Sugarbeet herbicides, Milan, 2007. (Dexter) 'Beta RZ02RR07' sugarbeet was seeded 1.25 inches deep in 22-inch rows April 27. Counter 15G insecticide at 12 pounds product per acre was applied modified in-furrow at planting. Preemerge ethofumesate was applied April 27 after planting. Postemergence treatments were applied May 8, May 15, May 29, and June 1. All treatments were applied in 17 gpa water at 40 psi through 8002 nozzles to the center four rows of six-row by 30-foot long plots. Sugarbeet injury and tear-thumb, velvet leaf, and waterhemp control were evaluated June 11 and June 19. Tear-thumb (Teth) is a smartweed with thorns on the stems.

Date of Application	April 27	May 8	May 15	May 22	June 1
Time of Day	1:00 PM	11:30 AM	12:15 PM	10:30 AM	1:30 PM
Air Temperature (°F)	71	67	60	74	63
Relative Humidity (%)	32	46	29	47	60
Soil Temp. (°F at 6")	54	57	63	66	62
Wind Velocity (mph)	13	4	13	20	5
Cloud Cover (%)	10	10	50	100	100
Soil Moisture	Good	Good	Good	Good	Good
Sugarbeet	preemerge	Cot	Cot-V1.5	V2.1-4.1	V4.8-5.8
Velvetleaf	---	Cot	Cot-2 lf	1-3 lf	2-4lf(1-4")
Tear-thumb (Smartweed)	---	Cot	2-4 lf	3-6 lf	2-5"
Redroot Pigweed	---	Cot	Cot-2 lf	2-4 lf	2-8lf(1/2-4")

Treatment*	Date of Application	Rate	June 11 Sgbt inj	June 11 Velf cntl	June 11 Teth cntl	June 11 Wahe cntl	June 19 Sgbt inj	June 19 Velf cntl	June 19 Teth cntl	June 19 Wahe cntl
		(lb/A)	%	%	%	%	%	%	%	%
De&Ph&Et+Tfsu+Clpy+CletM+MSO (May 8, 15, 22, June 1)		0.08+0.004+0.03+0.03+1.5%	18	92	91	83	10	89	86	64
De&Ph&Et+Tfsu+Clpy+CletM+MSO (May 8,15)		0.12+0.004+0.03+0.03+1.5%								
De&Ph&Et+Tfsu+Clpy+CletM+MSO(May 22)		0.16+0.004+0.03+0.03+1.5%								
De&Ph&Et+Tfsu+Clpy+CletM+MSO(June 1)		0.22+0.004+0.03+0.03+1.5%	23	92	92	91	14	89	89	76
De&Ph&Et+Tfsu+Clpy+CletM (May 8)		0.25+0.008+0.06+0.03								
De&Ph&Et+Tfsu+Clpy+CletM (May 15, 22)		0.33+0.008+0.06+0.03								
De&Ph&Et+Tfsu+Clpy+CletM (June 1)		0.5+0.008+0.06+0.03	29	87	95	99	23	81	92	99
De&Ph&Et+Tfsu+Clpy+CletM+MSO+Etho (May 8, 15, 22, June 1)		0.08+.004+.03+.03+1.5%+.094	13	94	93	88	9	90	90	73
Ethofumesate(Pre)	(April 27)	3.75								
Desm&Phen&Etho	(May 8)	0.25								
Desm&Phen&Etho	(May 15, 22)	0.33								
Desm&Phen&Etho	(June 1)	0.5	11	48	94	99	0	46	97	99
Glyt+Premier90+AMS (May 15, June 1)		1+0.25%+1.7	0	94	94	98	0	90	94	94
Glyt+Premier90+AMS(May 8,15,22, June 1)		1+0.25%+1.7	0	97	98	98	0	93	96	94
Glyt+Premier90+AMS	(May 8)	1+0.25%+1.7	0	5	5	0	0	0	0	0
Glyt+Premier90+AMS	(May 15)	1+0.25%+1.7	0	69	74	95	0	60	54	85
Glyt+Premier90+AMS	(May 22)	1+0.25%+1.7	0	93	92	97	0	90	89	89
Glyt+Premier90+AMS	(June 1)	1+0.25%+1.7	0	64	35	91	0	81	64	94

Table continued on next page.

Sugarbeet Herbicides, Milan, 2007. (continued)

Treatment*	Date of Application	Rate	June 11 Sgbt inj	June 11 Velf cntl	June 11 Teth cntl	June 11 Wahe cntl	June 19 Sgbt inj	June 19 Velf cntl	June 19 Teth cntl	June 19 Wahe cntl
		(lb/A)	%	%	%	%	%	%	%	%
Glyt+Premier90+AMS+Tfsu	(May 15,June 1)	1+0.25%+1.7+0.008	1	97	95	99	0	95	95	97
Glyt+P90+AMS+Tfsu	(May 15, June 1)	1+0.25%+1.7+0.032	3	97	95	99	3	96	96	99
Glyt+Premier90+AMS+Flumiclorac	(May 15)	1+0.25%+1.7+0.015								
Glyt+Premier90+AMS	(June 1)	1+0.25%+1.7	91	94	93	97	79	92	90	94
Glyt+Premier90+AMS+Clpy	(May 22)	1+0.25%+1.7+0.03								
Glyt+Premier90+AMS	(June 1)	1+0.25%+1.7	4	94	95	98	0	92	96	93
Glyt+Premier90+AMS+Clpy	(May 22)	1+0.25%+1.7+0.06								
Glyt+Premier90+AMS	(June 1)	1+0.25%+1.7	4	95	93	98	0	93	98	95
Glyt+Premier90+AMS+CletM	(May 15)	1+0.25%+1.7+0.09								
Glyt+Premier90+AMS	(June 1)	1+0.25%+1.7	0	91	89	97	0	88	76	91
Glyt+Premier90+AMS+Etho	(May 8)	1+0.25%+1.7+3.75								
Glyt+Premier90+AMS	(June 1)	1+0.25%+1.7	4	83	80	74	0	83	70	51
Ethofumesate (Pre)	(April 27)	3.75								
Glyt+Premier90+AMS	(May 15, June 1)	1+0.25%+1.7	1	89	93	99	0	88	92	99
EXP MEAN			11	83	84	89	7	81	82	83
C.V. %			30	7	7	4	62	8	11	8
LSD 5%			5	9	9	4	6	9	13	9
LSD 1%			6	12	11	6	8	12	18	12
# OF REPS			4	4	4	4	4	4	4	4

* Premier 90=non-ionic surfactant from West Central; MSO=methylated seed oil from Loveland; AMS=Am-Stik liquid ammonium sulfate from West Central.

Combined Evaluations

Treatment*	Date of Application	Rate	Sgbt inj	Velf cntl	Teth cntl	Wahe cntl
		(lb/A)	%	%	%	%
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(May 8, 15, 22, June 1)	0.08+0.004+0.03+0.03+1.5%	14	91	89	73
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(May 8,15)	0.12+0.004+0.03+0.03+1.5%				
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(May 22)	0.16+0.004+0.03+0.03+1.5%				
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(June 1)	0.22+0.004+0.03+0.03+1.5%	18	91	90	83

Table continued on next page.

Sugarbeet Herbicides, Milan, 2007. (continued)

Combined Evaluations (continued)

Treatment*	Date of Application	Rate	Sgbt inj	Velf cntl	Teth cntl	Wahe cntl
		(lb/A)	%	%	%	%
De&Ph&Et+Tfsu+Clpy+CletM	(May 8)	0.25+0.008+0.06+0.03				
De&Ph&Et+Tfsu+Clpy+CletM	(May 15, 22)	0.33+0.008+0.06+0.03				
De&Ph&Et+Tfsu+Clpy+CletM	(June 1)	0.5+0.008+0.06+0.03	26	84	94	99
De&Ph&Et+Tfsu+Clpy+CletM+MSO+Etho	(May 8, 15, 22, June 1)	0.08+.004+.03+.03+1.5%+.094	11	92	92	80
Ethofumesate(Pre)	(April 27)	3.75				
Desm&Phen&Etho	(May 8)	0.25				
Desm&Phen&Etho	(May 15, 22)	0.33				
Desm&Phen&Etho	(June 1)	0.5	6	47	96	99
Glyt+Premier90+AMS	(May 15, June 1)	1+0.25%+1.7	0	92	94	96
Glyt+Premier90+AMS	(May 8,15,22, June 1)	1+0.25%+1.7	0	95	97	96
Glyt+Premier90+AMS	(May 8)	1+0.25%+1.7	0	3	3	0
Glyt+Premier90+AMS	(May 15)	1+0.25%+1.7	0	64	64	90
Glyt+Premier90+AMS	(May 22)	1+0.25%+1.7	0	91	91	93
Glyt+Premier90+AMS	(June 1)	1+0.25%+1.7	0	72	50	92
Glyt+Premier90+AMS+Tfsu	(May 15,June 1)	1+0.25%+1.7+0.008	1	96	95	98
Glyt+P90+AMS+Tfsu	(May 15, June 1)	1+0.25%+1.7+0.032	3	96	96	99
Glyt+Premier90+AMS+Flumiclorac	(May 15)	1+0.25%+1.7+0.015				
Glyt+Premier90+AMS	(June 1)	1+0.25%+1.7	85	93	91	95
Glyt+Premier90+AMS+Clpy	(May 22)	1+0.25%+1.7+0.03				
Glyt+Premier90+AMS	(June 1)	1+0.25%+1.7	2	93	95	95
Glyt+Premier90+AMS+Clpy	(May 22)	1+0.25%+1.7+0.06				
Glyt+Premier90+AMS	(June 1)	1+0.25%+1.7	2	94	95	96
Glyt+Premier90+AMS+CletM	(May 15)	1+0.25%+1.7+0.09				
Glyt+Premier90+AMS	(June 1)	1+0.25%+1.7	0	89	83	94
Glyt+Premier90+AMS+Etho	(May 8)	1+0.25%+1.7+3.75				
Glyt+Premier90+AMS	(June 1)	1+0.25%+1.7	2	83	75	63
Ethofumesate (Pre)	(April 27)	3.75				
Glyt+Premier90+AMS	(May 15, June 1)	1+0.25%+1.7	1	88	92	99
EXP MEAN			9	82	83	86
C.V. %			48	6	11	7
LSD 5%			4	6	9	6
LSD 1%			6	8	12	8
# OF REPS			8	8	8	8

* Premier 90=non-ionic surfactant from West Central; MSO=methylated seed oil from Loveland; AMS=Am-Stik liquid ammonium sulfate from West Central.

SUMMARY: Weed control with glyphosate was generally less at Milan than at other locations. Triflusulfuron added to glyphosate tended to improve weed control compared to glyphosate used alone. Weed control with glyphosate applied once on June 1 was poor compared to glyphosate applied once on May 22. Rainfall started during the last few treatments on June 1, and rain shortly after application probably washed off some of the glyphosate. Velvetleaf and tear-thumb control was affected more than waterhemp control. Glyphosate caused less sugarbeet injury than conventional treatments. Flumiclorac caused severe sugarbeet injury. The micro-rate and mid-rate treatments which included MSO gave better velvetleaf control than the conventional rate without MSO. The conventional rate gave better control of waterhemp than the micro-rate or mid-rate. PRE ethofumesate followed by POST desm&phen&etho gave poor velvetleaf control but good control of tear-thumb and waterhemp.

Sugarbeet herbicides, Kindred, 2007. (Dexter) 'Beta RZ02RR07' sugarbeet was seeded 1.25 inches deep in 22-inch rows April 30. Counter 15G insecticide at 12 pounds product per acre was applied modified in-furrow at planting. Preemerge ethofumesate was applied April 30 after planting. Postemergence treatments were applied May 17, May 25, June 5, and June 25. All treatments were applied in 17 gpa water at 40 psi through 8002 nozzles to the center four rows of six-row by 30-foot long plots. Sugarbeet injury and common lambsquarters and redroot pigweed control were evaluated July 5 and July 13.

Date of Application	April 30	May 17	May 25	June 5	June 25
Time of Day	3:00 PM	11:30 AM	11:45 AM	1:00 PM	8:30 AM
Air Temperature (°F)	75	67	56	69	75
Relative Humidity (%)	18	17	41	22	52
Soil Temp. (°F at 6")	54	53	51	60	70
Wind Velocity (mph)	6	16	4	2	8
Cloud Cover (%)	70	100	100	5	50
Soil Moisture	Good	Good	Good	Good	Good
Sugarbeet	preemerge	Cot	V1.1-2.0	V5.5-6.2	V9.5-12.2
Common Lambsquarters	---	Cot	Cot-2lf	4-8lf(2-5")	6-12"
Redroot Pigweed	---	Cot	Cot-1lf	3-6lf	6-12"

Treatment*	Date of Application	Rate	July 5 Sgbt inj	July 5 Rrpw cntl	July 5 Colq cntl	July 13 Sgbt inj	July 13 Rrpw cntl	July 13 Colq cntl
		(lb/A)	%	%	%	%	%	%
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(May 17, 25, June 5, 25)	0.08+0.004+0.03+0.03+1.5%	0	93	97	0	85	98
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(May 17, 25)	0.12+0.004+0.03+0.03+1.5%						
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(June 5)	0.16+0.004+0.03+0.03+1.5%						
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(June 25)	0.22+0.004+0.03+0.03+1.5%	0	92	99	0	90	97
De&Ph&Et+Tfsu+Clpy+CletM	(May 17)	0.25+0.008+0.06+0.03						
De&Ph&Et+Tfsu+Clpy+CletM	(May 25, June 5)	0.33+0.008+0.06+0.03						
De&Ph&Et+Tfsu+Clpy+CletM	(June 25)	0.5+0.008+0.06+0.03	0	98	99	0	98	99
De&Ph&Et+Tfsu+Clpy+CletM+MSO+Etho	(May 17, 25, June 5, 25)	0.08+.004+.03+.03+1.5%+.094	0	94	99	0	93	98
Ethofumesate(Pre)	(April 30)	3.75						
Desm&Phen&Etho	(May 17)	0.25						
Desm&Phen&Etho	(May 25, June 5)	0.33						
Desm&Phen&Etho	(June 25)	0.5	0	99	99	0	99	99
Glyt+Premier90+AMS	(May 25, June 25)	1+0.25%+1.7	0	99	99	0	99	99
Glyt+Premier90+AMS	(May 17, 25, June 5, 25)	1+0.25%+1.7	0	99	99	0	99	99
Glyt+Premier90+AMS	(May 17)	1+0.25%+1.7	0	55	58	0	38	43
Glyt+Premier90+AMS	(May 25)	1+0.25%+1.7	0	58	87	0	43	79
Glyt+Premier90+AMS	(June 5)	1+0.25%+1.7	0	99	99	0	99	99
Glyt+Premier90+AMS	(June 25)	1+0.25%+1.7	0	99	96	0	99	90

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Sugarbeet Herbicides, Kindred, 2007. (continued)

Treatment*	Date of Application	Rate	July 5 Sgbt inj	July 5 Rrpw cntl	July 5 Colq cntl	July 13 Sgbt inj	July 13 Rrpw cntl	July 13 Colq cntl
		(lb/A)	%	%	%	%	%	%
Glyt+Premier90+AMS+Tfsu	(May 25, June 25)	1+0.25%+1.7+0.008	0	99	99	0	99	99
Glyt+P90+AMS+Tfsu	(May 25, June 25)	1+0.25%+1.7+0.032	0	99	99	0	99	99
Glyt+Premier90+AMS+Flumiclorac	(May 25)	1+0.25%+1.7+0.015						
Glyt+Premier90+AMS	(June 25)	1+0.25%+1.7	64	99	99	58	99	98
Glyt+Premier90+AMS+Clpy	(May 25)	1+0.25%+1.7+0.03						
Glyt+Premier90+AMS	(June 25)	1+0.25%+1.7	0	99	99	0	99	99
Glyt+Premier90+AMS+Clpy	(May 25)	1+0.25%+1.7+0.06						
Glyt+Premier90+AMS	(June 25)	1+0.25%+1.7	0	99	99	0	99	99
Glyt+Premier90+AMS+CletM	(May 25)	1+0.25%+1.7+0.09						
Glyt+Premier90+AMS	(June 25)	1+0.25%+1.7	0	99	99	0	99	99
Glyt+Premier90+AMS+Etho	(May 17)	1+0.25%+1.7+3.75						
Glyt+Premier90+AMS	(June 25)	1+0.25%+1.7	0	99	99	0	99	99
Ethofumesate (Pre)	(April 30)	3.75						
Glyt+Premier90+AMS	(May 25, June 25)	1+0.25%+1.7	0	99	99	0	99	99
EXP MEAN			3	93	96	3	91	94
C.V. %			123	5	4	95	4	4
LSD 5%			6	7	6	4	5	5
LSD 1%			8	10	7	5	7	7
# OF REPS			4	4	4	4	4	4

* Premier 90=non-ionic surfactant from West Central; MSO=methylated seed oil from Loveland; AMS=Am-Stik liquid ammonium sulfate from West Central.

Combined Evaluations

Treatment*	Date of Application	Rate	Sgbt inj	Rrpw cntl	Colq cntl
		(lb/A)	%	%	%
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(May 17, 25, June 5, 25)	0.08+0.004+0.03+0.03+1.5%	0	89	98
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(May 17,25)	0.12+0.004+0.03+0.03+1.5%			
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(June 5)	0.16+0.004+0.03+0.03+1.5%			
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(June 25)	0.22+0.004+0.03+0.03+1.5%	0	91	98

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Sugarbeet Herbicides, Kindred, 2007. (continued)

Combined Evaluations (continued)

Treatment*	Date of Application	Rate	Sgbt inj	Rrpw cntl	Colq cntl
		(lb/A)	%	%	%
De&Ph&Et+Tfsu+Clpy+CletM	(May 17)	0.25+0.008+0.06+0.03			
De&Ph&Et+Tfsu+Clpy+CletM	(May 25, June 5)	0.33+0.008+0.06+0.03			
De&Ph&Et+Tfsu+Clpy+CletM	(June 25)	0.5+0.008+0.06+0.03	0	98	99
De&Ph&Et+Tfsu+Clpy+CletM+MSO+Etho	(May 17, 25, June 5,25)	0.08+.004+.03+.03+1.5%+.094	0	93	99
Ethofumesate(Pre)	(April 30)	3.75			
Desm&Phen&Etho	(May 17)	0.25			
Desm&Phen&Etho	(May 25, June 5)	0.33			
Desm&Phen&Etho	(June 25)	0.5	0	99	99
Glyt+Premier90+AMS	(May 25, June 25)	1+0.25%+1.7	0	99	99
Glyt+Premier90+AMS	(May 17,25,June 5,25)	1+0.25%+1.7	0	99	99
Glyt+Premier90+AMS	(May 17)	1+0.25%+1.7	0	46	50
Glyt+Premier90+AMS	(May 25)	1+0.25%+1.7	0	50	83
Glyt+Premier90+AMS	(June 5)	1+0.25%+1.7	0	99	99
Glyt+Premier90+AMS	(June 25)	1+0.25%+1.7	0	99	93
Glyt+Premier90+AMS+Tfsu	(May 25,June 25)	1+0.25%+1.7+0.008	0	99	99
Glyt+P90+AMS+Tfsu	(May 25,June 25)	1+0.25%+1.7+0.032	0	99	99
Glyt+Premier90+AMS+Flumiclorac	(May 25)	1+0.25%+1.7+0.015			
Glyt+Premier90+AMS	(June 25)	1+0.25%+1.7	61	99	99
Glyt+Premier90+AMS+Clpy	(May 25)	1+0.25%+1.7+0.03			
Glyt+Premier90+AMS	(June 25)	1+0.25%+1.7	0	99	99
Glyt+Premier90+AMS+Clpy	(May 25)	1+0.25%+1.7+0.06			
Glyt+Premier90+AMS	(June 25)	1+0.25%+1.7	0	99	99
Glyt+Premier90+AMS+CletM	(May 25)	1+0.25%+1.7+0.09			
Glyt+Premier90+AMS	(June 25)	1+0.25%+1.7	0	99	99
Glyt+Premier90+AMS+Etho	(May 17)	1+0.25%+1.7+3.75			
Glyt+Premier90+AMS	(June 25)	1+0.25%+1.7	0	99	99
Ethofumesate (Pre)	(April 30)	3.75			
Glyt+Premier90+AMS	(May 25, June 25)	1+0.25%+1.7	0	99	99
EXP MEAN			3	92	95
C.V. %			106	5	4
LSD 5%			3	5	4
LSD 1%			4	7	5
# OF REPS			8	8	8

* Premier 90=non-ionic surfactant from West Central; MSO=methylated seed oil from Loveland; AMS=Am-Stik liquid ammonium sulfate from West Central.

SUMMARY: Glyphosate applied once on May 17 or May 25 gave less weed control than when applied on June 5 or June 25 because many weeds emerged after May 25. Two glyphosate applications gave nearly total weed control. Registered herbicide treatments at all rates gave 98 to 99% control of common lambsquarters but the micro-rate and mid-rate treatments gave less redroot pigweed control than the conventional-rate treatments. Conventional-rate treatments gave weed control similar to glyphosate. Flumiclorac caused severe sugarbeet injury.

Sugarbeet herbicides, Prosper, 2007. (Dexter) 'Beta RZ02RR07' sugarbeet was seeded 1.25 inches deep in 22-inch rows May 3. Counter 15G insecticide at 12 pounds product per acre was applied modified in-furrow at planting. 'Plainsman' amaranth, 'Interstate Hyola 420' canola at 14 lb/A, quinoa (*Chenopodium quinoa*), 'Golden German' millet at 34 lb/A, 'Maida' oat at 26 lb/A, and yellow-seeded flax at 12 lb/A were seeded in 4 foot strips across herbicide plots May 3, prior to sugarbeet seeding. Preemerge ethofumesate was applied May 2 after planting. Postemergence treatments were applied May 21, May 28, June 5, and June 21. All treatments were applied in 17 gpa water at 40 psi through 8002 nozzles to the center four rows of six-row by 30-foot long plots. The entire experiment was sprayed with Headline at 9 fl oz/A July 31. Redroot pigweed and amaranth, common lambsquarters and quinoa, canola, flax, millet, and oat, control were evaluated June 29 and July 9. Sugarbeet from the center 2 rows was counted and harvested September 11.

