

Wheat and barley response to various postemergence herbicides at Rosemount, MN - 1998. Durgan, Beverly R. and Douglas Miller This experiment was designed to evaluate wheat and barley tolerance to various postemergence herbicides. The experiment was conducted at Rosemount, MN on a Waukegon silt loam soil. Following soybeans, the experimental area was fall chisel plowed. In the spring, the area received 50 lbs/A N then was disked, field cultivated, and harrowed. 'AC Barrie', 'Anvil', 'Forge', 'Gunner', 'Lars', 'Oxen', 'Russ', 'SBE 0050', Sharpshooter, 'Verde', '2375" hard red spring wheat varieties, 'MN Brite' and 'Stander' barley varieties were seeded on April 23 at 85 lb/A and 90 lbs/A for wheat and barley, respectively. Ramrod (propachlor at 2.5 lbs ai/A) was applied preemergence to control grassy weeds. All herbicide treatments were applied to a 6 ft strip with a tractor mounted sprayer delivering 10 gpa at 35 psi using 8001 flat fan nozzles. The experimental design was a split block with three replications. Varieties were seeded in strips randomized within each replication. Herbicide treatments were applied across all ten varieties. Each herbicide x variety plot was 10 feet wide by 17 feet long. Herbicide treatments were applied May 18 and May 26. Environmental conditions at application are listed below. Crop injury was rated visually on May 27, June 13, and June 30. Crop height was measured at maturity and yields taken. Data were summarized by variety and are presented in Tables 1-5.

Treatment Date	May 18	May 26
Target crop stage	3-4 leaf	4-5 leaf
Temperature (°F)		
air	76	65
soil	70	59
Soil Moisture	moist at 0.25"	moist
Wind (mph)	7-12 SW	2-5 E
Sky	hazy	clear
Rainfall before application		
Week 1 (inch)	2.39	0.59
Rainfall after application		
Week 1 (inch)	0.57	1.10
Week 2 (inch)	1.12	0.02
<u>Barley</u>		
Stander		
leaf no.	4.5	6.5-6.75
height (inch)	7-9	13-15
tillers	1-2	3
MN Brite		
leaf no.	4.5-5	6.5-6.75
height (inch)	6-8	13-15
tillers	3	3
<u>Wheat</u>		
Anvil		
leaf no.	4.5	6.5
height (inch)	5-7	13-14
tillers	2-3	3
2375		
leaf no.	4.75	6.5
height (inch)	5-7	11-12
tillers	2-3	3-4
Forge		
leaf no.	4.5-4.75	6.5
height (inch)	5-7	10-13
tillers	2-4	3-4

Russ		
leaf no.	4.5-4.75	6.5-6.75
height (inch)	5-7	9-11
tillers	2	3-4
AC Barrie		
leaf no.	4.5	6.25
height (inch)	5-8	10-13
tillers	2	4
Gunner		
leaf no.	4.5-4.75	6.5
height (inch)	5-7	11-12
tillers	2-3	4
Verde		
leaf no.	4.5-4.75	5.75-6.25
height (inch)	5-7	9-11
tillers	3	3
Sharpshooter		
leaf no.	4.75	6.75-7.25
height (inch)	6-8	13-14
tillers	3	4
Lars		
leaf no.	3.75-4	5.75
height (inch)	6-8	9-11
tillers	2-3	3-4
SBE 0050		
leaf no.	4-4.25	5.75
height (inch)	4-6	8-11
tillers	2	3-4
Oxen		
leaf no.	4.25-4.5	6.5
height (inch)	5-7	10-12
tillers	2	3

Table 1. Hard red spring wheat tolerance to postemergence herbicides at Rosemount, MN -1998 (Durgan and Miller).

