6	oz/a	D			
	N-pak ams	100	%	2.5	% v/v	1.5	qt/a	D			
16	Enlist Duo	3.33	LBA/GAL	1.98	lb ai/a	4.75	pt/a	C	0.0 c	70.0 b	91.7 a
	Sonic	70	%AW/W	0.197	lb ai/a	4.5	oz/a	C			
	N-pak ams	100	%	2.5	% v/v	1.5	qt/a	C			
	Enlist Duo	3.33	LBA/GAL	1.67	lb ai/a	4.0	pt/a	D			
	N-pak ams	100	%	2.5	% v/v	1.5	qt/a	D			
17	Enlist Duo	3.33	LBA/GAL	1.98	lb ai/a	4.75	pt/a	C	0.0 c	53.3 c	70.0 c
	N-pak ams	100	%	2.5	% v/v	1.5	qt/a	C			
	Enlist Duo	3.33	LBA/GAL	1.67	lb ai/a	4.0	pt/a	D			
	N-pak ams	100	%	2.5	% v/v	1.5	qt/a	D			
18	Enlist Duo	3.33	LBA/GAL	1.98	lb ai/a	4.75	pt/a	C	0.0 c	56.7 c	88.3 ab
	N-pak ams	100	%	2.5	% v/v	1.5	qt/a	C			
	Glufosinate	2.34	LBA/GAL	0.585	lb ai/a	32	oz/a	D			
	2,4-D Ester	4	LBA/GAL	0.8	lb ai/a	25.6	oz/a	D			
	N-pak ams	100	%	2.5	% v/v	1.5	qt/a	D			
	LSD P=.05					2.26				4.93	14.66
	Standard Deviation					1.36				2.97	8.84
	CV					2.23				3.18	9.48
	Bartlett's X2					0.0				0.88	13.347
	P(Bartlett's X2)					.				0.348	0.10
	Skewness					-0.4667			-0.4667	-2.1195*	-1.6447*
	Kurtosis					-1.8493*			-1.8493*	3.1743*	1.3257*
	Replicate F					1.000			1.000	1.889	1.785
	Replicate Prob(F)					0.3784			0.3784	0.1668	0.1832
	Treatment F					4052.765			4052.765	83.111	3.484
	Treatment Prob(F)					0.0001			0.0001	0.0001	0.0010

# The Ohio State University

## OSU fall/spring marestail study using Enlist Soybean programs

Trial ID: 16 OSUFALL1      Location: F-10 West      Trial Year: 2016  
 Protocol ID: 16 OSUFALL1      Investigator: Dr. Mark M. Loux  
 Project ID: 16 OSUFALL1      Study Director: Bryan Reeb  
 Sponsor Contact: Loux

Pest Type	W Weed	W Weed
Pest Code	ERICA	ERICA
Pest Scientific Name	Erigeron canad>	Erigeron canad>
Pest Name	Canada horsewe>	Canada horsewe>
Rating Date	6-23-2016	8-1-2016
Rating Type	COUNT	COUNT
Rating Unit	Row Mid	Row Mid
Number of Subsamples	1	1
SE Group No.	5	7
Days After First/Last Applic.	233 58	272 34
Number of Decimals	0	0

