

ACKNOWLEDGEMENTS

PURPOSE OF THIS BOOKLET

This booklet is provided as a guide to the 2006 processing vegetable weed control research control plots. The experiments outlined in this booklet are located at University of Guelph, Ridgetown Campus. We appreciate the funding, cooperation and assistance provided by the Ontario Processing Vegetable Growers, vegetable growers, and processing companies. As well, we would like to thank the chemical companies and their representatives, ag-extension personnel, and other research scientists for their ideas, plant material and herbicide samples that were used in these trials. Funding for the 2006 research program was provided by:

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We trust that the information provided by this research will further the science of weed control by assisting with the registration of herbicides through the minor use system. We also hope this information will be of use in the extension of proper herbicide recommendations, thereby enabling growers to achieve consistent, broad spectrum weed control with a minimum of crop damage.

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**2006
RIDGETOWN
WEATHER DATA**

RAINFALL IN MM.							
DATE	APRIL	MAY	JUNE	JULY	AUGUST	SEPT.	OCT.
1	0.2	0.0	0.4	0.0	0.0	0.0	0.4
2	0.2	1.4	0.0	0.0	0.0	4.2	0.0
3	5.4	1.6	14.2	0.2	11.8	0.2	6.8
4	0.0	0.0	4.6	3.4	0.2	0.0	24.8
5	3.6	0.0	0.0	0.0	0.0	0.0	0.0
6	3.2	0.0	0.0	0.0	0.0	0.2	0.0
7	10.8	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.4	0.0	0.0	0.2	0.0
9	0.0	0.0	0.0	0.0	0.0	16.4	0.2
10	0.0	2.0	0.0	5.4	0.0	0.0	0.0
11	0.0	19.6	0.0	12.0	0.0	0.0	16.0
12	9.4	5.2	0.0	25.8	0.0	27.0	0.2
13	0.6	0.6	0.0	0.0	0.0	8.0	0.0
14	9.4	0.6	0.0	1.2	0.0	0.2	0.0
15	0.0	2.6	0.0	0.2	0.0	0.0	0.0
16	0.0	8.0	0.0	0.0	0.0	0.0	0.2
17	0.0	10.6	0.0	0.0	0.0	0.2	28.8
18	0.0	13.0	0.0	0.4	0.0	24.6	0.0
19	0.0	3.2	7.6	0.0	7.0	0.4	0.2
20	0.0	0.2	0.0	0.0	0.4	0.0	1.4
21	2.0	6.6	22.6	0.0	0.0	0.0	0.0
22	0.4	0.0	2.0	0.0	0.0	1.4	16.8
23	17.2	0.0	0.0	0.2	0.0	5.4	0.0
24	0.0	0.0	0.0	0.0	25.2	2.2	0.0
25	0.0	0.0	0.0	3.2	0.8	0.2	0.0
26	0.2	5.0	0.0	19.0	0.0	0.0	0.0
27	0.0	0.0	2.2	2.8	18.4	12.2	14.2
28	0.0	0.0	0.0	9.0	10.0	0.8	8.2
29	0.0	0.0	1.0	0.0	1.8	0.0	0.0
30	0.0	0.0	0.0	15.4	0.0	6.2	0.0
31		3.6		0.0	0.0		0.2
TOTAL	62.6	83.8	55.0	98.2	75.6	110.0	118.4
30 YEAR AVG.	75.6	80.9	79.5	87.8	97.4	90.4	58.4

TEMPERATURE (C)

MEAN MAX	13.8	19.1	22.4	25.0	23.4	19.6	13.2
MEAN MIN	2.9	9.4	14.2	18.8	16.2	10.9	4.3
MEAN	8.4	14.3	18.3	21.9	19.8	15.3	8.8

TEMPERATURE, 30 YEAR AVERAGE (C)

MEAN MAX	12.2	19.0	24.2	27.0	25.8	22.0	14.9
MEAN MIN	2.0	8.0	13.2	15.8	15.2	11.6	5.9
MEAN	7.1	13.5	18.7	21.4	20.5	16.8	10.4

**2006
EXETER
WEATHER DATA**

RAINFALL IN MM.

DATE	APRIL	MAY	JUNE	JULY	AUGUST	SEPT.	OCT.
1	0.0	0.0	0.0	0.8	0.0	0.0	0.0
2	0.	0.0	0.0	0.0	44.4	9.4	6.4
3	9.8	0.0	18.0	0.0	22.8	0.0	15.6
4	4.0	0.0	0.0	0.0	0.0	0.0	13.8
5	2.0	0.0	0.0	0.0	0.0	0.0	0.0
6	2.6	0.0	0.0	0.0	0.0	2.6	0.0
7	14.8	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	2.8	0.0
9	0.0	0.0	0.0	17.6	0.0	0.0	0.0
10	0.0	11.6	0.0	0.0	0.0	0.0	12.6
11	2.2	1.6	0.0	13.2	0.0	1.0	16.6
12	15.0	1.6	0.0	0.0	0.0	4.8	3.6
13	1.8	0.8	0.2	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	3.6	9.8	0.0	0.0
15	0.0	4.0	0.0	1.0	0.0	0.0	0.0
16	0.0	3.2	0.0	0.0	0.0	0.0	13.4
17	0.0	12.0	0.0	1.6	0.0	0.0	12.2
18	0.	5.0	1.4	0.0	0.0	14.2	3.8
19	0.0	2.8	3.6	0.0	7.2	2.8	2.0
20	0.0	5.8	0.0	0.0	0.0	3.8	0.0
21	3.6	0.6	3.0	0.0	0.0	0.0	4.2
22	10.0	0.6	0.0	0.0	0.0	11.0	14.0
23	1.0	0.0	0.0	0.8	0.0	7.4	8.0
24	1.6	0.0	0.0	0.0	0.0	2.6	3.6
25	0.0	1.0	0.0	8.0	13.8	3.8	0.4
26	0.0	2.6	3.6	27.0	10.8	0.0	0.0
27	0.0	0.0	0.0	6.4	0.4	3.4	19.6
28	0.0	0.0	7.4	1.6	0.8	2.6	8.4
29	0.0	0.0	3.4	1.6	0.0	4.0	0.0
30	0.0	0.0	0.0	0.6	0.0	7.2	1.0
31		1.2		0.0	0.0		0.6
TOTAL	68.4	54.4	40.6	83.8	110.0	83.4	159.8
30 YEAR AVG.	77.6	80.4	76.6	82.8	79.8	111.4	86.8

TEMPERATURE (C)

MEAN MAX	13.8	19.3	24.6	27.5	25.5	19.4	12.0
MEAN MIN	2.7	9.3	13.5	16.9	16.1	11.3	4.3
MEAN	8.2	14.3	19.0	22.2	20.8	15.4	8.2

TEMPERATURE, 30 YEAR AVERAGE (C)

MEAN MAX	11.4	18.7	23.9	26.0	25.1	21.1	13.8
MEAN MIN	1.4	7.0	12.0	14.7	13.8	10.0	4.4
MEAN	6.4	12.9	18.0	20.4	19.4	15.5	9.1

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SUGAR BEET TOLERANCE AND WEED CONTROL WITH METAMITRON

DAVE BILYEA, DARREN ROBINSON

Experiment ID: SB06T2

CROP: BEAVA, BEET, SUGAR (CRYSTAL 963). Planted: Apr-19-06, 75 CM Row Width.
 Planting Method: MONOSEM VACUUM PLANTER. Emerged On: Apr-29-06.
 FIELD Site. Expt. Design: RANDOMIZED COMPLETE BLOCK. Reps: 4. Plot Size: 2 M x 40 M.
 Expt. Location: RCAT - K RANGE.

Site Description: Soil Texture: WATFORD/ BRADY SERIES. %OM:9.2 %Sand:49.4 %Silt:33.6 %Clay:17.0 pH:7.2 CEC: 20.

