

Survey of Weed Control and Production Practices on Sugarbeet in Eastern N.D. and M.N.-2002
2002 Sugarbeet Research and Extension Reports. Volume 33, Page 35 - 64

**SURVEY OF WEED CONTROL AND PRODUCTION PRACTICES
ON SUGARBEET IN EASTERN NORTH DAKOTA AND MINNESOTA - 2002**

John L. Luecke and Alan G. Dexter

Sugarbeet Research Specialist and Extension Sugarbeet Specialist

North Dakota State University and the University of Minnesota
Fargo, ND

Other portions of the survey are published in the
Entomology and Plant Pathology sections.

The thirtyfourth annual weed control and production practices questionnaire was mailed in September, 2002 to sugarbeet growers producing sugarbeet for the American Crystal Sugar Company, the Minn-Dak Farmers Cooperative, and the Southern Minnesota Beet Sugar Cooperative. Growers were requested to evaluate weed control and sugarbeet injury from specific herbicides, and to list the most important weed and production problems. In addition, growers were requested to list insecticide use, fungicide use, total acreage, acres of hand-weeded sugarbeet, thinning practices, herbicide application methods, cost of hand thinning and hand weeding, cultivation practices and soil fertility practices. Insecticide use and fungicide use portions of the survey can be found in the Entomology and Plant Pathology sections.

Approximately 3,600 sugarbeet growers planted 723,000 acres of sugarbeet in the Red River Valley and West Central Minnesota in 2002. Growers representing 26 percent of the total acres responded to the survey. The responses to the questionnaire are reported in [Tables 1 to 27](#).

[Table 1](#) gives a summary of herbicide use and performance averaged over all counties. The number of growers reporting the use of a herbicide treatment is listed and the acres treated is expressed as a percentage of the total acreage reported on the survey. Multiple herbicide treatments are tabulated for each herbicide treatment, thus the number of growers reporting in [Table 1](#) exceeds the total number of responses. Also, multiple herbicide treatments on the same acreage are listed separately in the tables, thus acres treated exceeds 100%. The ratings of weed control and sugarbeet injury are presented as the percentage of growers who judged weed control as excellent, good, fair or poor. Data for individual counties are in [Tables 2 through 17](#).

Total sugarbeet acreage treated with herbicides in 2002 was 428%, which compares to 368% in 2001, 348% in 2000, and 346% in 1999. The acres treated does not include "other weed control methods" which were non-herbicidal methods. Eptam, Ro-Neet and Nortron, used in combination as well as used alone, were the only soil applied herbicides reported in 2002. Soil applied herbicide use was 96% in 1984, 47% in 1989, 32% in 1993, 11% in 1998, 4% in 1999, 4% in 2001 and 4% in 2002. Postemergence herbicide use was 388% in 2002, 342% in 2001, 338% in 2000, 337% in 1999, 374% in 1998 and 421% in 1997. The decline in postemergence herbicide use from 1997 to 2002 is partly due to the increased use of herbicide combinations. In 1997, nearly all of the grass herbicides were applied separately and those acres were totaled as separate acres. In 2002, most of the grass herbicides were applied in combination with other herbicides so the acres treated are only totaled once for all herbicides in the combination.

The usage of postemergence grass control herbicides was 209% of the acreage in 2002 as compared to 214% in 2001, 235% in 2000, 213% in 1999 and 176% in 1998. Assure II was used on 15% of the acreage in 2001 and 13% in 2002. Prism/Select was used on 163% of the acreage in 2001 and 190% in 2002. Poast was used on 36% of the acreage in 2001 and 17% in 2002. Most of the grass herbicides were applied in combination with the micro-rate which included an oil adjuvant. Only about 23% of the acres treated with a grass herbicide were treated with a grass herbicide used alone.

Betanex use was 176% of the acreage in 1997, 190% in 1999, 149% in 2000, 107% in 2001 and 112% in 2002. Betamix use was 74% of the acreage in 1997, 95% in 1999, 107% in 2000, 116% in 2001 and 139% in 2002.

Progress use was 13% of the acreage in 1997, 21% in 1999, 54% in 2000, 81% in 2001 and 97% in 2002. Progress use is increasing due to the increase in kochia in sugarbeet. UpBeet use was 249% of the acreage in 1998, 301% in 2000, 278% in 2001 and 332% in 2002. Stinger use was 55% of the acreage in 1995, 138% in 1997, 291% in 1999, 298% in 2000, 274% in 2001 and 304% in 2002. The most common herbicide treatment in 2002 was Betamix + UpBeet + Stinger + Select + Oil adjuvant on 60% of the acreage. This combination was used on less than 1% of the acreage in 1997. Combination treatments that included an oil generally would be micro-rate treatments. Treatments including oil were applied to 301% of the acreage in 2002, 265% in 2001, 285% in 2000 and 273% in 1999. Lay-by Outlook was used on 26% of the acreage in 2002, the first year for a Section 18 label for eastern ND and MN.