Trt No.	Treatment Name	Form Conc	Form Unit	Rate Rate	Other Rate	Other Unit	Appl Unit Code	4*	5*
1	2,4-D	4 LBA/GAL		0.5 lb ai/a	1 pt/a		A	1 c	3 b
	Clarity	4 LBA/GAL		0.25 lb ai/a	0.5 pt/a		A		
	COC	100 %		1 % v/v	1.2 pt/a		A		
	N-pak ams	100 %		2.5 % v/v	3 pt/a		A		
	Enlist Duo	3.33 LBA/GAL		1.98 lb ai/a	4.75 pt/a		C		
	Sonic	70 %AW/W		0.197 lb ai/a	4.5 oz/a		C		
	Metribuzin	75 %AW/W		0.28 lb ai/a	6 oz/a		C		
	N-pak ams	100 %		2.5 % v/v	1.5 qt/a		C		
	Roundup Power Max	4.5 LBAE/GAL		1.5 lb ae/a	42.7 oz/a		D		
	N-pak ams	100 %		2.5 % v/v	1.5 qt/a		D		
2	2,4-D	4 LBA/GAL		0.5 lb ai/a	1 pt/a		A	0 c	2 b
	Roundup Power Max	4.5 LBAE/GAL		0.56 lb ae/a	16 oz/a		A		
	COC	100 %		1 % v/v	1.2 pt/a		A		
	N-pak ams	100 %		2.5 % v/v	3 pt/a		A		
	Enlist Duo	3.33 LBA/GAL		1.98 lb ai/a	4.75 pt/a		C		
	Sonic	70 %AW/W		0.197 lb ai/a	4.5 oz/a		C		
	Metribuzin	75 %AW/W		0.28 lb ai/a	6 oz/a		C		
	N-pak ams	100 %		2.5 % v/v	1.5 qt/a		C		
	Roundup Power Max	4.5 LBAE/GAL		1.5 lb ae/a	42.7 oz/a		D		
	N-pak ams	100 %		2.5 % v/v	1.5 qt/a		D		
3	2,4-D	4 LBA/GAL		0.5 lb ai/a	1 pt/a		A	0 c	5 b
	Roundup Power Max	4.5 LBAE/GAL		0.56 lb ae/a	16 oz/a		A		
	COC	100 %		1 % v/v	1.2 pt/a		A		
	N-pak ams	100 %		2.5 % v/v	3 pt/a		A		
	2,4-D Ester	4 LBA/GAL		1 lb ai/a	32 oz/a		B		
	Gramoxone Inteon	2 LBA/GAL		0.75 lb ai/a	3 pt/a		B		
	Sonic	70 %AW/W		0.197 lb ai/a	4.5 oz/a		B		
	Metribuzin	75 %AW/W		0.28 lb ai/a	6 oz/a		B		
	COC	100 %		1 % v/v	0.6 qt/a		B		
	N-pak ams	100 %		2.5 % v/v	1.5 qt/a		B		
	Roundup Power Max	4.5 LBAE/GAL		1.5 lb ae/a	42.7 oz/a		D		
	N-pak ams	100 %		2.5 % v/v	1.5 qt/a		D		



# The Ohio State University

## OSU fall/spring marestail study using Enlist Soybean programs

Trial ID: 16 OSUFALL1 Location: F-10 West Trial Year: 2016  
 Protocol ID: 16 OSUFALL1 Investigator: Dr. Mark M. Loux  
 Project ID: 16 OSUFALL1 Study Director: Bryan Reeb  
 Sponsor Contact: Loux

Pest Type	W Weed	W Weed
Pest Code	ERICA	ERICA
Pest Scientific Name	Erigeron canad>	Erigeron canad>
Pest Name	Canada horsewe>	Canada horsewe>
Rating Date	6-23-2016	8-1-2016
Rating Type	COUNT	COUNT
Rating Unit	Row Mid	Row Mid
Number of Subsamples	1	1
SE Group No.	5	7
Days After First/Last Applic.	233 58	272 34
Number of Decimals	0	0