APPLICATION DESCRIPTION

Application:	A	B	C	D
Date	May-01-06	May-9-06	May-23-06	Jun-5-06
Time of Day	14:00	19:00	11:00	10:00
Method	SPRAY	SPRAY	SPRAY	SPRAY
Timing	POST 1	POST 2	POST 3	POST 4
Placement	FOLIAR	FOLIAR	FOLIAR	FOLIAR
Air Temp.	22 C	15 C	22 C	24 C
% Humidity	26	54	39	44
Wind Speed	4 KPH	6 KPH	1 KPH	2 KPH
Cloud Cover	20%	50	0	0
Equipment	CO2 SPRAY	CO2 SPRAY	CO2 SPRAY	CO2 SPRAY
Pressure	207	207	207	207
Nozzle Type	AIR INDUC	AIR INDUC	AIR INDUC	AIR INDUC
Nozzle Size	UDL120-02	UDL120-02	UDL120-02	UDL120-02
Noz. Spacing	50 CM	50 CM	50 CM	50 CM
Boom Length	1.5 M	1.5 M	1.5 M	1.5 M
Boom Height	50 CM	50 CM	50 CM	50 CM
Carrier	WATER	WATER	WATER	WATER
Appl. Volume	200 L/HA	200 L/HA	200 L/HA	200 L/HA

STAGE AT APPLICATION

Application	A	B	C	D
Crop Stage	BEAV COT	BEAV .2-3 LF	BEAV 4-5 LF	BEAV 6-7 LF
WEED 1 CODE	ABUTH COT	ABUTH COT	ABUTH COT	ABUTH COT
DENSITY	1 SQ M	1 SQ M	3 SQ M	1 SQ M
WEED 2 CODE	AMARE COT	AMARE COT	AMARE COT	AMARE COT
DENSITY	49 SQ M	156 SQ M	119 SQ M	88 SQ M
WEED 3 CODE	CHEAL COT	CHEAL COT	CHEAL COT	CHEAL COT
DENSITY	491 SQ M	366 SQ M	297 SQ M	220 SQ M
WEED4 CODE	PANDI 1 LF	PANDI 1-3 LF	PANDI 1-3 LF	PANDI 1-3 LF
DENSITY	21 SQ M	383 SQ M	230 SQ M	173 SQ M

Crop Code	BEAVA	BEAVA	BEAVA	BEAVA
Rating Data Type	INJURY	INJURY	INJURY	INJURY
Rating Unit	%	%	%	%
Rating Date	May-09-06	May-17-06	Jun-02-06	Jun-15-06
Crop Stage	COT-2 LF	2 LF	6 LF	10-11 LF

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code					
1	UNTREATED CHECK							0	a 0	a 0	b 0	a
2	METAMITRON	70	WG	900	G A/HA	POST1234	ABCD	0	a 0	a 0	b 0	a
3	METAMITRON	70	WG	1800	G A/HA	POST1234	ABCD	0	a 0	a 0	b 0	a
4	PHENMEDIPHAM/DESMEDIPHAM	150	EC	124	G A/HA	POST1234	ABCD	0	a 0	a 9	a 0	a
	TRIFLUSULFURON	50	DF	4.5	G A/HA	POST1234	ABCD					
	CLOPYRALID	360	SN	35	G A/HA	POST1234	ABCD					
	MERGE		SO	1	L/HA	POST1234	ABCD					
5	PHENMEDIPHAM/DESMEDIPHAM	150	EC	124	G A/HA	POST1234	ABCD	0	a 0	a 8	a 0	a
	TRIFLUSULFURON	50	DF	4.5	G A/HA	POST1234	ABCD					
	CLOPYRALID	360	SN	35	G A/HA	POST1234	ABCD					
	METAMITRON	70	WG	900	G A/HA	POST1234	ABCD					
	MERGE		SO	1	L/HA	POST1234	ABCD					
	LSD (P=.05)							0.0	0.0	6.3	0.0	
	Standard Deviation							0.0	0.0	4.1	0.0	
	CV							0.0	0.0	125.61	0.0	

Means followed by same letter do not significantly differ (P=.05, LSD)

SUGAR BEET TOLERANCE AND WEED CONTROL WITH METAMITRON

DAVE BILYEA, DARREN ROBINSON

Experiment ID: SB06T2

Weed Code		AMARE	CHEAL	PANDI
Crop Code	BEAVA	BEAVA	BEAVA	BEAVA
Rating Data Type	ST. COUNTS	CONTROL	CONTROL	CONTROL
Rating Unit	#/2M ROW	%	%	%
Rating Date	May-31-06	Jun-02-06	Jun-02-06	Jun-02-06
Crop Stage		6 LF	6 LF	6 LF
Weed Stage		20+ LF	20+ LF	1-3 LF
Weed Density, Unit		87.5SQ M	220 SQ M	173 SQ M

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code					
1	UNTREATED CHECK							10	a 0	c 0	c 0.0	c
2	METAMITRON	70	WG	900	G A/HA	POST1234	ABCD	9	a 67	b 65	b 25.0	c
3	METAMITRON	70	WG	1800	G A/HA	POST1234	ABCD	12	a 85	ab 84	ab 32.5	bc
4	PHENMEDIPHAM/DESMEDIPHAM	150	EC	124	G A/HA	POST1234	ABCD	10	a 94	a 95	a 66.3	ab
	TRIFLUSULFURON	50	DF	4.5	G A/HA	POST1234	ABCD					
	CLOPYRALID	360	SN	35	G A/HA	POST1234	ABCD					
	MERGE		SO	1	L/HA	POST1234	ABCD					
5	PHENMEDIPHAM/DESMEDIPHAM	150	EC	124	G A/HA	POST1234	ABCD	11	a 99	a 99	a 85.0	a
	TRIFLUSULFURON	50	DF	4.5	G A/HA	POST1234	ABCD					
	CLOPYRALID	360	SN	35	G A/HA	POST1234	ABCD					
	METAMITRON	70	WG	900	G A/HA	POST1234	ABCD					
	MERGE		SO	1	L/HA	POST1234	ABCD					

LSD (P=.05)	4.6	21.4	18.8	39.48
Standard Deviation	3.0	13.9	12.2	25.63
CV	28.97	20.11	17.81	61.38

Means followed by same letter do not significantly differ (P=.05, LSD)

Weed Code		ABUTH	AMARE	CHEAL	
Crop Code	BEAVA	BEAVA	BEAVA	BEAVA	
Rating Data Type	CONTROL	CONTROL	CONTROL	WEEDY	
Rating Unit	%	%	%	NO TOTAL	
Rating Date	Jun-26-06	Jun-26-06	Jun-26-06	Oct-16-06	
Crop Stage	10-11 LF	10-11 LF	10-11 LF		
Weed Stage	2-3 LF	20+ LF	20+ LF		
Weed Density, Unit	1.5 SQ M	3 SQ M	35 SQ M		

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code					
1	UNTREATED CHECK							0	c 0	b 0	c 4	b
2	METAMITRON	70	WG	900	G A/HA	POST1234	ABCD	79	ab 85	a 48	b 21	ab
3	METAMITRON	70	WG	1800	G A/HA	POST1234	ABCD	70	b 90	a 75	a 19	ab
4	PHENMEDIPHAM/DESMEDIPHAM	150	EC	124	G A/HA	POST1234	ABCD	94	a 76	a 91	a 26	a
	TRIFLUSULFURON	50	DF	4.5	G A/HA	POST1234	ABCD					
	CLOPYRALID	360	SN	35	G A/HA	POST1234	ABCD					
	MERGE		SO	1	L/HA	POST1234	ABCD					
5	PHENMEDIPHAM/DESMEDIPHAM	150	EC	124	G A/HA	POST1234	ABCD	96	a 98	a 98	a 36	a
	TRIFLUSULFURON	50	DF	4.5	G A/HA	POST1234	ABCD					
	CLOPYRALID	360	SN	35	G A/HA	POST1234	ABCD					
	METAMITRON	70	WG	900	G A/HA	POST1234	ABCD					
	MERGE		SO	1	L/HA	POST1234	ABCD					

LSD (P=.05)	21.0	22.6	27.2	19.7
Standard Deviation	13.6	14.7	17.7	12.8
CV	20.19	21.0	28.34	59.66

Means followed by same letter do not significantly differ (P=.05, LSD)

SUGAR BEET TOLERANCE AND WEED CONTROL WITH METAMITRON

DAVE BILYEA, DARREN ROBINSON

Experiment ID: SB06T2

Crop Code	BEAVA	BEAVA	BEAVA	BEAVA	BEAVA
Rating Data Type	W. FREE	WEEDY	W. FREE	WEEDY	W. FREE
Rating Unit	NO TOTAL	T/HA	T/HA	T/AC	T/AC
Rating Date	Oct-16-06	Oct-16-06	Oct-16-06	Oct-16-06	Oct-16-06

