

# University of Nebraska

## Spring Burndown with Tank Mixtures of Valor and Roundup Original Max

Trial ID: L0733  
Location: Mead

Study Dir.: Kevin Horky  
Investigator: Dr. Mark Bernards

### GENERAL TRIAL INFORMATION

**Study Director:** Kevin Horky **Title:** Research Technician  
**Affiliation:** University of Nebraska Lincoln  
**Postal Code:** 68583  
**Investigator:** Dr. Mark Bernards **Title:** Ext. Weed Specialist  
**Affiliation:** University of Nebraska Lincoln  
**Postal Code:** 68583

### TRIAL LOCATION

**City:** Lincoln  
**State/Prov.:** NE  
**Postal Code:** 68583

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

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

### CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name
1.	HELAN	Common sunflower	Helianthus annuus
2.	ERICA	Horseweed, Canada	Erigeron canadensis
3.	ABUTH	Velvetleaf	Abutilon theophrasti
4.	POAAN	Annual bluegrass	Poa annua
5.	AMAPA	Amaranth, Palmer	Amaranthus palmeri
6.	DESSS	Tansymustard	Descurainia sp.
7.	LACSE	Lettuce, prickly	Lactuca serriola

**Crop 1:** GLXMA SOYBEAN

**Variety:** Asgrow 2703

**Planting Date:** 18/May/2007

**Planting Method:** planted

**Rate:** 160000 seeds/a

**Depth:** 1.25 in

**Row Spacing:** 30 in

**Seed Bed:** no-till

**Emergence Date:** 24/May/2007

### SITE AND DESIGN

**Plot Width, Unit:** 10 FT

**Plot Length, Unit:** 30 FT **Reps:** 3

**Site Type:** field

**Tillage Type:** no-till

**Study Design:** RANDOMIZED COMPLETE BLOCK

### SOIL DESCRIPTION

**% Sand:** 6 **% OM:** 3.1 **Texture:** Silty Clay Loam  
**% Silt:** 65 **pH:** 6.6 **Soil Name:** Sharpesburg  
**% Clay:** 29 **CEC:** 31 **Fert. Level:** good

### APPLICATION DESCRIPTION

A	
<b>Application Date:</b>	10/May/2007
<b>Time of Day:</b>	3:00 pm
<b>Application Method:</b>	Spray
<b>Application Timing:</b>	PP
<b>Applic. Placement:</b>	BROFOL
<b>Air Temp., Unit:</b>	85 F
<b>% Relative Humidity:</b>	30
<b>Wind Velocity, Unit:</b>	2.5 mph
<b>Soil Temp., Unit:</b>	16 C
<b>Soil Moisture:</b>	wet
<b>% Cloud Cover:</b>	20

### CROP STAGE AT EACH APPLICATION

A	
<b>Crop 1 Code, Stage:</b>	GLXMA
<b>Stage Scale:</b>	pre

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## WEED STAGE AT EACH APPLICATION

A	
Weed 1 Code, Stage:	HELAN
Stage Scale:	PRE
Weed 2 Code, Stage:	ERICA
Stage Scale:	10 in
Density, Unit:	2 m2
Weed 3 Code, Stage:	ABUTH
Stage Scale:	pre
Weed 4 Code, Stage:	POAAN
Stage Scale:	13 in
Density, Unit:	10 m2
Weed 5 Code, Stage:	AMAPA
Stage Scale:	pre
Weed 6 Code, Stage:	DESSS
Stage Scale:	15 in
Density, Unit:	6 m2
Weed 7 Code, Stage:	LACSE
Stage Scale:	8 in
Density, Unit:	4 m2

## APPLICATION EQUIPMENT

A	
Appl. Equipment:	IH cub
Operating Pressure:	30
Nozzle Type:	Turbo Tee
Nozzle Size:	110015
Nozzle Spacing, Unit:	15 in
Nozzles/Row:	2
Boom Length, Unit:	10 ft
Boom Height, Unit:	30 in
Ground Speed, Unit:	3 mph
Carrier:	water
Spray Volume, Unit:	15 gpa
Propellant:	air