Treatment	Rate (lb/A)	Anvil					2375				
		Injury			Height inch	Yield Bu/A	Injury			Height inch	Yield Bu/A
		5/27	6/13	6/30			5/27	6/13	6/30		
Postemergence (May 18)											
Fenoxaprop & safener ¹	0.104	5	7	3	39	30	5	7	7	34	32
Fenoxaprop & safener	0.208	3	7	8	39	33	3	7	5	34	31
Tralkoxydim + TF8035 COC	0.18 + 0.5%	3	7	3	40	34	3	7	13	35	30
Tralkoxydim + TF8035 COC	0.36 + 0.5%	2	12	3	39	29	2	10	8	35	32
MKH 6562 + NIS ²	0.027 + 0.25%	10	10	10	38	30	10	13	8	34	31
MKH 6562 + NIS	0.054 + 0.25%	10	13	8	40	31	10	13	8	34	30
Fenoxaprop & MCPA ³ + thifensulfuron & tribenuron ⁴	0.09 & 0.37 + 0.009 & 0.005	2	7	7	39	30	2	8	5	34	30
Fenoxaprop & MCPA + thifensulfuron & tribenuron	0.14 & 0.55 + 0.014 & 0.007	7	13	3	39	31	7	13	5	34	32
Carfentrazone-ethyl & MCPA ⁵ + 28%N ⁶	0.0306 & 0.499 + 2.0%	13	15	7	38	30	13	13	8	34	30
Carfentrazone-ethyl & 2,4-D ⁷ + 28%N	0.0311 & 0.338 + 2.0%	7	15	0	40	34	7	15	2	35	34
Postemergence (May 26)											
Difenoquat	0.75	0	10	5	39	29	0	20	7	35	31
Difenoquat	1.0	17	23	8	39	27	17	28	12	33	27
Difenoquat	1.5	15	30	12	38	25	15	37	15	33	27
Imazamethabenz ⁸ + difenoquat + NIS	0.23 + 0.5 + 0.25%	3	25	7	38	28	3	30	8	34	27
Fenoxaprop & MCPA + thifensulfuron & tribenuron	0.09 & 0.37 + 0.009 & 0.005	2	25	7	38	28	2	23	5	34	30
Fenoxaprop & MCPA + thifensulfuron & tribenuron	0.14 & 0.55 + 0.014 & 0.007	5	25	5	38	30	5	28	5	34	32
Fenoxaprop & 2,4-D & MCPA ⁹	0.0921 & 0.121 & 0.366	7	25	10	38	29	7	32	8	34	30
Fenoxaprop & 2,4-D & MCPA	0.138 & 0.182 & 0.549	5	27	10	38	30	5	30	7	34	26
Check		0	0	0	40	32	0	0	0	35	32
LSD (P=0.05)		7	9	ns	ns	ns	7	8	ns	ns	ns

- 1 HOE 1170
- 2 NIS = Class Preference nonionic surfactant.
- 3 Premix = Cheyenne 2.69E.
- 4 Premix = Harmony Extra 75DF.
- 5 Premix = Affinity MCPA 66DF.
- 6 28%N = 28% UAN fertilizer solution.
- 7 Premix = Affinity 2,4-D 74DF.
- 8 Assert LC 2.5E.
- 9 Premix = Tiller 2.77E.

Table 2. Hard red spring wheat tolerance to postemergence herbicides at Rosemount, MN -1998 (Durgan and Miller).

Treatment	Rate (lb/A)	Forge					Russ				
		Injury			Height inch	Yield Bu/A	Injury			Height inch	Yield Bu/A
		5/27	6/13	6/30			5/27	6/13	6/30		
Postemergence (May 18)											
Fenoxaprop & safener ¹	0.104	5	7	7	35	24	5	7	3	33	29
Fenoxaprop & safener	0.208	3	7	7	36	24	3	5	8	33	27
Tralkoxydim + TF8035 COC	0.18 + 0.5%	3	7	8	36	23	3	10	8	34	29
Tralkoxydim + TF8035 COC	0.36 + 0.5%	2	12	8	36	23	2	12	8	33	26
MKH 6562 + NIS ²	0.027 + 0.25%	10	17	5	34	24	10	15	8	33	23
MKH 6562 + NIS	0.054 + 0.25%	10	22	3	35	23	10	18	5	32	29
Fenoxaprop & MCPA ³ + thifensulfuron & tribenuron ⁴	0.09 & 0.37 + 0.009 & 0.005	2	10	5	37	25	2	8	10	35	29
Fenoxaprop & MCPA + thifensulfuron & tribenuron	0.14 & 0.55 + 0.014 & 0.007	7	13	5	35	26	7	17	5	35	32
Carfentrazone-ethyl & MCPA ⁵ + 28%N ⁶	0.0306 & 0.499 + 2.0%	13	13	12	35	23	13	13	7	35	28
Carfentrazone-ethyl & 2,4-D ⁷ + 28%N	0.0311 & 0.338 + 2.0%	7	15	3	35	26	7	15	3	36	32
Postemergence (May 26)											
Difenoquat	0.75	0	25	8	35	22	0	30	7	34	25
Difenoquat	1.0	17	23	13	34	23	17	32	3	33	25
Difenoquat	1.5	15	27	18	33	21	15	35	17	32	24
Imazamethabenz ⁸ + difenoquat + NIS	0.23 + 0.5 + 0.25%	3	28	3	35	22	3	25	13	33	30
Fenoxaprop & MCPA + thifensulfuron & tribenuron	0.09 & 0.37 + 0.009 & 0.005	2	27	7	35	23	2	28	10	33	25
Fenoxaprop & MCPA + thifensulfuron & tribenuron	0.14 & 0.55 + 0.014 & 0.007	5	37	7	35	25	5	32	7	34	30
Fenoxaprop & 2,4-D & MCPA ⁹	0.0921 & 0.121 & 0.366	7	28	10	36	23	7	35	12	33	25
Fenoxaprop & 2,4-D & MCPA	0.138 & 0.182 & 0.549	5	37	7	36	23	5	37	10	33	23
Check		0	0	0	37	26	0	0	3	35	30
LSD (P=0.05)		7	12	8	ns	ns	7	12	ns	ns	5