Date of Application	May 3	May 21	May 28	June 5	June 21
Time of Day	10:00 AM	1:00 PM	12:30 PM	10:45 AM	12:00 PM
Air Temperature (°F)	61	71	80	62	79
Relative Humidity (%)	31	64	46	20	33
Soil Temp. (°F at 6")	50	55	58	61	70
Wind Velocity (mph)	18	17	18	5	9
Cloud Cover (%)	10	90	65	5	30
Soil Moisture	Good	Good	Good	Good	Good
Sugarbeet		V1.0-1.5	V2.1-2.7	V4.2-5.9	V10.9-13.9
Redroot Pigweed		1-2lf	2-3lf	3-6lf	8-10"
Amaranth		Cot-1lf	2-3lf	3-4lf	8-12"
Quinoa		Cot-2lf	4-6lf(2")	(3-6")	12-20"
Canola		Cot-2lf	3-4lf(2-3")	5-6lf(6")	28-32"
Flax		Cot-2lf	(1/2-2")	(3-6")	8-14"
Millet		1.9-2.5lf	3-4lf(1-3")	4-5lf(3-6")	10-14"
Oats		1.9-2.1lf	3-4lf(4-5")	4-5lf(6-8")	28-32"
Com.Lambsquarters		Cot-2lf	2-4lf	6-8lf(2-4")	10-14"

June 29 Evaluation

Treatment*	Date of Application	Rate	Sgbt inj	Cano cntl	Colq Quin cntl	Rrpw Amar cntl	Flax cntl	Oats cntl	Mill cntl
		(lb/A)	%	%	%	%	%	%	%
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(May 21, 28, June 5, 21)	0.08+0.004+0.03+0.03+1.5%	8	87	98	76	70	99	99
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(May 21, 28)	0.12+0.004+0.03+0.03+1.5%							
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(June 5)	0.16+0.004+0.03+0.03+1.5%							
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(June 21)	0.22+0.004+0.03+0.03+1.5%	13	90	99	95	85	99	99
De&Ph&Et+Tfsu+Clpy+CletM	(May 21)	0.25+0.008+0.06+0.03							
De&Ph&Et+Tfsu+Clpy+CletM	(May 28, June 5)	0.33+0.008+0.06+0.03							
De&Ph&Et+Tfsu+Clpy+CletM	(June 21)	0.5+0.008+0.06+0.03	29	96	99	99	97	99	99
De&Ph&Et+Tfsu+Clpy+CletM+MSO+Etho	(May 21, 28, June 5, 21)	0.08+0.004+0.03+0.03+1.5%+0.094	11	88	99	94	71	99	99

Table continued on next page.

Sugarbeet herbicides, Prosper, 2007. (continued)

June 29 Evaluation

Treatment*	Date of Application	Rate	Sgbt inj	Cano cntl	Colq Quin cntl	Rrpw Amar cntl	Flax cntl	Oats cntl	Mill cntl
		(lb/A)	%	%	%	%	%	%	%
Ethofumesate(Pre)	(May 3)	3.75							
Desm&Phen&Etho	(May 21)	0.25							
Desm&Phen&Etho	(May 28, June 5)	0.33							
Desm&Phen&Etho	(June 21)	0.5	16	96	99	99	99	99	99
Glyt+Premier90+AMS	(May 28, June 21)	1+0.25%+1.7	0	98	99	99	99	99	99
Glyt+Premier90+AMS	(May 21, 28, June 5, 21)	1+0.25%+1.7	0	99	99	99	99	99	99
Glyt+Premier90+AMS	(May 21)	1+0.25%+1.7	0	94	48	73	85	94	55
Glyt+Premier90+AMS	(May 28)	1+0.25%+1.7	0	98	87	89	99	97	97
Glyt+Premier90+AMS	(June 5)	1+0.25%+1.7	0	98	97	98	98	98	99
Glyt+Premier90+AMS	(June 21)	1+0.25%+1.7	0	30	96	96	91	97	97
Glyt+Premier90+AMS+Tfsu	(May 28, June 5)	1+0.25%+1.7+0.008	0	99	99	99	99	99	99
Glyt+P90+AMS+Tfsu	(May 28, June 21)	1+0.25%+1.7+0.032	0	99	99	99	99	99	99
Glyt+Premier90+AMS+Flumiclorac	(May 28)	1+0.25%+1.7+0.015							
Glyt+Premier90+AMS	(June 21)	1+0.25%+1.7	58	99	99	99	99	99	99
Glyt+Premier90+AMS+Clpy	(May 28)	1+0.25%+1.7+0.03							
Glyt+Premier90+AMS	(June 21)	1+0.25%+1.7	0	99	99	99	99	99	99
Glyt+Premier90+AMS+Clpy	(May 28)	1+0.25%+1.7+0.06							
Glyt+Premier90+AMS	(June 21)	1+0.25%+1.7	0	98	99	99	99	99	99
Glyt+Premier90+AMS+CletM	(May 28)	1+0.25%+1.7+0.09							
Glyt+Premier90+AMS	(June 21)	1+0.25%+1.7	0	99	99	99	99	99	99
Glyt+Premier90+AMS+Etho	(May 21)	1+0.25%+1.7+3.75							
Glyt+Premier90+AMS	(June 21)	1+0.25%+1.7	0	99	99	99	99	99	99
Ethofumesate (Pre)	(May 3)	3.75							
Glyt+Premier90+AMS	(May 28, June 21)	1+0.25%+1.7	1	99	99	99	99	99	99
EXP MEAN			7	93	95	95	94	98	96
C.V. %			34	3	8	6	4	1	6
LSD 5%			3	3	11	8	5	1	8
LSD 1%			5	5	15	10	7	1	10
# OF REPS			4	4	4	4	4	4	4

* Premier 90=non-ionic surfactant from West Central; MSO=methylated seed oil from Loveland; AMS=Am-Stik liquid ammonium sulfate from West Central.

Experiment continued on next page.

Sugarbeet herbicides, Prosper, 2007. (continued)

July 9 Evaluation

Treatment*	Date of Application	Rate	Sgbt inj	Cano cntl	Colq Quin cntl	Rrpw Amar cntl	Flax cntl	Oats cntl	Mill cntl
		(lb/A)	%	%	%	%	%	%	%
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(May 21, 28, June 5, 21)	0.08+0.004+0.03+0.03+1.5%	5	81	91	70	48	99	99
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(May 21, 28)	0.12+0.004+0.03+0.03+1.5%							
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(June 5)	0.16+0.004+0.03+0.03+1.5%							
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(June 21)	0.22+0.004+0.03+0.03+1.5%	10	86	98	91	50	99	99
De&Ph&Et+Tfsu+Clpy+CletM	(May 21)	0.25+0.008+0.06+0.03							
De&Ph&Et+Tfsu+Clpy+CletM	(May 28, June 5)	0.33+0.008+0.06+0.03							
De&Ph&Et+Tfsu+Clpy+CletM	(June 21)	0.5+0.008+0.06+0.03	18	96	99	99	98	99	99
De&Ph&Et+Tfsu+Clpy+CletM+MSO+Etho	(May 21, 28, June 5, 21)	0.08+0.004+0.03+0.03+1.5%+0.094	8	80	96	92	53	99	99
Ethofumesate(Pre)	(May 3)	3.75							
Desm&Phen&Etho	(May 21)	0.25							
Desm&Phen&Etho	(May 28, June 5)	0.33							
Desm&Phen&Etho	(June 21)	0.5	6	96	99	99	99	99	99
Glyt+Premier90+AMS	(May 28, June 21)	1+0.25%+1.7	0	99	99	99	99	99	99
Glyt+Premier90+AMS	(May 21, 28, June 5, 21)	1+0.25%+1.7	0	99	99	99	99	99	99
Glyt+Premier90+AMS	(May 21)	1+0.25%+1.7	0	93	28	45	90	97	48
Glyt+Premier90+AMS	(May 28)	1+0.25%+1.7	0	98	65	79	99	99	99
Glyt+Premier90+AMS	(June 5)	1+0.25%+1.7	0	98	91	97	99	99	99
Glyt+Premier90+AMS	(June 21)	1+0.25%+1.7	0	94	99	99	99	99	99
Glyt+Premier90+AMS+Tfsu	(May 28, June 5)	1+0.25%+1.7+0.008	0	99	99	99	99	99	99
Glyt+P90+AMS+Tfsu	(May 28, June 21)	1+0.25%+1.7+0.032	0	99	99	99	99	99	99
Glyt+Premier90+AMS+Flumiclorac	(May 28)	1+0.25%+1.7+0.015							
Glyt+Premier90+AMS	(June 21)	1+0.25%+1.7	33	99	99	99	99	99	99
Glyt+Premier90+AMS+Clpy	(May 28)	1+0.25%+1.7+0.03							
Glyt+Premier90+AMS	(June 21)	1+0.25%+1.7	0	99	99	99	99	99	99
Glyt+Premier90+AMS+Clpy	(May 28)	1+0.25%+1.7+0.06							
Glyt+Premier90+AMS	(June 21)	1+0.25%+1.7	0	99	99	99	99	99	99

Table continued on next page.

Sugarbeet herbicides, Prosper, 2007. (continued)

July 9 Evaluation

Treatment*	Date of Application	Rate	Sgbt inj	Cano cntl	Colq Quin cntl	Rrpw Amar cntl	Flax cntl	Oats cntl	Mill cntl
		(lb/A)	%	%	%	%	%	%	%
Glyt+Premier90+AMS+CletM	(May 28)	1+0.25%+1.7+0.09							
Glyt+Premier90+AMS	(June 21)	1+0.25%+1.7	0	99	99	99	99	99	99
Glyt+Premier90+AMS+Etho	(May 21)	1+0.25%+1.7+3.75							
Glyt+Premier90+AMS	(June 21)	1+0.25%+1.7	0	99	99	99	99	99	99
Ethofumesate (Pre)	(May 3)	3.75							
Glyt+Premier90+AMS	(May 28, June 21)	1+0.25%+1.7	0	99	99	99	99	99	99
EXP MEAN			4	95	92	93	91	99	96
C.V. %			68	4	8	8	6	0	5
LSD 5%			4	5	10	11	8	1	7
LSD 1%			5	6	13	15	10	1	10
# OF REPS			4	4	4	4	4	4	4

* Premier 90=non-ionic surfactant from West Central; MSO=methylated seed oil from Loveland; AMS=Am-Stik liquid ammonium sulfate from West Central.

Combined Evaluations

Treatment*	Date of Application	Rate	Sgbt inj	Cano cntl	Colq Quin cntl	Rrpw Amar cntl	Flax cntl	Oats cntl	Mill cntl
		(lb/A)	%	%	%	%	%	%	%
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(May 21, 28, June 5, 21)	0.08+0.004+0.03+0.03+1.5%	6	84	94	73	59	99	99
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(May 21, 28)	0.12+0.004+0.03+0.03+1.5%							
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(June 5)	0.16+0.004+0.03+0.03+1.5%							
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(June 21)	0.22+0.004+0.03+0.03+1.5%	12	88	99	93	68	99	99
De&Ph&Et+Tfsu+Clpy+CletM	(May 21)	0.25+0.008+0.06+0.03							
De&Ph&Et+Tfsu+Clpy+CletM	(May 28, June 5)	0.33+0.008+0.06+0.03							
De&Ph&Et+Tfsu+Clpy+CletM	(June 21)	0.5+0.008+0.06+0.03	23	96	99	99	97	99	99
De&Ph&Et+Tfsu+Clpy+CletM+MSO+Etho	(May 21, 28, June 5, 21)	0.08+0.004+0.03+0.03+1.5%+0.094	9	84	97	93	62	99	99
Ethofumesate(Pre)	(May 3)	3.75							
Desm&Phen&Etho	(May 21)	0.25							
Desm&Phen&Etho	(May 28, June 5)	0.33							
Desm&Phen&Etho	(June 21)	0.5	11	96	99	99	99	99	99
Glyt+Premier90+AMS	(May 28, June 21)	1+0.25%+1.7	0	99	99	99	99	99	99
Glyt+Premier90+AMS	(May 21, 28, June 5, 21)	1+0.25%+1.7	0	99	99	99	99	99	99

Table continued on next page.

Sugarbeet herbicides, Prosper, 2007. (continued)

Combined Evaluations

Treatment*	Date of Application	Rate	Sgbt inj	Cano cntl	Colq Quin cntl	Rrpw Amar cntl	Flax cntl	Oats cntl	Mill cntl
		(lb/A)	%	%	%	%	%	%	%
Glyt+Premier90+AMS	(May 21)	1+0.25%+1.7	0	93	38	59	88	95	51
Glyt+Premier90+AMS	(May 28)	1+0.25%+1.7	0	98	76	84	99	98	98
Glyt+Premier90+AMS	(June 5)	1+0.25%+1.7	0	98	94	97	99	99	99
Glyt+Premier90+AMS	(June 21)	1+0.25%+1.7	0	62	97	97	95	98	98
Glyt+Premier90+AMS+Tfsu	(May 28, June 5)	1+0.25%+1.7+0.008	0	99	99	99	99	99	99
Glyt+P90+AMS+Tfsu	(May 28, June 21)	1+0.25%+1.7+0.032	0	99	99	99	99	99	99
Glyt+Premier90+AMS+Flumiclorac	(May 28)	1+0.25%+1.7+0.015							
Glyt+Premier90+AMS	(June 21)	1+0.25%+1.7	45	99	99	99	99	99	99
Glyt+Premier90+AMS+Clpy	(May 28)	1+0.25%+1.7+0.03							
Glyt+Premier90+AMS	(June 21)	1+0.25%+1.7	0	99	99	99	99	99	99
Glyt+Premier90+AMS+Clpy	(May 28)	1+0.25%+1.7+0.06							
Glyt+Premier90+AMS	(June 21)	1+0.25%+1.7	0	98	99	99	99	99	99
Glyt+Premier90+AMS+CletM	(May 28)	1+0.25%+1.7+0.09							
Glyt+Premier90+AMS	(June 21)	1+0.25%+1.7	0	99	99	99	99	99	99
Glyt+Premier90+AMS+Etho	(May 21)	1+0.25%+1.7+3.75							
Glyt+Premier90+AMS	(June 21)	1+0.25%+1.7	0	99	99	99	99	99	99
Ethofumesate (Pre)	(May 3)	3.75							
Glyt+Premier90+AMS	(May 28, June 21)	1+0.25%+1.7	1	99	99	99	99	99	99
EXP MEAN			6	94	94	94	92	99	96
C.V. %			74	9	8	8	8	1	5
LSD 5%			4	8	8	7	7	1	5
LSD 1%			5	11	10	9	9	1	7
# OF REPS			8	8	8	8	8	8	8

* Premier 90=non-ionic surfactant from West Central; MSO=methylated seed oil from Loveland; AMS=Am-Stik liquid ammonium sulfate from West Central.

Yield Data

Treatment*	Date of Application	Rate	Sgbt Popl	Sucr	Root Yield	Impur Index	Extr Sucr
		(lb/A)	#/60'	%	ton/A		lb/A
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(May 11, 18, 31, June 12)	0.08+0.004+0.03+0.03+1.5%	81	15.8	25.6	665	7300
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(May 11,18)	0.12+0.004+0.03+0.03+1.5%					
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(May 31)	0.16+0.004+0.03+0.03+1.5%					
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(June 12)	0.22+0.004+0.03+0.03+1.5%	88	15.5	26.3	695	7264

Table continued on next page.

Sugarbeet Herbicides, Prosper, 2007. (continued)

Yield Data (continued)

Treatment*	Date of Application	Rate	Sgbt Popl	Sucr	Root Yield	Impur Index	Extr Sucr
		(lb/A)	#/60'	%	ton/A		lb/A
De&Ph&Et+Tfsu+Clpy+CletM (May 11)		0.25+0.008+0.06+0.03					
De&Ph&Et+Tfsu+Clpy+CletM (May 18, 31)		0.33+0.008+0.06+0.03					
De&Ph&Et+Tfsu+Clpy+CletM (June 12)		0.5+0.008+0.06+0.03	73	15.7	22.8	664	6444
De&Ph&Et+Tfsu+Clpy+CletM+MSO+Etho (May 11, 18, 31, June 12)		0.08+0.004+0.03+0.03+1.5%+0.094	83	15.1	28.8	736	7709
Ethofumesate(Pre)	(April 25)	3.75					
Desm&Phen&Etho	(May 11)	0.25					
Desm&Phen&Etho	(May 18, 31)	0.33					
Desm&Phen&Etho	(June 12)	0.5	73	16.0	25.1	667	7172
Glyt+Premier90+AMS (May 28, June 21)		1+0.25%+1.7	76	16.5	27.7	600	8294
Glyt+Premier90+AMS (May 11, 18, 31, June 12)		1+0.25%+1.7	73	16.3	27.4	605	8095
Glyt+Premier90+AMS (May 11)		1+0.25%+1.7	80	16.7	24.3	534	7446
Glyt+Premier90+AMS (May 18)		1+0.25%+1.7	88	15.7	27.2	644	7718
Glyt+Premier90+AMS (May 31)		1+0.25%+1.7	71	15.9	24.4	602	7015
Glyt+Premier90+AMS(June 12)		1+0.25%+1.7	93	15.4	28.2	635	7887
Glyt+Premier90+AMS+Tfsu (May 18, June 12)		1+0.25%+1.7+0.008	91	16.1	28.9	627	8419
Glyt+Premier90+AMS+Tfsu (May 18, June 12)		1+0.25%+1.7+0.032	79	16.4	28.2	579	8422
Glyt+Premier90+AMS+Flumiclorac (May 18)		1+0.25%+1.7+0.015					
Glyt+Premier90+AMS (June 12)		1+0.25%+1.7	77	16.1	25.7	618	7494
Glyt+Premier90+AMS+Clpy (May 31)		1+0.25%+1.7+0.03					
Glyt+Premier90+AMS (June 12)		1+0.25%+1.7	76	15.9	28.0	605	8108
Glyt+Premier90+AMS+Clpy (May 31)		1+0.25%+1.7+0.06					
Glyt+Premier90+AMS (June 12)		1+0.25%+1.7	87	15.7	28.9	638	8176
Glyt+Premier90+AMS+CletM (May 18)		1+0.25%+1.7+0.09					
Glyt+Premier90+AMS (June 12)		1+0.25%+1.7	67	15.0	25.2	729	6693
Glyt+Premier90+AMS+Etho (May 11)		1+0.25%+1.7+3.75					
Glyt+Premier90+AMS (June 12)		1+0.25%+1.7	70	15.5	25.1	612	7070
Ethofumesate (Pre)	(April 25)	3.75					
Glyt+Premier90+AMS (May 18, June 12)		1+0.25%+1.7	73	15.6	25.5	657	7109
EXP MEAN			79	15.8	26.5	637	7570
C.V. %			16	4.1	9.4	14	10
LSD 5%			NS	0.9	3.5	NS	1021
LSD 1%			NS	NS	NS	NS	1360
# OF REPS			4	4	4	4	4

* Premier 90=non-ionic surfactant from West Central; MSO=methylated seed oil from Loveland; AMS=Am-Stik liquid ammonium sulfate from West Central.

Experiment summary on next page.

SUMMARY

The summary is from the combined date of evaluation data. The treatment that included flumiclorac gave the greatest sugarbeet injury. Increased rates of the registered sugarbeet herbicides gave increased sugarbeet injury and increased control of canola, common lambsquarters and quinoa, pigweed spp., and flax. Single applications of glyphosate on May 11 gave less control than single applications on May 18, May 31, or June 12. Two glyphosate applications generally gave better control than a single application.

Sugarbeet herbicides, Moorhead, 2007. (Dexter) 'Beta RZ02RR07' sugarbeet was seeded 1.25 inches deep in 22-inch rows April 30. Counter 15G insecticide at 12 pounds product per acre was applied modified in-furrow at planting. Preemerge ethofumesate was applied April 30 after planting. Postemergence treatments were applied May 17, May 29, June 5, and June 20. All treatments were applied in 17 gpa water at 40 psi through 8002 nozzles to the center four rows of six-row by 30-foot long plots. Sugarbeet injury and common lambsquarters and redroot pigweed control were evaluated June 29 and July 10.

Date of Application	April 30	May 17	May 29	June 5	June 20
Time of Day	12:30 PM	10:15 AM	9:00 AM	3:15 PM	8:30 AM
Air Temperature (°F)	63	62	78	67	76
Relative Humidity (%)	21	22	58	24	47
Soil Temp. (°F at 6")	50	52	60	69	62
Wind Velocity (mph)	3	10	9	3	0
Cloud Cover (%)	100	0	85	0	0
Soil Moisture	Good	Good	Good	Good	Good
Sugarbeet	preemerge	Cot-V1.2	V2.2-2.9	V4.5-5.9	V10-12
Common Lambsquarters	---	Cot-2lf	4-6lf	6-8lf(2-5")	4-6lf(10-12")
Redroot Pigweed	---	Cot	2-4lf	4-6lf	8-10"

Treatment*	Date of Application	Rate	June 29 Sgbt inj	June 29 Rrpw cntl	June 29 Colq cntl	July 10 Sgbt inj	July 10 Rrpw cntl	July 10 Colq cntl
		(lb/A)	%	%	%	%	%	%
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(May 17, 29, June 5, 20)	0.08+0.004+0.03+0.03+1.5%	11	95	99	0	94	98
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(May 17, 29)	0.12+0.004+0.03+0.03+1.5%						
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(June 5)	0.16+0.004+0.03+0.03+1.5%						
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(June 20)	0.22+0.004+0.03+0.03+1.5%	19	97	99	1	95	99
De&Ph&Et+Tfsu+Clpy+CletM	(May 17)	0.25+0.008+0.06+0.03						
De&Ph&Et+Tfsu+Clpy+CletM	(May 29, June 5)	0.33+0.008+0.06+0.03						
De&Ph&Et+Tfsu+Clpy+CletM	(June 20)	0.5+0.008+0.06+0.03	25	99	99	9	99	99
De&Ph&Et+Tfsu+Clpy+CletM+MSO+Etho	(May 17, 29, June 5, 20)	0.08+.004+.03+.03+1.5%+.094	10	97	98	0	92	98
Ethofumesate(Pre)	(April 30)	3.75						
Desm&Phen&Etho	(May 17)	0.25						
Desm&Phen&Etho	(May 29, June 5)	0.33						
Desm&Phen&Etho	(June 20)	0.5	14	99	99	6	99	99
Glyt+Premier90+AMS	(May 29, June 20)	1+0.25%+1.7	0	99	99	0	99	99
Glyt+Premier90+AMS	(May 17, 29, June 5, 20)	1+0.25%+1.7	0	99	99	0	99	99
Glyt+Premier90+AMS	(May 17)	1+0.25%+1.7	0	56	50	0	8	13
Glyt+Premier90+AMS	(May 29)	1+0.25%+1.7	0	87	86	0	64	65
Glyt+Premier90+AMS	(June 5)	1+0.25%+1.7	0	97	93	0	93	92
Glyt+Premier90+AMS	(June 20)	1+0.25%+1.7	0	97	97	0	99	99

Table continued on next page.