Trial Comments

Monsanto Protocol # 30-06

Data Requested 14, 28 DAT Burndown

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Trial ID: L0733

Study Dir.: Kevin Horky

Location: Mead

Investigator: Dr. Mark Bernards

Weed Code		DESSS	ERICA	LACSE	POAAN	HELAN					
Crop Code		GLXMA	GLXMA	GLXMA	GLXMA	GLXMA					
Rating Data Type		CONTROL	CONTROL	CONTROL	CONTROL	CONTROL					
Rating Unit		%	%	%	%	%					
Rating Date		24/May/2007	24/May/2007	24/May/2007	24/May/2007	7/Jun/2007					
Trt-Eval Interval		14 DA-A	14 DA-A	14 DA-A	14 DA-A	28 DA-A					
Trt	Treatment	Rate	Unit	Grow							
No.	Name			Stg	Plot						
					1	2					
					3	4					
					5						
1	Roundup Original Max	22	oz/a	pp	101	99	99	99	99	99	0
	AMS	2	% w/w	pp	214	99	99	99	99	99	0
					308	99	99	99	99	99	0
	Mean =					99	99	99	99	99	0
2	Roundup Original Max	22	oz/a	pp	102	99	99	99	99	99	50
	Valor	2	oz/a	pp	208	99	99	99	99	99	95
	AMS	2	% w/w	pp	311	99	99	99	99	99	80
	Mean =					99	99	99	99	99	75
3	Roundup Original Max	22	oz/a	pp	103	99	99	99	99	99	60
	Valor	2	oz/a	pp	205	99	99	99	99	99	75
	2,4-D ester	1	pt/a	pp	302	99	99	99	99	99	70
	AMS	2	% w/w	pp							
	Mean =					99	99	99	99	99	68
4	Roundup Original Max	22	oz/a	pp	104	99	99	99	99	99	95
	Valor	2	oz/a	pp	210	99	99	99	99	99	99
	Clarity	8	oz/a	pp	309	99	99	99	99	99	95
	AMS	2	% w/w	pp							
	Mean =					99	99	99	99	99	96
5	Roundup Original Max	22	oz/a	pp	105	99	99	99	99	99	0
	AMS	2	% w/w	pp	212	99	99	99	99	99	0
					307	99	99	99	99	99	0
	Mean =					99	99	99	99	99	0
6	Roundup Original Max	22	oz/a	pp	106	99	99	99	99	99	85
	Valor	2	oz/a	pp	202	99	99	99	99	99	90
	AMS	2	% w/w	pp	303	99	99	99	99	99	70
	Mean =					99	99	99	99	99	82
7	Roundup Original Max	22	oz/a	pp	107	99	99	99	99	99	95
	Valor	2	oz/a	pp	206	99	99	99	99	99	90
	2,4-D ester	1	pt/a	pp	305	99	99	99	99	99	85
	AMS	2	% w/w	pp							
	Mean =					99	99	99	99	99	90
8	Roundup Original Max	22	oz/a	pp	108	99	99	99	99	99	95
	Valor	2	oz/a	pp	207	99	99	99	99	99	95
	Clarity	8	oz/a	pp	304	99	99	99	99	99	60
	AMS	2	% w/w	pp							
	Mean =					99	99	99	99	99	83
9	Roundup Original Max	22	oz/a	pp	109	99	99	99	99	99	90
	AMS	2	% w/w	pp	204	99	99	99	99	99	95
	Intro	2	qt/a	pp	310	99	99	99	99	99	80
	2,4-D ester	1	pt/a	pp							
	Mean =					99	99	99	99	99	88