Trt No.	Treatment Name	Form Conc	Form Unit	Rate	Rate Unit	Other Rate	Other Unit	Appl Unit Code	4*	5*
4	2,4-D	4 LBA/GAL		0.5 lb ai/a		1 pt/a		A	0 c	0 b
	Roundup Power Max	4.5 LBAE/GAL		0.56 lb ae/a		16 oz/a		A		
	COC	100 %		1 % v/v		1.2 pt/a		A		
	N-pak ams	100 %		2.5 % v/v		3 pt/a		A		
	2,4-D Ester	4 LBA/GAL		1 lb ai/a		32 oz/a		B		
	Gramoxone Inteon	2 LBA/GAL		0.75 lb ai/a		3 pt/a		B		
	Sonic	70 %AW/W		0.197 lb ai/a		4.5 oz/a		B		
	COC	100 %		1 % v/v		0.6 qt/a		B		
	N-pak ams	100 %		2.5 % v/v		1.5 qt/a		B		
	Glufosinate	2.34 LBA/GAL		0.585 lb ai/a		32 oz/a		D		
	N-pak ams	100 %		2.5 % v/v		1.5 qt/a		D		
5	Sharpen	2.85 LBA/GAL		0.0223 lb ai/a		1 oz/a		A	0 c	0 b
	Roundup Power Max	4.5 LBAE/GAL		0.56 lb ae/a		16 oz/a		A		
	MSO	100 %		1 % v/v		1.2 pt/a		A		
	N-pak ams	100 %		2.5 % v/v		3 pt/a		A		
	Sharpen	2.85 LBA/GAL		0.0223 lb ai/a		1 oz/a		C		
	Roundup Power Max	4.5 LBAE/GAL		0.75 lb ae/a		21.3 oz/a		C		
	Sonic	70 %AW/W		0.197 lb ai/a		4.5 oz/a		C		
	Exuro	100 %		1 % v/v		0.6 qt/a		C		
	N-pak ams	100 %		2.5 % v/v		1.5 qt/a		C		
	Enlist Duo	3.33 LBA/GAL		1.67 lb ai/a		4.0 pt/a		D		
	N-pak ams	100 %		2.5 % v/v		1.5 qt/a		D		
6	2,4-D	4 LBA/GAL		0.5 lb ai/a		1 pt/a		A	0 c	0 b
	Roundup Power Max	4.5 LBAE/GAL		0.56 lb ae/a		16 oz/a		A		
	COC	100 %		1 % v/v		1.2 pt/a		A		
	N-pak ams	100 %		2.5 % v/v		3 pt/a		A		
	Sharpen	2.85 LBA/GAL		0.0223 lb ai/a		1 oz/a		C		
	Roundup Power Max	4.5 LBAE/GAL		0.75 lb ae/a		21.3 oz/a		C		
	Sonic	70 %AW/W		0.197 lb ai/a		4.5 oz/a		C		
	Exuro	100 %		1 % v/v		0.6 qt/a		C		
	N-pak ams	100 %		2.5 % v/v		1.5 qt/a		C		
	Enlist Duo	3.33 LBA/GAL		1.67 lb ai/a		4.0 pt/a		D		
	N-pak ams	100 %		2.5 % v/v		1.5 qt/a		D		
7	2,4-D	4 LBA/GAL		0.5 lb ai/a		1 pt/a		A	0 c	0 b
	Roundup Power Max	4.5 LBAE/GAL		0.56 lb ae/a		16 oz/a		A		
	COC	100 %		1 % v/v		1.2 pt/a		A		
	N-pak ams	100 %		2.5 % v/v		3 pt/a		A		
	Sharpen	2.85 LBA/GAL		0.0223 lb ai/a		1 oz/a		C		
	Gramoxone Inteon	2 LBA/GAL		0.75 lb ai/a		3 pt/a		C		
	Sonic	70 %AW/W		0.197 lb ai/a		4.5 oz/a		C		
	Exuro	100 %		1 % v/v		0.6 qt/a		C		
	N-pak ams	100 %		2.5 % v/v		1.5 qt/a		C		
	Enlist Duo	3.33 LBA/GAL		1.67 lb ai/a		4.0 pt/a		D		
	N-pak ams	100 %		2.5 % v/v		1.5 qt/a		D		
8	Sharpen	2.85 LBA/GAL		0.0223 lb ai/a		1 oz/a		A	1 c	0 b
	Roundup Power Max	4.5 LBAE/GAL		0.56 lb ae/a		16 oz/a		A		
	MSO	100 %		1 % v/v		1.2 pt/a		A		
	N-pak ams	100 %		2.5 % v/v		3 pt/a		A		
	Enlist Duo	3.33 LBA/GAL		1.98 lb ai/a		4.75 pt/a		C		
	Sonic	70 %AW/W		0.197 lb ai/a		4.5 oz/a		C		
	N-pak ams	100 %		2.5 % v/v		1.5 qt/a		C		
	Enlist Duo	3.33 LBA/GAL		1.67 lb ai/a		4.0 pt/a		D		
	N-pak ams	100 %		2.5 % v/v		1.5 qt/a		D		

# The Ohio State University

## OSU fall/spring marestail study using Enlist Soybean programs

Trial ID: 16 OSUFALL1 Location: F-10 West Trial Year: 2016  
 Protocol ID: 16 OSUFALL1 Investigator: Dr. Mark M. Loux  
 Project ID: 16 OSUFALL1 Study Director: Bryan Reeb  
 Sponsor Contact: Loux

Pest Type	W Weed	W Weed
Pest Code	ERICA	ERICA
Pest Scientific Name	Erigeron canad>	Erigeron canad>
Pest Name	Canada horsewe>	Canada horsewe>
Rating Date	6-23-2016	8-1-2016
Rating Type	COUNT	COUNT
Rating Unit	Row Mid	Row Mid
Number of Subsamples	1	1
SE Group No.	5	7
Days After First/Last Applic.	233 58	272 34
Number of Decimals	0	0