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code									
1	UNTREATED CHECK						36	a	9.6	c	77.0	a	4.3	c	34.3a	
2	METAMITRON	70	WG	900	G A/HA	POST1234	ABCD 33	a	31.5	bc	72.0	a	14.1	bc	32.1a	
3	METAMITRON	70	WG	1800	G A/HA	POST1234	ABCD 38	a	27.9	bc	81.0	a	12.5	bc	36.1a	
4	PHENMEDIPHAM/DESMEDIPHAM	150	EC	124	G A/HA	POST1234	ABCD 32	a	48.1	ab	70.2	a	21.4	ab	31.3a	
	TRIFLUSULFURON	50	DF	4.5	G A/HA	POST1234	ABCD									
	CLOPYRALID	360	SN	35	G A/HA	POST1234	ABCD									
	MERGE		SO	1	L/HA	POST1234	ABCD									
5	PHENMEDIPHAM/DESMEDIPHAM	150	EC	124	G A/HA	POST1234	ABCD 44	a	62.3	a	83.3	a	27.8	a	37.2a	
	TRIFLUSULFURON	50	DF	4.5	G A/HA	POST1234	ABCD									
	CLOPYRALID	360	SN	35	G A/HA	POST1234	ABCD									
	METAMITRON	70	WG	900	G A/HA	POST1234	ABCD									
	MERGE		SO	1	L/HA	POST1234	ABCD									
	LSD (P=.05)								19.4		30.50		30.76		13.61	13.72
	Standard Deviation								12.6		19.80		19.96		8.83	8.90
	CV								34.34		55.17		26.02		55.17	26.02

Means followed by same letter do not significantly differ (P=.05, LSD)

Trial Comments

CONCLUSIONS: Metamitron was tested alone and in combination with phenmedipham/desmedipham micro-rates or with trisulfuron and clopyralid. The metamitron micro-rates gave similar control to the phenmedipham/desmedipham micro-rates and gave good early season control with trisulfuron and clopyralid, but late season escapes occurred in the metamitron, trisulfuron and clopyralid treatments.

WEED CONTROL AND TOLERANCE OF SUGARBEETS TO TANK MIXES OF DESMEDIPHAM/PHENMEDIPHAM MICRO RATES WITH SINGLE AND SPLIT APPLICATIONS OF S-METOLACHLOR

DAVE BILYEA, DARREN ROBINSON

Experiment ID: SB06T3

CROP: BEAVA, BEET, SUGAR (CRYSTAL 963). Planted: Apr-19-06, 75 CM Row Width.

Planting Method: MONOSEM VACUUM PLANTER. Emerged On: Apr-29-06.

FIELD Site. Expt. Design: RANDOMIZED COMPLETE BLOCK. Reps: 4. Plot Size: 1.5 M x 44 M. Expt. Location: RCAT - K.

Site Description: Soil Texture: WATFORD/BRADY SERIES. %OM:9.2 %Sand:49.4 %Silt:33.6 %Clay: 17.0 pH: 7.2 CEC: 20.

APPLICATION DESCRIPTION

Application:	A	B	C	D
Date	May-01-06	May-9-06	May-23-06	Jun-5-06
Time of Day	14:00	19:00	11:00	10:00
Method	SPRAY	SPRAY	SPRAY	SPRAY
Timing	POST 1	POST 2	POST 3	POST 4
Placement	FOLIAR	FOLIAR	FOLIAR	FOLIAR
Air Temp.	22 C	15 C	22 C	24 C
% Humidity	26	54	39	44
Wind Speed	4 KPH	6 KPH	1 KPH	2 KPH
Cloud Cover	20%	50	0	0
Equipment	CO2 SPRAY	CO2 SPRAY	CO2 SPRAY	CO2 SPRAY
Pressure	207	207	207	207
Nozzle Type	AIR INDUC	AIR INDUC	AIR INDUC	AIR INDUC
Nozzle Size	UDL120-02	UDL120-02	UDL120-02	UDL120-02
Noz.Spacing	50 CM	50 CM	50 CM	50 CM
Boom Length	1.5 M	1.5 M	1.5 M	1.5 M
Boom Height	50 CM	50 CM	50 CM	50 CM
Carrier	WATER	WATER	WATER	WATER
Appl.Volume	200 L/HA	200 L/HA	200 L/HA	200 L/HA

STAGE AT APPLICATION

Application	A	B	C	D
Crop Stage	BEAV COT	BEAV .2-3 LF	BEAV 4-5 LF	BEAV 6-7 LF
WEED 1 CODE	ABUTH COT	ABUTH COT	ABUTH COT	ABUTH COT
DENSITY	2 SQ M	2 SQ M	8 SQ M	5 SQ M
WEED 2 CODE	AMARE COT	AMARE COT	AMARE COT	AMARE COT
DENSITY		71 SQ M	54 SQ M	33 SQ M
WEED 3 CODE	CHEAL COT	CHEAL COT	CHEAL COT	CHEAL COT
DENSITY	124 SQ M	234 SQ M	152 SQ M	166 SQ M

Crop Code	BEAVA	BEAVA	BEAVA	BEAVA
Rating Data Type	INJURY	INJURY	INJURY	INJURY
Rating Unit	%	%	%	%
Rating Date	May-09-06	May-17-06	May-25-06	Jun-06-06
Crop Stage	COT-2 LF	2 LF	4 LF	7-8 LF

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Grow Stg	Appl Code						
1	UNTREATED						0	a 0	a 0	a 3	ab	
2	DESMEDIPHAM/PHENMEDIPHAM	150	EC	125	G A/HA	POST1234	ABDC	0	a 0	a 1	a 0	b
	TRIFLUSULFURON-METHYL	50	DF	4.5	G A/HA	POST1234	ABDC					
	CLOPYRALID	360	SN	35	G A/HA	POST1234	ABDC					
	MERGE		SO	1	L/HA	POST1234	ABDC					
3	DESMEDIPHAM/PHENMEDIPHAM	150	EC	125	G A/HA	POST124	ABD	0	a 0	a 1	a 3	ab
	TRIFLUSULFURON-METHYL	50	DF	4.5	G A/HA	POST124	ABD					
	CLOPYRALID	360	SN	35	G A/HA	POST124	ABD					
	MERGE		SO	1	L/HA	POST124	ABD					
	DESMEDIPHAM/PHENMEDIPHAM	150	EC	125	G A/HA	POST3	C					
	TRIFLUSULFURON-METHYL	50	DF	4.5	G A/HA	POST3	C					
	CLOPYRALID	360	SN	35	G A/HA	POST3	C					
	S-METOLACHLOR/BENOXACOR	915	EC	1200	G A/HA	POST3	C					
	MERGE		SO	1	L/HA	POST3	C					
4	DESMEDIPHAM/PHENMEDIPHAM	150	EC	125	G A/HA	POST13	AC	0	a 0	a 1	a 3	ab
	TRIFLUSULFURON-METHYL	50	DF	4.5	G A/HA	POST13	AC					
	CLOPYRALID	360	SN	35	G A/HA	POST13	AC					
	MERGE		SO	1	L/HA	POST13	AC					
	DESMEDIPHAM/PHENMEDIPHAM	150	EC	125	G A/HA	POST24	BD					
	TRIFLUSULFURON-METHYL	50	DF	4.5	G A/HA	POST24	BD					
	CLOPYRALID	360	SN	35	G A/HA	POST24	BD					
	S-METOLACHLOR/BENOXACOR	915	EC	600	G A/HA	POST24	BD					
	MERGE		SO	1	L/HA	POST24	BD					

WEED CONTROL AND TOLERANCE OF SUGARBEETS TO TANK MIXES OF DESMEDIPHAM/PHENMEDIPHAM MICRO RATES WITH SINGLE AND SPLIT APPLICATIONS OF S-METOLACHLOR

DAVE BILYEA, DARREN ROBINSON

Experiment ID: SB06T3

Crop Code	Rating Data Type	Rating Unit	Rating Date	Crop Stage	BEAVA INJURY %	BEAVA INJURY %	BEAVA INJURY %	BEAVA INJURY %				
					May-09-06	May-17-06	May-25-06	Jun-06-06				
					COT-2 LF	2 LF	4 LF	7-8 LF				
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Grow Stg	Appl Code					
5	DESMEDIPHAM/PHENMEDIPHAM	150	EC	125	G A/HA	POST13	AC	0	a 0	a 1	a 6	a
	TRIFLUSULFURON-METHYL	50	DF	4.5	G A/HA	POST13	AC					
	CLOPYRALID	360	SN	35	G A/HA	POST13	AC					
	S-METOLACHLOR/BENOXACOR	915	EC	600	G A/HA	POST13	AC					
	MERGE		SO	1	L/HA	POST13	AC					
	DESMEDIPHAM/PHENMEDIPHAM	150	EC	125	G A/HA	POST24	BD					
	TRIFLUSULFURON-METHYL	50	DF	4.5	G A/HA	POST24	BD					
	CLOPYRALID	360	SN	35	G A/HA	POST24	BD					
	MERGE		SO	1	L/HA	POST24	BD					
6	S-METOLACHLOR/BENOXACOR	915	EC	1200	G A/HA	POST3	C	0	a 0	a 0	a 3	ab
7	S-METOLACHLOR/BENOXACOR	915	EC	600	G A/HA	POST24	BD	0	a 0	a 0	a 0	b
	S-METOLACHLOR/BENOXACOR	915	EC	600	G A/HA	POST13	AC					
LSD (P=.05)								0.0	0.0	2.6	5.9	
Standard Deviation								0.0	0.0	1.7	4.0	
CV								0.0	0.0	241.52	172.16	