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Weed Code					DESSS	ERICA	LACSE	POAAN	HELAN	
Crop Code					GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	
Rating Data Type					CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	
Rating Unit					%	%	%	%	%	
Rating Date					24/May/2007	24/May/2007	24/May/2007	24/May/2007	7/Jun/2007	
Trt-Eval Interval					14 DA-A	14 DA-A	14 DA-A	14 DA-A	28 DA-A	
Trt No.	Treatment Name	Rate	Unit	Grow Stg	Plot	1	2	3	4	5
10	Roundup Original Max	22	oz/a	pp	110	99	99	99	99	90
	AMS	2	% w/w	pp	211	99	99	99	99	85
	Prowl H20	2	pt/a	pp	314	99	99	99	99	85
	2,4-D ester	1	pt/a	pp						
					Mean =	99	99	99	99	87
11	Roundup Original Max	22	oz/a	pp	111	99	99	99	99	90
	AMS	2	% w/w	pp	201	99	99	99	99	99
	Authority First	3.22	oz/a	pp	315	99	99	99	99	80
	2,4-D ester	1	pt/a	pp						
					Mean =	99	99	99	99	90
12	Roundup Original Max	22	oz/a	pp	112	99	99	99	99	90
	Valor XLT	3	oz/a	pp	203	99	99	99	99	95
	AMS	2	% w/w	pp	313	99	99	99	99	80
					Mean =	99	99	99	99	88
13	Roundup Original Max	22	oz/a	pp	113	99	99	99	99	85
	Valor XLT	3	oz/a	pp	209	99	99	99	99	90
	2,4-D ester	1	pt/a	pp	301	99	99	99	99	90
	AMS	2	% w/w	pp						
					Mean =	99	99	99	99	88
14	Gramoxone Inteon	0.75	lb ai/a	pp	114	99	99	99	99	0
	NIS	0.125	% v/v	pp	215	99	99	99	99	0
	2,4-D ester	1	pt/a	pp	306	99	99	99	99	0
					Mean =	99	99	99	99	0
15	check				115	0	0	0	0	0
					213	0	0	0	0	0
					312	0	0	0	0	0
					Mean =	0	0	0	0	0

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Weed Code					ERICA	ABUTH	POAAN	AMAPA
Crop Code					GLXMA	GLXMA	GLXMA	GLXMA
Rating Data Type					CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit					%	%	%	%
Rating Date					7/Jun/2007	7/Jun/2007	7/Jun/2007	7/Jun/2007
Trt-Eval Interval					28 DA-A	28 DA-A	28 DA-A	28 DA-A
Trt No.	Treatment Name	Rate	Unit	Grow Stg Plot	6	7	8	9
1	Roundup Original Max	22	oz/a	pp 101	99	0	99	0
	AMS	2	% w/w	pp 214	99	0	99	0
				pp 308	99	0	0	0
				Mean =	99	0	66	0
2	Roundup Original Max	22	oz/a	pp 102	99	70	99	90
	Valor	2	oz/a	pp 208	99	80	99	80
	AMS	2	% w/w	pp 311	99	40	99	40
				Mean =	99	63	99	70
3	Roundup Original Max	22	oz/a	pp 103	99	75	99	90
	Valor	2	oz/a	pp 205	99	50	99	75
	2,4-D ester	1	pt/a	pp 302	99	60	99	80
	AMS	2	% w/w	pp				
			Mean =	99	62	99	82	
4	Roundup Original Max	22	oz/a	pp 104	99	85	99	95
	Valor	2	oz/a	pp 210	99	95	99	85
	Clarity	8	oz/a	pp 309	99	30	99	30
	AMS	2	% w/w	pp				
			Mean =	99	70	99	70	
5	Roundup Original Max	22	oz/a	pp 105	99	0	99	0
	AMS	2	% w/w	pp 212	99	0	99	0
				pp 307	99	0	99	0
				Mean =	99	0	99	0
6	Roundup Original Max	22	oz/a	pp 106	99	80	99	50
	Valor	2	oz/a	pp 202	99	65	99	70
	AMS	2	% w/w	pp 303	99	50	99	80
				Mean =	99	65	99	67
7	Roundup Original Max	22	oz/a	pp 107	99	60	99	50
	Valor	2	oz/a	pp 206	99	90	99	40
	2,4-D ester	1	pt/a	pp 305	99	40	99	85
	AMS	2	% w/w	pp				
			Mean =	99	63	99	58	
8	Roundup Original Max	22	oz/a	pp 108	99	80	99	80
	Valor	2	oz/a	pp 207	99	60	99	50
	Clarity	8	oz/a	pp 304	99	40	99	80
	AMS	2	% w/w	pp				
			Mean =	99	60	99	70	
9	Roundup Original Max	22	oz/a	pp 109	99	60	99	20
	AMS	2	% w/w	pp 204	99	60	99	65
	Intro	2	qt/a	pp 310	99	85	99	95
	2,4-D ester	1	pt/a	pp				
			Mean =	99	68	99	60	
10	Roundup Original Max	22	oz/a	pp 110	99	90	99	40
	AMS	2	% w/w	pp 211	99	60	99	40
	Prowl H20	2	pt/a	pp 314	99	85	99	85
	2,4-D ester	1	pt/a	pp				
			Mean =	99	78	99	55	