- 1 HOE 1170
- 2 NIS = Class Preference nonionic surfactant.
- 3 Premix = Cheyenne 2.69E.
- 4 Premix = Harmony Extra 75DF.
- 5 Premix = Affinity MCPA 66DF.
- 6 28%N = 28% UAN fertilizer solution.
- 7 Premix = Affinity 2,4-D 74DF.
- 8 Assert LC 2.5E.
- 9 Premix = Tiller 2.77E.

Table 3. Hard red spring wheat tolerance to postemergence herbicides at Rosemount, MN -1998 (Durgan and Miller).

Treatment	Rate (lb/A)	AC Barrie					Gunner				
		Injury			Height inch	Yield Bu/A	Injury			Height inch	Yield Bu/A
		5/27	6/13	6/30			5/27	6/13	6/30		
Postemergence (May 18)											
Fenoxaprop & safener ¹	0.104	5	7	0	36	17	5	7	2	36	17
Fenoxaprop & safener	0.208	3	7	8	36	17	3	7	12	35	17
Tralkoxydim + TF8035 COC	0.18 + 0.5%	3	7	5	37	17	3	13	12	36	17
Tralkoxydim + TF8035 COC	0.36 + 0.5%	2	10	8	36	12	2	10	7	36	17
MKH 6562 + NIS ²	0.027 + 0.25%	10	10	8	35	15	10	13	12	35	16
MKH 6562 + NIS	0.054 + 0.25%	10	17	7	34	13	10	15	5	37	16
Fenoxaprop & MCPA ³ + thifensulfuron & tribenuron ⁴	0.09 & 0.37 + 0.009 & 0.005	2	7	12	37	18	2	10	5	36	19
Fenoxaprop & MCPA + thifensulfuron & tribenuron	0.14 & 0.55 + 0.014 & 0.007	7	15	3	37	17	7	13	5	35	20
Carfentrazone-ethyl & MCPA ⁵ + 28%N ⁶	0.0306 & 0.499 + 2.0%	13	13	5	37	16	13	15	8	36	21
Carfentrazone-ethyl & 2,4-D ⁷ + 28%N	0.0311 & 0.338 + 2.0%	7	15	3	38	19	7	15	5	36	22
Postemergence (May 26)											
Difenzoquat	0.75	0	22	3	37	21	0	62	48	33	14
Difenzoquat	1.0	17	22	8	35	17	17	77	63	30	10
Difenzoquat	1.5	15	25	15	33	15	15	83	80	29	6
Imazamethabenz ⁸ + difenzoquat + NIS	0.23 + 0.5 + 0.25%	3	28	8	36	18	3	47	30	33	16
Fenoxaprop & MCPA + thifensulfuron & tribenuron	0.09 & 0.37 + 0.009 & 0.005	2	20	10	36	17	2	13	7	35	22
Fenoxaprop & MCPA + thifensulfuron & tribenuron	0.14 & 0.55 + 0.014 & 0.007	5	27	8	35	17	5	20	10	35	20
Fenoxaprop & 2,4-D & MCPA ⁹	0.0921 & 0.121 & 0.366	7	22	2	37	20	7	20	3	37	20
Fenoxaprop & 2,4-D & MCPA	0.138 & 0.182 & 0.549	5	23	3	37	20	5	23	5	36	21
Check		0	0	0	37	20	0	0	0	37	22
LSD (P=0.05)		7	11	7	ns	4	7	11	12	2	5

1 HOE 1170

2 NIS = Class Preference nonionic surfactant.

3 Premix = Cheyenne 2.69E.

4 Premix = Harmony Extra 75DF.

5 Premix = Affinity MCPA 66DF.

6 28%N = 28% UAN fertilizer solution.