Means followed by same letter do not significantly differ (P=.05, LSD)

Weed Code	Crop Code	Rating Data Type	Rating Unit	Rating Date	Crop Stage	Weed Density, Unit	BEAVA INJURY %	BEAVA INJURY %	BEAVA ST. COUNTS #/2M ROW	ABUTH BEAVA CONTROL %		
							Jun-23-06	Jul-04-06	May-31-06	Jun-06-06		
							10-12 LF	12-14 LF		7-8 LF		
										4.5 SQ M		
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Grow Stg	Appl Code					
1	UNTREATED							0	a 0	a 19	a 24	b
2	DESMEDIPHAM/PHENMEDIPHAM	150	EC	125	G A/HA	POST1234	ABDC	0	a 0	a 18	ab 92	a
	TRIFLUSULFURON-METHYL	50	DF	4.5	G A/HA	POST1234	ABDC					
	CLOPYRALID	360	SN	35	G A/HA	POST1234	ABDC					
	MERGE		SO	1	L/HA	POST1234	ABDC					
3	DESMEDIPHAM/PHENMEDIPHAM	150	EC	125	G A/HA	POST124	ABD	0	a 0	a 15	b 90	a
	TRIFLUSULFURON-METHYL	50	DF	4.5	G A/HA	POST124	ABD					
	CLOPYRALID	360	SN	35	G A/HA	POST124	ABD					
	MERGE		SO	1	L/HA	POST124	ABD					
	DESMEDIPHAM/PHENMEDIPHAM	150	EC	125	G A/HA	POST3	C					
	TRIFLUSULFURON-METHYL	50	DF	4.5	G A/HA	POST3	C					
	CLOPYRALID	360	SN	35	G A/HA	POST3	C					
	S-METOLACHLOR/BENOXACOR	915	EC	1200	G A/HA	POST3	C					
	MERGE		SO	1	L/HA	POST3	C					
4	DESMEDIPHAM/PHENMEDIPHAM	150	EC	125	G A/HA	POST13	AC	0	a 0	a 17	ab 97	a
	TRIFLUSULFURON-METHYL	50	DF	4.5	G A/HA	POST13	AC					
	CLOPYRALID	360	SN	35	G A/HA	POST13	AC					
	MERGE		SO	1	L/HA	POST13	AC					
	DESMEDIPHAM/PHENMEDIPHAM	150	EC	125	G A/HA	POST24	BD					
	TRIFLUSULFURON-METHYL	50	DF	4.5	G A/HA	POST24	BD					
	CLOPYRALID	360	SN	35	G A/HA	POST24	BD					
	S-METOLACHLOR/BENOXACOR	915	EC	600	G A/HA	POST24	BD					
	MERGE		SO	1	L/HA	POST24	BD					
5	DESMEDIPHAM/PHENMEDIPHAM	150	EC	125	G A/HA	POST13	AC	0	a 0	a 19	a 94	a
	TRIFLUSULFURON-METHYL	50	DF	4.5	G A/HA	POST13	AC					
	CLOPYRALID	360	SN	35	G A/HA	POST13	AC					
	S-METOLACHLOR/BENOXACOR	915	EC	600	G A/HA	POST13	AC					
	MERGE		SO	1	L/HA	POST13	AC					
	DESMEDIPHAM/PHENMEDIPHAM	150	EC	125	G A/HA	POST24	BD					
	TRIFLUSULFURON-METHYL	50	DF	4.5	G A/HA	POST24	BD					
	CLOPYRALID	360	SN	35	G A/HA	POST24	BD					
	MERGE		SO	1	L/HA	POST24	BD					
6	S-METOLACHLOR/BENOXACOR	915	EC	1200	G A/HA	POST3	C	0	a 0	a 19	a 46	b
7	S-METOLACHLOR/BENOXACOR	915	EC	600	G A/HA	POST24	BD	0	a 0	a 15	b 46	b
	S-METOLACHLOR/BENOXACOR	915	EC	600	G A/HA	POST13	AC					
LSD (P=.05)								0.0	0.0	3.2	30.2	
Standard Deviation								0.0	0.0	2.1	20.4	
CV								0.0	0.0	12.35	29.16	

Means followed by same letter do not significantly differ (P=.05, LSD)

WEED CONTROL AND TOLERANCE OF SUGARBEETS TO TANK MIXES OF DESMEDIPHAM/PHENMEDIPHAM MICRO RATES WITH SINGLE AND SPLIT APPLICATIONS OF S-METOLACHLOR

DAVE BILYEA, DARREN ROBINSON

Experiment ID: SB06T3

Trt No.	Treatment Name	Form Conc	Form Type	Form Rate	Rate Unit	Grow Stg	Appl Code	AMARE	CHEAL	ABUTH	AMARE	
								BEAVA	BEAVA	BEAVA	BEAVA	
								CONTROL	CONTROL	CONTROL	CONTROL	
								%	%	%	%	
								Jun-06-06	Jun-06-06	Jul-04-06	Jul-04-06	
								7-8 LF	7-8 LF	12-14 LF	12-14 LF	
										6-9 LF	3-20+ LF	
								33 SQ M	166 SQ M	1.5 SQ M	11.5SQ M	
1	UNTREATED							24	b 24	b 0	c 0	b
2	DESMEDIPHAM/PHENMEDIPHAM	150	EC	125	G A/HA	POST1234	ABDC	86	a 84	a 97	ab 95	a
	TRIFLUSULFURON-METHYL	50	DF	4.5	G A/HA	POST1234	ABDC					
	CLOPYRALID	360	SN	35	G A/HA	POST1234	ABDC					
	MERGE		SO	1	L/HA	POST1234	ABDC					
3	DESMEDIPHAM/PHENMEDIPHAM	150	EC	125	G A/HA	POST124	ABD	87	a 85	a 97	ab 96	a
	TRIFLUSULFURON-METHYL	50	DF	4.5	G A/HA	POST124	ABD					
	CLOPYRALID	360	SN	35	G A/HA	POST124	ABD					
	MERGE		SO	1	L/HA	POST124	ABD					
	DESMEDIPHAM/PHENMEDIPHAM	150	EC	125	G A/HA	POST3	C					
	TRIFLUSULFURON-METHYL	50	DF	4.5	G A/HA	POST3	C					
	CLOPYRALID	360	SN	35	G A/HA	POST3	C					
	S-METOLACHLOR/BENOXACOR	915	EC	1200	G A/HA	POST3	C					
	MERGE		SO	1	L/HA	POST3	C					
4	DESMEDIPHAM/PHENMEDIPHAM	150	EC	125	G A/HA	POST13	AC	91	a 91	a 98	a 99	a
	TRIFLUSULFURON-METHYL	50	DF	4.5	G A/HA	POST13	AC					
	CLOPYRALID	360	SN	35	G A/HA	POST13	AC					
	MERGE		SO	1	L/HA	POST13	AC					
	DESMEDIPHAM/PHENMEDIPHAM	150	EC	125	G A/HA	POST24	BD					
	TRIFLUSULFURON-METHYL	50	DF	4.5	G A/HA	POST24	BD					
	CLOPYRALID	360	SN	35	G A/HA	POST24	BD					
	S-METOLACHLOR/BENOXACOR	915	EC	600	G A/HA	POST24	BD					
	MERGE		SO	1	L/HA	POST24	BD					
5	DESMEDIPHAM/PHENMEDIPHAM	150	EC	125	G A/HA	POST13	AC	86	a 90	a 97	ab 97	a
	TRIFLUSULFURON-METHYL	50	DF	4.5	G A/HA	POST13	AC					
	CLOPYRALID	360	SN	35	G A/HA	POST13	AC					
	S-METOLACHLOR/BENOXACOR	915	EC	600	G A/HA	POST13	AC					
	MERGE		SO	1	L/HA	POST13	AC					
	DESMEDIPHAM/PHENMEDIPHAM	150	EC	125	G A/HA	POST24	BD					
	TRIFLUSULFURON-METHYL	50	DF	4.5	G A/HA	POST24	BD					
	CLOPYRALID	360	SN	35	G A/HA	POST24	BD					
	MERGE		SO	1	L/HA	POST24	BD					
6	S-METOLACHLOR/BENOXACOR	915	EC	1200	G A/HA	POST3	C	51	b 43	b 95	b 96	a
7	S-METOLACHLOR/BENOXACOR	915	EC	600	G A/HA	POST24	BD	35	b 35	b 95	b 97	a
	S-METOLACHLOR/BENOXACOR	915	EC	600	G A/HA	POST13	AC					
	LSD (P=.05)							31.0	31.0	3.1	4.1	
	Standard Deviation							20.9	20.9	2.1	2.7	
	CV							31.76	32.44	2.55	3.3	