Trt No.	Treatment Name	Form Conc	Form Unit	Rate	Rate Unit	Other Rate	Other Unit	Appl Unit Code	4*	5*
9	Roundup Power Max	4.5 LBAE/GAL		0.56 lb ae/a		16 oz/a		A	0 c	0 b
	Clarity	4 LBA/GAL		0.25 lb ai/a		0.5 pt/a		A		
	COC	100 %		1 % v/v		1.2 pt/a		A		
	N-pak ams	100 %		2.5 % v/v		3 pt/a		A		
	Enlist Duo	3.33 LBA/GAL		1.98 lb ai/a		4.75 pt/a		C		
	Sonic	70 %AW/W		0.197 lb ai/a		4.5 oz/a		C		
	N-pak ams	100 %		2.5 % v/v		1.5 qt/a		C		
	Enlist Duo	3.33 LBA/GAL		1.67 lb ai/a		4.0 pt/a		D		
	N-pak ams	100 %		2.5 % v/v		1.5 qt/a		D		
10	Sharpen	2.85 LBA/GAL		0.0223 lb ai/a		1 oz/a		A	2 c	1 b
	Roundup Power Max	4.5 LBAE/GAL		0.56 lb ae/a		16 oz/a		A		
	MSO	100 %		1 % v/v		1.2 pt/a		A		
	N-pak ams	100 %		2.5 % v/v		3 pt/a		A		
	2,4-D Ester	4 LBA/GAL		1 lb ai/a		32 oz/a		B		
	Gramoxone Inteon	2 LBA/GAL		0.75 lb ai/a		3 pt/a		B		
	Sonic	70 %AW/W		0.197 lb ai/a		4.5 oz/a		B		
	COC	100 %		1 % v/v		0.6 qt/a		B		
	N-pak ams	100 %		2.5 % v/v		1.5 qt/a		B		
	Enlist Duo	3.33 LBA/GAL		1.67 lb ai/a		4.0 pt/a		D		
	N-pak ams	100 %		2.5 % v/v		1.5 qt/a		D		
11	Roundup Power Max	4.5 LBAE/GAL		0.56 lb ae/a		16 oz/a		A	2 c	0 b
	Clarity	4 LBA/GAL		0.25 lb ai/a		0.5 pt/a		A		
	COC	100 %		1 % v/v		1.2 pt/a		A		
	N-pak ams	100 %		2.5 % v/v		3 pt/a		A		
	Enlist Duo	3.33 LBA/GAL		1.98 lb ai/a		4.75 pt/a		C		
	Sonic	70 %AW/W		0.197 lb ai/a		4.5 oz/a		C		
	N-pak ams	100 %		2.5 % v/v		1.5 qt/a		C		
	Glufosinate	2.34 LBA/GAL		0.585 lb ai/a		32 oz/a		D		
	N-pak ams	100 %		2.5 % v/v		1.5 qt/a		D		
12	Sharpen	2.85 LBA/GAL		0.0223 lb ai/a		1 oz/a		C	1 c	2 b
	Enlist Duo	3.33 LBA/GAL		1.98 lb ai/a		4.75 pt/a		C		
	Sonic	70 %AW/W		0.197 lb ai/a		4.5 oz/a		C		
	Metribuzin	75 %AW/W		0.28 lb ai/a		6 oz/a		C		
	Exuro	100 %		1 % v/v		0.6 qt/a		C		
	N-pak ams	100 %		2.5 % v/v		1.5 qt/a		C		
	Roundup Power Max	4.5 LBAE/GAL		1.5 lb ae/a		42.7 oz/a		D		
	N-pak ams	100 %		2.5 % v/v		1.5 qt/a		D		
13	Sharpen	2.85 LBA/GAL		0.0223 lb ai/a		1 oz/a		C	2 c	1 b
	Enlist Duo	3.33 LBA/GAL		1.98 lb ai/a		4.75 pt/a		C		
	Sonic	70 %AW/W		0.197 lb ai/a		4.5 oz/a		C		
	Exuro	100 %		1 % v/v		0.6 qt/a		C		
	N-pak ams	100 %		2.5 % v/v		1.5 qt/a		C		
	Glufosinate	2.34 LBA/GAL		0.585 lb ai/a		32 oz/a		D		
	N-pak ams	100 %		2.5 % v/v		1.5 qt/a		D		
14	Sharpen	2.85 LBA/GAL		0.0223 lb ai/a		1 oz/a		C	0 c	0 b
	Enlist Duo	3.33 LBA/GAL		1.98 lb ai/a		4.75 pt/a		C		
	Sonic	70 %AW/W		0.197 lb ai/a		4.5 oz/a		C		
	Exuro	100 %		1 % v/v		0.6 qt/a		C		
	N-pak ams	100 %		2.5 % v/v		1.5 qt/a		C		
	Enlist Duo	3.33 LBA/GAL		1.67 lb ai/a		4.0 pt/a		D		
	N-pak ams	100 %		2.5 % v/v		1.5 qt/a		D		