Sugarbeet herbicides, Moorhead, 2007. (continued)

Treatment*	Date of Application	Rate	June 29 Sgbt inj	June 29 Rrpw cntl	June 29 Colq cntl	July 10 Sgbt inj	July 10 Rrpw cntl	July 10 Colq cntl
		(lb/A)	%	%	%	%	%	%
Glyt+Premier90+AMS+Tfsu	(May 29, June 20)	1+0.25%+1.7+0.008	0	99	99	0	99	99
Glyt+P90+AMS+Tfsu	(May 29, June 20)	1+0.25%+1.7+0.032	0	99	99	0	99	99
Glyt+Premier90+AMS+Flumiclorac	(May 29)	1+0.25%+1.7+0.015						
Glyt+Premier90+AMS	(June 20)	1+0.25%+1.7	73	99	99	55	99	99
Glyt+Premier90+AMS+Clpy	(May 29)	1+0.25%+1.7+0.03						
Glyt+Premier90+AMS	(June 20)	1+0.25%+1.7	0	99	99	0	99	99
Glyt+Premier90+AMS+Clpy	(May 29)	1+0.25%+1.7+0.06						
Glyt+Premier90+AMS	(June 20)	1+0.25%+1.7	0	99	99	0	99	99
Glyt+Premier90+AMS+CletM	(May 29)	1+0.25%+1.7+0.09						
Glyt+Premier90+AMS	(June 20)	1+0.25%+1.7	0	99	99	0	99	99
Glyt+Premier90+AMS+Etho	(May 17)	1+0.25%+1.7+3.75						
Glyt+Premier90+AMS	(June 20)	1+0.25%+1.7	0	99	99	0	99	99
Ethofumesate (Pre)	(April 30)	3.75						
Glyt+Premier90+AMS	(May 29, June 20)	1+0.25%+1.7	3	99	99	0	99	99
EXP MEAN			8	95	95	4	91	92
C.V. %			31	3	4	67	7	5
LSD 5%			4	5	6	4	9	7
LSD 1%			5	6	8	5	12	9
# OF REPS			4	4	4	4	4	4

* Premier 90=non-ionic surfactant from West Central; MSO=methylated seed oil from Loveland; AMS=Am-Stik liquid ammonium sulfate from West Central.

Combined Evaluations

Treatment*	Date of Application	Rate	Sgbt inj	Rrpw cntl	Colq cntl
		(lb/A)	%	%	%
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(May 17, 29, June 5, 20)	0.08+0.004+0.03+0.03+1.5%	6	94	98
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(May 17,29)	0.12+0.004+0.03+0.03+1.5%			
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(June 5)	0.16+0.004+0.03+0.03+1.5%			
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(June 20)	0.22+0.004+0.03+0.03+1.5%	10	96	99

Table continued on next page.

Sugarbeet Herbicides, Moorhead, 2007. (continued)

Combined Evaluations (continued)

Treatment*	Date of Application	Rate	Sgbt inj	Rrpw cntl	Colq cntl
		(lb/A)	%	%	%
De&Ph&Et+Tfsu+Clpy+CletM	(May 17)	0.25+0.008+0.06+0.03			
De&Ph&Et+Tfsu+Clpy+CletM	(May 29, June 5)	0.33+0.008+0.06+0.03			
De&Ph&Et+Tfsu+Clpy+CletM	(June 20)	0.5+0.008+0.06+0.03	17	99	99
De&Ph&Et+Tfsu+Clpy+CletM+MSO+Etho	(May 17, 29, June 5,20)	0.08+.004+.03+.03+1.5%+.094	5	95	98
Ethofumesate(Pre)	(April 30)	3.75			
Desm&Phen&Etho	(May 17)	0.25			
Desm&Phen&Etho	(May 29, June 5)	0.33			
Desm&Phen&Etho	(June 20)	0.5	10	99	99
Glyt+Premier90+AMS	(May 29, June 20)	1+0.25%+1.7	0	99	99
Glyt+Premier90+AMS	(May 17,29,June 5,20)	1+0.25%+1.7	0	99	99
Glyt+Premier90+AMS	(May 17)	1+0.25%+1.7	0	32	31
Glyt+Premier90+AMS	(May 29)	1+0.25%+1.7	0	75	76
Glyt+Premier90+AMS	(June 5)	1+0.25%+1.7	0	95	92
Glyt+Premier90+AMS	(June 20)	1+0.25%+1.7	0	98	98
Glyt+Premier90+AMS+Tfsu	(May 29,June 20)	1+0.25%+1.7+0.008	0	99	99
Glyt+P90+AMS+Tfsu	(May 29,June 20)	1+0.25%+1.7+0.032	0	99	99
Glyt+Premier90+AMS+Flumiclorac	(May 29)	1+0.25%+1.7+0.015			
Glyt+Premier90+AMS	(June 20)	1+0.25%+1.7	64	99	99
Glyt+Premier90+AMS+Clpy	(May 29)	1+0.25%+1.7+0.03			
Glyt+Premier90+AMS	(June 20)	1+0.25%+1.7	0	99	99
Glyt+Premier90+AMS+Clpy	(May 29)	1+0.25%+1.7+0.06			
Glyt+Premier90+AMS	(June 20)	1+0.25%+1.7	0	99	99
Glyt+Premier90+AMS+CletM	(May 29)	1+0.25%+1.7+0.09			
Glyt+Premier90+AMS	(June 20)	1+0.25%+1.7	0	99	99
Glyt+Premier90+AMS+Etho	(May 17)	1+0.25%+1.7+3.75			
Glyt+Premier90+AMS	(June 20)	1+0.25%+1.7	0	99	99
Ethofumesate (Pre)	(April 30)	3.75			
Glyt+Premier90+AMS	(May 29, June 20)	1+0.25%+1.7	1	99	99
EXP MEAN			6	93	94
C.V. %			72	9	7
LSD 5%			4	8	6
LSD 1%			6	10	9
# OF REPS			8	8	8

* Premier 90=non-ionic surfactant from West Central; MSO=methylated seed oil from Loveland; AMS=Am-Stik liquid ammonium sulfate from West Central.

SUMMARY: Glyphosate applied May 17 or May 29 gave less weed control than latter applications because weeds emerged after May 29. Two glyphosate applications gave nearly total weed control. Registered herbicide treatments gave 94 to 99% weed control. Flumiclorac caused excessive sugarbeet injury.

Sugarbeet herbicides, Crookston, 2007. (Dexter) 'Beta RZ02RR07' sugarbeet was seeded 1.25 inches deep in 22-inch rows May 9. Counter 15G insecticide at 12 pounds product per acre was applied modified in-furrow at planting. 'Plainsman' amaranth, 'Interstate Hyola 420' canola at 14 lb/A, quinoa (*Chenopodium quinoa*), 'Golden German' millet at 34 lb/A, 'Maida' oat at 26 lb/A, and yellow-seeded flax at 12 lb/A were seeded in 4 foot strips across herbicide plots May 9, prior to sugarbeet seeding. Preemerge ethofumesate was applied May 9 after planting. Postemergence treatments were applied May 29, June 4, June 20, and June 27. All treatments were applied in 17 gpa water at 40 psi through 8002 nozzles to the center four rows of six-row by 30-foot long plots. Yellow foxtail, redroot pigweed, common lambsquarters and quinoa, amaranth, canola, flax, millet, oat, and curly dock (Cudo) control were evaluated July 5 and July 17.

Date of Application	**May 9**	**May 29**	**June 4**	**June 20**	**June 27**
Time of Day	12:45 PM	11:30 AM	9:30 AM	12:30 PM	12:00 PM
Air Temperature (°F)	80	74	68	76	62
Relative Humidity (%)	23	56	32	32	33
Soil Temp. (°F at 6")	58	61	62	64	67
Wind Velocity (mph)	10	5	13	9	8
Cloud Cover (%)	0	100	25	0	95
Soil Moisture	Good	Good	Good	Good	Good
Sugarbeet	preemerge	V1.0-2.1	V1.1-4.2	V5.8-6.8	V8.5-13.9
Redroot Pigweed	---	Cot-3lf	Cot-5lf	6-8"	10-12"
Amaranth	---	1-2lf	Cot-4lf	2-5"	6-10"
Quinoa	---	4lf(2")	4-6"	8-12"	10-18"
Canola	---	2-3lf(2")	2-4lf(3-4")	16-20"	28-32"
Flax	---	Cot-1½"	1-4"	2-6"	4-10"
Millet	---	2-3lf(1-2")	3-4lf(3-5")	6-7lf(10-12")	14-18"
Oat	---	2-3lf(4-6")	3-4lf(5-7")	6-7lf(14-16")	20-24"
Yellow Foxtail	---	3-4lf(½-2")	3-5lf(1-4")	7lf(6-10")	8lf(10-14")

July 5 Evaluation

Treatment*	Date of Application	Rate	Yeft cntl	Rrpw Amar cntl	Colq Quin cntl	Cano cntl	Flax cntl	Mill cntl	Oats cntl	Cudo cntl
		(lb/A)	%	%	%	%	%	%	%	%
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(May 29, June 4, 20, 27)	0.08+0.004+0.03+0.03+1.5%	99	71	89	69	55	99	99	99
De&Ph&Et+Tfsu+Clpy+CletM+MSO De&Ph&Et+Tfsu+Clpy+CletM+MSO	(May 29,June 4) (June 20)	0.12+0.004+0.03+0.03+1.5% 0.16+0.004+0.03+0.03+1.5%								
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(June 27)	0.22+0.004+0.03+0.03+1.5%	99	83	98	69	81	99	99	99
De&Ph&Et+Tfsu+Clpy+CletM De&Ph&Et+Tfsu+Clpy+CletM De&Ph&Et+Tfsu+Clpy+CletM	(May 29) (June 4, 20) (June 27)	0.25+0.008+0.06+0.03 0.33+0.008+0.06+0.03 0.5+0.008+0.06+0.03	98	92	98	90	95	99	98	99
De&Ph&Et+Tfsu+Clpy+CletM+MSO+Etho	(May 29, June 4, 20, 27)	0.08+.004+.03+.03+1.5%+.094	98	82	95	71	58	99	99	99

Table continued on next page.

Sugarbeet herbicides, Crookston, 2007. (continued)

July 5 Evaluation (continued)

Treatment*	Date of Application	Rate	Yeft cntl	Rrpw Amar cntl	Colq Quin cntl	Cano cntl	Flax cntl	Mill cntl	Oats cntl	Cudo cntl
		(lb/A)	%	%	%	%	%	%	%	%
Ethofumesate(Pre)	(May 9)	3.75								
Desm&Phen&Etho	(May 29)	0.25								
Desm&Phen&Etho	(June 4, 20)	0.33								
Desm&Phen&Etho	(June 27)	0.5	93	98	99	78	99	96	96	99
Glyt+Premier90+AMS	(June 4, 27)	1+0.25%+1.7	99	99	99	97	99	99	99	99
Glyt+Premier90+AMS	(May 29,June 4,20,27)	1+0.25%+1.7	99	99	99	99	99	99	99	99
Glyt+Premier90+AMS	(May 29)	1+0.25%+1.7	25	29	55	75	50	35	70	58
Glyt+Premier90+AMS	(June 4)	1+0.25%+1.7	85	91	88	98	99	95	98	95
Glyt+Premier90+AMS	(June 20)	1+0.25%+1.7	98	98	98	88	99	99	99	99
Glyt+Premier90+AMS	(June 27)	1+0.25%+1.7	50	81	68	30	71	58	58	63
Glyt+Premier90+AMS+Tfsu	(June 4, 27)	1+0.25%+1.7+0.008	99	99	99	99	99	99	99	99
Glyt+P90+AMS+Tfsu	(June 4, 27)	1+0.25%+1.7+0.032	98	99	99	99	99	99	99	99
Glyt+Premier90+AMS+Flumiclorac	(June 4)	1+0.25%+1.7+0.015								
Glyt+Premier90+AMS	(June 27)	1+0.25%+1.7	98	99	99	99	99	99	99	99
Glyt+Premier90+AMS+Clpy	(June 20)	1+0.25%+1.7+0.03								
Glyt+Premier90+AMS	(June 27)	1+0.25%+1.7	99	99	99	81	99	99	98	99
Glyt+Premier90+AMS+Clpy	(June 20)	1+0.25%+1.7+0.06								
Glyt+Premier90+AMS	(June 27)	1+0.25%+1.7	99	99	99	85	99	99	99	99
Glyt+Premier90+AMS+CletM	(June 20)	1+0.25%+1.7+0.09								
Glyt+Premier90+AMS	(June 27)	1+0.25%+1.7	99	99	98	85	99	99	99	99
Glyt+Premier90+AMS+Etho	(May 29)	1+0.25%+1.7+3.75								
Glyt+Premier90+AMS	(June 27)	1+0.25%+1.7	99	99	99	97	99	99	99	99
Ethofumesate (Pre)	(May 9)	3.75								
Glyt+Premier90+AMS	(June 4, 27)	1+0.25%+1.7	99	99	99	99	99	99	99	99
EXP MEAN			91	90	93	85	89	93	95	95
C.V. %			3	6	8	7	9	5	4	3
LSD 5%			3	8	11	9	11	7	6	4
LSD 1%			5	11	15	12	15	9	8	6
# OF REPS			4	4	4	4	4	4	4	4

Experiment continued on next page.

Sugarbeet herbicides, Crookston, 2007. (continued)

July 17 Evaluation

Treatment*	Date of Application	Rate	Yeft cntl	Rrpw Amar cntl	Colq Quin cntl	Cano cntl	Flax cntl	Oats cntl	Mill cntl	Cudo cntl
		(lb/A)	%	%	%	%	%	%	%	%
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(May 29, June 4, 20, 27)	0.08+0.004+0.03+0.03+1.5%	97	43	95	70	45	99	99	99
De&Ph&Et+Tfsu+Clpy+CletM+MSO(May 29,June 4)		0.12+0.004+0.03+0.03+1.5%								
De&Ph&Et+Tfsu+Clpy+CletM+MSO (June 20)		0.16+0.004+0.03+0.03+1.5%								
De&Ph&Et+Tfsu+Clpy+CletM+MSO (June 27)		0.22+0.004+0.03+0.03+1.5%	97	53	98	70	71	99	99	99
De&Ph&Et+Tfsu+Clpy+CletM (May 29)		0.25+0.008+0.06+0.03								
De&Ph&Et+Tfsu+Clpy+CletM (June 4, 20)		0.33+0.008+0.06+0.03								
De&Ph&Et+Tfsu+Clpy+CletM (June 27)		0.5+0.008+0.06+0.03	95	86	99	88	96	98	99	99
De&Ph&Et+Tfsu+Clpy+CletM+MSO+Etho	(May 29, June 4, 20, 27)	0.08+.004+.03+.03+1.5%+.094	96	68	93	75	35	99	99	95
Ethofumesate(Pre)	(May 9)	3.75								
Desm&Phen&Etho	(May 29)	0.25								
Desm&Phen&Etho	(June 4, 20)	0.33								
Desm&Phen&Etho	(June 27)	0.5	86	96	99	73	99	99	93	99
Glyt+Premier90+AMS	(June 4, 27)	1+0.25%+1.7	98	99	99	99	99	99	99	99
Glyt+Premier90+AMS	(May 29, June 4, 20, 27)	1+0.25%+1.7	98	99	99	99	99	99	99	99
Glyt+Premier90+AMS	(May 29)	1+0.25%+1.7	16	8	45	61	82	79	44	35
Glyt+Premier90+AMS	(June 4)	1+0.25%+1.7	66	73	90	96	99	99	94	92
Glyt+Premier90+AMS	(June 20)	1+0.25%+1.7	97	94	99	99	99	99	99	97
Glyt+Premier90+AMS	(June 27)	1+0.25%+1.7	98	97	98	91	99	99	99	99
Glyt+Premier90+AMS+Tfsu	(June 4, 27)	1+0.25%+1.7+0.008	97	99	99	99	99	99	99	99
Glyt+P90+AMS+Tfsu	(June 4, 27)	1+0.25%+1.7+0.032	97	98	99	99	99	99	99	99
Glyt+Premier90+AMS+Flumiclorac	(June 4)	1+0.25%+1.7+0.015								
Glyt+Premier90+AMS	(June 27)	1+0.25%+1.7	96	95	99	99	99	99	99	99
Glyt+Premier90+AMS+Clpy	(June 20)	1+0.25%+1.7+0.03								
Glyt+Premier90+AMS	(June 27)	1+0.25%+1.7	99	99	99	99	99	99	99	99
Glyt+Premier90+AMS+Clpy	(June 20)	1+0.25%+1.7+0.06								
Glyt+Premier90+AMS	(June 27)	1+0.25%+1.7	98	99	99	99	99	99	99	99
Glyt+Premier90+AMS+CletM	(June 20)	1+0.25%+1.7+0.09								
Glyt+Premier90+AMS	(June 27)	1+0.25%+1.7	99	98	99	99	99	99	99	99
Glyt+Premier90+AMS+Etho	(May 29)	1+0.25%+1.7+3.75								
Glyt+Premier90+AMS	(June 27)	1+0.25%+1.7	99	99	99	99	99	99	99	99

Table continued on next page.

Sugarbeet herbicides, Crookston, 2007. (continued)

July 17 Evaluation (continued)

Treatment*	Date of Application	Rate	Yeft cntl	Rrpw Amar cntl	Colq Quin cntl	Cano cntl	Flax cntl	Oats cntl	Mill cntl	Cudo cntl
		(lb/A)	%	%	%	%	%	%	%	%
Ethofumesate (Pre)	(May 9)	3.75								
Glyt+P90+AMS	(June 4, 27)	1+0.25%+1.7	98	99	99	99	99	99	99	99
EXP MEAN			91	84	95	90	90	98	96	95
C.V. %			5	8	8	7	11	2	5	4
LSD 5%			6	10	11	9	14	3	7	6
LSD 1%			9	13	15	12	19	5	10	7
# OF REPS			4	4	4	4	4	4	4	4

* Premier 90=non-ionic surfactant from West Central; MSO=methylated seed oil from Loveland; AMS=Am-Stik liquid ammonium sulfate from West Central.

Combined Evaluations

Treatment*	Date of Application	Rate	Yeft cntl	Rrpw Amar cntl	Colq Quin cntl	Cano cntl	Flax cntl	Mill cntl	Oats cntl	Cudo cntl
		(lb/A)	%	%	%	%	%	%	%	%
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(May 29, June 4, 20, 27)	0.08+0.004+0.03+0.03+1.5%	98	57	92	69	50	99	99	99
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(May 29,June 4)	0.12+0.004+0.03+0.03+1.5%								
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(June 20)	0.16+0.004+0.03+0.03+1.5%								
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(June 27)	0.22+0.004+0.03+0.03+1.5%	98	68	98	69	76	99	99	99
De&Ph&Et+Tfsu+Clpy+CletM	(May 29)	0.25+0.008+0.06+0.03								
De&Ph&Et+Tfsu+Clpy+CletM	(June 4, 20)	0.33+0.008+0.06+0.03								
De&Ph&Et+Tfsu+Clpy+CletM	(June 27)	0.5+0.008+0.06+0.03	97	89	99	89	96	99	98	99
De&Ph&Et+Tfsu+Clpy+CletM+MSO+Etho	(May 29, June 4, 20, 27)	0.08+.004+.03+.03+1.5%+.094	97	75	94	73	46	99	99	97
Ethofumesate(Pre)	(May 9)	3.75								
Desm&Phen&Etho	(May 29)	0.25								
Desm&Phen&Etho	(June 4, 20)	0.33								
Desm&Phen&Etho	(June 27)	0.5	89	97	99	75	99	95	97	99
Glyt+Premier90+AMS	(June 4, 27)	1+0.25%+1.7	98	99	99	98	99	99	99	99
Glyt+Premier90+AMS	(May 29,June 4,20,27)	1+0.25%+1.7	98	99	99	99	99	99	99	99
Glyt+Premier90+AMS	(May 29)	1+0.25%+1.7	21	18	50	68	66	39	74	46
Glyt+Premier90+AMS	(June 4)	1+0.25%+1.7	76	82	89	97	99	94	98	93
Glyt+Premier90+AMS	(June 20)	1+0.25%+1.7	97	96	99	93	99	99	99	98
Glyt+Premier90+AMS	(June 27)	1+0.25%+1.7	74	89	83	61	85	78	78	81
Glyt+Premier90+AMS+Tfsu	(June 4, 27)	1+0.25%+1.7+0.008	98	99	99	99	99	99	99	99

Table continued on next page.