Means followed by same letter do not significantly differ (P=.05, LSD)

WEED CONTROL AND TOLERANCE OF SUGARBEETS TO TANK MIXES OF DESMEDIPHAM/PHENMEDIPHAM MICRO RATES WITH SINGLE AND SPLIT APPLICATIONS OF S-METOLACHLOR

DAVE BILYEA, DARREN ROBINSON

Experiment ID: SB06T3

Weed Code
 Crop Code
 Rating Data Type
 Rating Unit
 Rating Date
 Crop Stage
 Weed Stage
 Weed Density, Unit

CHEAL
 BEAVA CONTROL %
 BEAVA WEEDY NO TOT
 BEAVA WEED FREE NO TOT
 BEAVA WEEDY T/HA
 Jul-04-06
 12-14 LF
 6-20+ LF
 98 SQ M

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code					
1	UNTREATED							0	b 6	b 47	a 6.4	b
2	DESMEDIPHAM/PHENMEDIPHAM	150	EC	125	G A/HA	POST1234	ABDC	84	a 42	a 48	a 57.5	a
	TRIFLUSULFURON-METHYL	50	DF	4.5	G A/HA	POST1234	ABDC					
	CLOPYRALID	360	SN	35	G A/HA	POST1234	ABDC					
	MERGE		SO	1	L/HA	POST1234	ABDC					
3	DESMEDIPHAM/PHENMEDIPHAM	150	EC	125	G A/HA	POST124	ABD	85	a 44	a 52	a 61.3	a
	TRIFLUSULFURON-METHYL	50	DF	4.5	G A/HA	POST124	ABD					
	CLOPYRALID	360	SN	35	G A/HA	POST124	ABD					
	MERGE		SO	1	L/HA	POST124	ABD					
	DESMEDIPHAM/PHENMEDIPHAM	150	EC	125	G A/HA	POST3	C					
	TRIFLUSULFURON-METHYL	50	DF	4.5	G A/HA	POST3	C					
	CLOPYRALID	360	SN	35	G A/HA	POST3	C					
	S-METOLACHLOR/BENOXACOR	915	EC	1200	G A/HA	POST3	C					
	MERGE		SO	1	L/HA	POST3	C					
4	DESMEDIPHAM/PHENMEDIPHAM	150	EC	125	G A/HA	POST13	AC	90	a 46	a 49	a 68.7	a
	TRIFLUSULFURON-METHYL	50	DF	4.5	G A/HA	POST13	AC					
	CLOPYRALID	360	SN	35	G A/HA	POST13	AC					
	MERGE		SO	1	L/HA	POST13	AC					
	DESMEDIPHAM/PHENMEDIPHAM	150	EC	125	G A/HA	POST24	BD					
	TRIFLUSULFURON-METHYL	50	DF	4.5	G A/HA	POST24	BD					
	CLOPYRALID	360	SN	35	G A/HA	POST24	BD					
	S-METOLACHLOR/BENOXACOR	915	EC	600	G A/HA	POST24	BD					
	MERGE		SO	1	L/HA	POST24	BD					
5	DESMEDIPHAM/PHENMEDIPHAM	150	EC	125	G A/HA	POST13	AC	90	a 44	a 50	a 62.1	a
	TRIFLUSULFURON-METHYL	50	DF	4.5	G A/HA	POST13	AC					
	CLOPYRALID	360	SN	35	G A/HA	POST13	AC					
	S-METOLACHLOR/BENOXACOR	915	EC	600	G A/HA	POST13	AC					
	MERGE		SO	1	L/HA	POST13	AC					
	DESMEDIPHAM/PHENMEDIPHAM	150	EC	125	G A/HA	POST24	BD					
	TRIFLUSULFURON-METHYL	50	DF	4.5	G A/HA	POST24	BD					
	CLOPYRALID	360	SN	35	G A/HA	POST24	BD					
	MERGE		SO	1	L/HA	POST24	BD					
6	S-METOLACHLOR/BENOXACOR	915	EC	1200	G A/HA	POST3	C	0	b 5	b 45	a 6.8	b
7	S-METOLACHLOR/BENOXACOR	915	EC	600	G A/HA	POST24	BD	8	b 4	b 51	a 8.0	b
	S-METOLACHLOR/BENOXACOR	915	EC	600	G A/HA	POST13	AC					
	LSD (P=.05)							9.2	9.6	11.0	13.28	
	Standard Deviation							6.2	6.5	7.4	8.94	
	CV							12.17	23.96	15.21	23.11	

Means followed by same letter do not significantly differ (P=.05, LSD)

WEED CONTROL AND TOLERANCE OF SUGARBEETS TO TANK MIXES OF DESMEDIPHAM/PHENMEDIPHAM MICRO RATES WITH SINGLE AND SPLIT APPLICATIONS OF S-METOLACHLOR

DAVE BILYEA, DARREN ROBINSON

Experiment ID: SB06T3

Crop Code				BEAVA		BEAVA		BEAVA					
Rating Data Type				WEED FREE		WEEDY		WEED FREE					
Rating Unit				T/HA		T/AC		T/AC					
Rating Date				Oct-16-06		Oct-16-06		Oct-16-06					
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Grow Stg	Appl Code						
1	UNTREATED							87.0	bc	2.9	b	38.8	bc
2	DESMEDIPHAM/PHENMEDIPHAM	150	EC	125	G A/HA	POST1234	ABDC	83.3	c	25.7	a	37.1	c
	TRIFLUSULFURON-METHYL	50	DF	4.5	G A/HA	POST1234	ABDC						
	CLOPYRALID	360	SN	35	G A/HA	POST1234	ABDC						
	MERGE		SO	1	L/HA	POST1234	ABDC						
3	DESMEDIPHAM/PHENMEDIPHAM	150	EC	125	G A/HA	POST124	ABD	97.4	abc	27.4	a	43.5	abc
	TRIFLUSULFURON-METHYL	50	DF	4.5	G A/HA	POST124	ABD						
	CLOPYRALID	360	SN	35	G A/HA	POST124	ABD						
	MERGE		SO	1	L/HA	POST124	ABD						
	DESMEDIPHAM/PHENMEDIPHAM	150	EC	125	G A/HA	POST3	C						
	TRIFLUSULFURON-METHYL	50	DF	4.5	G A/HA	POST3	C						
	CLOPYRALID	360	SN	35	G A/HA	POST3	C						
	S-METOLACHLOR/BENOXACOR	915	EC	1200	G A/HA	POST3	C						
	MERGE		SO	1	L/HA	POST3	C						
4	DESMEDIPHAM/PHENMEDIPHAM	150	EC	125	G A/HA	POST13	AC	98.8	ab	30.6	a	44.1	ab
	TRIFLUSULFURON-METHYL	50	DF	4.5	G A/HA	POST13	AC						
	CLOPYRALID	360	SN	35	G A/HA	POST13	AC						
	MERGE		SO	1	L/HA	POST13	AC						
	DESMEDIPHAM/PHENMEDIPHAM	150	EC	125	G A/HA	POST24	BD						
	TRIFLUSULFURON-METHYL	50	DF	4.5	G A/HA	POST24	BD						
	CLOPYRALID	360	SN	35	G A/HA	POST24	BD						
	S-METOLACHLOR/BENOXACOR	915	EC	600	G A/HA	POST24	BD						
	MERGE		SO	1	L/HA	POST24	BD						
5	DESMEDIPHAM/PHENMEDIPHAM	150	EC	125	G A/HA	POST13	AC	93.9	bc	27.7	a	41.9	bc
	TRIFLUSULFURON-METHYL	50	DF	4.5	G A/HA	POST13	AC						
	CLOPYRALID	360	SN	35	G A/HA	POST13	AC						
	S-METOLACHLOR/BENOXACOR	915	EC	600	G A/HA	POST13	AC						
	MERGE		SO	1	L/HA	POST13	AC						
	DESMEDIPHAM/PHENMEDIPHAM	150	EC	125	G A/HA	POST24	BD						
	TRIFLUSULFURON-METHYL	50	DF	4.5	G A/HA	POST24	BD						
	CLOPYRALID	360	SN	35	G A/HA	POST24	BD						
	MERGE		SO	1	L/HA	POST24	BD						
6	S-METOLACHLOR/BENOXACOR	915	EC	1200	G A/HA	POST3	C	91.3	bc	3.0	b	40.7	bc
7	S-METOLACHLOR/BENOXACOR	915	EC	600	G A/HA	POST24	BD	110.4	a	3.6	b	49.3	a
	S-METOLACHLOR/BENOXACOR	915	EC	600	G A/HA	POST13	AC						
LSD (P=.05)								14.77		5.92		6.59	
Standard Deviation								9.94		3.99		4.44	
CV								10.51		23.11		10.51	

Means followed by same letter do not significantly differ (P=.05, LSD)

Trial Comments

CONCLUSIONS: The best control and yield was obtained when s-metolachlor (600 g ai ha⁻¹) was applied in the second and fourth micro-rate applications. S-metolachlor applied at(1200 g ai ha⁻¹) applied caused significant injury and some yield loss when applied in a single application.