# The Ohio State University

## OSU fall/spring marestalk study using Enlist Soybean programs

Trial ID: 16 OSUFALL1      Location: F-10 West      Trial Year: 2016  
 Protocol ID: 16 OSUFALL1      Investigator: Dr. Mark M. Loux  
 Project ID: 16 OSUFALL1      Study Director: Bryan Reeb  
 Sponsor Contact: Loux

Pest Type	W Weed	W Weed
Pest Code	ERICA	ERICA
Pest Scientific Name	Erigeron canad>	Erigeron canad>
Pest Name	Canada horsewe>	Canada horsewe>
Rating Date	6-23-2016	8-1-2016
Rating Type	COUNT	COUNT
Rating Unit	Row Mid	Row Mid
Number of Subsamples	1	1
SE Group No.	5	7
Days After First/Last Applic.	233 58	272 34
Number of Decimals	0	0

Trt No.	Treatment Name	Form Conc	Form Unit	Rate	Rate Unit	Other Rate	Other Rate Unit	Appl Code	4*	5*
15	Sharpen	2.85	LBA/GAL	0.0223	lb ai/a	1	oz/a	C	0 c	0 b
	Enlist Duo	3.33	LBA/GAL	1.98	lb ai/a	4.75	pt/a	C		
	Sonic	70	%AW/W	0.197	lb ai/a	4.5	oz/a	C		
	Exuro	100	%	1	% v/v	0.6	qt/a	C		
	N-pak ams	100	%	2.5	% v/v	1.5	qt/a	C		
	Glufosinate	2.34	LBA/GAL	0.585	lb ai/a	32	oz/a	D		
	2,4-D Ester	4	LBA/GAL	0.8	lb ai/a	25.6	oz/a	D		
	N-pak ams	100	%	2.5	% v/v	1.5	qt/a	D		
16	Enlist Duo	3.33	LBA/GAL	1.98	lb ai/a	4.75	pt/a	C	5 c	0 b
	Sonic	70	%AW/W	0.197	lb ai/a	4.5	oz/a	C		
	N-pak ams	100	%	2.5	% v/v	1.5	qt/a	C		
	Enlist Duo	3.33	LBA/GAL	1.67	lb ai/a	4.0	pt/a	D		
	N-pak ams	100	%	2.5	% v/v	1.5	qt/a	D		
17	Enlist Duo	3.33	LBA/GAL	1.98	lb ai/a	4.75	pt/a	C	77 a	17 a
	N-pak ams	100	%	2.5	% v/v	1.5	qt/a	C		
	Enlist Duo	3.33	LBA/GAL	1.67	lb ai/a	4.0	pt/a	D		
	N-pak ams	100	%	2.5	% v/v	1.5	qt/a	D		
18	Enlist Duo	3.33	LBA/GAL	1.98	lb ai/a	4.75	pt/a	C	42 b	2 b
	N-pak ams	100	%	2.5	% v/v	1.5	qt/a	C		
	Glufosinate	2.34	LBA/GAL	0.585	lb ai/a	32	oz/a	D		
	2,4-D Ester	4	LBA/GAL	0.8	lb ai/a	25.6	oz/a	D		
	N-pak ams	100	%	2.5	% v/v	1.5	qt/a	D		
LSD P=.05									21.0	6.0
Standard Deviation									12.7	3.6
CV									170.28	185.96
Bartlett's X2									84.662	45.327
P(Bartlett's X2)									0.001*	0.001*
Skewness									3.693*	4.588*
Kurtosis									13.6861*	24.5271*
Replicate F									2.341	2.222
Replicate Prob(F)									0.1116	0.1239
Treatment F									7.456	3.843
Treatment Prob(F)									0.0001	0.0004

# The Ohio State University

## OSU fall/spring marestail study using Enlist Soybean programs

Trial ID: 16 OSUFALL1      Location: F-10 West      Trial Year: 2016  
Protocol ID: 16 OSUFALL1      Investigator: Dr. Mark M. Loux  
Project ID: 16 OSUFALL1      Study Director: Bryan Reeb  
Sponsor Contact: Loux

Pest Type

W, Weed, G-BYRW7, G-WedStg = Weed or volunteer crop

Pest Code

ERICA, Conyza canadensis, = ERICA, Conyza canadensis,  
ERICA, Erigeron canadensis, = US

Rating Type

CONTRO = control / burndown or knockdown

COUNT = count

Rating Unit

% = percent