The rotary hoe or harrow were used on 42% of the acres in 2002 compared to 63% in 2001, 62% in 2000 and 48% in 1999. The electrical discharge system, weed pullers, mowing or swathing were used on 7.6% of the acreage in 1995, 1.6% in 1997, less than 1% in 1999, 1.7% in 2000, 2.4% in 2001 and 3.1% in 2002.

Pigweed species were named most often as “worst weed” in sugarbeet in 2002 ([Table 18](#)). For the first time in the survey, “pigweed (all types)” was listed as a choice rather than redroot pigweed. Waterhemp was left as a choice on the survey even though waterhemp is a pigweed. The percentage of respondents indicating redroot pigweed as their worst weed was 53% in 1997, 51% in 1998, 40% in 1999, 18% in 2000, 43% in 2001 and 44% in 2002. Late emerging pigweed was especially bad in 2002. Waterhemp was named as worst weed by 5% of the respondents in 2002. Kochia was named the most important weed problem by 26% of the survey respondents in 2002 compared to 32% in 2001, 43% in 2000, 33% in 1999, 13% in 1998 and 3% in 1997. The increasing appearance of kochia that is resistant to UpBeet may explain the increase of kochia being named as worst weed. The question on “worst weed” was first asked in 1977 and 2000 was the only year that redroot pigweed was not named most frequently.

Weeds were named as the most serious production problem by 53% of the survey respondents in 2002 compared to 52% in 2001, 48% in 2000, 39% in 1999 and 25% in 1998 ([Table 19](#)). The percentage of respondents who named emergence and stand as their worst problem was 12% in 1997, 4% in 1998, 12% in 1999, 10% in 2000, 5% in 2001 and 19% in 2002. The percentage of respondents who named Cercospora leaf spot (CLS) as their worst problem was 3% in 1996, 5% in 1997, 36% in 1998, 6% in 1999, 3% in 2000, 1% in 2001 and 1% in 2002. The Section 18 label for Eminent in 1999, 2000, 2001 and 2002 probably explains the reduction in Cercospora being identified as the worst problem. Rhizoctonia/aphanomyces was named as worst problem by 14% of the respondents in 1997, 17% in 1998, 9% in 1999, 18% in 2000, 16% in 2001 and 9% in 2002. Soil moisture and soil temperature have a very large influence on sugarbeet injury caused by rhizoctonia and aphanomyces.

Rhizomania was listed as a “worst problem” choice for the first time in 1997 ([Table 19](#)). Rhizomania caused identifiable yield loss only in the Southern Minnesota Beet Sugar Cooperative in 1998 but it was identified in the Red River Valley in 1999. Rhizomania was named as worst problem by 3% of the respondents in 1998, by 2% in 1999 and 2000, and by 3% in 2001 and 2002.

The percentage of acreage hand weeded was 62% in 1996, 45% in 1997, 28% in 1998, 26% in 1999, 25% in 2000, 23% in 2001 and 32% in 2002 ([Table 20](#)). Weed problems were worse in 2002 than in several previous years and this is reflected in the increase of hand weeding.

Percentage of acreage not thinned was 76% in 1998, 83% in 1999, 79% in 2000, 89% in 2001 and 93% in 2002 ([Table 20](#)). Acreage hand thinned was, 5% in 1998, 2% in 1999 and 1% in 2000, 2001 and 2002. Acres thinned with an electronic thinner were 4% in 1997, 1998 and 1999, 3% in 2000, and 1% in 2001 and 2002. The use of various forms of mechanical thinning was 11% of the acreage in 1997 and 1998, 8% in 1999, 13% in 2000, 7% in 2001 and 3% in 2002.

Averaged over all herbicides, herbicides were band applied to 38%, broadcast applied with a ground sprayer to 48% and broadcast applied by air to 14% of the sugarbeet acreage ([Table 21](#)). In 1998, 40% of the acreage was band treated, 30% was band treated in 1999, 37% in 2000 and 41% in 2001. Herbicides were applied by air to 9% of the acreage in 2000, 22% in 1999, 17% in 1998 and 9% in 1997.

The cost of hand weeding and hand thinning varied from zero to over \$70/A in 2002 ([Table 22](#)). The most common cost was zero dollars for 43% of the respondents. Zero cost responses were 41% in 1997, 58% in 1998, 55% in 1999, 56% in 2000 and 57% in 2001. The average cost of hand weeding as calculated from Table 22 was \$15.95/A

in 2002 as compared to \$11.15/A in 2001, \$11.90/A in 2000, \$11.20/A in 1999, \$18.50/A in 1997 and \$34/A in 1995. The percentage of respondents who used no hand labor varied by county from 19% in Chippewa county to 94% in Norman County.

Sugarbeet acreage operated by respondents to the survey in 2002 varied from less than 50 acres to over 2,000 acres ([Table 23](#)). The most common acreage was 400 to 599 acres for 20% of the respondents. Other common acreages were 100 to 199 acres at 14%, 200 to 299 acres at 16%, 300 to 399 acres at 15% and 600 to 799 acres at 15%. Eight percent of the respondents reported over 1,000 acres and 15% had over 800 acres. In 1998, 5% reported over 1,000 acres and 11% had over 800 acres.