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Weed Code					ERICA	ABUTH	POAAN	AMAPA	
Crop Code					GLXMA	GLXMA	GLXMA	GLXMA	
Rating Data Type					CONTROL	CONTROL	CONTROL	CONTROL	
Rating Unit					%	%	%	%	
Rating Date					7/Jun/2007	7/Jun/2007	7/Jun/2007	7/Jun/2007	
Trt-Eval Interval					28 DA-A	28 DA-A	28 DA-A	28 DA-A	
Trt No.	Treatment Name	Rate	Unit	Grow Stg	Plot	6	7	8	9
11	Roundup Original Max	22	oz/a	pp	111	99	95	99	85
	AMS	2	% w/w	pp	201	99	90	99	80
	Authority First	3.22	oz/a	pp	315	99	75	99	80
	2,4-D ester	1	pt/a	pp					
	Mean =					99	87	99	82
12	Roundup Original Max	22	oz/a	pp	112	99	85	99	90
	Valor XLT	3	oz/a	pp	203	99	30	99	60
	AMS	2	% w/w	pp	313	99	60	99	85
	Mean =					99	58	99	78
13	Roundup Original Max	22	oz/a	pp	113	99	90	99	90
	Valor XLT	3	oz/a	pp	209	99	90	99	90
	2,4-D ester	1	pt/a	pp	301	99	60	99	80
	AMS	2	% w/w	pp					
	Mean =					99	80	99	87
14	Gramoxone Inteon	0.75	lb ai/a	pp	114	99	0	99	0
	NIS	0.125	% v/v	pp	215	99	0	99	0
	2,4-D ester	1	pt/a	pp	306	99	0	99	0
	Mean =					99	0	99	0
15	check				115	0	0	0	0
					213	0	0	0	0
					312	0	0	0	0
		Mean =				0	0	0	0

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## Spring Burndown with Tank Mixtures of Valor and Roundup Original Max