Sugarbeet herbicides, Crookston, 2007. (continued)

Combined Evaluations (continued)

Treatment*	Date of Application	Rate	Yeft cntl	Rrpw Amar cntl	Colq Quin cntl	Cano cntl	Flax cntl	Mill cntl	Oats cntl	Cudo cntl
		(lb/A)	%	%	%	%	%	%	%	%
Glyt+P90+AMS+Tfsu	(June 4, 27)									
		1+0.25%+1.7+0.032	98	98	99	99	99	99	99	99
Glyt+Premier90+AMS+Flumiclorac	(June 4)									
		1+0.25%+1.7+0.015								
Glyt+Premier90+AMS	(June 27)									
		1+0.25%+1.7	97	97	99	99	99	99	99	99
Glyt+Premier90+AMS+Clpy	(June 20)									
		1+0.25%+1.7+0.03								
Glyt+Premier90+AMS	(June 27)									
		1+0.25%+1.7	99	99	99	90	99	99	99	99
Glyt+Premier90+AMS+Clpy	(June 20)									
		1+0.25%+1.7+0.06								
Glyt+Premier90+AMS	(June 27)									
		1+0.25%+1.7	99	99	99	92	99	99	99	99
Glyt+Premier90+AMS+CletM	(June 20)									
		1+0.25%+1.7+0.09								
Glyt+Premier90+AMS	(June 27)									
		1+0.25%+1.7	99	98	99	92	99	99	99	99
Glyt+Premier90+AMS+Etho	(May 29)									
		1+0.25%+1.7+3.75								
Glyt+Premier90+AMS	(June 27)									
		1+0.25%+1.7	99	99	99	98	99	99	99	99
Ethofumesate (Pre)	(May 9)	3.75								
Glyt+Premier90+AMS	(June 4, 27)									
		1+0.25%+1.7	98	99	99	99	99	99	99	99
EXP MEAN			91	87	94	87	90	94	96	95
C.V. %			8	9	9	12	12	7	6	7
LSD 5%			7	8	8	10	10	7	6	6
LSD 1%			10	11	11	13	14	9	8	8
# OF REPS			8	8	8	8	8	8	8	8

SUMMARY: Registered herbicide treatments gave less control of pigweed spp, canola, and flax than glyphosate treatments. Glyphosate applied once on June 20 gave better control than glyphosate applied once on May 29, June 4 or June 27. Glyphosate applied twice gave 98 to 99% control of all species.

Sugarbeet herbicides, St. Thomas, 2007. (Dexter) 'Beta RZ02RR07' sugarbeet was seeded 1.25 inches deep in 22-inch rows April 25. Counter 15G insecticide at 12 pounds product per acre was applied modified in-furrow at planting. Preemerge ethofumesate was applied April 25 after planting. Postemergence treatments were applied May 11, May 18, May 31, and June 12. All treatments were applied in 17 gpa water at 40 psi through 8002 nozzles to the center four rows of six-row by 30-foot long plots. The entire experiment was sprayed with Roundup Original Max at 44 fl oz/A July 2, Headline at 9 fl oz/A July 31, and Eminent at 13 fl oz/A August 17. Sugarbeet injury and redroot pigweed and wild buckwheat control were evaluated June 22 and July 2. Sugarbeet from the center 2 rows was counted and harvested September 18.

Date of Application	April 25	May 11	May 18	May 31	June 12
Time of Day	7:15 PM	12:30 PM	12:15 PM	11:30 AM	12:30 PM
Air Temperature (°F)	68	57	66	64	85
Relative Humidity (%)	28	28	54	50	45
Soil Temp. (°F at 6")	46	51	56	58	73
Wind Velocity (mph)	7	6	9	4	13
Cloud Cover (%)	10	100	100	35	10
Soil Moisture	Good	Good	Good	Good	Good
Sugarbeet		Cot	V1.0-2.3	V3.9-4.5	V8.5-13.1
Redroot Pigweed		Cot	Cot-2lf	3-6lf	2-4"
Wild Buckwheat			cot-1lf	2-6lf	4-6"tall

Treatment*	Date of Application	Rate	June 22 Sgbt inj	June 22 Rrpw cntl	June 22 Wibw cntl	July 2 Sgbt inj	July 2 Rrpw cntl	July 2 Wibw cntl
		(lb/A)	%	%	%	%	%	%
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(May 11, 18, 31, June 12)	0.08+0.004+0.03+0.03+1.5%	1	98	99	4	96	99
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(May 11,18)	0.12+0.004+0.03+0.03+1.5%						
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(May 31)	0.16+0.004+0.03+0.03+1.5%						
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(June 12)	0.22+0.004+0.03+0.03+1.5%	4	99	99	3	97	99
De&Ph&Et+Tfsu+Clpy+CletM	(May 11)	0.25+0.008+0.06+0.03						
De&Ph&Et+Tfsu+Clpy+CletM	(May 18, 31)	0.33+0.008+0.06+0.03						
De&Ph&Et+Tfsu+Clpy+CletM	(June 12)	0.5+0.008+0.06+0.03	9	99	99	8	98	99
De&Ph&Et+Tfsu+Clpy+CletM+MSO+Etho	(May 11, 18, 31, June 12)	0.08+0.004+0.03+0.03+1.5%+0.094	3	99	99	1	96	99
Ethofumesate(Pre)	(April 25)	3.75						
Desm&Phen&Etho	(May 11)	0.25						
Desm&Phen&Etho	(May 18, 31)	0.33						
Desm&Phen&Etho	(June 12)	0.5	4	99	99	5	99	99
Glyt+Premier90+AMS	(May 11, 18, 31, June 12)	1+0.25%+1.7	0	99	99	1	98	99
Glyt+Premier90+AMS	(May 11)	1+0.25%+1.7	0	86	0	0	43	0
Glyt+Premier90+AMS	(May 18)	1+0.25%+1.7	0	88	90	0	71	90
Glyt+Premier90+AMS	(May 31)	1+0.25%+1.7	0	94	93	0	74	80
Glyt+Premier90+AMS	(June 12)	1+0.25%+1.7	0	99	23	0	99	44
Glyt+Premier90+AMS+Tfsu	(May 18, June 12)	1+0.25%+1.7+0.008	0	99	99	1	99	98

Table continued on next page.

Sugarbeet herbicides, St. Thomas, 2007. (continued)

Treatment*	Date of Application	Rate	June 22 Sgbt inj	June 22 Rrpw cntl	June 22 Wibw cntl	July 2 Sgbt inj	July 2 Rrpw cntl	July 2 Wibw cntl
		(lb/A)	%	%	%	%	%	%
Glyt+Premier90+AMS+Tfsu	(May 18, June 12)	1+0.25%+1.7+0.032	1	99	99	0	99	99
Glyt+Premier90+AMS+Flumiclorac	(May 18)	1+0.25%+1.7+0.015						
Glyt+Premier90+AMS	(June 12)	1+0.25%+1.7	97	99	99	94	93	99
Glyt+Premier90+AMS+Clpy	(May 31)	1+0.25%+1.7+0.03						
Glyt+Premier90+AMS	(June 12)	1+0.25%+1.7	0	99	98	0	98	95
Glyt+Premier90+AMS+Clpy	(May 31)	1+0.25%+1.7+0.06						
Glyt+Premier90+AMS	(June 12)	1+0.25%+1.7	0	99	99	1	99	97
Glyt+Premier90+AMS+CletM	(May 18)	1+0.25%+1.7+0.09						
Glyt+Premier90+AMS	(June 12)	1+0.25%+1.7	0	99	99	0	99	99
Glyt+Premier90+AMS+Etho	(May 11)	1+0.25%+1.7+3.75						
Glyt+Premier90+AMS	(June 12)	1+0.25%+1.7	0	99	99	0	99	99
Ethofumesate (Pre)	(April 25)	3.75						
Glyt+Premier90+AMS	(May 18, June 12)	1+0.25%+1.7	1	99	99	0	99	99
EXP MEAN			7	97	88	7	92	88
C.V. %			51	2	4	30	4	7
LSD 5%			5	3	6	3	6	9
LSD 1%			6	4	8	4	8	12
# OF REPS			4	4	3	4	4	4

* Premier 90=non-ionic surfactant from West Central; MSO=methylated seed oil from Loveland; AMS=Am-Stik liquid ammonium sulfate from West Central.

Combined Evaluations

Treatment*	Date of Application	Rate	Sgbt inj	Rrpw cntl	Wibw cntl
		(lb/A)	%	%	%
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(May 11, 18, 31, June 12)	0.08+0.004+0.03+0.03+1.5%	3	97	99
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(May 11,18)	0.12+0.004+0.03+0.03+1.5%			
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(May 31)	0.16+0.004+0.03+0.03+1.5%			
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(June 12)	0.22+0.004+0.03+0.03+1.5%	3	98	99
De&Ph&Et+Tfsu+Clpy+CletM	(May 11)	0.25+0.008+0.06+0.03			
De&Ph&Et+Tfsu+Clpy+CletM	(May 18, 31)	0.33+0.008+0.06+0.03			
De&Ph&Et+Tfsu+Clpy+CletM	(June 12)	0.5+0.008+0.06+0.03	8	99	99
De&Ph&Et+Tfsu+Clpy+CletM+MSO+Etho	(May 11, 18, 31, June 12)	0.08+.004+.03+.03+1.5%+.094	2	97	99

Table continued on next page.

Sugarbeet Herbicides, St. Thomas, 2007. (continued)

Combined Evaluations (continued)

Treatment*	Date of Application	Rate	Sgbt inj	Rrpw cntl	Wibw cntl
		(lb/A)	%	%	%
Ethofumesate(Pre)	(April 25)	3.75			
Desm&Phen&Etho	(May 11)	0.25			
Desm&Phen&Etho	(May 18, 31)	0.33			
Desm&Phen&Etho	(June 12)	0.5	4	99	99
Glyt+Premier90+AMS	(May 11,18,31, June 12)	1+0.25%+1.7	1	98	99
Glyt+Premier90+AMS	(May 11)	1+0.25%+1.7	0	64	0
Glyt+Premier90+AMS	(May 18)	1+0.25%+1.7	0	79	90
Glyt+Premier90+AMS	(May 31)	1+0.25%+1.7	0	84	85
Glyt+Premier90+AMS	(June 12)	1+0.25%+1.7	0	99	35
Glyt+Premier90+AMS+Tfsu	(May 18,June 12)	1+0.25%+1.7+0.008	1	99	98
Glyt+P90+AMS+Tfsu	(May 18, June 12)	1+0.25%+1.7+0.032	1	99	99
Glyt+Premier90+AMS+Flumiclorac	(May 18)	1+0.25%+1.7+0.015			
Glyt+Premier90+AMS	(June 12)	1+0.25%+1.7	95	96	99
Glyt+Premier90+AMS+Clpy	(May 31)	1+0.25%+1.7+0.03			
Glyt+Premier90+AMS	(June 12)	1+0.25%+1.7	0	98	96
Glyt+Premier90+AMS+Clpy	(May 31)	1+0.25%+1.7+0.06			
Glyt+Premier90+AMS	(June 12)	1+0.25%+1.7	1	99	98
Glyt+Premier90+AMS+CletM	(May 18)	1+0.25%+1.7+0.09			
Glyt+Premier90+AMS	(June 12)	1+0.25%+1.7	0	99	99
Glyt+Premier90+AMS+Etho	(May 11)	1+0.25%+1.7+3.75			
Glyt+Premier90+AMS	(June 12)	1+0.25%+1.7	0	99	99
Ethofumesate (Pre)	(April 25)	3.75			
Glyt+Premier90+AMS	(May 18, June 12)	1+0.25%+1.7	1	99	99
EXP MEAN			7	95	88
C.V. %			40	7	7
LSD 5%			3	7	6
LSD 1%			3	9	8
# OF REPS			8	8	7

* Premier 90=non-ionic surfactant from West Central; MSO=methylated seed oil from Loveland; AMS=Am-Stik liquid ammonium sulfate from West Central.

Yield Data

Treatment*	Date of Application	Rate	Sgbt Popl	Sucr	Root Yield	Impur Index	Extr Sucr
		(lb/A)	#/60'	%	ton/A		lb/A
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(May 11, 18, 31, June 12)	0.08+0.004+0.03+0.03+1.5%	89	14.5	26.2	786	7371
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(May 11,18)	0.12+0.004+0.03+0.03+1.5%					
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(May 31)	0.16+0.004+0.03+0.03+1.5%					
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(June 12)	0.22+0.004+0.03+0.03+1.5%	93	14.3	25.3	847	6932

Table continued on next page.

Sugarbeet Herbicides, St. Thomas, 2007. (continued)

Yield Data (continued)

Treatment*	Date of Application	Rate	Sgbt Popl	Sucr	Root Yield	Impur Index	Extr Sucr
		(lb/A)	#/60'	%	ton/A		lb/A
De&Ph&Et+Tfsu+Clpy+CletM	(May 11)	0.25+0.008+0.06+0.03					
De&Ph&Et+Tfsu+Clpy+CletM	(May 18, 31)	0.33+0.008+0.06+0.03					
De&Ph&Et+Tfsu+Clpy+CletM	(June 12)	0.5+0.008+0.06+0.03	89	14.2	25.6	862	7041
De&Ph&Et+Tfsu+Clpy+CletM+MSO+Etho	(May 11, 18, 31, June 12)	0.08+0.004+0.03+0.03+1.5%+0.094	86	13.7	28.5	928	7472
Ethofumesate(Pre)	(April 25)	3.75					
Desm&Phen&Etho	(May 11)	0.25					
Desm&Phen&Etho	(May 18, 31)	0.33					
Desm&Phen&Etho	(June 12)	0.5	82	13.4	25.7	994	6630
Glyt+Premier90+AMS	(May 11, 18, 31, June 12)	1+0.25%+1.7	93	14.0	26.0	946	6977
Glyt+Premier90+AMS	(May 11)	1+0.25%+1.7	93	13.9	25.1	844	6654
Glyt+Premier90+AMS	(May 18)	1+0.25%+1.7	89	14.1	27.1	918	7318
Glyt+Premier90+AMS	(May 31)	1+0.25%+1.7	90	14.0	26.7	896	7208
Glyt+Premier90+AMS	(June 12)	1+0.25%+1.7	92	14.1	25.6	858	6926
Glyt+Premier90+AMS+Tfsu	(May 18, June 12)	1+0.25%+1.7+0.008	97	13.8	27.4	972	7216
Glyt+Premier90+AMS+Tfsu	(May 18, June 12)	1+0.25%+1.7+0.032	100	14.1	28.5	851	7746
Glyt+Premier90+AMS+Flumiclorac	(May 18)	1+0.25%+1.7+0.015					
Glyt+Premier90+AMS	(June 12)	1+0.25%+1.7	29	13.4	16.0	964	4160
Glyt+Premier90+AMS+Clpy	(May 31)	1+0.25%+1.7+0.03					
Glyt+Premier90+AMS	(June 12)	1+0.25%+1.7	92	13.9	25.8	888	6901
Glyt+Premier90+AMS+Clpy	(May 31)	1+0.25%+1.7+0.06					
Glyt+Premier90+AMS	(June 12)	1+0.25%+1.7	85	13.8	26.2	937	6927
Glyt+Premier90+AMS+CletM	(May 18)	1+0.25%+1.7+0.09					
Glyt+Premier90+AMS	(June 12)	1+0.25%+1.7	89	13.9	27.0	882	7118
Glyt+Premier90+AMS+Etho	(May 11)	1+0.25%+1.7+3.75					
Glyt+Premier90+AMS	(June 12)	1+0.25%+1.7	94	13.5	29.9	958	7798
Ethofumesate (Pre)	(April 25)	3.75					
Glyt+Premier90+AMS	(May 18, June 12)	1+0.25%+1.7	91	13.5	29.2	1006	7481
EXP MEAN			88	13.9	26.2	902	6996
C.V. %			10	3.7	9.8	12	10
LSD 5%			13	NS	3.6	NS	1017
LSD 1%			17	NS	4.8	NS	1355
# OF REPS			4	4	4	4	4

* Premier 90=non-ionic surfactant from West Central; MSO=methylated seed oil from Loveland; AMS=Am-Stik liquid ammonium sulfate from West Central.

Experiment summary on next page.

SUMMARY

The summary is from the combined date of evaluation data. The treatment that included flumiclorac gave 95% sugarbeet injury and the least sugarbeet yield while other treatments gave 0 to 8% injury and from 2500 to 3500 lb/A greater yield of extractable sucrose per acre. Redroot pigweed control and wild buckwheat control was excellent with all treatments except the treatments where glyphosate was applied once. The single glyphosate treatment on June 12 gave the best redroot pigweed control; probably because pigweed germinated and emerged after the earlier treatments. The single glyphosate treatment on May 18 gave the best wild buckwheat control. The wild buckwheat had not emerged on May 11 and the wild buckwheat became progressively more tolerant of the glyphosate as the plants became larger after May 18.

Sugarbeet herbicides, Cavalier, 2007. (Dexter) 'Beta RZ02RR07' sugarbeet was seeded 1.25 inches deep in 22-inch rows April 25. Counter 15G insecticide at 12 pounds product per acre was applied modified in-furrow at planting. Preemerge ethofumesate was applied April 25 after planting. Postemergence treatments were applied May 11, May 18, May 31, and June 12. All treatments were applied in 17 gpa water at 40 psi through 8002 nozzles to the center four rows of six-row by 30-foot long plots. Sugarbeet injury and redroot pigweed, kochia, and common lambsquarters control were evaluated June 22 and July 2.

Date of Application	April 25	May 11	May 18	May 31	June 12
Time of Day	3:00 PM	11:00 AM	2:30 PM	10:00 AM	11:00 AM
Air Temperature (°F)	73	60	66	61	84
Relative Humidity (%)	21	30	45	46	48
Soil Temp. (°F at 6")	48	50	55	54	68
Wind Velocity (mph)	8	1	13	7	9
Cloud Cover (%)	0	100	30	75	0
Soil Moisture	Good	Good	Good	Good	Good
Sugarbeet	preemerge	Cot	Cot-V1.5	V1.1-1.9	V6.5-8.1
Kochia	---	Cot	Cot-1/2"whorl	1/4-1"whorl	2-6"
Lambsquarters	---	Cot-2lf	Cot-4lf	4-10lf(1-4")	6-10"
Redroot Pigweed	---	Cot	Cot-2lf	1-4lf	4-8lf(1-3"

Treatment*	Date of Application	Rate	June 22 Sgbt inj	June 22 Rrpw cntl	June 22 Kocz cntl	June 22 Colq cntl	July 2 Sgbt inj	July 2 Rrpw cntl	July 2 Kocz cntl	July 2 Colq cntl
		(lb/A)	%	%	%	%	%	%	%	%
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(May 11, 18, 31, June 12)	0.08+0.004+0.03+0.03+1.5%	16	91	77	99	5	76	46	99
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(May 11, 18)	0.12+0.004+0.03+0.03+1.5%								
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(May 31)	0.16+0.004+0.03+0.03+1.5%								
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(June 12)	0.22+0.004+0.03+0.03+1.5%	31	93	88	98	15	79	63	99
De&Ph&Et+Tfsu+Clpy+CletM	(May 11)	0.25+0.008+0.06+0.03								
De&Ph&Et+Tfsu+Clpy+CletM	(May 18, 31)	0.33+0.008+0.06+0.03								
De&Ph&Et+Tfsu+Clpy+CletM	(June 12)	0.5+0.008+0.06+0.03	31	96	94	99	25	90	86	99
De&Ph&Et+Tfsu+Clpy+CletM+MSO+Etho	(May 11, 18, 31, June 12)	0.08+.004+.03+.03+1.5%+.094	20	94	76	99	13	81	51	99
Ethofumesate(Pre)	(April 25)	3.75								
Desm&Phen&Etho	(May 11)	0.25								
Desm&Phen&Etho	(May 18, 31)	0.33								
Desm&Phen&Etho	(June 12)	0.5	20	97	97	99	25	92	93	98
Glyt+Premier90+AMS	(May 11, 18, 31, June 12)	1+0.25%+1.7	0	99	99	99	0	93	99	99
Glyt+Premier90+AMS	(May 11)	1+0.25%+1.7	0	3	78	56	0	9	23	15
Glyt+Premier90+AMS	(May 18)	1+0.25%+1.7	0	38	76	74	0	21	40	24
Glyt+Premier90+AMS	(May 31)	1+0.25%+1.7	0	84	96	98	0	48	97	99
Glyt+Premier90+AMS	(June 12)	1+0.25%+1.7	6	97	99	97	1	93	98	98

Table continued on next page.

Sugarbeet herbicides, Cavalier, 2007. (continued)

Treatment*	Date of Application	Rate	June 22 Sgbt inj	June 22 Rrpw cntl	June 22 Kocz cntl	June 22 Colq cntl	July 2 Sgbt inj	July 2 Rrpw cntl	July 2 Kocz cntl	July 2 Colq cntl
		(lb/A)	%	%	%	%	%	%	%	%
Glyt+Premier90+AMS+Tfsu	(May 18, June 12)	1+0.25%+1.7+0.008	3	99	99	99	1	97	99	99
Glyt+P90+AMS+Tfsu	(May 18, June 12)	1+0.25%+1.7+0.032	4	99	99	99	3	99	98	99
Glyt+Premier90+AMS+Flumiclorac	(May 18)	1+0.25%+1.7+0.015								
Glyt+Premier90+AMS	(June 12)	1+0.25%+1.7	97	98	99	99	96	91	98	99
Glyt+Premier90+AMS+Clpy	(May 31)	1+0.25%+1.7+0.03								
Glyt+Premier90+AMS	(June 12)	1+0.25%+1.7	1	98	99	99	0	95	99	99
Glyt+Premier90+AMS+Clpy	(May 31)	1+0.25%+1.7+0.06								
Glyt+Premier90+AMS	(June 12)	1+0.25%+1.7	1	99	99	99	0	94	99	99
Glyt+Premier90+AMS+CletM	(May 31)	1+0.25%+1.7+0.09								
Glyt+Premier90+AMS	(June 12)	1+0.25%+1.7	0	98	99	99	0	93	99	99
Glyt+Premier90+AMS+Etho	(May 11)	1+0.25%+1.7+3.75								
Glyt+Premier90+AMS	(June 12)	1+0.25%+1.7	0	99	99	98	0	99	99	99
Ethofumesate (Pre)	(April 25)	3.75								
Glyt+P90+AMS	(May 18, June 12)	1+0.25%+1.7	1	98	99	98	0	96	99	99
EXP MEAN			12	85	92	94	10	77	82	88
C.V. %			42	4	7	6	35	5	12	4
LSD 5%			7	5	9	8	5	6	14	5
LSD 1%			10	7	11	10	6	8	19	7
# OF REPS			4	4	4	4	4	4	4	4

* Premier 90=non-ionic surfactant from West Central; MSO=methylated seed oil from Loveland; AMS=Am-Stik liquid ammonium sulfate from West Central.