The number of cultivations reported on the survey varied from zero to five ([Table 24](#)). The most common number of cultivations was two with 52% of the respondents, 27% cultivated once, 18% cultivated three times, and 2% did not cultivate. This question was asked previously in 1992, 1998, 1999, 2000 and 2001. The average number of cultivations was 3.2 in 1992, 2.3 in 1998, 2.2 in 1999, 2.0 in 2000, 1.9 in 2001 and 1.9 in 2002.

Twelve-row sugarbeet planters were the most common size planter in 2002 with 58% of the respondents using 12-row planters ([Table 25](#)). Planters with 18 rows were used by 10% and 24-row planters used by 30% of the respondents.

Phosphorus fertilizer was used by 77% of the survey respondents on 85% of the reported acres on the survey ([Table 26](#)). Phosphorus fertilizer was broadcast on 49% of the acreage, was applied as a starter on 14% of the acreage and both starter plus broadcast phosphorus were applied on 21% of the acreage.

Sugarbeet growers were asked to estimate acres that were affected by Rhizomania in 2002 ([Table 27](#)). Rhizomania effect was indicated by 37% of the respondents on 14% of the acres over all counties. Rhizomania was most prevalent in the SMBSC factory district with 70% of the growers in Chippewa and 71% of the growers in Renville indicating a Rhizomania problem.

A summary of the most important weed problem responses from 1977 to 2002.

Weed indicated as most important weed problem in sugarbeet															
Year	PIWE ¹	FXTL	COLQ	WIOA	WIBW	WIMU	KOCZ	COCB	SMWE	EBNS	COMA	LASA	VELE	WAHE	
-----Percent of responses-----															
1977	51	20	3	8	5	1									
1978	55	19	3	8	6	1									
1978	53	22	5	5	7	1									
1980	43	23	10	10	8	1									
1981	46	20	8	6	9	3	5								
1982	44	8	7	9	11	7	14								
1983	50	8	11	6	5	4	12								
1984	54	5	6	6	5	4	10								
1985	43	2	11	9	6	5	12								
1986	71	5	4	3	2	1	5	4							
1987	61	7	6	3	6	2	6	2							
1988	75	2	5	1	2	<1	9	1							
1989	54	5	4	1	5	<1	21	1							
1990	51	2	8	1	5	0	23	1	3						
1991	59	3	4	0	2	0	18	2	3						
1992	47	4	8	3	4	<1	16	3	8						
1993	38	3	6	6	8	1	13	3	9	3	2				
1994	61	2	6	2	8	1	8	2	6	2	1				
1995	71	2	4	1	2	1	4	1	8	4	1				
1996	72	4	4	2	1	1	3	2	6	2	1				
1997	53	7	4	2	6	1	3	2	5	4	1				
1998	51	9	7	2	4	1	13	1	4	1	<1				
1999	40	2	10	2	1	<1	33	1	3	1	<1	2			
2000	18	2	19	<1	2	<1	43	2	3	<1	<1	2		1	
2001	43	1	10	<1	1	0	32	1	4	4	<1	1		2	
2002	44	<1	14	<1	<1	0	26	1	4	<1	<1	<1	2	5	

¹PIWE = Pigweed species, FXTL = Green & Yellow foxtail, COLQ = Common lambsquarters, WIOA = Wild oats, WIBW = Wild buckwheat, WIMU = Wild mustard, KOCZ = Kochia, COCB = Common cocklebur, SMWE = Smartweed, EBNS = Eastern black nightshade, COMA = Common mallow, LASA = Lanceleaf sage, VELE = Velvetleaf and WAHE = Waterhemp.

A summary of the worst production problem responses from 1977 to 2002.

Production problem indicated as worst in sugarbeet										
Year	No Problem	Weeds	Weather	Emergence/stand	Labor mgmt.	Root Maggot	Cercospora leaf spot	Rhizomania	Rhizoctonia/Aphanomyces	
-----percent of responses-----										
1977	10	13	42	29	4	1	0			
1978	21	47	16	7	6	2	0			
1978	19	41	28	6	4	1	0			
1980	5	23	42	28	2	0	0			
1981	4	35	38	16	1	0	6			
1982	10	39	35	9	3	4	0			
1983	3	37	37	13	2	1	5			
1984	5	26	49	8	2	1	2			
1985	4	20	45	17	1	1	1			
1986	4	39	31	18	1	1	1			
1987	5	42	23	22	2	0	2			
1988	1	37	12	40	1	1	1			
1989	5	38	19	16	3	8	2			
1990	5	42	20	10	2	8	4			
1991	3	26	4	18	1	26	7		8	
1992	11	45	9	15	5	9	1		3	
1993	3	40	21	16	4	1	2		12	
1994	3	56	12	13	4	1	3		8	
1995	2	51	6	2	3	<1	24		11	
1996	6	53	12	11	6	2	3		6	
1997	15	34	13	12	3	1	5	2	14	
1998	3	25	9	4	1	1	36	3	17	
1999	14	39	14	12	2	1	6	2	9	
2000	8	48	9	10	1	<1	3	2	18	
2001	6	52	13	5	2	1	1	3	16	
2002	4	53	11	19	1	<1	<1	3	9	

TABLE 1. SUMMARY OF ALL HERBICIDES USED IN SUGARBEET REPORTED IN 2002.
 390 GROWERS REPORTED ON 185,656 ACRES: OF THIS TOTAL 1 GROWER
 WITH 217 ACRES REPORTED NO HERBICIDES USED.