Trial ID: L0733

Study Dir.: Kevin Horkey

Location: Mead

Investigator: Dr. Mark Bernards

Weed Code				DESSS	ERICA	LACSE	POAAN	HELAN	
Crop Code				GLXMA	GLXMA	GLXMA	GLXMA	GLXMA	
Rating Data Type				CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	
Rating Unit				%	%	%	%	%	
Rating Date				24/May/2007	24/May/2007	24/May/2007	24/May/2007	7/Jun/2007	
Trt-Eval Interval				14 DA-A	14 DA-A	14 DA-A	14 DA-A	28 DA-A	
Trt	Treatment	Rate	Rate Unit	Grow Stg	1	2	3	4	5
1	Roundup Original Max AMS	22 2	oz/a % w/w	pp pp	99 a	99 a	99 a	99 a	0 c
2	Roundup Original Max Valor AMS	22 2 2	oz/a oz/a % w/w	pp pp pp	99 a	99 a	99 a	99 a	75 ab
3	Roundup Original Max Valor 2,4-D ester AMS	22 2 1 2	oz/a oz/a pt/a % w/w	pp pp pp pp	99 a	99 a	99 a	99 a	68 b
4	Roundup Original Max Valor Clarity AMS	22 2 8 2	oz/a oz/a oz/a % w/w	pp pp pp pp	99 a	99 a	99 a	99 a	96 a
5	Roundup Original Max AMS	22 2	oz/a % w/w	pp pp	99 a	99 a	99 a	99 a	0 c
6	Roundup Original Max Valor AMS	22 2 2	oz/a oz/a % w/w	pp pp pp	99 a	99 a	99 a	99 a	82 ab
7	Roundup Original Max Valor 2,4-D ester AMS	22 2 1 2	oz/a oz/a pt/a % w/w	pp pp pp pp	99 a	99 a	99 a	99 a	90 ab
8	Roundup Original Max Valor Clarity AMS	22 2 8 2	oz/a oz/a oz/a % w/w	pp pp pp pp	99 a	99 a	99 a	99 a	83 ab
9	Roundup Original Max AMS Intro 2,4-D ester	22 2 2 1	oz/a % w/w qt/a pt/a	pp pp pp pp	99 a	99 a	99 a	99 a	88 ab
10	Roundup Original Max AMS Prowl H20 2,4-D ester	22 2 2 1	oz/a % w/w pt/a pt/a	pp pp pp pp	99 a	99 a	99 a	99 a	87 ab
11	Roundup Original Max AMS Authority First 2,4-D ester	22 2 3.22 1	oz/a % w/w oz/a pt/a	pp pp pp pp	99 a	99 a	99 a	99 a	90 ab
12	Roundup Original Max Valor XLT AMS	22 3 2	oz/a oz/a % w/w	pp pp pp	99 a	99 a	99 a	99 a	88 ab
13	Roundup Original Max Valor XLT 2,4-D ester AMS	22 3 1 2	oz/a oz/a pt/a % w/w	pp pp pp pp	99 a	99 a	99 a	99 a	88 ab
14	Gramoxone Inteon NIS 2,4-D ester	0.75 0.125 1	lb ai/a % v/v pt/a	pp pp pp	99 a	99 a	99 a	99 a	0 c

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Weed Code	DESSS	ERICA	LACSE	POAAN	HELAN
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA	GLXMA
Rating Data Type	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit	%	%	%	%	%
Rating Date	24/May/2007	24/May/2007	24/May/2007	24/May/2007	7/Jun/2007
Trt-Eval Interval	14 DA-A	14 DA-A	14 DA-A	14 DA-A	28 DA-A
Trt No.	1	2	3	4	5
Treatment Name					
Rate					
Unit					
Grow Stg					
15 check	0 b	0 b	0 b	0 b	0 c
LSD (P=.05)	0.0	0.0	0.0	0.0	14.5
Standard Deviation	0.0	0.0	0.0	0.0	8.7
CV	0.0	0.0	0.0	0.0	13.9
Grand Mean	92.4	92.4	92.4	92.4	62.4
Bartlett's X2	0.0	0.0	0.0	0.0	18.098
P(Bartlett's X2)	.	.	.	.	0.053
Replicate F	0.000	0.000	0.000	0.000	4.000
Replicate Prob(F)	1.0000	1.0000	1.0000	1.0000	0.0297
Treatment F	0.000	0.000	0.000	0.000	62.219
Treatment Prob(F)	1.0000	1.0000	1.0000	1.0000	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.