Combined Evaluations

Treatment*	Date of Application	Rate	Sgbt inj	Rrpw cntl	Kocz cntl	Colq cntl
		(lb/A)	%	%	%	%
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(May 11, 18, 31, June 12)	0.08+0.004+0.03+0.03+1.5%	11	84	62	99
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(May 11,18)	0.12+0.004+0.03+0.03+1.5%				
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(May 31)	0.16+0.004+0.03+0.03+1.5%				
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(June 12)	0.22+0.004+0.03+0.03+1.5%	23	86	75	98
De&Ph&Et+Tfsu+Clpy+CletM	(May 11)	0.25+0.008+0.06+0.03				
De&Ph&Et+Tfsu+Clpy+CletM	(May 18, 31)	0.33+0.008+0.06+0.03				
De&Ph&Et+Tfsu+Clpy+CletM	(June 12)	0.5+0.008+0.06+0.03	28	93	90	99

Table continued on next page.

Sugarbeet Herbicides, Cavalier, 2007. (continued)

Combined Evaluations (continued)

Treatment*	Date of Application	Rate	Sgbt inj	Rrpw cntl	Kocz cntl	Colq cntl
		(lb/A)	%	%	%	%
De&Ph&Et+Tfsu+Clpy+CletM+MSO+Etho	(May 11, 18, 31, June 12)	0.08+.004+.03+.03+1.5%+.094	16	88	64	99
Ethofumesate(Pre)	(April 25)	3.75				
Desm&Phen&Etho	(May 11)	0.25				
Desm&Phen&Etho	(May 18, 31)	0.33				
Desm&Phen&Etho	(June 12)	0.5	23	95	95	98
Glyt+Premier90+AMS	(May 11,18,31, June 12)	1+0.25%+1.7	0	96	99	99
Glyt+Premier90+AMS	(May 11)	1+0.25%+1.7	0	6	50	36
Glyt+Premier90+AMS	(May 18)	1+0.25%+1.7	0	29	58	49
Glyt+Premier90+AMS	(May 31)	1+0.25%+1.7	0	66	97	98
Glyt+Premier90+AMS	(June 12)	1+0.25%+1.7	4	95	98	98
Glyt+Premier90+AMS+Tfsu	(May 18,June 12)	1+0.25%+1.7+0.008	2	98	99	99
Glyt+P90+AMS+Tfsu	(May 18, June 12)	1+0.25%+1.7+0.032	3	99	99	99
Glyt+Premier90+AMS+Flumiclorac	(May 18)	1+0.25%+1.7+0.015				
Glyt+Premier90+AMS	(June 12)	1+0.25%+1.7	96	94	98	99
Glyt+Premier90+AMS+Clpy	(May 31)	1+0.25%+1.7+0.03				
Glyt+Premier90+AMS	(June 12)	1+0.25%+1.7	1	97	99	99
Glyt+Premier90+AMS+Clpy	(May 31)	1+0.25%+1.7+0.06				
Glyt+Premier90+AMS	(June 12)	1+0.25%+1.7	1	96	99	99
Glyt+Premier90+AMS+CletM	(May 18)	1+0.25%+1.7+0.09				
Glyt+Premier90+AMS	(June 12)	1+0.25%+1.7	0	95	99	99
Glyt+Premier90+AMS+Etho	(May 11)	1+0.25%+1.7+3.75				
Glyt+Premier90+AMS	(June 12)	1+0.25%+1.7	0	99	99	98
Ethofumesate (Pre)	(April 25)	3.75				
Glyt+Premier90+AMS	(May 18, June 12)	1+0.25%+1.7	1	97	99	98
EXP MEAN			11	81	87	91
C.V. %			43	8	13	10
LSD 5%			5	6	11	9
LSD 1%			6	8	15	12
# OF REPS			8	8	8	8

* Premier 90=non-ionic surfactant from West Central; MSO=methylated seed oil from Loveland; AMS=Am-Stik liquid ammonium sulfate from West Central.

SUMMARY: Registered herbicide treatments caused more sugarbeet injury than glyphosate. Flumiclorac caused excessive sugarbeet injury. Glyphosate applied once on June 12 gave better pigweed control than glyphosate applied once in May, probably because pigweed was still emerging after May 31. Micro-rate and mid-rate treatments gave less control of redroot pigweed and kochia but similar control of common lambsquarters compared to glyphosate applied twice. The conventional-rate treatments and PRE ethofumesate followed by POST desm&phen&etho gave control similar to glyphosate applied twice.

Glyphosate on Roundup Ready sugarbeet, Prosper, 2007. (Dexter) 'Beta RZ02RR07' sugarbeet was seeded 1.25 inches deep in 22-inch rows May 3. Counter 15G insecticide at 12 pounds product per acre was applied modified in-furrow at planting. 'Plainsman' amaranth, 'Interstate Hyola 420' canola at 14 lb/A, quinoa (*Chenopodium quinoa*), 'Golden German' millet at 34 lb/A, 'Maida' oat at 26 lb/A, and yellow-seeded flax at 12 lb/A were seeded in 4 foot strips across herbicide plots May 2, prior to sugarbeet seeding. Preemerge ethofumesate was applied May 3 after planting. Postemergence treatments were applied May 21, May 28, June 5, June 21, June 27, and July 11. All treatments were applied in 17 gpa water at 40 psi through 8002 nozzles to the center four rows of six-row by 30-foot long plots. The entire experiment was sprayed with Headline at 9 fl oz/A July 31. Sugarbeet injury and redroot pigweed and amaranth, common lambsquarters and quinoa, canola, flax, millet, and oat control were evaluated July 17 and July 30. Sugarbeet from the center 2 rows was counted and harvested September 11.

Date of Application	May 3	May 21	May 28	June 5	June 21	June 27	July 11
Time of Day	10:00 AM	1:00 PM	10:00 AM	10:30 AM	11:00 AM	9:00 AM	8:30 AM
Air Temperature (°F)	61	71	80	57	74	67	63
Relative Humidity (%)	31	64	46	28	37	36	51
Soil Temp. (°F at 6")	50	55	58	56	65	69	62
Wind Velocity (mph)	18	17	18	5	9	4	6
Cloud Cover (%)	10	90	10	5	70	25	0
Soil Moisture	Good	Good	Good	Good	Good	Good	Good
Sugarbeet		V1.0-1.5	V2.1-2.7	V4.2-5.9	V10.9-13.9	V14.9-17.9	Canopy
Redroot Pigweed		1-2lf	2-3lf	3-6lf	8-10"	14 - 20"	16 - 20"
Amaranth		Cot-1lf	2-3lf	3-4lf	8-12"	14 - 22"	16 - 22"
Quinoa		Cot-2lf	4-6lf(2")	3-6"	12-20"	22 - 30"	28 - 34"
Canola		Cot-2lf(1/2-1")	3-4lf(2-3")	5-6lf(6")	28-32"	30 - 36"	30 - 36"
Flax		Cot-2lf(1/2-1")	(1/2-2")	3-6"	8-14"	14 - 16"	16 - 18"
Millet		1.9-2.5lf(1")	3-4lf(1-3")	4-5lf(3-	10-14"	16 - 24"	20 - 24"
Oats		1.9-2.1lf(3")	3-4lf(4-5")	4-5lf(6-	28-32"	30 - 34"	30 - 36"
Com.Lambsquarters		Cot-2lf	2-4lf	6-8lf(2-	10-14"	14 - 20"	16 - 22"

July 17 Evaluation

Treatment*	Date of Application	Rate	Sgbt inj	Rrpw Amar cntl	Colq Quin cntl	Cano cntl	Flax cntl	Oats cntl	Fomi cntl
		lb/A	%	%	%	%	%	%	%
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(May 21, 28, June 5, 21)	0.08+0.004+0.03+0.03+1.5%	0	94	98	84	53	99	99
De&Ph&Et+Tfsu+Clpy+CletM	(May 21)	0.25+0.008+0.06+0.03							
De&Ph&Et+Tfsu+Clpy+CletM	(May 28, June 5)	0.33+0.008+0.06+0.03							
De&Ph&Et+Tfsu+Clpy+CletM	(June 21)	0.5+0.008+0.06+0.03	6	99	99	96	98	99	99
Untreated Check		0	0	0	0	0	0	0	0
Glyphosate+AMS	(May 28, June 21, July 11)	0.75+2.9	0	99	99	99	99	99	99
Glyphosate+AMS+P90	(May 28, June 21, July 11)	0.75+2.9+0.25%	0	99	99	99	99	99	99
MON79790+AMS	(May 28,June 21,27, July 11)	1.5+2.9	1	99	99	99	99	99	99
Glyphosate+AMS	(May 28)	0.75+2.9							
Glyphosate+AMS+Dime	(June 21)	0.75+2.9+0.84							
Glyphosate+AMS	(July 11)	0.75+2.9	0	99	99	99	99	99	99
Glyphosate+AMS+Clpy	(May 28)	0.75+2.9+0.09							
Glyphosate+AMS	(June 21, July 11)	0.75+2.9	0	99	99	99	99	99	99
Glyphosate+AMS+Dime	(May 28)	0.75+2.9+0.84							
Glyphosate+AMS	(June 21, July 11)	0.75+2.9	0	99	99	99	99	99	99
Glyphosate+AMS+CletM	(May 28)	0.75+2.9+0.125							
Glyphosate+AMS	(June 21, July 11)	0.75+2.9	0	99	99	99	99	99	99

Table continued on next page.

Glyphosate on Roundup Ready sugarbeet, Prosper, 2007. (continued)

July 17 Evaluation (continued)

Treatment*	Date of Application	Rate	Sgbt inj	Rrpw Amar cntl	Colq Quin cntl	Cano cntl	Flax cntl	Oats cntl	Fomi cntl
		lb/A	%	%	%	%	%	%	%
Ethofumesate (Pre)	(May 3)	3.75							
Glyt+AMS	(May 28, June 21, July 11)	0.75+2.9	0	99	99	99	99	99	99
Glyphosate+AMS	(May 28)	0.75+2.9							
Glyphosate+AMS+Etho	(June 21)	0.75+2.9+2							
Glyphosate+AMS	(July 11)	0.75+2.9	1	99	99	99	99	99	99
Ethofumesate (Pre)	(May 3)	2.25							
Glyphosate+AMS	(May 28)	0.75+2.9							
Glyphosate+AMS+Etho	(June 21)	0.75+2.9+1.5							
Glyphosate+AMS	(July 11)	0.75+2.9	0	99	99	99	99	99	99
Glyt+AMS+P90	(May 28, June 21)	0.75+2.9+0.25%							
Glyt+AMS+P90+Eminent	(July 11)	0.75+2.9+0.25%+0.1	0	99	99	99	99	99	99
Glyt+AMS+P90	(May 28, June 21)	0.75+2.9+0.25%							
Glyt+AMS+P90+Headline	(July 11)	0.75+2.9+0.25%+0.15	0	99	99	99	99	99	99
Glyt+AMS+P90	(May 28, June 21)	0.75+2.9+0.25%							
Glyt+AMS+P90+SuperTin	(July 11)	0.75+2.9+0.25%+0.25	1	99	99	99	99	99	99
Glyt+AMS+P90+Lorsban	(May 28)	0.75+2.9+0.25%+0.5							
Glyt+AMS+P90	(June 21, July 11)	0.75+2.9+0.25%	0	99	99	99	99	99	99
Glyphosate+AMS+P90	(May 28,June 21)	0.75+2.9+0.25%	0	98	99	99	99	99	99
EXP MEAN			1	93	93	92	91	94	94
C.V. %			206	2	0	1	1	0	0
LSD 5%			2	2	0	1	2	0	0
LSD 1%			2	3	1	1	2	0	0
# OF REPS			4	4	4	4	4	4	4

AMS=Am-Stik liquid ammonium sulfate from West Central; P90=Premier 90 non-ionic surfactant from West Central.

July 30 Evaluation

Treatment*	Date of Application	Rate	Sgbt inj	Rrpw Amar cntl	Colq Quin cntl	Cano cntl	Flax cntl	Oats cntl	Fomi cntl
		lb/A	%	%	%	%	%	%	%
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(May 21, 28, June 5, 21)	0.08+0.004+0.03+0.03+1.5%	0	96	98	83	63	99	99
De&Ph&Et+Tfsu+Clpy+CletM	(May 21)	0.25+0.008+0.06+0.03							
De&Ph&Et+Tfsu+Clpy+CletM	(May 28, June 5)	0.33+0.008+0.06+0.03							
De&Ph&Et+Tfsu+Clpy+CletM	(June 21)	0.5+0.008+0.06+0.03	1	99	99	95	94	99	99
Untreated Check		0	0	0	0	0	0	0	0
Glyphosate+AMS	(May 28, June 21, July 11)	0.75+2.9	0	99	99	99	99	99	99
Glyphosate+AMS+P90	(May 28, June 21, July 11)	0.75+2.9+0.25%	0	99	99	99	99	99	99
MON79790+AMS	(May 28,June 21, 27,July 11)	1.5+2.9	0	99	99	99	99	99	99

Table continued on next page.

Glyphosate on Roundup Ready sugarbeet, Prosper, 2007. (continued)

July 30 Evaluation (continued)

Treatment*	Date of Application	Rate	Sgbt inj	Rrpw Amar cntl	Colq Quin cntl	Cano cntl	Flax cntl	Oats cntl	Fomi cntl
		lb/A	%	%	%	%	%	%	%
Glyphosate+AMS	(May 28)	0.75+2.9							
Glyphosate+AMS+Dime	(June 21)	0.75+2.9+0.84							
Glyphosate+AMS	(July 11)	0.75+2.9	0	99	99	99	99	99	99
Glyphosate+AMS+Clpy	(May 28)	0.75+2.9+0.09							
Glyphosate+AMS	(June 21, July 11)	0.75+2.9	0	99	99	99	99	99	99
Glyphosate+AMS+Dime	(May 28)	0.75+2.9+0.84							
Glyphosate+AMS	(June 21, July 11)	0.75+2.9	0	99	99	99	99	99	99
Glyphosate+AMS+CletM	(May 28)	0.75+2.9+0.125							
Glyphosate+AMS	(June 21, July 11)	0.75+2.9	0	99	99	99	99	99	99
Ethofumesate (Pre)	(May 3)	3.75							
Glyt+AMS	(May 28, June 21, July 11)	0.75+2.9	0	99	99	99	99	99	99
Glyphosate+AMS	(May 28)	0.75+2.9							
Glyphosate+AMS+Etho	(June 21)	0.75+2.9+2							
Glyphosate+AMS	(July 11)	0.75+2.9	0	99	99	99	99	99	99
Ethofumesate (Pre)	(May 3)	2.25							
Glyphosate+AMS	(May 28)	0.75+2.9							
Glyphosate+AMS+Etho	(June 21)	0.75+2.9+1.5							
Glyphosate+AMS	(July 11)	0.75+2.9	0	99	99	99	99	99	99
Glyt+AMS+P90	(May 28, June 21)	0.75+2.9+0.25%							
Glyt+AMS+P90+Eminent	(July 11)	0.75+2.9+0.25%+0.1	0	99	99	99	99	99	99
Glyt+AMS+P90	(May 28, June 21)	0.75+2.9+0.25%							
Glyt+AMS+P90+Headline	(July 11)	0.75+2.9+0.25%+0.15	0	99	99	99	99	99	99
Glyt+AMS+P90	(May 28, June 21)	0.75+2.9+0.25%							
Glyt+AMS+P90+SuperTin	(July 11)	0.75+2.9+0.25%+0.25	0	99	99	99	99	99	99
Glyt+AMS+P90+Lorsban	(May 28)	0.75+2.9+0.25%+0.5							
Glyt+AMS+P90	(June 21, July 11)	0.75+2.9+0.25%	0	99	99	99	99	99	99
Glyphosate+AMS+P90	(May 28,June 21)	0.75+2.9+0.25%	0	98	99	99	99	99	99
EXP MEAN			0	93	93	92	91	94	94
C.V. %			849	1	0	2	3	0	0
LSD 5%			NS	1	1	2	4	0	0
LSD 1%			NS	2	1	3	6	0	0
# OF REPS			4	4	4	4	4	4	4

AMS=Am-Stik liquid ammonium sulfate from West Central; P90=Premier 90 non-ionic surfactant from West Central.

Experiment continued on next page.

Glyphosate on Roundup Ready sugarbeet, Prosper, 2007. (continued)
Combined Evaluations

Treatment*	Date of Application	Rate	Sgbt inj	Rrpw Amar cntl	Colq Quin cntl	Cano cntl	Flax cntl	Oats cntl	Fomi cntl
		lb/A	%	%	%	%	%	%	%
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(May 21, 28, June 5, 21)	0.08+0.004+0.03+0.03+1.5%	0	95	98	83	58	99	99
De&Ph&Et+Tfsu+Clpy+CletM	(May 21)	0.25+0.008+0.06+0.03							
De&Ph&Et+Tfsu+Clpy+CletM	(May 28, June 5)	0.33+0.008+0.06+0.03							
De&Ph&Et+Tfsu+Clpy+CletM	(June 21)	0.5+0.008+0.06+0.03	4	99	99	95	96	99	99
Untreated Check		0	0	0	0	0	0	0	0
Glyphosate+AMS	(May 28, June 21, July 11)	0.75+2.9	0	99	99	99	99	99	99
Glyphosate+AMS+P90	(May 28, June 21, July 11)	0.75+2.9+0.25%	0	99	99	99	99	99	99
MON79790+AMS	(May 28,June 21, 27,July 11)	1.5+2.9	1	99	99	99	99	99	99
Glyphosate+AMS	(May 28)	0.75+2.9							
Glyphosate+AMS+Dime	(June 21)	0.75+2.9+0.84							
Glyphosate+AMS	(July 11)	0.75+2.9	0	99	99	99	99	99	99
Glyphosate+AMS+Clpy	(May 28)	0.75+2.9+0.09							
Glyphosate+AMS	(June 21, July 11)	0.75+2.9	0	99	99	99	99	99	99
Glyphosate+AMS+Dime	(May 28)	0.75+2.9+0.84							
Glyphosate+AMS	(June 21, July 11)	0.75+2.9	0	99	99	99	99	99	99
Glyphosate+AMS+CletM	(May 28)	0.75+2.9+0.125							
Glyphosate+AMS	(June 21, July 11)	0.75+2.9	0	99	99	99	99	99	99
Ethofumesate (Pre)	(May 3)	3.75							
Glyt+AMS	(May 28, June 21, July 11)	0.75+2.9	0	99	99	99	99	99	99
Glyphosate+AMS	(May 28)	0.75+2.9							
Glyphosate+AMS+Etho	(June 21)	0.75+2.9+2							
Glyphosate+AMS	(July 11)	0.75+2.9	1	99	99	99	99	99	99
Ethofumesate (Pre)	(May 3)	2.25							
Glyphosate+AMS	(May 28)	0.75+2.9							
Glyphosate+AMS+Etho	(June 21)	0.75+2.9+1.5							
Glyphosate+AMS	(July 11)	0.75+2.9	0	99	99	99	99	99	99
Glyt+AMS+P90	(May 28, June 21)	0.75+2.9+0.25%							
Glyt+AMS+P90+Eminent	(July 11)	0.75+2.9+0.25%+0.1	0	99	99	99	99	99	99
Glyt+AMS+P90	(May 28, June 21)	0.75+2.9+0.25%							
Glyt+AMS+P90+Headline	(July 11)	0.75+2.9+0.25%+0.15	0	99	99	99	99	99	99
Glyt+AMS+P90	(May 28, June 21)	0.75+2.9+0.25%							
Glyt+AMS+P90+SuperTin	(July 11)	0.75+2.9+0.25%+0.25	1	99	99	99	99	99	99
Glyt+AMS+P90+Lorsban	(May 28)	0.75+2.9+0.25%+0.5							
Glyt+AMS+P90	(June 21, July 11)	0.75+2.9+0.25%	0	99	99	99	99	99	99
Glyphosate+AMS+P90	(May 28,June 21)	0.75+2.9+0.25%	0	98	99	99	99	99	99
EXP MEAN			0	93	93	92	91	94	94
C.V. %			341	1	0	1	3	0	0
LSD 5%			1	1	0	1	3	0	0
LSD 1%			1	2	1	2	3	0	0
# OF REPS			8	8	8	8	8	8	8

AMS=Am-Stik liquid ammonium sulfate from West Central; P90=Premier 90 non-ionic surfactant from West Central.

Experiment continued on next page.