HERBICIDES (IN ORDER OF ACRES TREATED)	NUMBER GROWERS RPTG.	ACRES TREATED % OF TOTAL	Avg no. of appl	% GROWERS REPORTING WEED CONTROL				
				NR*	EXC	GOOD	FAIR	POOR
A. SOIL APPLIED HERBICIDES:								
NORTRON (PRE/PPI)	18	2.6	1.1	6	11	67	11	6
EPTAM+RO-NEET	11	1.2	1.0	9	0	45	27	18
EPTAM	6	0.5	1.0	0	17	67	17	0
RO-NEET	1	0.1	1.0	0	0	100	0	0
TOTAL-PPI&PRE	36	4.4	1.0	6	8	61	17	8
B. POSTEMERGENCE HERBICIDES:								
BMIX+STINGER+UPBEET+SELECT+OIL	100	60.1	2.1	14	7	44	29	6
BETX+STINGER+UPBEET+SELECT+OIL	110	54.3	1.8	16	6	40	32	5
PROG+STINGER+UPBEET+SELECT+OIL	82	38.4	2.1	10	7	57	21	5
BMIX+STINGER+UPBEET+OIL	66	36.3	2.1	9	9	44	30	8
BETX+STINGER+UPBEET+OIL	54	20.7	1.9	17	2	37	33	11
PROG+STINGER+UPBEET+OIL	40	20.1	1.8	13	13	38	30	8
SELECT/PRISM	68	16.6	1.2	18	54	22	6	0
BMIX+STINGER+UPBEET+NORTRON+OIL	21	12.8	2.1	29	14	43	14	0
PROG+UPBEET+SELECT+OIL	20	10.2	1.6	20	5	60	10	5
BETAMIX	34	9.9	1.5	18	3	29	38	12
BMIX+STINGER+UPBEET	20	7.0	1.8	5	5	35	35	20
PROG+STINGER+UPBEET+POAST+OIL	13	7.0	2.5	15	15	46	8	15
BETX+STINGER+UPBEET+NORTRON+OIL	17	6.9	1.5	6	0	59	29	6
PROG+STINGER+UPBEET+NORTRON+OIL	19	6.8	1.9	37	0	32	26	5
BETX+UPBEET+SELECT+OIL	19	6.7	1.6	26	5	42	21	5
OTHER COMBINATIONS	12	6.6	1.8	17	25	50	8	0
UPBEET	8	6.2	2.5	25	0	38	38	0
PROGRESS+UPBEET	10	5.4	1.7	10	10	50	10	20
BETX+STINGER+UPBEET	19	4.9	1.4	11	0	47	16	26
BETANEX	15	4.7	1.5	27	0	47	27	0
BETX+STINGER+UPBEET+ASSURE+OIL	11	4.6	1.6	36	18	36	9	0
STINGER	12	4.4	1.7	25	50	17	8	0
BETANEX+UPBEET	18	4.0	1.3	17	6	33	39	6
BETX+STINGER+UPBEET+POAST+OIL	9	3.7	1.9	22	0	33	33	11
POAST	26	3.7	1.1	4	69	19	4	4
BMIX+UPBEET+SELECT+OIL	15	3.6	1.5	13	27	33	27	0
BMIX+STINGER+UPBEET+ASSURE+OIL	9	3.4	1.9	22	0	56	22	0
PROG+STINGER+UPBEET	11	3.0	1.7	18	18	27	18	18
PROG+STINGER+UPBEET+ASSURE+OIL	6	2.6	1.8	17	17	67	0	0
PROGRESS	12	2.5	1.4	8	8	50	25	8
BMIX+STINGER+UPBEET+POAST+OIL	6	2.4	1.5	0	0	83	17	0
ASSURE II	18	2.3	1.1	28	39	28	0	6
BETAMIX+STINGER	18	1.8	1.3	0	0	72	28	0
BETAMIX+UPBEET	7	1.4	1.4	0	29	43	29	0
BETANEX+STINGER	9	1.3	1.2	33	22	22	22	0
PROGRESS+STINGER	12	1.2	1.3	25	8	58	8	0
TOTAL-POST	946	387.7	1.7	16	14	41	23	6

TABLE 1. SUMMARY OF ALL HERBICIDES USED IN SUGARBEET REPORTED IN 2002.
 390 GROWERS REPORTED ON 185,656 ACRES: OF THIS TOTAL 1 GROWER
 WITH 217 ACRES REPORTED NO HERBICIDES USED.