7 Premix = Affinity 2,4-D 74DF.

8 Assert LC 2.5E.

9 Premix = Tiller 2.77E.

Table 4. Hard red spring wheat tolerance to postemergence herbicides at Rosemount, MN -1998 (Durgan and Miller).

Treatment	Rate (lb/A)	Verde					Sharpshooter				
		Injury			Height inch	Yield Bu/A	Injury			Height inch	Yield Bu/A
		5/27	6/13	6/30			5/27	6/13	6/30		
Postemergence (May 18)											
Fenoxaprop & safener ¹	0.104	5	7	2	31	31	5	8	3	35	27
Fenoxaprop & safener	0.208	3	7	2	31	28	3	7	3	35	27
Tralkoxydim + TF8035 COC	0.18 + 0.5%	3	7	0	32	31	3	7	2	36	29
Tralkoxydim + TF8035 COC	0.36 + 0.5%	2	17	3	32	31	2	10	7	35	27
MKH 6562 + NIS ²	0.027 + 0.25%	10	10	8	31	29	10	13	10	35	28
MKH 6562 + NIS	0.054 + 0.25%	10	20	5	30	28	10	13	5	36	28
Fenoxaprop & MCPA ³ + thifensulfuron & tribenuron ⁴	0.09 & 0.37 + 0.009 & 0.005	2	7	2	32	28	2	8	3	36	26
Fenoxaprop & MCPA + thifensulfuron & tribenuron	0.14 & 0.55 + 0.014 & 0.007	7	15	3	31	30	7	13	2	35	27
Carfentrazone-ethyl & MCPA ⁵ + 28%N ⁶	0.0306 & 0.499 + 2.0%	13	13	8	32	29	13	13	10	35	26
Carfentrazone-ethyl & 2,4-D ⁷ + 28%N	0.0311 & 0.338 + 2.0%	7	15	7	31	30	7	15	3	36	29
Postemergence (May 26)											
Difenzoquat	0.75	0	58	43	29	19	0	15	3	36	26
Difenzoquat	1.0	17	73	72	28	15	17	22	8	34	25
Difenzoquat	1.5	15	78	78	27	11	15	27	12	34	22
Imazamethabenz ⁸ + difenzoquat + NIS	0.23 + 0.5 + 0.25%	3	33	13	30	24	3	22	10	34	27
Fenoxaprop & MCPA + thifensulfuron & tribenuron	0.09 & 0.37 + 0.009 & 0.005	2	20	10	30	27	2	27	5	34	25
Fenoxaprop & MCPA + thifensulfuron & tribenuron	0.14 & 0.55 + 0.014 & 0.007	5	22	10	30	32	5	25	13	34	26
Fenoxaprop & 2,4-D & MCPA ⁹	0.0921 & 0.121 & 0.366	7	20	8	31	31	10	33	12	33	23
Fenoxaprop & 2,4-D & MCPA	0.138 & 0.182 & 0.549	5	25	13	31	30	5	38	15	34	21
Check		0	0	2	31	32	0	0	2	37	26
LSD (P=0.05)		7	10	12	1	5	7	10	8	ns	3

1 HOE 1170

2 NIS = Class Preference nonionic surfactant.

3 Premix = Cheyenne 2.69E.

4 Premix = Harmony Extra 75DF.

5 Premix = Affinity MCPA 66DF.

6 28%N = 28% UAN fertilizer solution.

7 Premix = Affinity 2,4-D 74DF.

8 Assert LC 2.5E.

9 Premix = Tiller 2.77E.

Table 5. Hard red spring wheat tolerance to postemergence herbicides at Rosemount, MN -1998 (Durgan and Miller).