# University of Nebraska

Weed Code				ERICA	ABUTH	POAAN	AMAPA
Crop Code				GLXMA	GLXMA	GLXMA	GLXMA
Rating Data Type				CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit				%	%	%	%
Rating Date				7/Jun/2007	7/Jun/2007	7/Jun/2007	7/Jun/2007
Trt-Eval Interval				28 DA-A	28 DA-A	28 DA-A	28 DA-A
Trt No.	Treatment Name	Rate	Grow Unit	6	7	8	9
1	Roundup Original Max AMS	22 oz/a 2 % w/w	pp pp	99 a	0 b	66 a	0 b
2	Roundup Original Max Valor AMS	22 oz/a 2 oz/a 2 % w/w	pp pp pp	99 a	63 a	99 a	70 a
3	Roundup Original Max Valor 2,4-D ester AMS	22 oz/a 2 oz/a 1 pt/a 2 % w/w	pp pp pp pp	99 a	62 a	99 a	82 a
4	Roundup Original Max Valor Clarity AMS	22 oz/a 2 oz/a 8 oz/a 2 % w/w	pp pp pp pp	99 a	70 a	99 a	70 a
5	Roundup Original Max AMS	22 oz/a 2 % w/w	pp pp	99 a	0 b	99 a	0 b
6	Roundup Original Max Valor AMS	22 oz/a 2 oz/a 2 % w/w	pp pp pp	99 a	65 a	99 a	67 a
7	Roundup Original Max Valor 2,4-D ester AMS	22 oz/a 2 oz/a 1 pt/a 2 % w/w	pp pp pp pp	99 a	63 a	99 a	58 a
8	Roundup Original Max Valor Clarity AMS	22 oz/a 2 oz/a 8 oz/a 2 % w/w	pp pp pp pp	99 a	60 a	99 a	70 a
9	Roundup Original Max AMS Intro 2,4-D ester	22 oz/a 2 % w/w 2 qt/a 1 pt/a	pp pp pp pp	99 a	68 a	99 a	60 a
10	Roundup Original Max AMS Prowl H20 2,4-D ester	22 oz/a 2 % w/w 2 pt/a 1 pt/a	pp pp pp pp	99 a	78 a	99 a	55 a
11	Roundup Original Max AMS Authority First 2,4-D ester	22 oz/a 2 % w/w 3.22 oz/a 1 pt/a	pp pp pp pp	99 a	87 a	99 a	82 a
12	Roundup Original Max Valor XLT AMS	22 oz/a 3 oz/a 2 % w/w	pp pp pp	99 a	58 a	99 a	78 a
13	Roundup Original Max Valor XLT 2,4-D ester AMS	22 oz/a 3 oz/a 1 pt/a 2 % w/w	pp pp pp pp	99 a	80 a	99 a	87 a
14	Gramoxone Inteon NIS 2,4-D ester	0.75 lb ai/a 0.125 % v/v 1 pt/a	pp pp pp	99 a	0 b	99 a	0 b
15	check			0 b	0 b	0 b	0 b
LSD (P=.05)				0.0	27.2	24.7	32.7
Standard Deviation				0.0	16.2	14.8	19.6
CV				0.0	32.28	16.36	37.69
Grand Mean				92.4	50.33	90.2	51.89
Bartlett's X2				0.0	4.695	0.0	14.527
P(Bartlett's X2)				.	0.911	.	0.15

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Weed Code	ERICA	ABUTH	POAAN	AMAPA
Crop Code	GLXMA	GLXMA	GLXMA	GLXMA
Rating Data Type	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit	%	%	%	%
Rating Date	7/Jun/2007	7/Jun/2007	7/Jun/2007	7/Jun/2007
Trt-Eval Interval	28 DA-A	28 DA-A	28 DA-A	28 DA-A
Replicate F	0.000	3.831	1.000	0.315
Replicate Prob(F)	1.0000	0.0338	0.3806	0.7322
Treatment F	0.000	11.904	9.571	8.836
Treatment Prob(F)	1.0000	0.0001	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.