HERBICIDES (IN ORDER OF ACRES TREATED)	NUMBER GROWERS RPTG.	ACRES TREATED % OF TOTAL	Avg no. of appl	% GROWERS REPORTING WEED CONTROL					
				NR*	EXC	GOOD	FAIR	POOR	
C. PREEMERGE & LAY-BY HERBICIDES:									
OUTLOOK (LAY-BY)	133	26.5	1.1	17	9	42	23	8	
ROUNDUP (PRE)	51	5.7	1.0	18	53	22	4	4	
TREFLAN (LAY-BY)	13	3.7	1.2	15	15	54	8	8	
TOTAL-PRE&LAY-BY	197	35.8	1.1	17	21	38	17	7	
D. OTHER WEED CONTROL METHODS:									
ROTARY HOE	103	38.1	1.3	23	8	26	38	5	
HARROW	20	3.5	1.0	20	5	50	20	5	
SWATH/FLAIL/MOW	30	1.8	1.1	30	10	10	23	27	
ELECTRICAL (EDS)	6	0.7	1.3	50	17	33	0	0	
WEED PULLER	10	0.6	1.1	20	20	20	40	0	
TOTAL-OTHER	169	44.8	1.2	25	9	26	32	8	
TOTAL TREATMENTS	1348	472.6	1.6	17	14	39	23	7	

*NO RESPONSE

TABLE 2. **CASS COUNTY:** 18 GROWERS REPORTED ON 8,670 ACRES.

TREATMENT	NO. RPTG.	ACRES TRTED	% OF TOTAL	Avg # of App	NO. OF GROWERS REPORTING WEED CONTROL				
					NR*	EXC	GOOD	FAIR	POOR
B. POSTEMERGENCE HERBICIDES:									
BMIX+STINGER+UPBEET+SELECT+OIL	9	15092	174.1	2.3	0	0	5	3	1
BETX+STINGER+UPBEET+SELECT+OIL	6	4841	55.8	1.7	2	0	2	2	0
SELECT/PRISM	3	2044	23.6	1.0	1	2	0	0	0
PROG+STINGER+UPBEET+SELECT+OIL	3	1861	21.5	1.3	1	0	2	0	0
BMIX+STINGER+UPBEET+OIL	3	1777	20.5	2.3	0	0	3	0	0
BETX+STINGER+UPBEET+NORT+OIL	3	1738	20.0	1.3	0	0	1	2	0
BETX+UPBEET+SELECT+OIL	2	1520	17.5	2.0	1	0	1	0	0
BMIX+STINGER+UPBEET+ASSURE+OIL	2	1322	15.2	2.0	1	0	1	0	0
BETX+STINGER+UPBEET+ASSURE+OIL	2	818	9.4	1.5	1	0	1	0	0
PROG+STINGER+UPBEET+NORT+OIL	1	746	8.6	2.0	0	0	1	0	0
BMIX+UPBEET+SELECT+OIL	1	700	8.1	1.0	0	0	1	0	0
STINGER	3	655	7.6	1.0	1	2	0	0	0
PROG+STINGER+UPBEET+OIL	1	400	4.6	2.0	0	0	0	1	0
BETX+STINGER+UPBEET+OIL	1	260	3.0	2.0	0	0	1	0	0
BMIX+STINGER+UPBEET	1	240	2.8	3.0	0	0	1	0	0
TOTAL-POST	41	34014	392.3	1.8	8	4	20	8	1
C. PREEMERGE & LAY-BY HERBICIDES:									
ROUNDUP (PRE)	5	1655	19.1	1.0	1	3	1	0	0
OUTLOOK (LAY-BY)	5	820	9.5	1.0	2	0	3	0	0
TOTAL-PRE&LAY-BY	10	2475	28.5	1.0	3	3	4	0	0
D. OTHER WEED CONTROL METHODS:									
ROTARY HOE	4	1192	13.7	1.0	1	0	2	0	1
SWATH/FLAIL/MOW	3	225	2.6	1.0	0	1	1	1	0
TOTAL-OTHER	7	1417	16.3	1.0	1	1	3	1	1
TOTAL TREATMENTS	58	37906	437.2	1.6	12	8	27	9	2

*NO RESPONSE

TABLE 3. CHIPPEWA, KANDIYOHI AND SWIFT COUNTY:47 GROWERS REPORTED ON 18,228 ACRES.