Treatment	Rate (lb/A)	Lars					SBE 0050				
		Injury			Height inch	Yield Bu/A	Injury			Height inch	Yield Bu/A
		5/27	6/13	6/30			5/27	6/13	6/30		
		-----	%	-----			-----	%	-----		
Postemergence (May 18)											
Fenoxaprop & safener ¹	0.104	5	7	2	27	27	5	7	2	32	20
Fenoxaprop & safener	0.208	3	7	2	27	28	3	7	8	31	27
Tralkoxydim + TF8035 COC	0.18 + 0.5%	3	7	2	28	29	3	7	10	31	23
Tralkoxydim + TF8035 COC	0.36 + 0.5%	2	10	2	28	30	2	10	5	31	23
MKH 6562 + NIS ²	0.027 + 0.25%	10	12	5	27	29	10	12	10	30	23
MKH 6562 + NIS	0.054 + 0.25%	10	15	2	26	28	10	13	8	31	18
Fenoxaprop & MCPA ³ + thifensulfuron & tribenuron ⁴	0.09 & 0.37 + 0.009 & 0.005	2	8	2	27	27	2	7	7	31	23
Fenoxaprop & MCPA + thifensulfuron & tribenuron	0.14 & 0.55 + 0.014 & 0.007	7	13	2	27	27	7	15	3	31	25
Carfentrazone-ethyl & MCPA ⁵ + 28%N ⁶	0.0306 & 0.499 + 2.0%	13	13	10	27	27	13	13	10	31	23
Carfentrazone-ethyl & 2,4-D ⁷ + 28%N	0.0311 & 0.338 + 2.0%	7	15	2	27	29	7	15	2	31	24
Postemergence (May 26)											
Difenzoquat	0.75	0	15	7	27	26	0	20	10	30	21
Difenzoquat	1.0	17	20	7	27	26	17	25	10	30	21
Difenzoquat	1.5	15	27	8	27	21	15	32	12	29	20
Imazamethabenz ⁸ + difenzoquat + NIS	0.23 + 0.5 + 0.25%	3	17	5	27	27	3	23	10	30	21
Fenoxaprop & MCPA + thifensulfuron & tribenuron	0.09 & 0.37 + 0.009 & 0.005	2	17	7	28	30	2	25	13	30	21
Fenoxaprop & MCPA + thifensulfuron & tribenuron	0.14 & 0.55 + 0.014 & 0.007	5	20	8	27	27	5	25	10	30	23
Fenoxaprop & 2,4-D & MCPA ⁹	0.0921 & 0.121 & 0.366	7	18	7	27	28	7	20	8	30	21
Fenoxaprop & 2,4-D & MCPA	0.138 & 0.182 & 0.549	5	20	7	27	27	5	30	13	30	20
Check		0	0	2	27	29	0	0	2	31	24
LSD (P= .05)		7	8	6	ns	3	7	10	ns	1	ns

1 HOE 1170

2 NIS = Class Preference nonionic surfactant.

3 Premix = Cheyenne 2.69E.

4 Premix = Harmony Extra 75DF.

5 Premix = Affinity MCPA 66DF.

6 28%N = 28% UAN fertilizer solution.

7 Premix = Affinity 2,4-D 74DF.

8 Assert LC 2.5E.

9 Premix = Tiller 2.77E.

Table 6. Hard red spring wheat tolerance to postemergence herbicides at Rosemount, MN -1998 (Durgan and Miller).

Treatment	Rate (lb/A)	Oxen				
		Injury			Height inch	Yield Bu/A
		5/27	6/13	6/30		
		-----	%	-----		
Postemergence (May 18)						
Fenoxaprop & safener ¹	0.104	5	7	3	30	35
Fenoxaprop & safener	0.208	3	7	5	30	35
Tralkoxydim + TF8035 COC	0.18 + 0.5%	3	8	5	30	34
Tralkoxydim + TF8035 COC	0.36 + 0.5%	2	10	5	29	32
MKH 6562 + NIS ²	0.027 + 0.25%	10	12	8	29	33
MKH 6562 + NIS	0.054 + 0.25%	10	13	3	28	34
Fenoxaprop & MCPA ³ + thifensulfuron & tribenuron ⁴	0.09 & 0.37 + 0.009 & 0.005	2	8	7	30	36
Fenoxaprop & MCPA + thifensulfuron & tribenuron	0.14 & 0.55 + 0.014 & 0.007	7	13	2	29	36
Carfentrazone-ethyl & MCPA ⁵ + 28%N ⁶	0.0306 & 0.499 + 2.0%	13	13	10	30	37
Carfentrazone-ethyl & 2,4-D ⁷ + 28%N	0.0311 & 0.338 + 2.0%	7	15	2	29	38
Postemergence (May 26)						
Difenzoquat	0.75	0	12	2	29	34
Difenzoquat	1.0	17	17	8	30	34
Difenzoquat	1.5	15	25	10	29	33
Imazamethabenz ⁸ + difenzoquat + NIS	0.23 + 0.5 + 0.25%	3	20	3	30	36
Fenoxaprop & MCPA + thifensulfuron & tribenuron	0.09 & 0.37 + 0.009 & 0.005	2	22	7	29	32
Fenoxaprop & MCPA + thifensulfuron & tribenuron	0.14 & 0.55 + 0.014 & 0.007	5	25	10	29	37
Fenoxaprop & 2,4-D & MCPA ⁹	0.0921 & 0.121 & 0.366	7	18	2	31	35
Fenoxaprop & 2,4-D & MCPA	0.138 & 0.182 & 0.549	5	25	2	31	35
Check		0	0	0	30	34
LSD (P= .05)		7	10	ns	1	ns