Glyphosate on Roundup Ready sugarbeet, Prosper, 2007. (continued)
Yield Data

Treatment*	Date of Application	Rate	Sgbt popl	Sucr	Root Yield	Impur Index	Extr Sucr
		lb/A	#/60'	%	ton/A		lb/A
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(May 21, 28, June 5, 21)	0.08+0.004+0.03+0.03+1.5%	79	15.9	27.4	607	7902
De&Ph&Et+Tfsu+Clpy+CletM (May 21)		0.25+0.008+0.06+0.03					
De&Ph&Et+Tfsu+Clpy+CletM (May 28, June 5)		0.33+0.008+0.06+0.03					
De&Ph&Et+Tfsu+Clpy+CletM (June 21)		0.5+0.008+0.06+0.03	84	16.0	23.8	675	6845
Untreated Check		0	69	15.6	15.8	679	4412
Glyphosate+AMS	(May 28, June 21, July 11)	0.75+2.9	79	16.4	28.3	608	8465
Glyphosate+AMS+P90	(May 28, June 21, July 11)	0.75+2.9+0.25%	77	16.6	27.2	594	8233
MON79790+AMS	(May 28,June 21, 27,July 11)	1.5+2.9	74	16.1	26.8	575	7881
Glyphosate+AMS	(May 28)	0.75+2.9					
Glyphosate+AMS+Dime	(June 21)	0.75+2.9+0.84					
Glyphosate+AMS	(July 11)	0.75+2.9	77	16.4	28.3	617	8437
Glyphosate+AMS+Clpy	(May 28)	0.75+2.9+0.09					
Glyphosate+AMS	(June 21, July 11)	0.75+2.9	87	16.5	30.8	626	9198
Glyphosate+AMS+Dime	(May 28)	0.75+2.9+0.84					
Glyphosate+AMS	(June 21, July 11)	0.75+2.9	81	16.0	29.9	634	8656
Glyphosate+AMS+CletM	(May 28)	0.75+2.9+0.125					
Glyphosate+AMS	(June 21, July 11)	0.75+2.9	90	16.7	28.4	605	8592
Ethofumesate (Pre)	(May 3)	3.75					
Glyt+AMS	(May 28, June 21, July 11)	0.75+2.9	84	15.9	29.1	665	8316
Glyphosate+AMS	(May 28)	0.75+2.9					
Glyphosate+AMS+Etho	(June 21)	0.75+2.9+2					
Glyphosate+AMS	(July 11)	0.75+2.9	97	16.0	31.2	607	9028
Ethofumesate (Pre)	(May 3)	2.25					
Glyphosate+AMS	(May 28)	0.75+2.9					
Glyphosate+AMS+Etho	(June 21)	0.75+2.9+1.5					
Glyphosate+AMS	(July 11)	0.75+2.9	82	15.9	28.8	685	8172
Glyt+AMS+P90	(May 28, June 21)	0.75+2.9+0.25%					
Glyt+AMS+P90+Eminent	(July 11)	0.75+2.9+0.25%+0.1	85	15.8	30.2	651	8628
Glyt+AMS+P90	(May 28, June 21)	0.75+2.9+0.25%					
Glyt+AMS+P90+Headline	(July 11)	0.75+2.9+0.25%+0.15	88	16.6	29.3	588	8873
Glyt+AMS+P90	(May 28, June 21)	0.75+2.9+0.25%					
Glyt+AMS+P90+SuperTin	(July 11)	0.75+2.9+0.25%+0.25	82	15.9	29.2	634	8397
Glyt+AMS+P90+Lorsban	(May 28)	0.75+2.9+0.25%+0.5					
Glyt+AMS+P90	(June 21, July 11)	0.75+2.9+0.25%	81	16.2	28.5	613	8361
Glyphosate+AMS+P90	(May 28,June 21)	0.75+2.9+0.25%	81	16.2	29.4	635	8624
EXP MEAN			82	16.1	27.9	628	8168
C.V. %			14	4	10	11	11
LSD 5%			NS	NS	4.0	NS	1321
LSD 1%			NS	NS	5.3	NS	1761
# OF REPS			4	4	4	4	4

AMS=Am-Stik liquid ammonium sulfate from West Central; P90=Premier 90 non-ionic surfactant from West Central.
Experiment summary on next page.

SUMMARY

The summary is from the combined dates of evaluation. All treatments including glyphosate gave nearly total control of all species except sugarbeet. Sugarbeet showed less than 5% injury from all glyphosate and conventional treatments. The micro-rate treatment gave less control of pigweed spp., lambsquarters spp., and flax than other treatments. The conventional rate treatment gave less control of canola and flax than the glyphosate treatments. The untreated check yielded less extractable sucrose per acre than all other treatments. Sugarbeet treated with the conventional rate of conventional herbicides yielded less than many treatments. Sugarbeet treated with the micro-rate yielded numerically greater than sugarbeet treated with the conventional rate. Since the conventional rate gave better weed control than the micro-rate, the lower yield from the conventional rate plots suggests that the conventional rate caused enough sugarbeet injury to cause yield loss even though the visual evaluations of injury did not detect severe injury. This raises a question of whether the 'Beta RZ02RR07' variety used in this experiment was especially susceptible to injury from conventional herbicides.

Glyphosate on Roundup Ready sugarbeet, Crookston, 2007. (Dexter) 'Beta RZ02RR07' sugarbeet was seeded 1.25 inches deep in 22-inch rows May 9. Counter 15G insecticide at 12 pounds product per acre was applied modified in-furrow at planting. 'Plainsman' amaranth, 'Interstate Hyola 420' canola at 14 lb/A, quinoa (*Chenopodium quinoa*), 'Golden German' millet at 34 lb/A, 'Maida' oat at 26 lb/A, and yellow-seeded flax at 12 lb/A were seeded in 4 foot strips across herbicide plots May 9, prior to sugarbeet seeding. Preemerge ethofumesate was applied May 9 after planting. Postemergence treatments were applied May 29, June 4, June 20, June 27, July 5 and July 13. All treatments were applied in 17 gpa water at 40 psi through 8002 nozzles to the center four rows of six-row by 30-foot long plots. Sugarbeet injury and redroot pigweed and amaranth, common lambsquarters and quinoa, canola, flax, oat, millet, and yellow foxtail control were evaluated July 20 and July 30.

Date of Application	May 9	May 29	June 4	June 20	June 27	July 5	July 13
Time of Day	12:45 PM	11:30 AM	11:00 AM	12:30 PM	1:00 PM	10:00 AM	10:30 AM
Air Temperature (°F)	80	74	68	76	62	73	74
Relative Humidity (%)	23	56	32	32	33	52	38
Soil Temp. (°F at 6")	58	61	62	64	67	67	62
Wind Velocity (mph)	10	5	13	9	8	4	5
Cloud Cover (%)	0	100	10	0	95	95	70
Soil Moisture	Good	Good	Good	Good	Good	Good	Good
Sugarbeet		Cot-V2.1	V1.1-4.2	V5.8-6.8	V8.5-13.9	V14.1-20.9	Canopy
Amaranth		1-2lf	Cot-4lf	2-5"	6-10"	20 - 26"	28-30"
Quinoa		4lf(2")	4-6"	8-12"	10-18"	26 - 30"	30-32"
Canola		2-3lf(2")	2-4lf(3-4")	16-20"	28-32"	36 - 42"	38-42"
Flax		Cot-1.5"	1-4"	2-6"	4-10"	16 - 20"	16-22"
Oat		2-3lf(4-6")	3-4lf(5-7")	6-7lf10-12"	20-24"	30 - 34"	30-36"
Millet		2-3lf(1-2")	3-4lf(3-5")	6-7lf14-16"	14-18"	22 - 26"	30-38"
RedRoot Pigweed		Cot-3lf	Cot-5lf	6-8"	10-14"	16 - 26"	24-30"
Com.Lambsquarter		2-4lf	2-3"	10-12"	12-16"	18 - 26"	22-26"

July 20 Evaluation

Treatment*	Date of Application	Rate	Rrpw Amar cntl	Colq Quin cntl	Cano cntl	Flax cntl	Oats cntl	Fomi cntl	Yeft cntl	Sgbt inj
		lb/A	%	%	%	%	%	%	%	%
De&Ph&Et+Tfsu+Clpy+CletM+MSO (May 29, June 4, 20, July 27)		0.08+0.004+0.03+0.03+1.5%	55	94	70	30	99	99	99	0
De&Ph&Et+Tfsu+Clpy+CletM (May 29) fb De&Ph&Et+Tfsu+Clpy+CletM (June 4, 20) fb De&Ph&Et+Tfsu+Clpy+CletM (June 27)		0.25+0.008+0.06+0.03 fb 0.33+0.008+0.06+0.03 fb 0.5+0.008+0.06+0.03	94	99	90	89	99	99	99	5
Untreated Check		0	0	0	0	0	0	0	0	0
Glyphosate+AMS (June 4, 27, July 13)		0.75+2.9	99	99	99	99	99	99	99	0
Glyphosate+AMS+P90 (June 4, 27, July 13)		0.75+2.9+0.25%	99	99	99	99	99	99	99	0
MON79790+AMS (June 4, 27, July 5, 13)		1.5+2.9	99	99	99	99	99	99	99	0
Glyphosate+AMS (June 4) fb Glyphosate+AMS+Dime (June 27) fb Glyphosate+AMS (July 13)		0.75+2.9 fb 0.75+2.9+0.84 fb 0.75+2.9	99	99	99	99	99	99	99	0
Glyphosate+AMS+Clpy (June 4) fb Glyphosate+AMS (June 27, July 13)		0.75+2.9+0.09 fb 0.75+2.9	99	99	99	99	99	99	99	0
Glyphosate+AMS+Dime (June 4) fb Glyphosate+AMS (June 27, July 13)		0.75+2.9+0.84 fb 0.75+2.9	99	99	99	99	99	99	99	0

Table continued on next page.

Glyphosate on Roundup Ready sugarbeet, Crookston, 2007. (continued)

July 20 Evaluation (continued)

Treatment*	Date of Application	Rate	Rrpw Amar cntl	Colq Quin cntl	Cano cntl	Flax cntl	Oats cntl	Fomi cntl	Yeft Cntl	Sgbt inj
		lb/A	%	%	%	%	%	%	%	%
Glyphosate+AMS+CletM	(June 4)	0.75+2.9+0.125								
Glyphosate+AMS	(June 27, July 13)	0.75+2.9	99	99	99	99	99	99	99	0
Ethofumesate (Pre)	(May 9)	3.75								
Glyt+AMS	(June 4, 27, July 13)	0.75+2.9	99	99	99	99	99	99	99	0
Glyphosate+AMS	(June 4)	0.75+2.9								
Glyphosate+AMS+Etho	(June 27)	0.75+2.9+2								
Glyphosate+AMS	(July 13)	0.75+2.9	99	99	99	99	99	99	99	0
Ethofumesate (Pre)	(May 9)	2.25								
Glyphosate+AMS	(June 4)	0.75+2.9								
Glyphosate+AMS+Etho	(June 27)	0.75+2.9+1.5								
Glyphosate+AMS	(July 13)	0.75+2.9	99	99	99	99	99	99	99	0
Glyt+AMS+P90	(June 4, 27)	0.75+2.9+0.25%								
Glyt+AMS+P90+Eminent	(July 13)	0.75+2.9+0.25%+0.1	99	99	99	99	99	99	99	0
Glyt+AMS+P90	(June 4, 27)	0.75+2.9+0.25%								
Glyt+AMS+P90+Headline	(July 13)	0.75+2.9+0.25%+0.15	99	99	99	99	99	99	99	0
Glyt+AMS+P90	(June 4, 27)	0.75+2.9+0.25%								
Glyt+AMS+P90+SuperTin	(July 13)	0.75+2.9+0.25%+0.25	99	99	99	99	99	99	99	5
Glyt+AMS+P90+Lorsban	(June 4)	0.75+2.9+0.25%+0.5								
Glyt+AMS+P90	(June 21, July 11)	0.75+2.9+0.25%	99	99	99	99	99	99	99	0
Glyphosate+AMS+P90	(June 27, July 13)	0.75+2.9+0.25%	99	99	99	99	99	99	99	0
EXP MEAN			91	93	91	89	93	94	93	1
C.V. %			2	2	2	2	0	0	0	0
LSD 5%			3	3	3	2	0	0	0	NS
LSD 1%			4	4	4	3	0	0	1	NS
# OF REPS			4	4	4	4	4	4	4	4

AMS=Am-Stik liquid ammonium sulfate from West Central; P90=Premier 90 non-ionic surfactant from West Central.

July 30 Evaluation

Treatment*	Date of Application	Rate	Rrpw Amar cntl	Colq Quin cntl	Cano cntl	Flax cntl	Oats cntl	Fomi cntl	Yeft cntl
		lb/A	%	%	%	%	%	%	%
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(May 29, June 4, 20, July 27)	0.08+0.004+0.03+0.03+1.5%	71	96	74	33	99	99	99
De&Ph&Et+Tfsu+Clpy+CletM	(May 29)	0.25+0.008+0.06+0.03							
De&Ph&Et+Tfsu+Clpy+CletM	(June 4, 20)	0.33+0.008+0.06+0.03							
De&Ph&Et+Tfsu+Clpy+CletM	(June 27)	0.5+0.008+0.06+0.03	97	99	90	95	98	99	99
Untreated Check		0	0	0	0	0	0	0	0

Table continued on next page.

Glyphosate on Roundup Ready sugarbeet, Crookston, 2007. (continued)

July 30 Evaluation (continued)

Treatment*	Date of Application	Rate	Rrpw Amar cntl	Colq Quin cntl	Cano cntl	Flax cntl	Oats cntl	Fomi cntl	Yeft cntl
		lb/A	%	%	%	%	%	%	%
Glyphosate+AMS (June 4, 27, July 13)		0.75+2.9	99	99	99	99	99	99	99
Glyphosate+AMS+P90(June 4, 27, July 13)		0.75+2.9+0.25%	99	99	99	99	99	99	99
MON79790+AMS (June 4, 27, July 5, 13)		1.5+2.9	99	99	99	99	99	99	99
Glyphosate+AMS	(June 4)	0.75+2.9							
Glyphosate+AMS+Dime	(June 27)	0.75+2.9+0.84							
Glyphosate+AMS	(July 13)	0.75+2.9	99	99	99	99	99	99	99
Glyphosate+AMS+Clpy	(June 4)	0.75+2.9+0.09							
Glyphosate+AMS	(June 27,July 13)	0.75+2.9	99	99	99	99	99	99	99
Glyphosate+AMS+Dime	(June 4)	0.75+2.9+0.84							
Glyphosate+AMS	(June 27,July 13)	0.75+2.9	99	99	99	99	99	99	99
Glyphosate+AMS+CletM	(June 4)	0.75+2.9+0.125							
Glyphosate+AMS	(June 27,July 13)	0.75+2.9	99	99	99	99	99	99	99
Ethofumesate (Pre)	(May 9)	3.75							
Glyt+AMS	(June 4, 27, July 13)	0.75+2.9	99	99	99	99	99	99	99
Glyphosate+AMS	(June 4)	0.75+2.9							
Glyphosate+AMS+Etho	(June 27)	0.75+2.9+2							
Glyphosate+AMS	(July 13)	0.75+2.9	99	99	99	99	99	99	99
Ethofumesate (Pre)	(May 9)	2.25							
Glyphosate+AMS	(June 4)	0.75+2.9							
Glyphosate+AMS+Etho	(June 27)	0.75+2.9+1.5							
Glyphosate+AMS	(July 13)	0.75+2.9	99	99	99	99	99	99	99
Glyt+AMS+P90 (June 4, 27)		0.75+2.9+0.25%							
Glyt+AMS+P90+Eminent (July 13)		0.75+2.9+0.25%+0.1	99	99	99	99	99	99	99
Glyt+AMS+P90 (June 4, 27)		0.75+2.9+0.25%							
Glyt+AMS+P90+Headline (July 13)		0.75+2.9+0.25%+0.15	99	99	99	99	99	99	99
Glyt+AMS+P90 (June 4, 27)		0.75+2.9+0.25%							
Glyt+AMS+P90+SuperTin (July 13)		0.75+2.9+0.25%+0.25	99	99	99	99	99	99	99
Glyt+AMS+P90+Lorsban (June 4)		0.75+2.9+0.25%+0.5							
Glyt+AMS+P90 (June 21, July 11)		0.75+2.9+0.25%	99	99	99	99	99	99	99
Glyphosate+AMS+P90 (June 27, July 13)		0.75+2.9+0.25%	99	99	99	99	99	99	99
EXP MEAN			92	93	92	90	93	94	93
C.V. %			1	1	1	2	0	0	0
LSD 5%			2	1	2	2	0	0	0
LSD 1%			2	2	2	3	1	0	0
# OF REPS			4	4	4	4	4	4	4

AMS=Am-Stik liquid ammonium sulfate from West Central; P90=Premier 90 non-ionic surfactant from West Central.

Experiment continued on next page.

Glyphosate on Roundup Ready sugarbeet, Crookston, 2007. (continued)

Combined Evaluations

Treatment*	Date of Application	Rate	Rrpw Amar cntl	Colq Quin cntl	Cano cntl	Flax cntl	Oats cntl	Fomi cntl	Yeft cntl	Sgbt inj
		lb/A	%	%	%	%	%	%	%	%
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(May 29, June 4, 20, July 27)	0.08+0.004+0.03+0.03+1.5%	63	95	72	31	99	99	99	0
De&Ph&Et+Tfsu+Clpy+CletM	(May 29)	0.25+0.008+0.06+0.03								
De&Ph&Et+Tfsu+Clpy+CletM	(June 4, 20)	0.33+0.008+0.06+0.03								
De&Ph&Et+Tfsu+Clpy+CletM	(June 27)	0.5+0.008+0.06+0.03	95	99	90	92	98	99	99	5
Untreated Check		0	0	0	0	0	0	0	0	0
Glyphosate+AMS	(June 4, 27, July 13)	0.75+2.9	99	99	99	99	99	99	99	0
Glyphosate+AMS+P90	(June 4, 27, July 13)	0.75+2.9+0.25%	99	99	99	99	99	99	99	0
MON79790+AMS	(June 4, 27, July 5, 13)	1.5+2.9	99	99	99	99	99	99	99	0
Glyphosate+AMS	(June 4)	0.75+2.9								
Glyphosate+AMS+Dime	(June 27)	0.75+2.9+0.84								
Glyphosate+AMS	(July 13)	0.75+2.9	99	99	99	99	99	99	99	0
Glyphosate+AMS+Clpy	(June 4)	0.75+2.9+0.09								
Glyphosate+AMS	(June 27, July 13)	0.75+2.9	99	99	99	99	99	99	99	0
Glyphosate+AMS+Dime	(June 4)	0.75+2.9+0.84								
Glyphosate+AMS	(June 27, July 13)	0.75+2.9	99	99	99	99	99	99	99	0
Glyphosate+AMS+CletM	(June 4)	0.75+2.9+0.125								
Glyphosate+AMS	(June 27, July 13)	0.75+2.9	99	99	99	99	99	99	99	0
Ethofumesate (Pre)	(May 9)	3.75								
Glyt+AMS	(June 4, 27, July 13)	0.75+2.9	99	99	99	99	99	99	99	0
Glyphosate+AMS	(June 4)	0.75+2.9								
Glyphosate+AMS+Etho	(June 27)	0.75+2.9+2								
Glyphosate+AMS	(July 13)	0.75+2.9	99	99	99	99	99	99	99	0
Ethofumesate (Pre)	(May 9)	2.25								
Glyphosate+AMS	(June 4)	0.75+2.9								
Glyphosate+AMS+Etho	(June 27)	0.75+2.9+1.5								
Glyphosate+AMS	(July 13)	0.75+2.9	99	99	99	99	99	99	99	0
Glyt+AMS+P90	(June 4, 27)	0.75+2.9+0.25%								
Glyt+AMS+P90+Eminent	(July 13)	0.75+2.9+0.25%+0.1	99	99	99	99	99	99	99	0
Glyt+AMS+P90	(June 4, 27)	0.75+2.9+0.25%								
Glyt+AMS+P90+Headline	(July 13)	0.75+2.9+0.25%+0.15	99	99	99	99	99	99	99	0
Glyt+AMS+P90	(June 4, 27)	0.75+2.9+0.25%								
Glyt+AMS+P90+SuperTin	(July 13)	0.75+2.9+0.25%+0.25	99	99	99	99	99	99	99	5
Glyt+AMS+P90+Lorsban	(June 4)	0.75+2.9+0.25%+0.5								
Glyt+AMS+P90	(June 21, July 11)	0.75+2.9+0.25%	99	99	99	99	99	99	99	0

Table continued on next page.

Glyphosate on Roundup Ready sugarbeet, Crookston, 2007. (continued)

Combined Evaluations (continued)

Treatment*	Date of Application	Rate	Rrpw Amar cntl	Colq Quin cntl	Cano cntl	Flax cntl	Oats cntl	Fomi cntl	Yeft cntl	Sgbt inj
		lb/A	%	%	%	%	%	%	%	%
Glyphosate+AMS+P90	(June 27, July 13)									
		0.75+2.9+0.25%	99	99	99	99	99	99	99	0
EXP MEAN			91	93	91	89	93	94	93	1
C.V. %			3	2	2	2	0	0	0	0
LSD 5%			3	2	2	2	0	0	0	NS
LSD 1%			3	2	2	2	0	0	0	NS
# OF REPS			8	8	8	8	8	8	8	4

AMS=Am-Stik liquid ammonium sulfate from West Central; P90=Premier 90 non-ionic surfactant from West Central.

SUMMARY: The summary is from the combined dates of evaluation. Sugarbeet injury was negligible from all treatments. All treatments gave nearly total control of oat, foxtail millet, and yellow foxtail. Glyphosate gave nearly total control of all evaluated species except sugarbeet when used alone or in combinations. The micro-rate of conventional herbicides gave less control of pigweed spp., lambsquarters spp., canola, and flax as compared to the conventional rate of conventional herbicides. The conventional rate of conventional herbicides gave less control of pigweed spp., canola, and flax than the glyphosate treatments.

Glyphosate and conventional herbicides influence on sugarbeet yield, Prosper, 2007.
(Dexter) 'Beta RZ02RR07' and 'Beta 993RR' sugarbeet was seeded 1.25 inches deep in 22-inch rows May 3. Counter 15G insecticide at 12 pounds product per acre was applied modified in-furrow at planting. Preemerge ethofumesate was applied May 3 after planting. Postemergence treatments were applied May 28, June 5, June 21, and June 27. All treatments were applied in 17 gpa water at 40 psi through 8002 nozzles to the center four rows of six-row by 30-foot long plots. The entire experiment was sprayed with Headline at 9 fl oz/A July 31. Sugarbeet injury was evaluated July 5 and July 17. Sugarbeet from the center 2 rows was counted and harvested September 11.