TREATMENT	NO. RPTG.	ACRES TRTED	% OF TOTAL	Avg # of App	NO. OF GROWERS REPORTING				
					NR*	EXC	GOOD	FAIR	POOR
A. SOIL APPLIED HERBICIDES:									
NORTRON (PRE/PPI)	7	1354	7.4	1.0	0	1	4	1	1
EPTAM+RO-NEET	6	1298	7.1	1.0	1	0	2	1	2
EPTAM	3	428	2.3	1.0	0	0	2	1	0
TOTAL-PPI&PRE	16	3080	16.9	1.0	1	1	8	3	3
B. POSTEMERGENCE HERBICIDES:									
BMIX+STINGER+UPBEET+OIL	17	21025	115.3	2.7	4	1	5	4	3
BETAMIX	11	11024	60.5	1.7	2	0	4	3	2
BETX+STINGER+UPBEET+OIL	12	8989	49.3	2.5	3	0	3	3	3
BMIX+STINGER+UPBEET	6	5228	28.7	2.2	0	0	1	3	2
BETX+STINGER+UPBEET+SELECT+OIL	2	4470	24.5	2.5	0	0	0	2	0
SELECT/PRISM	14	3144	17.2	1.0	5	3	6	0	0
ASSURE II	7	2854	15.7	1.1	1	2	3	0	1
UPBEET	2	2815	15.4	2.5	0	0	1	1	0
BETX+STINGER+UPBEET	5	2806	15.4	1.6	0	0	3	0	2
POAST	10	2709	14.9	1.1	0	5	3	1	1
PROG+STINGER+UPBEET+OIL	4	2373	13.0	2.3	0	0	3	1	0
BMIX+STINGER+UPBEET+SELECT+OIL	5	2261	12.4	1.2	1	0	2	0	2
BETANEX	2	1670	9.2	2.0	0	0	2	0	0
STINGER	2	1606	8.8	1.5	0	2	0	0	0
BMIX+STINGER+UPBEET+ASSURE+OIL	3	1266	6.9	2.3	1	0	1	1	0
PROG+STINGER+UPBEET	2	1150	6.3	2.5	1	0	1	0	0
PROGRESS	4	1076	5.9	1.0	0	0	3	0	1
PROG+STINGER+UPBEET+POAST+OIL	1	780	4.3	3.0	0	0	1	0	0
PROGRESS+STINGER	3	766	4.2	1.3	1	1	1	0	0
BMIX+STINGER+UPBEET+NORT+OIL	1	762	4.2	2.0	0	0	1	0	0
BETAMIX+STINGER	3	694	3.8	1.7	0	0	3	0	0
BETX+STINGER+UPBEET+ASSURE+OIL	1	460	2.5	2.0	1	0	0	0	0
BETANEX+STINGER	2	430	2.4	1.5	1	1	0	0	0
PROG+STINGER+UPBEET+ASSURE+OIL	1	225	1.2	1.0	1	0	0	0	0
BETX+STINGER+UPBEET+POAST+OIL	1	150	0.8	1.0	1	0	0	0	0
PROGRESS+UPBEET	1	96	0.5	1.0	0	0	1	0	0
BMIX+STINGER+UPBEET+POAST+OIL	1	80	0.4	1.0	0	0	1	0	0
TOTAL-POST	123	80909	443.9	1.8	23	15	49	19	17
C. PREEMERGE & LAY-BY HERBICIDES:									
OUTLOOK (LAY-BY)	26	9225	50.6	1.2	4	1	9	9	3
TREFLAN (LAY-BY)	1	50	0.3	1.0	0	0	1	0	0
TOTAL-PRE&LAY-BY	27	9275	50.9	1.1	4	1	10	9	3
D. OTHER WEED CONTROL METHODS:									
ROTARY HOE	15	7204	39.5	1.3	3	1	1	9	1
HARROW	5	2100	11.5	1.0	1	0	2	1	1
ELECTRICAL (EDS)	4	625	3.4	1.5	2	1	1	0	0
SWATH/FLAIL/MOW	4	270	1.5	1.3	1	0	0	1	2
TOTAL-OTHER	28	10199	56.0	1.3	7	2	4	11	4
TOTAL TREATMENTS	194	103463	567.6	1.6	35	19	71	42	27

*NO RESPONSE

TABLE 4. CLAY AND BECKER COUNTY: 28 GROWERS REPORTED ON 15,996 ACRES.