COMPARISON OF ADJUVANTS FOR WEED CONTROL AND TOLERANCE IN SUGAR BEETS

DAVE BILYEA, DARREN ROBINSON

Experiment ID: SB06T4

CROP: BEAVA, BEET, SUGAR (CRYSTAL 963). Planted: Apr-19-06, 75 CM Row Width.

Planting Method: MONOSEM VACUUM PLANTER. Emerged On: Apr-29-06.

FIELD Site. Expt. Design: RANDOMIZED COMPLETE BLOCK. Reps: 4. Plot Size: 1.5 M x 44 M. Expt. Location: RCAT - K.

Site Description: Soil Texture: WATFORD/BRADY SERIES. %OM:9.2 %Sand:49.4 %Silt:33.6 %Clay: 17.0 pH: 7.2 CEC: 20.

APPLICATION DESCRIPTION

Application:	A	B	C	D
Date	May-01-06	May-9-06	May-23-06	Jun-5-06
Time of Day	14:00	19:00	11:00	10:00
Method	SPRAY	SPARY	SPRAY	SPRAY
Timing	POST 1	POST 2	POST 3	POST 4
Placement	FOLIAR	FOLIAR	FOLIAR	FOLIAR
Air Temp.	22 C	15 C	22 C	24 C
% Humidity	26	54	39	44
Wind Speed	4 KPH	6 KPH	1 KPH	2 KPH
Cloud Cover	20%	50	0	0
Equipment	CO2 SPRAY	CO2 SPRAY	CO2 SPRAY	CO2 SPRAY
Pressure	207	207	207	207
Nozzle Type	AIR INDUC	AIR INDUC	AIR INDUC	AIR INDUC
Nozzle Size	UDL120-02	UDL120-02	UDL120-02	UDL120-02
Noz. Spacing	50 CM	50 CM	50 CM	50 CM
Boom Length	1.5 M	1.5 M	1.5 M	1.5 M
Boom Height	50 CM	50 CM	50 CM	50 CM
Carrier	WATER	WATER	WATER	WATER
Appl. Volume	200 L/HA	200 L/HA	200 L/HA	200 L/HA

STAGE AT APPLICATION

Application	A	B	C	D
Crop Stage	BEAV COT	BEAV .2-3 LF	BEAV 4-5 LF	BEAV 6-7 LF
WEED 1 CODE	ABUTH COT	ABUTH COT	ABUTH COT	ABUTH COT
DENSITY	2 SQ M	2 SQ M	8 SQ M	0 SQ M
WEED 2 CODE	AMARE COT	AMARE COT	AMARE COT	AMARE COT
DENSITY	4 SQ M	81 SQ M	33 SQ M	35 SQ M
WEED 3 CODE	CHEAL COT	CHEAL COT	CHEAL COT	CHEAL COT
DENSITY	79 SQ M	649 SQ M	235 SQ M	131 SQ M

Crop Code	BEAVA INJURY %	BEAVA INJURY %	BEAVA INJURY %	BEAVA INJURY %
Rating Data Type				
Rating Unit	%	%	%	%
Rating Date	May-09-06	May-17-06	Jun-03-06	Jun-15-06
Crop Stage	COT-2 LF	2 LF	6 LF	10-11 LF

Trt No.	Treatment Name	Form Conc	Form Type	Form Rate	Rate Unit	Grow Stg	Appl Code				
1	UNTREATED							0	a 0	a 3	a 0 b
2	DESMEDIPHAM/PHENMEDIPHAM	150	EC	125	G A/HA	POST1234	ABDC	0	a 0	a 3	a 0 b
	TRIFLUSULFURON-METHYL	50	DF	4.5	G A/HA	POST1234	ABDC				
	CLOPYRALID	360	SN	35	G A/HA	POST1234	ABDC				
	MERGE		SO	1	L/HA	POST1234	ABDC				
3	DESMEDIPHAM/PHENMEDIPHAM	150	EC	125	G A/HA	POST1234	ABDC	0	a 0	a 6	a 0 b
	TRIFLUSULFURON-METHYL	50	DF	4.5	G A/HA	POST1234	ABDC				
	CLOPYRALID	360	SN	35	G A/HA	POST1234	ABDC				
	MSO		SO	1.5	% V/V	POST1234	ABDC				
4	DESMEDIPHAM/PHENMEDIPHAM	150	EC	125	G A/HA	POST1234	ABDC	0	a 0	a 3	a 0 b
	TRIFLUSULFURON-METHYL	50	DF	4.5	G A/HA	POST1234	ABDC				
	CLOPYRALID	360	SN	35	G A/HA	POST1234	ABDC				
	REDDY-IT		SO	0.25	% V/V	POST1234	ABDC				
	UAN 28%		SO	1.25	L/HA	POST1234	ABDC				
5	DESMEDIPHAM/PHENMEDIPHAM	150	EC	250	G A/HA	POST1234	ABDC	0	a 0	a 3	a 4 a
	TRIFLUSULFURON-METHYL	50	DF	9	G A/HA	POST1234	ABDC				
	CLOPYRALID	360	SN	70	G A/HA	POST1234	ABDC				
	MSO		SO	3	% V/V	POST1234	ABDC				

LSD (P=.05)	0.0	0.0	9.5	1.7
Standard Deviation	0.0	0.0	6.2	1.1
CV	0.0	0.0	189.47	149.07

Means followed by same letter do not significantly differ (P=.05, LSD)

COMPARISON OF ADJUVANTS FOR WEED CONTROL AND TOLERANCE IN SUGAR BEETS

DAVE BILYEA, DARREN ROBINSON

Experiment ID: SB06T4

								BEAVA	ABUTH	AMARE	CHEAL	
								ST. COUNT	BEAVA	BEAVA	BEAVA	
								#/2M RW	CONTROL	CONTROL	CONTROL	
								May-31-06	Jun-03-06	Jun-03-06	Jun-03-06	
									6 LF	6 LF	6 LF	
									7 SQ M	54.5SQ M	124 SQ M	
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Grow Stg	Appl Code					
1	UNTREATED							15	a 0	c 0	c 0	c
2	DESMEDIPHAM/PHENMEDIPHAM	150	EC	125	G A/HA	POST1234	ABDC	17	a 92	b 89	b 89	b
	TRIFLUSULFURON-METHYL	50	DF	4.5	G A/HA	POST1234	ABDC					
	CLOPYRALID	360	SN	35	G A/HA	POST1234	ABDC					
	MERGE		SO	1	L/HA	POST1234	ABDC					
3	DESMEDIPHAM/PHENMEDIPHAM	150	EC	125	G A/HA	POST1234	ABDC	16	a 93	b 89	b 89	b
	TRIFLUSULFURON-METHYL	50	DF	4.5	G A/HA	POST1234	ABDC					
	CLOPYRALID	360	SN	35	G A/HA	POST1234	ABDC					
	MSO		SO	1.5	% V/V	POST1234	ABDC					
4	DESMEDIPHAM/PHENMEDIPHAM	150	EC	125	G A/HA	POST1234	ABDC	19	a 94	b 94	b 91	b
	TRIFLUSULFURON-METHYL	50	DF	4.5	G A/HA	POST1234	ABDC					
	CLOPYRALID	360	SN	35	G A/HA	POST1234	ABDC					
	REDDY-IT		SO	0.25	% V/V	POST1234	ABDC					
	UAN 28%		SO	1.25	L/HA	POST1234	ABDC					
5	DESMEDIPHAM/PHENMEDIPHAM	150	EC	250	G A/HA	POST1234	ABDC	15	a 99	a 99	a 99	a
	TRIFLUSULFURON-METHYL	50	DF	9	G A/HA	POST1234	ABDC					
	CLOPYRALID	360	SN	70	G A/HA	POST1234	ABDC					
	MSO		SO	3	% V/V	POST1234	ABDC					
LSD (P=.05)								6.5	5.0	5.4	6.0	
Standard Deviation								4.2	3.3	3.5	3.9	
CV								25.96	4.32	4.72	5.3	