Date of Application	May 3	May 28	June 5	June 21	June 27
Time of Day	10:00 AM	12:00 PM	11:45 AM	12:30 PM	9:15 AM
Air Temperature (°F)	61	80	62	79	67
Relative Humidity (%)	31	46	20	33	36
Soil Temp. (°F at 6")	50	58	61	70	69
Wind Velocity (mph)	18	18	5	9	4
Cloud Cover (%)	10	65	5	30	25
Soil Moisture	Good	Good	Good	Good	Good
Sugarbeet		V2.1-2.7	V4.2-5.9	V10.9-13.9	V14.9-17.9

July 5 and July 17 Evaluations AND Yield Data

Variety	Herbicide Treatment	7-5 Sgbt inj	7-17 Sgbt inj	Sgbt Popl	Sucr	Root Yield	Impur Index	Extr Sucr
		%	%	#/60'	%	ton/A		lb/A
Beta Rz02RR07	1)Micro-rate	6	1	89	15.8	28.8	608	8255
Beta Rz02RR07	2)Conventional Rate	18	5	90	15.4	26.8	642	7468
Beta Rz02RR07	3)Untreated Check	0	0	81	16.5	26.3	543	7976
Beta Rz02RR07	4)Glyphosate 2 times	0	0	92	16.4	30.2	588	9053
Beta Rz02RR07	5)Glyphosate 4 times	0	0	95	15.9	30.5	585	8841
Beta Rz02RR07	6)Pre fb Conv. Rate	18	6	93	15.6	26.6	600	7520
Beta Rz02RR07	7)Pre fb Glyp. 2 times	1	0	83	16.6	28.7	526	8757
Beta 993RR	1)Micro-rate	5	1	79	15.4	27.7	689	7656
Beta 993RR	2)Conventional Rate	11	1	97	15.4	28.8	701	7927
Beta 993RR	3)Untreated Check	0	0	78	15.7	25.2	667	7160
Beta 993RR	4)Glyphosate 2 times	0	0	90	15.6	32.3	670	9028
Beta 993RR	5)Glyphosate 4 times	1	0	80	16.2	30.1	621	8854
Beta 993RR	6)Pre fb Conv. Rate	19	3	81	15.2	26.8	719	7279
Beta 993RR	7)Pre fb Glyp. 2 times	3	0	91	16.1	31.1	617	9056
Experiment Mean		6	1	87	15.8	28.6	627	8202
CV%		55	160	11	5	11	12	11
LSD 5%		5	3	13	NS	NS	105	1257
LSD 1%		6	4	NS	NS	NS	NS	1682
Number of Reps		4	4	4	4	4	4	4

Experiment continued on next page

Glyphosate and conventional herbicides influence on sugarbeet yield, Prosper, 2007. (continued)

Herbicide Treatments	Date of Application	Rate
1) Micro-rate		lb/A
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(May 28, June 5, 21, 27)	0.08+0.004+0.03+0.03+1.5%
2) Conventional Rate		
De&Ph&Et+Tfsu+Clpy+CletM	(May 28)	0.25+0.008+0.06+0.03
De&Ph&Et+Tfsu+Clpy+CletM	(June 5, 21)	0.33+0.008+0.06+0.03
De&Ph&Et+Tfsu+Clpy+CletM	(June 27)	0.5+0.008+0.06+0.03
3) Untreated Check		0
4) Glyphosate 2 times		
Glyphosate+P90+AMS	(June 5, 27)	1+0.25%+1.7
5) Glyphosate 4 times		
Glyphosate+P90+AMS	(May 28, June 5, 21, 27)	1+0.25%+1.7
6) Preemergence fb Conventional Rate		
Ethofumesate(Pre)	(May 3)	3.75
De&Ph&Et+Tfsu+Clpy+CletM	(May 28)	0.25+0.008+0.06+0.03
De&Ph&Et+Tfsu+Clpy+CletM	(June 5, 21)	0.33+0.008+0.06+0.03
De&Ph&Et+Tfsu+Clpy+CletM	(June 27)	0.5+0.008+0.06+0.03
7) Preemergence fb Glyphosate 2 times		
Ethofumesate(Pre)	(May 3)	3.75
Glyphosate+P90+AMS	(June 5, 27)	1+0.25%+1.7

AMS=Am-Stik liquid ammonium sulfate from West Central; P90=Premier 90 non-ionic surfactant from West Central.

SUMMARY: Averaged over all treatments, 'Beta RZ02RR07' yielded 8267 lb/A of extractable sucrose and 'Beta 993' yielded 8137 lb/A of extractable sucrose. Averaged over the two varieties, the 3 treatments containing glyphosate yielded 8931 lb/A of ecxtractable sucrose, the 3 treatments containing only conventional herbicides yielded 7685 lb/A, and the untreated check yielded 7568 lb/A. Weed populations were very non-uniform in this experiment and weed control was not evaluated. The results suggest that the two Roundup Ready sugarbeet varieties were injured by conventional herbicides, and that the two varieties responded similarly to the herbicide treatments evaluated.

Adjuvants with sugarbeet herbicides, Prosper, 2007. (Dexter) Beta RZ02RR07' sugarbeet was seeded 1.25 inches deep in 22-inch rows May 3. Counter 15G insecticide at 12 pounds product per acre was applied modified in-furrow at planting. 'Plainsman' amaranth, 'Interstate Hyola 420' canola at 14 lb/A, quinoa (*Chenopodium quinoa*), 'Golden German' millet at 34 lb/A, 'Maida' oat at 26 lb/A, and yellow-seeded flax at 12 lb/A were seeded in 4 foot strips across herbicide plots May 2, prior to sugarbeet seeding. Postemergence treatments were applied May 28, June 5, and June 21. All treatments were applied in 17 gpa water at 40 psi through 8002 nozzles to the center four rows of six-row by 30-foot long plots. Redroot pigweed and amaranth, common lambsquarters and quinoa, canola, flax, millet, and oat control were evaluated June 29 and July 9.

Date of Application	**May 28**	**June 5**	**June 21**
Time of Day	8:00 AM	9:00 AM	8:30 AM
Air Temperature (°F)	66	57	74
Relative Humidity (%)	51	28	37
Soil Temp. (°F at 6")	53	56	65
Wind Velocity (mph)	12	5	9
Cloud Cover (%)	100	5	70
Soil Moisture	Good	Good	Good
Sugarbeet	V2.1 - 2.7	V4.2 - 5.9	V10.2 - 14.2
Amaranth/Redroot Pigweed	2-3 lf	3-4 lf	8-12"
Quinoa/Common Lambsquarters	4-6 lf (2")	(3-6")	12-20"
Canola	3-4 lf (2-3")	5-6 lf (6")	28-32" flowering
Flax	(1/2-2")	(3-6")	8-14"
Millet	3-4 lf (1-3")	4-5 lf (3-6")	10-14"
Oat	3-4 lf (4-5")	4-5 lf (6-8")	jointing 28-32"

June 29 Evaluation

Treatment*	Date of Application	Rate	Sgbt inj	Cano cntl	Colq Quin cntl	Rrpw Amar cntl	Flax cntl	Oats cntl	Fomi cntl
		lb/A	%	%	%	%	%	%	%
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(May 28, June 5, 21)	0.08+0.004+0.03+0.03+1.5%	5	60	99	92	53	99	99
De&Ph&Et+Tfsu+Clpy+CletM+Destiny	(May 28, June 5, 21)	0.08+0.004+0.03+0.03+1.5%	4	68	99	90	48	99	99
De&Ph&Et+Tfsu+Clpy+CletM+Scoil	(May 28, June 5, 21)	0.08+0.004+0.03+0.03+1.5%	5	69	99	90	55	99	99
De&Ph&Et+Tfsu+Clpy+CletM+Quad7	(May 28, June 5, 21)	0.08+0.004+0.03+0.03+1.5%	6	65	98	78	50	99	99
De&Ph&Et+Tfsu+Clpy+CletM+LI6193	(May 28, June 5, 21)	0.08+0.004+0.3+0.3+1.5%	5	66	96	88	50	99	99
De&Ph&Et+Tfsu+Clpy+CletM+LI6231	(May 28, June 5, 21)	0.08+0.004+0.3+0.3+1.5%	8	74	99	89	63	99	99
De&Ph&Et+Tfsu+Clpy+CletM+AG05006	(May 28, June 5, 21)	0.08+0.004+0.03+0.03+1.5%	5	69	97	86	48	99	99
De&Ph&Et+Tfsu+Clpy+CletM+AG05006	(May 28, June 5, 21)	0.08+0.004+0.03+0.03+1%	1	65	98	61	45	99	99

Table continued on next page.

Adjuvants with sugarbeet herbicides, Prosper, 2007. (continued)

June 29 Evaluation (continued)

Treatment*	Date of Application	Rate	Sgbt inj	Cano cntl	Colq Quin cntl	Rrpw Amar cntl	Flax cntl	Oats cntl	Fomi cntl
		lb/A	%	%	%	%	%	%	%
De&Ph&Et+Tfsu+Clpy+CletM+AG05006	(May 28, June 5, 21)	0.08+0.004+0.03+0.03+0.75%	5	58	99	88	43	99	99
De&Ph&Et+Tfsu+Clpy+CletM+AG05055	(May 28, June 5, 21)	0.08+0.004+0.03+0.03+2.5%	4	65	99	84	46	99	99
De&Ph&Et+Tfsu+Clpy+CletM+MSO (May 28)		0.12+0.004+0.03+0.03+1.5%							
De&Ph&Et+Tfsu+Clpy+CletM+MSO (June 5)		0.16+0.004+0.03+0.03+1.5%							
De&Ph&Et+Tfsu+Clpy+CletM+MSO (June 21)		0.22+0.004+0.03+0.03+1.5%	6	63	99	97	55	99	99
De&Ph&Et+Tfsu+Clpy+CletM+Destiny (May 28)		0.12+0.004+0.03+0.03+1.5%							
De&Ph&Et+Tfsu+Clpy+CletM+Destiny (June 5)		0.16+0.004+0.03+0.03+1.5%							
De&Ph&Et+Tfsu+Clpy+CletM+Destiny(June 21)		0.22+0.004+0.03+0.03+1.5%	5	71	99	95	63	99	99
De&Ph&Et+Tfsu+Clpy+CletM+Scoil (May 28)		0.12+0.004+0.03+0.03+1.5%							
De&Ph&Et+Tfsu+Clpy+CletM+Scoil (June 5)		0.16+0.004+0.03+0.03+1.5%							
De&Ph&Et+Tfsu+Clpy+CletM+Scoil (June 21)		0.22+0.004+0.03+0.03+1.5%	6	66	99	96	53	99	99
De&Ph&Et+Tfsu+Clpy+CletM+Quad7 (May 28)		0.12+0.004+0.03+0.03+1.5%							
De&Ph&Et+Tfsu+Clpy+CletM+Quad7 (June 5)		0.16+0.004+0.03+0.03+1.5%							
De&Ph&Et+Tfsu+Clpy+CletM+Quad7 (June 21)		0.22+0.004+0.03+0.03+1.5%	9	66	99	92	58	99	99
De&Ph&Et+Tfsu+Clpy+CletM+LI6193 (May 28)		0.12+0.004+0.03+0.03+1.5%							
De&Ph&Et+Tfsu+Clpy+CletM+LI6193 (June 5)		0.16+0.004+0.03+0.03+1.5%							
De&Ph&Et+Tfsu+Clpy+CletM+LI6193 (June 21)		0.22+0.004+0.03+0.03+1.5%	6	70	99	95	58	99	99
De&Ph&Et+Tfsu+Clpy+CletM+LI6231 (May 28)		0.12+0.004+0.03+0.03+1.5%							
De&Ph&Et+Tfsu+Clpy+CletM+LI6231 (June 5)		0.16+0.004+0.03+0.03+1.5%							
De&Ph&Et+Tfsu+Clpy+CletM+LI6231 (June 21)		0.22+0.004+0.03+0.03+1.5%	15	73	99	94	70	99	99
De&Ph&Et+Tfsu+Clpy+CletM+AG05006 (May 28)		0.12+0.004+0.03+0.03+1.5%							
De&Ph&Et+Tfsu+Clpy+CletM+AG05006 (June 5)		0.16+0.004+0.03+0.03+1.5%							
De&Ph&Et+Tfsu+Clpy+CletM+AG05006(June 21)		0.22+0.004+0.03+0.03+1.5%	6	66	99	97	60	99	99

Table continued on next page.

Adjuvants with sugarbeet herbicides, Prosper, 2007. (continued)

June 29 Evaluation (continued)

Treatment*	Date of Application	Rate	Sgbt inj	Cano cntl	Colq Quin cntl	Rrpw Amar cntl	Flax cntl	Oats cntl	Fomi cntl
		lb/A	%	%	%	%	%	%	%
De&Ph&Et+Tfsu+Clpy+CletM+AG05006 (May 28) 0.12+0.004+0.03+0.03+1% De&Ph&Et+Tfsu+Clpy+CletM+AG05006 (June 5) 0.16+0.004+0.03+0.03+1% De&Ph&Et+Tfsu+Clpy+CletM+AG05006(June 21) 0.22+0.004+0.03+0.03+1%			4	68	99	95	53	99	99
De&Ph&Et+Tfsu+Clpy+CletM+AG05006 (May 28) 0.12+0.004+0.03+0.03+0.75% De&Ph&Et+Tfsu+Clpy+CletM+AG05006 (June 5) 0.16+0.004+0.03+0.03+0.75% De&Ph&Et+Tfsu+Clpy+CletM+AG05006(June 21) 0.22+0.004+0.03+0.03+0.75%			4	65	99	96	59	99	99
De&Ph&Et+Tfsu+Clpy+CletM+AG05055 (May 28) 0.12+0.004+0.03+0.03+2.5% De&Ph&Et+Tfsu+Clpy+CletM+AG05055 (June 5) 0.16+0.004+0.03+0.03+2.5% De&Ph&Et+Tfsu+Clpy+CletM+AG05055(June 21) 0.22+0.004+0.03+0.03+2.5%			5	69	99	94	55	99	99
De&Ph&Et+Tfsu+Clpy+CletM+MSO+AMS (May 28) 0.12+0.004+0.03+0.03+1.5%+2.5 De&Ph&Et+Tfsu+Clpy+CletM+MSO+AMS (June 5) 0.16+0.004+0.03+0.03+1.5%+2.5 De&Ph&Et+Tfsu+Clpy+CletM+MSO+AMS(June 21) 0.22+0.004+0.03+0.03+1.5%+2.5			5	71	99	98	55	99	99
De&Ph&Et+Tfsu+Clpy+V-10207+MSO+AMS (May 28) 0.12+0.004+0.03+0.03+1.5%+2.5 De&Ph&Et+Tfs+Clp+V-10207+MSO+AMS (June 5) 0.16+0.004+0.03+0.03+1.5%+2.5 De&Ph&Et+Tfs+Clp+V-10207+MSO+AMS(June 21) 0.22+0.004+0.03+0.03+1.5%+2.5			6	76	99	96	59	99	99
De&Ph&Et+Tfsu+Clpy+CletM+MSO+AMS (May 28) 0.12+0.004+0.03+0.023+1.5%+2.5 De&Ph&Et+Tfsu+Clpy+CletM+MSO+AMS (June 5) 0.16+0.004+0.03+0.023+1.5%+2.5 De&Ph&Et+Tfsu+Clpy+CletM+MSO+AMS(June 21) 0.22+0.004+0.03+0.023+1.5%+2.5			5	73	99	94	60	99	99
De&Ph&Et+Tfsu+Clpy+V-10207+MSO+AMS (May 28) 0.12+0.004+0.03+0.023+1.5%+2.5 De&Ph&Et+Tfs+Clp+V-10207+MSO+AMS (June 5) 0.16+0.004+0.03+0.023+1.5%+2.5 De&Ph&Et+Tfs+Clp+V-10207+MSO+AMS(June 21) 0.22+0.004+0.03+0.023+1.5%+2.5			5	75	99	95	58	99	99
De&Ph&Et+Tfsu+Clpy+CletM+MSO+AMS (May 28) 0.12+0.004+0.03+0.016+1.5%+2.5 De&Ph&Et+Tfsu+Clpy+CletM+MSO+AMS (June 5) 0.16+0.004+0.03+0.016+1.5%+2.5 De&Ph&Et+Tfsu+Clpy+CletM+MSO+AMS(June 21) 0.22+0.004+0.03+0.016+1.5%+2.5			6	69	99	96	60	99	99

Table continued on next page.

Adjuvants with sugarbeet herbicides, Prosper, 2007. (continued)

June 29 Evaluation (continued)

Treatment*	Date of Application	Rate	Sgbt inj	Cano cntl	Colq Quin cntl	Rrpw Amar cntl	Flax cntl	Oats cntl	Fomi cntl
		lb/A	%	%	%	%	%	%	%
De&Ph&Et+Tfsu+Clpy+V-10207+MSO+AMS (May 28) 0.12+0.004+0.03+0.016+1.5%+2.5 De&Ph&Et+Tfs+Clp+V-10207+MSO+AMS (June 5) 0.16+0.004+0.03+0.016+1.5%+2.5 De&Ph&Et+Tfs+Clp+V-10207+MSO+AMS(June 21) 0.22+0.004+0.03+0.016+1.5%+2.5			5	69	99	97	60	99	99
De&Ph&Et+Tfsu+Clpy+Clet+MSO (May 28) 0.12+0.004+0.03+0.016+1.5% De&Ph&Et+Tfsu+Clpy+Clet+MSO (June 5) 0.16+0.004+0.03+0.016+1.5% De&Ph&Et+Tfsu+Clpy+Clet+MSO (June 21) 0.22+0.004+0.03+0.016+1.5%			5	68	99	92	58	99	99
De&Ph&Et+Tfsu+Clpy+CletM+MSO (May 28) 0.12+0.004+0.03+0.016+1.5% De&Ph&Et+Tfsu+Clpy+CletM+MSO (June 5) 0.16+0.004+0.03+0.016+1.5% De&Ph&Et+Tfsu+Clpy+CletM+MSO (June 21) 0.22+0.004+0.03+0.016+1.5%			5	60	99	94	55	99	99
EXP MEAN			6	68	99	91	55	99	99
C.V. %			36	8	1	8	15	0	0
LSD 5%			3	7	2	10	11	NS	NS
LSD 1%			4	10	NS	13	15	NS	NS
# OF REPS			4	4	4	4	4	4	4

*MSO=methylated seed oil from Loveland; Scoil=methylated seed oil from UAP; Destiny=methylated seed oil from Agriliance; AG05006 and AG05055=experimental adjuvants from Agriliance; LI6231 and LI6193=experimental adjuvants from Loveland; Quad7=basic blend adjuvant from UAP; AMS=Am-Stik ammonium sulfate from West Central.

July 9 Evaluation

Treatment*	Date of Application	Rate	Sgbt inj	Cano cntl	Colq Quin cntl	Rrpw Amar cntl	Flax cntl	Oats cntl	Fomi cntl
		lb/A	%	%	%	%	%	%	%
De&Ph&Et+Tfsu+Clpy+CletM+MSO (May 28, June 5, 21)		0.08+0.004+0.03+0.03+1.5%	0	45	99	90	30	99	99
De&Ph&Et+Tfsu+Clpy+CletM+Destiny (May 28, June 5, 21)		0.08+0.004+0.03+0.03+1.5%	0	55	99	88	28	99	99
De&Ph&Et+Tfsu+Clpy+CletM+Scoil (May 28, June 5, 21)		0.08+0.004+0.03+0.03+1.5%	0	48	98	76	29	99	99
De&Ph&Et+Tfsu+Clpy+CletM+Quad7 (May 28, June 5, 21)		0.08+0.004+0.03+0.03+1.5%	0	48	98	66	33	99	99
De&Ph&Et+Tfsu+Clpy+CletM+LI6193 (May 28, June 5, 21)		0.08+0.004+0.3+0.3+1.5%	0	53	99	84	28	99	99
De&Ph&Et+Tfsu+Clpy+CletM+LI6231 (May 28, June 5, 21)		0.08+0.004+0.3+0.3+1.5%	0	50	98	83	34	99	99

Table continued on next page.