TREATMENT	NO. RPTG.	ACRES TRTED	% OF TOTAL	Avg # of App	NO. OF GROWERS REPORTING WEED CONTROL				
					NR*	EXC	GOOD	FAIR	POOR
A. SOIL APPLIED HERBICIDES:									
NORTRON (PRE/PPI)	1	130	0.8	1.0	0	0	1	0	0
TOTAL-PPI&PRE	1	130	0.8	1.0	0	0	1	0	0
B. POSTEMERGENCE HERBICIDES:									
BMIX+STINGER+UPBEET+SELECT+OIL	11	23260	145.4	2.5	1	1	4	5	0
BETX+STINGER+UPBEET+SELECT+OIL	12	7013	43.8	1.7	1	1	4	5	1
PROG+STINGER+UPBEET+SELECT+OIL	7	4424	27.7	1.7	0	1	3	1	2
BETX+STINGER+UPBEET+OIL	7	4184	26.2	1.7	0	0	4	3	0
PROG+STINGER+UPBEET+OIL	4	2440	15.3	2.0	0	0	2	2	0
PROG+UPBEET+SELECT+OIL	2	2435	15.2	1.0	1	0	1	0	0
PROG+STINGER+UPBEET	3	1775	11.1	1.3	0	0	1	1	1
BMIX+STINGER+UPBEET+OIL	2	1655	10.3	2.0	0	0	2	0	0
BETX+UPBEET+SELECT+OIL	1	1000	6.3	2.0	0	0	0	1	0
BMIX+STINGER+UPBEET+NORT+OIL	2	820	5.1	1.5	0	0	2	0	0
BETX+STINGER+UPBEET+POAST+OIL	1	660	4.1	2.0	0	0	1	0	0
PROG+STINGER+UPBEET+ASSURE+OIL	1	640	4.0	2.0	0	0	1	0	0
BMIX+UPBEET+SELECT+OIL	2	485	3.0	1.0	0	0	1	1	0
SELECT/PRISM	2	390	2.4	1.0	0	2	0	0	0
BETAMIX+UPBEET	1	224	1.4	1.0	0	0	1	0	0
PROGRESS+STINGER	1	140	0.9	1.0	0	0	1	0	0
PROGRESS+UPBEET	1	100	0.6	1.0	0	1	0	0	0
PROG+STINGER+UPBEET+POAST+OIL	1	60	0.4	3.0	0	0	0	0	1
STINGER	1	2	0.0	1.0	1	0	0	0	0
TOTAL-POST	62	51707	323.2	1.8	4	6	28	19	5
C. PREEMERGE & LAY-BY HERBICIDES:									
OUTLOOK (LAY-BY)	4	1630	10.2	1.0	1	0	0	3	0
ROUNDUP (PRE)	6	1365	8.5	1.0	1	3	2	0	0
TOTAL-PRE&LAY-BY	10	2995	18.7	1.0	2	3	2	3	0
D. OTHER WEED CONTROL METHODS:									
ROTARY HOE	10	12540	78.4	1.5	3	1	3	3	0
HARROW	4	1850	11.6	1.0	1	0	3	0	0
SWATH/FLAIL/MOW	2	160	1.0	1.0	1	0	0	1	0
TOTAL-OTHER	16	14550	91.0	1.3	5	1	6	4	0
TOTAL TREATMENTS	89	69382	433.7	1.6	11	10	37	26	5

*NO RESPONSE

TABLE 5. GRAND FORKS COUNTY: 23 GROWERS REPORTED ON 12,952 ACRES.

TREATMENT	NO. RPTG.	ACRES TRTED	% OF TOTAL	Avg # of App	NO. OF GROWERS REPORTING WEED CONTROL				
					NR*	EXC	GOOD	FAIR	POOR

A. SOIL APPLIED HERBICIDES:									
NORTRON (PRE/PPI)	2	200	1.5	1.0	0	0	1	1	0
TOTAL-PPI&PRE	2	200	1.5	1.0	0	0	1	1	0
B. POSTEMERGENCE HERBICIDES:									
BETX+STINGER+UPBEET+SELECT+OIL	6	15521	119.8	2.7	1	0	1	4	0
BMIX+STINGER+UPBEET+SELECT+OIL	5	8852	68.3	3.0	0	1	2	2	0
PROG+STINGER+UPBEET+SELECT+OIL	6	6434	49.7	2.7	1	1	3	1	0
BMIX+STINGER+UPBEET+NORT+OIL	2	6055	46.7	2.5	2	0	0	0	0
PROG+UPBEET+SELECT+OIL	3	4450	34.4	2.3	1	0	2	0	0
BMIX+UPBEET+SELECT+OIL	5	3295	25.4	2.0	1	3	1	0	0
PROG+STINGER+UPBEET+OIL	2	2700	20.8	2.5	1	1	0	0	0
BETX+UPBEET+SELECT+OIL	3	2560	19.8	1.3	1	0	2	0	0
SELECT/PRISM	4	1935	14.9	1.0	1	1	2	0	0
BMIX+STINGER+UPBEET+ASSURE+OIL	1	1500	11.6	2.0	0	0	0	1	0
OTHER COMBINATIONS	1	1200	9.3	2.0	0	1	0	0	0
BETX+STINGER+UPBEET+ASSURE+OIL	1	750	5.8	1.0	0	0	1	0	0
BMIX+STINGER+UPBEET+POAST+OIL	1	720	5.6	1.0	0	0	1	0	0
BETX+STINGER+UPBEET+OIL	2	530	4.1	1.5	0	0	0	2	0
PROG+STINGER+UPBEET+NORT+OIL	1	430	3.3	2.0	1	0	0	0	0
PROGRESS+UPBEET	1	210	1.6	1.0	0	0	1	0	0
BETX+STINGER+UPBEET+POAST+OIL	1	210	1.6	1.0	0	0	1	0	0
BETANEX+UPBEET	1	200	1.5	1.0	0	0	1	0	0
PROG+STINGER+UPBEET+POAST+OIL	1	200	1.5	1.0	1	0	0	0	0
POAST	1	140	1.1	1.0	0	0	1	0	0
BETX+STINGER+UPBEET+NORT+OIL	1	115	0.9	1.0	1	0	0	0	0
TOTAL-POST	49	58007	447.9	2.0	12	8	19	10	0
C. PREEMERGE & LAY-BY HERBICIDES:									
OUTLOOK (LAY-BY)	6	1282	9.9	1.2	2	1	3	0	0
TREFLAN (LAY-BY)	3	906	7.0	1.0	0	2	1	0	0
ROUNDUP (PRE)	4	904	7.0	1.0	2	1	1	0	0
TOTAL-PRE&LAY-BY	13	3092	23.9	1.1	4	4	5	0	0
D. OTHER WEED CONTROL METHODS:									
ROTARY HOE	8	8526	65.8	1.8	3	1	2	2	0
HARROW	1	200	1.5	1.0	0	0	0	1	0
SWATH/FLAIL/MOW	2	30	0.2	1.0	1	0	1	0	0
TOTAL-OTHER	11	8756	67.6	1.5	4	1	3	3	0
TOTAL TREATMENTS	75	70055	540.9	1.8	20	13	28	14	0