1 HOE 1170

2 NIS = Class Preference nonionic surfactant.

3 Premix = Cheyenne 2.69E.

4 Premix = Harmony Extra 75DF.

5 Premix = Affinity MCPA 66DF.

6 28%N = 28% UAN fertilizer solution.

7 Premix = Affinity 2,4-D 74DF.

8 Assert LC 2.5E.

9 Premix = Tiller 2.77E.

Table 7. Barley tolerance to postemergence herbicides at Rosemount, MN -1998 (Durgan and Miller).

Treatment	Rate (lb/A)	Stander					MN Brite				
		Injury			Height inch	Yield Bu/A	Injury			Height inch	Yield Bu/A
		5/27 ----- ----- % -----	6/13 ----- ----- % -----	6/30 ----- ----- % -----			5/27 ----- ----- % -----	6/13 ----- ----- % -----	6/30 ----- ----- % -----		
Postemergence (May 18)											
Fenoxaprop & safener ¹	0.104	12	20	2	30	72	12	15	5	33	67
Fenoxaprop & safener	0.208	13	10	7	30	71	13	10	3	34	69
Tralkoxydim + TF8035 COC	0.18 + 0.5%	7	22	5	30	66	7	18	7	34	66
Tralkoxydim + TF8035 COC	0.36 + 0.5%	13	32	22	31	63	13	27	20	31	53
MKH 6562 + NIS ²	0.027 + 0.25%	42	43	20	27	55	45	45	20	31	60
MKH 6562 + NIS	0.054 + 0.25%	42	40	22	29	57	48	47	22	31	58
Fenoxaprop & MCPA ³ + thifensulfuron & tribenuron ⁴	0.09 & 0.37 + 0.009 & 0.005	13	20	5	30	67	13	22	5	33	69
Fenoxaprop & MCPA + thifensulfuron & tribenuron	0.14 & 0.55 + 0.014 & 0.007	22	30	8	30	69	22	32	10	33	72
Carfentrazone-ethyl & MCPA ⁵ + 28%N ⁶	0.0306 & 0.499 + 2.0%	20	18	8	30	65	20	15	12	33	70
Carfentrazone-ethyl & 2,4-D ⁷ + 28%N	0.0311 & 0.338 + 2.0%	17	18	2	30	56	18	15	2	32	68
Postemergence (May 26)											
Difenzoquat	0.75	0	30	7	30	65	0	30	5	34	74
Difenzoquat	1.0	17	27	8	30	69	17	32	7	34	69
Difenzoquat	1.5	15	37	8	29	62	15	40	13	32	68
Imazamethabenz ⁸ + difenzoquat + NIS	0.23 + 0.5 + 0.25%	10	30	13	31	69	10	30	12	33	65
Fenoxaprop & MCPA + thifensulfuron & tribenuron	0.09 & 0.37 + 0.009 & 0.005	8	58	20	29	60	8	60	32	33	56
Fenoxaprop & MCPA + thifensulfuron & tribenuron	0.14 & 0.55 + 0.014 & 0.007	8	62	20	29	67	12	68	32	32	64
Fenoxaprop & 2,4-D & MCPA ⁹	0.0921 & 0.121 & 0.366	12	33	5	29	72	15	35	7	32	65
Fenoxaprop & 2,4-D & MCPA	0.138 & 0.182 & 0.549	18	35	12	30	69	18	43	13	32	63
Check		0	0	2	30	73	0	0	0	34	73
LSD (P= .05)		14	22	10	2	10	14	19	14	ns	11

1 HOE 1170

2 NIS = Class Preference nonionic surfactant.

3 Premix = Cheyenne 2.69E.

4 Premix = Harmony Extra 75DF.

5 Premix = Affinity MCPA 66DF.

6 28%N = 28% UAN fertilizer solution.

7 Premix = Affinity 2,4-D 74DF.

8 Assert LC 2.5E.

9 Premix = Tiller 2.77E.