Adjuvants with sugarbeet herbicides, Prosper, 2007. (continued)

July 9 Evaluation (continued)

Treatment*	Date of Application	Rate	Sgbt inj	Cano cntl	Colq Quin cntl	Rrpw Amar cntl	Flax cntl	Oats cntl	Fomi cntl
		lb/A	%	%	%	%	%	%	%
De&Ph&Et+Tfsu+Clpy+CletM+AG05006 (May 28, June 5, 21)		0.08+0.004+0.03+0.03+1.5%	0	45	99	83	31	99	99
De&Ph&Et+Tfsu+Clpy+CletM+AG05006 (May 28, June 5, 21)		0.08+0.004+0.03+0.03+1%	0	48	96	55	29	99	99
De&Ph&Et+Tfsu+Clpy+CletM+AG05006 (May 28, June 5, 21)		0.08+0.004+0.03+0.03+0.75%	0	43	98	85	25	99	99
De&Ph&Et+Tfsu+Clpy+CletM+AG05055 (May 28, June 5, 21)		0.08+0.004+0.03+0.03+2.5%	0	48	99	88	30	99	99
De&Ph&Et+Tfsu+Clpy+CletM+MSO (May 28)		0.12+0.004+0.03+0.03+1.5%							
De&Ph&Et+Tfsu+Clpy+CletM+MSO (June 5)		0.16+0.004+0.03+0.03+1.5%							
De&Ph&Et+Tfsu+Clpy+CletM+MSO (June 21)		0.22+0.004+0.03+0.03+1.5%	0	50	99	96	38	99	99
De&Ph&Et+Tfsu+Clpy+CletM+Destiny (May 28)		0.12+0.004+0.03+0.03+1.5%							
De&Ph&Et+Tfsu+Clpy+CletM+Destiny (June 5)		0.16+0.004+0.03+0.03+1.5%							
De&Ph&Et+Tfsu+Clpy+CletM+Destiny(June 21)		0.22+0.004+0.03+0.03+1.5%	0	58	99	94	38	99	99
De&Ph&Et+Tfsu+Clpy+CletM+Scoil (May 28)		0.12+0.004+0.03+0.03+1.5%							
De&Ph&Et+Tfsu+Clpy+CletM+Scoil (June 5)		0.16+0.004+0.03+0.03+1.5%							
De&Ph&Et+Tfsu+Clpy+CletM+Scoil (June 21)		0.22+0.004+0.03+0.03+1.5%	0	55	99	96	35	99	99
De&Ph&Et+Tfsu+Clpy+CletM+Quad7 (May 28)		0.12+0.004+0.03+0.03+1.5%							
De&Ph&Et+Tfsu+Clpy+CletM+Quad7 (June 5)		0.16+0.004+0.03+0.03+1.5%							
De&Ph&Et+Tfsu+Clpy+CletM+Quad7 (June 21)		0.22+0.004+0.03+0.03+1.5%	1	50	99	91	39	99	99
De&Ph&Et+Tfsu+Clpy+CletM+LI6193 (May 28)		0.12+0.004+0.03+0.03+1.5%							
De&Ph&Et+Tfsu+Clpy+CletM+LI6193 (June 5)		0.16+0.004+0.03+0.03+1.5%							
De&Ph&Et+Tfsu+Clpy+CletM+LI6193 (June 21)		0.22+0.004+0.03+0.03+1.5%	0	58	99	94	45	99	99
De&Ph&Et+Tfsu+Clpy+CletM+LI6231 (May 28)		0.12+0.004+0.03+0.03+1.5%							
De&Ph&Et+Tfsu+Clpy+CletM+LI6231 (June 5)		0.16+0.004+0.03+0.03+1.5%							
De&Ph&Et+Tfsu+Clpy+CletM+LI6231 (June 21)		0.22+0.004+0.03+0.03+1.5%	3	58	99	89	45	99	99

Table continued on next page.

Adjuvants with sugarbeet herbicides, Prosper, 2007. (continued)

July 9 Evaluation (continued)

Treatment*	Date of Application	Rate	Sgbt inj	Cano cntl	Colq Quin cntl	Rrpw Amar cntl	Flax cntl	Oats cntl	Fomi cntl
		lb/A	%	%	%	%	%	%	%
De&Ph&Et+Tfsu+Clpy+CletM+AG05006 (May 28) 0.12+0.004+0.03+0.03+1.5% De&Ph&Et+Tfsu+Clpy+CletM+AG05006 (June 5) 0.16+0.004+0.03+0.03+1.5% De&Ph&Et+Tfsu+Clpy+CletM+AG05006(June 21) 0.22+0.004+0.03+0.03+1.5%			0	53	99	97	43	99	99
De&Ph&Et+Tfsu+Clpy+CletM+AG05006 (May 28) 0.12+0.004+0.03+0.03+1% De&Ph&Et+Tfsu+Clpy+CletM+AG05006 (June 5) 0.16+0.004+0.03+0.03+1% De&Ph&Et+Tfsu+Clpy+CletM+AG05006(June 21) 0.22+0.004+0.03+0.03+1%			0	50	99	94	38	99	99
De&Ph&Et+Tfsu+Clpy+CletM+AG05006 (May 28) 0.12+0.004+0.03+0.03+0.75% De&Ph&Et+Tfsu+Clpy+CletM+AG05006 (June 5) 0.16+0.004+0.03+0.03+0.75% De&Ph&Et+Tfsu+Clpy+CletM+AG05006(June 21) 0.22+0.004+0.03+0.03+0.75%			0	50	99	96	38	99	99
De&Ph&Et+Tfsu+Clpy+CletM+AG05055 (May 28) 0.12+0.004+0.03+0.03+2.5% De&Ph&Et+Tfsu+Clpy+CletM+AG05055 (June 5) 0.16+0.004+0.03+0.03+2.5% De&Ph&Et+Tfsu+Clpy+CletM+AG05055(June 21) 0.22+0.004+0.03+0.03+2.5%			0	50	99	94	40	99	99
De&Ph&Et+Tfsu+Clpy+CletM+MSO+AMS (May 28) 0.12+0.004+0.03+0.03+1.5%+2.5 De&Ph&Et+Tfsu+Clpy+CletM+MSO+AMS (June 5) 0.16+0.004+0.03+0.03+1.5%+2.5 De&Ph&Et+Tfsu+Clpy+CletM+MSO+AMS(June 21) 0.22+0.004+0.03+0.03+1.5%+2.5			0	55	99	96	38	99	99
De&Ph&Et+Tfsu+Clpy+V-10207+MSO+AMS (May 28) 0.12+0.004+0.03+0.03+1.5%+2.5 De&Ph&Et+Tfs+Clp+V-10207+MSO+AMS (June 5) 0.16+0.004+0.03+0.03+1.5%+2.5 De&Ph&Et+Tfs+Clp+V-10207+MSO+AMS(June 21) 0.22+0.004+0.03+0.03+1.5%+2.5			0	55	99	91	43	99	99
De&Ph&Et+Tfsu+Clpy+CletM+MSO+AMS (May 28) 0.12+0.004+0.03+0.023+1.5%+2.5 De&Ph&Et+Tfsu+Clpy+CletM+MSO+AMS (June 5) 0.16+0.004+0.03+0.023+1.5%+2.5 De&Ph&Et+Tfsu+Clpy+CletM+MSO+AMS(June 21) 0.22+0.004+0.03+0.023+1.5%+2.5			0	55	99	97	43	99	99
De&Ph&Et+Tfsu+Clpy+V-10207+MSO+AMS (May 28) 0.12+0.004+0.03+0.023+1.5%+2.5 De&Ph&Et+Tfs+Clp+V-10207+MSO+AMS (June 5) 0.16+0.004+0.03+0.023+1.5%+2.5 De&Ph&Et+Tfs+Clp+V-10207+MSO+AMS(June 21) 0.22+0.004+0.03+0.023+1.5%+2.5			0	53	99	92	39	99	99

Table continued on next page.

Adjuvants with sugarbeet herbicides, Prosper, 2007. (continued)
July 9 Evaluation (continued)

Treatment*	Date of Application	Rate	Sgbt inj	Cano cntl	Colq Quin cntl	Rrpw Amar cntl	Flax cntl	Oats cntl	Fomi cntl
		lb/A	%	%	%	%	%	%	%
De&Ph&Et+Tfsu+Clpy+CletM+MSO+AMS (May 28) 0.12+0.004+0.03+0.016+1.5%+2.5 De&Ph&Et+Tfsu+Clpy+CletM+MSO+AMS (June 5) 0.16+0.004+0.03+0.016+1.5%+2.5 De&Ph&Et+Tfsu+Clpy+CletM+MSO+AMS(June 21) 0.22+0.004+0.03+0.016+1.5%+2.5			0	55	99	95	38	99	99
De&Ph&Et+Tfsu+Clpy+V-10207+MSO+AMS (May 28) 0.12+0.004+0.03+0.016+1.5%+2.5 De&Ph&Et+Tfs+Clp+V-10207+MSO+AMS (June 5) 0.16+0.004+0.03+0.016+1.5%+2.5 De&Ph&Et+Tfs+Clp+V-10207+MSO+AMS(June 21) 0.22+0.004+0.03+0.016+1.5%+2.5			0	50	99	96	43	99	99
De&Ph&Et+Tfsu+Clpy+Clet+MSO (May 28) 0.12+0.004+0.03+0.016+1.5% De&Ph&Et+Tfsu+Clpy+Clet+MSO (June 5) 0.16+0.004+0.03+0.016+1.5% De&Ph&Et+Tfsu+Clpy+Clet+MSO (June 21) 0.22+0.004+0.03+0.016+1.5%			0	50	99	94	43	99	99
De&Ph&Et+Tfsu+Clpy+CletM+MSO (May 28) 0.12+0.004+0.03+0.016+1.5% De&Ph&Et+Tfsu+Clpy+CletM+MSO (June 5) 0.16+0.004+0.03+0.016+1.5% De&Ph&Et+Tfsu+Clpy+CletM+MSO (June 21) 0.22+0.004+0.03+0.016+1.5%			0	50	99	94	38	99	99
EXP MEAN			0	51	99	89	36	99	99
C.V. %			793	12	1	9	18	0	0
LSD 5%			NS	8	NS	11	9	0	0
LSD 1%			NS	NS	NS	15	12	0	0
# OF REPS			4	4	4	4	4	4	4

*MSO=methylated seed oil from Loveland; Scoil=methylated seed oil from UAP; Destiny=methylated seed oil from Agriliance; AG05006 and AG05055=experimental adjuvants from Agriliance; LI6231 and LI6193=experimental adjuvants from Loveland; Quad7=basic blend adjuvant from UAP; AMS=Am-Stik ammonium sulfate from West Central.

Combined Evaluations

Treatment*	Date of Application	Rate	Sgbt inj	Cano cntl	Colq Quin cntl	Rrpw Amar cntl	Flax cntl	Oats cntl	Fomi cntl
		lb/A	%	%	%	%	%	%	%
De&Ph&Et+Tfsu+Clpy+CletM+MSO (May 28, June 5, 21)		0.08+0.004+0.03+0.03+1.5%	3	53	99	91	41	99	99
De&Ph&Et+Tfsu+Clpy+CletM+Destiny (May 28, June 5, 21)		0.08+0.004+0.03+0.03+1.5%	2	61	99	89	38	99	99
De&Ph&Et+Tfsu+Clpy+CletM+Scoil (May 28, June 5, 21)		0.08+0.004+0.03+0.03+1.5%	3	58	98	83	42	99	99
De&Ph&Et+Tfsu+Clpy+CletM+Quad7 (May 28, June 5, 21)		0.08+0.004+0.03+0.03+1.5%	3	56	98	72	41	99	99

Table continued on next page.

Adjuvants with sugarbeet herbicides, Prosper, 2007. (continued)

Combined Evaluations (continued)

Treatment*	Date of Application	Rate	Sgbt inj	Cano cntl	Colq Quin cntl	Rrpw Amar cntl	Flax cntl	Oats cntl	Fomi cntl
		lb/A	%	%	%	%	%	%	%
De&Ph&Et+Tfsu+Clpy+CletM+LI6193	(May 28, June 5, 21)	0.08+0.004+0.3+0.3+1.5%	3	59	97	86	39	99	99
De&Ph&Et+Tfsu+Clpy+CletM+LI6231	(May 28, June 5, 21)	0.08+0.004+0.3+0.3+1.5%	4	62	99	86	48	99	99
De&Ph&Et+Tfsu+Clpy+CletM+AG05006	(May 28, June 5, 21)	0.08+0.004+0.03+0.03+1.5%	3	57	98	84	39	99	99
De&Ph&Et+Tfsu+Clpy+CletM+AG05006	(May 28, June 5, 21)	0.08+0.004+0.03+0.03+1%	1	56	97	58	37	99	99
De&Ph&Et+Tfsu+Clpy+CletM+AG05006	(May 28, June 5, 21)	0.08+0.004+0.03+0.03+0.75%	3	50	98	87	34	99	99
De&Ph&Et+Tfsu+Clpy+CletM+AG05055	(May 28, June 5, 21)	0.08+0.004+0.03+0.03+2.5%	2	56	99	86	38	99	99
De&Ph&Et+Tfsu+Clpy+CletM+MSO (May 28)		0.12+0.004+0.03+0.03+1.5%							
De&Ph&Et+Tfsu+Clpy+CletM+MSO (June 5)		0.16+0.004+0.03+0.03+1.5%							
De&Ph&Et+Tfsu+Clpy+CletM+MSO (June 21)		0.22+0.004+0.03+0.03+1.5%	3	56	99	97	46	99	99
De&Ph&Et+Tfsu+Clpy+CletM+Destiny (May 28)		0.12+0.004+0.03+0.03+1.5%							
De&Ph&Et+Tfsu+Clpy+CletM+Destiny (June 5)		0.16+0.004+0.03+0.03+1.5%							
De&Ph&Et+Tfsu+Clpy+CletM+Destiny(June 21)		0.22+0.004+0.03+0.03+1.5%	3	64	99	95	50	99	99
De&Ph&Et+Tfsu+Clpy+CletM+Scoil (May 28)		0.12+0.004+0.03+0.03+1.5%							
De&Ph&Et+Tfsu+Clpy+CletM+Scoil (June 5)		0.16+0.004+0.03+0.03+1.5%							
De&Ph&Et+Tfsu+Clpy+CletM+Scoil (June 21)		0.22+0.004+0.03+0.03+1.5%	3	61	99	96	44	99	99
De&Ph&Et+Tfsu+Clpy+CletM+Quad7 (May 28)		0.12+0.004+0.03+0.03+1.5%							
De&Ph&Et+Tfsu+Clpy+CletM+Quad7 (June 5)		0.16+0.004+0.03+0.03+1.5%							
De&Ph&Et+Tfsu+Clpy+CletM+Quad7 (June 21)		0.22+0.004+0.03+0.03+1.5%	5	58	99	92	48	99	99
De&Ph&Et+Tfsu+Clpy+CletM+LI6193 (May 28)		0.12+0.004+0.03+0.03+1.5%							
De&Ph&Et+Tfsu+Clpy+CletM+LI6193 (June 5)		0.16+0.004+0.03+0.03+1.5%							
De&Ph&Et+Tfsu+Clpy+CletM+LI6193 (June 21)		0.22+0.004+0.03+0.03+1.5%	3	64	99	94	51	99	99

Table continued on next page.

Adjuvants with sugarbeet herbicides, Prosper, 2007. (continued)

Combined Evaluations (continued)

Treatment*	Date of Application	Rate	Sgbt inj	Cano cntl	Colq Quin cntl	Rrpw Amar cntl	Flax cntl	Oats cntl	Fomi cntl
		lb/A	%	%	%	%	%	%	%
De&Ph&Et+Tfsu+Clpy+CletM+LI6231 (May 28)		0.12+0.004+0.03+0.03+1.5%							
De&Ph&Et+Tfsu+Clpy+CletM+LI6231 (June 5)		0.16+0.004+0.03+0.03+1.5%							
De&Ph&Et+Tfsu+Clpy+CletM+LI6231 (June 21)		0.22+0.004+0.03+0.03+1.5%	9	65	99	91	58	99	99
De&Ph&Et+Tfsu+Clpy+CletM+AG05006 (May 28)		0.12+0.004+0.03+0.03+1.5%							
De&Ph&Et+Tfsu+Clpy+CletM+AG05006 (June 5)		0.16+0.004+0.03+0.03+1.5%							
De&Ph&Et+Tfsu+Clpy+CletM+AG05006(June 21)		0.22+0.004+0.03+0.03+1.5%	3	59	99	97	51	99	99
De&Ph&Et+Tfsu+Clpy+CletM+AG05006 (May 28)		0.12+0.004+0.03+0.03+1%							
De&Ph&Et+Tfsu+Clpy+CletM+AG05006 (June 5)		0.16+0.004+0.03+0.03+1%							
De&Ph&Et+Tfsu+Clpy+CletM+AG05006(June 21)		0.22+0.004+0.03+0.03+1%	2	59	99	95	45	99	99
De&Ph&Et+Tfsu+Clpy+CletM+AG05006 (May 28)		0.12+0.004+0.03+0.03+0.75%							
De&Ph&Et+Tfsu+Clpy+CletM+AG05006 (June 5)		0.16+0.004+0.03+0.03+0.75%							
De&Ph&Et+Tfsu+Clpy+CletM+AG05006(June 21)		0.22+0.004+0.03+0.03+0.75%	2	58	99	96	48	99	99
De&Ph&Et+Tfsu+Clpy+CletM+AG05055 (May 28)		0.12+0.004+0.03+0.03+2.5%							
De&Ph&Et+Tfsu+Clpy+CletM+AG05055 (June 5)		0.16+0.004+0.03+0.03+2.5%							
De&Ph&Et+Tfsu+Clpy+CletM+AG05055(June 21)		0.22+0.004+0.03+0.03+2.5%	3	59	99	94	48	99	99
De&Ph&Et+Tfsu+Clpy+CletM+MSO+AMS (May 28)		0.12+0.004+0.03+0.03+1.5%+2.5							
De&Ph&Et+Tfsu+Clpy+CletM+MSO+AMS (June 5)		0.16+0.004+0.03+0.03+1.5%+2.5							
De&Ph&Et+Tfsu+Clpy+CletM+MSO+AMS(June 21)		0.22+0.004+0.03+0.03+1.5%+2.5	3	63	99	97	46	99	99
De&Ph&Et+Tfsu+Clpy+V-10207+MSO+AMS (May 28)		0.12+0.004+0.03+0.03+1.5%+2.5							
De&Ph&Et+Tfs+Clp+V-10207+MSO+AMS (June 5)		0.16+0.004+0.03+0.03+1.5%+2.5							
De&Ph&Et+Tfs+Clp+V-10207+MSO+AMS(June 21)		0.22+0.004+0.03+0.03+1.5%+2.5	3	66	99	94	51	99	99
De&Ph&Et+Tfsu+Clpy+CletM+MSO+AMS (May 28)		0.12+0.004+0.03+0.023+1.5%+2.5							
De&Ph&Et+Tfsu+Clpy+CletM+MSO+AMS (June 5)		0.16+0.004+0.03+0.023+1.5%+2.5							
De&Ph&Et+Tfsu+Clpy+CletM+MSO+AMS(June 21)		0.22+0.004+0.03+0.023+1.5%+2.5	3	64	99	95	51	99	99

Table continued on next page.

Adjuvants with sugarbeet herbicides, Prosper, 2007. (continued)

Combined Evaluations (continued)

Treatment*	Date of Application	Rate	Sgbt inj	Cano cntl	Colq Quin cntl	Rrpw Amar cntl	Flax cntl	Oats cntl	Fomi cntl
		lb/A	%	%	%	%	%	%	%
De&Ph&Et+Tfsu+Clpy+V-10207+MSO+AMS	(May 28)	0.12+0.004+0.03+0.023+1.5%+2.5							
De&Ph&Et+Tfs+Clp+V-10207+MSO+AMS	(June 5)	0.16+0.004+0.03+0.023+1.5%+2.5							
De&Ph&Et+Tfs+Clp+V-10207+MSO+AMS	(June 21)	0.22+0.004+0.03+0.023+1.5%+2.5	3	64	99	94	48	99	99
De&Ph&Et+Tfsu+Clpy+CletM+MSO+AMS	(May 28)	0.12+0.004+0.03+0.016+1.5%+2.5							
De&Ph&Et+Tfsu+Clpy+CletM+MSO+AMS	(June 5)	0.16+0.004+0.03+0.016+1.5%+2.5							
De&Ph&Et+Tfsu+Clpy+CletM+MSO+AMS	(June 21)	0.22+0.004+0.03+0.016+1.5%+2.5	3	62	99	96	49	99	99
De&Ph&Et+Tfsu+Clpy+V-10207+MSO+AMS	(May 28)	0.12+0.004+0.03+0.016+1.5%+2.5							
De&Ph&Et+Tfs+Clp+V-10207+MSO+AMS	(June 5)	0.16+0.004+0.03+0.016+1.5%+2.5							
De&Ph&Et+Tfs+Clp+V-10207+MSO+AMS	(June 21)	0.22+0.004+0.03+0.016+1.5%+2.5	3	59	99	96	51	99	99
De&Ph&Et+Tfsu+Clpy+Clet+MSO	(May 28)	0.12+0.004+0.03+0.016+1.5%							
De&Ph&Et+Tfsu+Clpy+Clet+MSO	(June 5)	0.16+0.004+0.03+0.016+1.5%							
De&Ph&Et+Tfsu+Clpy+Clet+MSO	(June 21)	0.22+0.004+0.03+0.016+1.5%	3	59	99	93	50	99	99
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(May 28)	0.12+0.004+0.03+0.016+1.5%							
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(June 5)	0.16+0.004+0.03+0.016+1.5%							
De&Ph&Et+Tfsu+Clpy+CletM+MSO	(June 21)	0.22+0.004+0.03+0.016+1.5%	3	55	99	94	46	99	99
EXP MEAN			3	59	99	90	46	99	99
C.V. %			63	9	1	8	15	0	0
LSD 5%			2	5	1	7	7	NS	NS
LSD 1%			3	7	2	9	9	NS	NS
# OF REPS			8	8	8	8	8	8	8

*MSO=methylated seed oil from Loveland; Scoil=methylated seed oil from UAP; Destiny=methylated seed oil from Agriliance; AG05006 and AG05055=experimental adjuvants from Agriliance; LI6231 and LI6193=experimental adjuvants from Loveland; Quad7=basic blend adjuvant from UAP; AMS=Am-Stik ammonium sulfate from West Central.

SUMMARY: The summary is from the combined evaluation date data. All treatments gave nearly total control of oat and foxtail millet. Control of common lambsquarters and quinoa was from 97 to 99%. The first 10 treatments are the micro-rate plus various adjuvants. The standard micro-rate plus MSO gave less canola control than the micro-rate plus Destiny, Scoil, LI6913, and LI6231. The standard micro-rate plus MSO gave more pigweed spp. Control than the micro-rate plus Scoil, Quad7, and AG05006. The standard micro-rate plus MSO gave more flax control than the micro-rate plus AG05006 and less flax control than LI6231. Treatments 11 through 18 are mid-rate treatments plus various adjuvants. The mid-rate plus MSO plus AMS gave better control of canola

Summary continued on next page.

Summary (continued)

than the mid-rate plus MSO without AMS. The mid-rate plus MSO gave less canola control than the mid-rate plus Destiny, Scoil, LI6193, and LI6231. The greatest control of flax was from the mid-rate plus LI6231, but this treatment also caused more sugarbeet injury than the other treatments. The last three treatments are a comparison of V-10207, clethodim, and clethodim M at a lower rate than in other treatments along with other herbicides that make up the micro-rate. The three treatments gave similar control of all species.