Means followed by same letter do not significantly differ (P=.05, LSD)

								ABUTH	AMARE	CHEAL		
								BEAVA	BEAVA	BEAVA	BEAVA	
								CONTROL	CONTROL	CONTROL	WEEDY	
								%	%	%	TOT NO	
								Jun-26-06	Jun-26-06	Jun-26-06	Oct-16-06	
								10-11 LF	10-11 LF	10-11 LF		
								1 SQ M	19 SQ M	77 SQ M		
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Grow Stg	Appl Code					
1	UNTREATED							0	b 0	c 0	c 2	b
2	DESMEDIPHAM/PHENMEDIPHAM	150	EC	125	G A/HA	POST1234	ABDC	96	a 91	ab 88	b 39	a
	TRIFLUSULFURON-METHYL	50	DF	4.5	G A/HA	POST1234	ABDC					
	CLOPYRALID	360	SN	35	G A/HA	POST1234	ABDC					
	MERGE		SO	1	L/HA	POST1234	ABDC					
3	DESMEDIPHAM/PHENMEDIPHAM	150	EC	125	G A/HA	POST1234	ABDC	96	a 88	b 89	ab 41	a
	TRIFLUSULFURON-METHYL	50	DF	4.5	G A/HA	POST1234	ABDC					
	CLOPYRALID	360	SN	35	G A/HA	POST1234	ABDC					
	MSO		SO	1.5	% V/V	POST1234	ABDC					
4	DESMEDIPHAM/PHENMEDIPHAM	150	EC	125	G A/HA	POST1234	ABDC	97	a 93	ab 93	ab 41	a
	TRIFLUSULFURON-METHYL	50	DF	4.5	G A/HA	POST1234	ABDC					
	CLOPYRALID	360	SN	35	G A/HA	POST1234	ABDC					
	REDDY-IT		SO	0.25	% V/V	POST1234	ABDC					
	UAN 28%		SO	1.25	L/HA	POST1234	ABDC					
5	DESMEDIPHAM/PHENMEDIPHAM	150	EC	250	G A/HA	POST1234	ABDC	98	a 94	a 95	a 50	a
	TRIFLUSULFURON-METHYL	50	DF	9	G A/HA	POST1234	ABDC					
	CLOPYRALID	360	SN	70	G A/HA	POST1234	ABDC					
	MSO		SO	3	% V/V	POST1234	ABDC					
LSD (P=.05)								2.9	5.1	6.1	11.6	
Standard Deviation								1.9	3.3	4.0	7.5	
CV								2.45	4.54	5.46	21.95	

Means followed by same letter do not significantly differ (P=.05, LSD)

COMPARISON OF ADJUVANTS FOR WEED CONTROL AND TOLERANCE IN SUGAR BEETS

DAVE BILYEA, DARREN ROBINSON

Experiment ID: SB06T4

Crop Code	Rating Data Type	Rating Unit	Rating Date	BEAVA WEED FREE TOT NO Oct-16-06	BEAVA WEEDY T/HA Oct-16-06	BEAVA W. FREE T/HA Oct-16-06	BEAVA WEEDY T/AC Oct-16-06	BEAVA W. FREE T/AC Oct-16-06
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Grow Stg	Appl Code	
1	UNTREATED						46	
2	DESMEDIPHAM/PHENMEDIPHAM	150	EC	125	G A/HA	POST1234	ABDC 48	a 4.6 c 80.5
	TRIFLUSULFURON-METHYL	50	DF	4.5	G A/HA	POST1234	ABDC	a 59.1 ab 89.9
	CLOPYRALID	360	SN	35	G A/HA	POST1234	ABDC	
	MERGE		SO	1	L/HA	POST1234	ABDC	
3	DESMEDIPHAM/PHENMEDIPHAM	150	EC	125	G A/HA	POST1234	ABDC 44	a 54.2 b 84.7
	TRIFLUSULFURON-METHYL	50	DF	4.5	G A/HA	POST1234	ABDC	a 24.2 b 37.8a
	CLOPYRALID	360	SN	35	G A/HA	POST1234	ABDC	
	MSO		SO	1.5	% V/V	POST1234	ABDC	
4	DESMEDIPHAM/PHENMEDIPHAM	150	EC	125	G A/HA	POST1234	ABDC 57	a 62.2 ab 99.7
	TRIFLUSULFURON-METHYL	50	DF	4.5	G A/HA	POST1234	ABDC	a 27.7 ab 44.5a
	CLOPYRALID	360	SN	35	G A/HA	POST1234	ABDC	
	REDDY-IT		SO	0.25	% V/V	POST1234	ABDC	
	UAN 28%		SO	1.25	L/HA	POST1234	ABDC	
5	DESMEDIPHAM/PHENMEDIPHAM	150	EC	250	G A/HA	POST1234	ABDC 52	a 79.3 a 95.0
	TRIFLUSULFURON-METHYL	50	DF	9	G A/HA	POST1234	ABDC	a 35.4 a 42.4a
	CLOPYRALID	360	SN	70	G A/HA	POST1234	ABDC	
	MSO		SO	3	% V/V	POST1234	ABDC	
LSD (P=.05)							14.0	21.64 21.89 9.65 9.77
Standard Deviation							9.1	14.04 14.21 6.26 6.34
CV							18.44	27.08 15.79 27.08 15.79

Means followed by same letter do not significantly differ (P=.05, LSD)

Trial Comments

CONCLUSIONS: We compared Reddy-It, Merge and MSO in sugarbeets for efficacy with micro-rates. MSO and Merge provided equivalent weed control and yield in sugarbeets.

TIMING OF WEATHERMAX APPLICATIONS IN ROUNDUP READY SUGAR BEETS

DAVE BILYEA, DARREN ROBINSON

Experiment ID: SB06T5

CROP: BEAVA, SUGAR BEET (CRYSTAL 963). Planted: Apr-19-06, 75 CM Row Width. Planting Method: MONOSEM VACUUM
 Emerged On: Apr-29-06.
 FIELD Site. Expt. Design: RANDOMIZED COMPLETE BLOCK. Reps: 4. Plot Size: 1.5 M x 44 M. Expt. Location: RCAT - K.
 Site Description: Soil Texture: WATFORD/BRADY SERIES. %OM:9.2% Sand:49.4% Silt:33.6% Clay:17.0 pH:7.2 CEC:20.

APPLICATION DESCRIPTION

Application:	A	B	C	D
Date :	May-01-06	May-9-06	May-23-06	Jun-5-06
Time of Day:	14:00	19:00	11:00	10:00
Method :	SPRAY	SPARY	SPRAY	SPRAY
Timing :	POST 1	POST 2	POST 3	POST 4
Placement :	FOLIAR	FOLIAR	FOLIAR	FOLIAR
Air Temp. :	22 C	15 C	22 C	24 C
% Humidity :	26	54	39	44
Wind Speed :	4 KPH	6 KPH	1 KPH	2 KPH
Cloud Cover:	20%	50	0	0
Equipment :	CO2 SPRAY	CO2 SPRAY	CO2 SPRAY	CO2 SPRAY
Pressure :	207	207	207	207
Nozzle Type:	AIR INDUC	AIR INDUC	AIR INDUC	AIR INDUC
Nozzle Size:	UDL120-02	UDL120-02	UDL120-02	UDL120-02
Noz.Spacing:	50 CM	50 CM	50 CM	50 CM
Boom Length:	1.5 M	1.5 M	1.5 M	1.5 M
Boom Height:	50 CM	50 CM	50 CM	50 CM
Carrier :	WATER	WATER	WATER	WATER
Appl.Volume:	200 L/HA	200 L/HA	200 L/HA	200 L/HA

STAGE AT APPLICATION

Application	A	B	C	D
Crop Stage	BEAV COT	BEAV .2-3 LF	BEAV 4-5 LF	BEAV 4-5 LF
WEED 1 CODE	ABUTH COT	ABUTH COT	ABUTH COT	ABUTH COT
DENSITY	2 SQ M	6 SQ M	3 SQ M	7 SQ M
WEED 2 CODE	AMARE COT	AMARE COT	AMARE COT-6 LF	AMARE
DENSITY	25 SQ M	47 SQ M	56 SQ M	0 SQ M
WEED 3 CODE	CHEAL COT	CHEAL COT	CHEAL COT	CHEAL COT
DENSITY	117 SQ M	498 SQ M	288 SQ M	58 SQ M

Crop Code	BEAVA	BEAVA	BEAVA	BEAVA	BEAVA
Rating Data Type	INJURY	INJURY	INJURY	INJURY	INJURY
Rating Unit	%	%	%	%	%
Rating Date	May-09-06	May-17-06	May-25-06	Jun-02-06	Jun-06-06
Crop Stage	COT LF	2 LF	4 LF	6 LF	6-8 LF

Trt No.	Treatment Name	Form Conc	Form Type	Form Rate	Rate Unit	Grow Stg	Appl Code								
1	UNTREATED							0	a	0	a	0	a	0	a
2	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST1	A	0	a	0	a	0	a	0	a
3	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST2	B	0	a	0	a	0	a	0	a
4	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST3	C	0	a	0	a	0	a	0	a
5	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST4	D	0	a	0	a	0	a	0	a
6	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST1	A	0	a	0	a	0	a	0	a
	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST3	C								
7	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST1	A	0	a	0	a	0	a	0	a
	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST4	D								
8	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST2	B	0	a	0	a	0	a	0	a
	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST3	C								
9	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST2	B	0	a	0	a	0	a	0	a
	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST4	D								

LSD (P=.05)	0.0	0.0	0.0	0.0	0.0
Standard Deviation	0.0	0.0	0.0	0.0	0.0
CV	0.0	0.0	0.0	0.0	0.0

Means followed by same letter do not significantly differ (P=.05, LSD)

TIMING OF WEATHERMAX APPLICATIONS IN ROUNDUP READY SUGAR BEETS

DAVE BILYEA, DARREN ROBINSON

Experiment ID: SB06T5

							BEAVA	BEAVA	BEAVA	ABUTH		
							INJURY	INJURY	ST. COUNT	BEAVA		
							%	%	#/2M RW	%		
							Jun-09-06	Jun-15-06	May-31-06	Jun-02-06		
							6-8 LF	8-10 LF		6 LF		
										2 LF		
										1 SQ M		
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code					
1	UNTREATED							0	a 0	a 17	ab 0	d
2	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST1	A	0	a 0	a 15	b 53	c
3	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST2	B	0	a 0	a 16	ab 80	b
4	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST3	C	0	a 0	a 18	ab 98	a
5	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST4	D	0	a 0	a 18	a 98	a
6	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST1	A	0	a 0	a 16	ab 96	a
	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST3	C					
7	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST1	A	0	a 0	a 15	b 99	a
	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST4	D					
8	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST2	B	0	a 0	a 15	ab 99	a
	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST3	C					
9	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST2	B	0	a 0	a 16	ab 99	a
	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST4	D					
LSD (P=.05)							0.0	0.0	3.5	14.0		
Standard Deviation							0.0	0.0	2.4	9.6		
CV							0.0	0.0	14.83	11.96		

Means followed by same letter do not significantly differ (P=.05, LSD)

							AMARE	CHEAL	ABUTH	AMARE		
							BEAVA	BEAVA	BEAVA	BEAVA		
							CONTROL	CONTROL	CONTROL	CONTROL		
							%	%	%	%		
							Jun-02-06	Jun-02-06	Jun-06-06	Jun-06-06		
							6 LF	6 LF	6-8 LF	6-8 LF		
							4-22 LF	COT-20+	COT	COT		
							26.5SQ M	206 SQ M	6.5 SQ M	1 SQ M		
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code					
1	UNTREATED							0	d 0	d 0	c 0	d
2	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST1	A	43	c 43	c 57	b 62	c
3	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST2	B	76	b 77	b 81	a 80	bc
4	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST3	C	98	a 98	a 98	a 97	ab
5	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST4	D	98	a 98	a 99	a 99	a
6	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST1	A	96	a 97	a 87	a 84	ab
	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST3	C					
7	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST1	A	97	a 99	a 99	a 99	a
	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST4	D					
8	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST2	B	98	a 99	a 98	a 94	ab
	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST3	C					
9	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST2	B	99	a 99	a 99	a 99	a
	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST4	D					
LSD (P=.05)							10.6	10.8	20.4	18.8		
Standard Deviation							7.2	7.4	14.0	12.9		
CV							9.25	9.39	17.54	16.29		

Means followed by same letter do not significantly differ (P=.05, LSD)

TIMING OF WEATHERMAX APPLICATIONS IN ROUNDUP READY SUGAR BEETS

DAVE BILYEA, DARREN ROBINSON

Experiment ID: SB06T5

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	CHEAL	ABUTH	AMARE	CHEAL				
1	UNTREATED							0	d	25	b	0	d	0	c
2	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST1	A	57	c	65	a	35	c	46	b
3	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST2	B	69	bc	91	a	61	b	80	a
4	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST3	C	97	a	97	a	89	a	94	a
5	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST4	D	99	a	99	a	99	a	99	a
6	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST1	A	86	ab	96	a	85	a	93	a
7	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST3	C								
7	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST1	A	99	a	98	a	92	a	95	a
7	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST4	D								
8	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST2	B	98	a	86	a	88	a	95	a
8	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST3	C								
9	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST2	B	99	a	97	a	97	a	98	a
9	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST4	D								
LSD (P=.05)								22.6		36.4		16.9		19.3	
Standard Deviation								15.5		25.0		11.6		13.2	
CV								19.85		29.81		16.15		17.05	

Means followed by same letter do not significantly differ (P=.05, LSD)

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	ABUTH	AMARE	CHEAL	BEAVA				
1	UNTREATED							13	c	13	d	0	c	7	b
2	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST1	A	58	b	50	c	10	c	14	b
3	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST2	B	72	b	69	b	62	b	45	a
4	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST3	C	96	a	90	a	95	a	52	a
5	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST4	D	97	a	97	a	97	a	51	a
6	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST1	A	96	a	93	a	96	a	57	a
6	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST3	C								
7	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST1	A	97	a	95	a	97	a	55	a
7	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST4	D								
8	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST2	B	95	a	87	a	95	a	49	a
8	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST3	C								
9	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST2	B	98	a	96	a	98	a	41	a
9	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST4	D								
LSD (P=.05)								20.2		17.9		14.3		16.6	
Standard Deviation								13.8		12.2		9.8		11.4	
CV								17.27		16.02		13.59		27.67	

Means followed by same letter do not significantly differ (P=.05, LSD)

TIMING OF WEATHERMAX APPLICATIONS IN ROUNDUP READY SUGAR BEETS

DAVE BILYEA, DARREN ROBINSON

Experiment ID: SB06T5

Crop Code	BEAVA	BEAVA	BEAVA	BEAVA	BEAVA
Rating Data Type	WEED FREE	WEEDY	WEED FREE	WEEDY	WEED FREE
Rating Unit	NO	T/HA	T/HA	T/AC	T/AC
Rating Date	Oct-10-06	Oct-10-06	Oct-10-06	Oct-10-06	Oct+10-06

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Grow Stg	Appl Code					
1	UNTREATED							53				
2	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST1	A	55	a 8.4	c 88.9	c 3.8	c 39.7c
3	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST2	B	55	a 13.2	c 93.5	bc 5.9	c 41.7bc
4	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST3	C	63	a 56.2	b 109.0	abc 25.1	b 48.6abc
5	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST4	D	61	a 77.1	ab 108.8	abc 34.4	ab 48.5abc
6	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST1	A	62	a 89.2	a 117.9	a 39.8	a 52.6a
6	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST3	C	62	a 84.8	a 108.6	abc 37.8	a 48.4abc
7	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST1	A	54	a 79.9	ab 103.8	abc 35.6	ab 46.3abc
7	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST4	D	54	a 79.9	ab 103.8	abc 35.6	ab 46.3abc
8	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST2	B	57	a 74.3	ab 112.9	ab 33.1	ab 50.4ab
8	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST3	C	57	a 74.3	ab 112.9	ab 33.1	ab 50.4ab
9	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST2	B	52	a 66.0	ab 100.3	abc 29.4	ab 44.7abc
9	GLYPHOSATE - WEATHERMAX	540	SL	900	G A/HA	POST4	D	52	a 66.0	ab 100.3	abc 29.4	ab 44.7abc
LSD (P=.05)								12.1	28.28	23.57	12.61	10.51
Standard Deviation								8.3	19.37	16.15	8.64	7.20
CV								14.46	31.75	15.4	31.75	15.4

Means followed by same letter do not significantly differ (P=.05, LSD)

Trial Comments

CONCLUSIONS: Glyphosate applied in single or sequential applications at 900 g ai ha⁻¹ per application did not injure sugarbeets. Treatments applied at the cotyledon, 1-2 leaf or 2-3 leaf stages had significantly less yield than the untreated check due to weed escapes that competed with the crop. Two applications applied at the 1-2 leaf and then at the 4-5 or 5-6 leaf stages provided optimal control and sugarbeet yield.