*NO RESPONSE

TABLE 6. **KITTSOON COUNTY:** 19 GROWERS REPORTED ON 8,928 ACRES; 1 GROWER REPORTED NO HERBICIDE USED ON 217 ACRES.

TREATMENT	NO. RPTG.	ACRES TRTED	% OF TOTAL	Avg # of App	NO. OF GROWERS REPORTING WEED CONTROL				
					NR*	EXC	GOOD	FAIR	POOR

B. POSTEMERGENCE HERBICIDES:									
PROG+STINGER+UPBEET+SELECT+OIL	11	10828	121.3	2.2	1	1	6	3	0
PROG+STINGER+UPBEET+NORT+OIL	5	4773	53.5	2.2	2	0	1	1	1
BETX+STINGER+UPBEET+SELECT+OIL	6	3229	36.2	1.2	1	1	2	2	0
PROG+STINGER+UPBEET+OIL	2	1896	21.2	2.0	0	0	2	0	0
PROG+UPBEET+SELECT+OIL	2	1057	11.8	2.0	0	1	1	0	0
BETX+UPBEET+SELECT+OIL	3	1034	11.6	1.7	0	0	2	1	0
SELECT/PRISM	3	607	6.8	1.0	0	2	1	0	0
PROG+STINGER+UPBEET	1	540	6.0	2.0	1	0	0	0	0
BETX+STINGER+UPBEET+POAST+OIL	1	400	4.5	2.0	0	0	0	1	0
BMIX+STINGER+UPBEET+SELECT+OIL	3	380	4.3	1.0	0	0	2	1	0
BMIX+STINGER+UPBEET+NORT+OIL	1	296	3.3	2.0	1	0	0	0	0
BETX+STINGER+UPBEET+ASSURE+OIL	1	200	2.2	1.0	0	0	0	1	0
PROGRESS	2	198	2.2	1.5	0	0	1	1	0
BETANEX+UPBEET	2	184	2.1	1.0	0	0	2	0	0
BETX+STINGER+UPBEET+NORT+OIL	2	176	2.0	1.0	0	0	2	0	0
PROGRESS+UPBEET	1	153	1.7	1.0	0	0	1	0	0
BMIX+STINGER+UPBEET+POAST+OIL	1	153	1.7	1.0	0	0	1	0	0
BETAMIX+STINGER	1	128	1.4	1.0	0	0	1	0	0
ASSURE II	2	110	1.2	1.0	0	2	0	0	0
BETX+STINGER+UPBEET	1	76	0.9	1.0	0	0	0	1	0
BETANEX	1	30	0.3	1.0	0	0	1	0	0
TOTAL-POST	52	26448	296.2	1.6	6	7	26	12	1
C. PREEMERGE & LAY-BY HERBICIDES:									
ROUNDUP (PRE)	3	315	3.5	1.0	0	2	1	0	0
OUTLOOK (LAY-BY)	1	200	2.2	1.0	0	1	0	0	0
TOTAL-PRE&LAY-BY	4	515	5.8	1.0	0	3	1	0	0
D. OTHER WEED CONTROL METHODS:									
SWATH/FLAIL/MOW	2	490	5.5	1.0	1	0	0	1	0
ROTARY HOE	2	161	1.8	1.0	0	0	1	1	0
HARROW	1	40	0.4	1.0	0	0	1	0	0
TOTAL-OTHER	5	691	7.7	1.0	1	0	2	2	0
TOTAL TREATMENTS	61	27654	309.7	1.5	7	10	29	14	1

*NO RESPONSE

TABLE 7. **MARSHALL COUNTY:** 22 GROWERS REPORTED ON 15,818 ACRES.

TREATMENT	NO. RPTG.	ACRES TRTED	% OF TOTAL	Avg # of App	NO. OF GROWERS REPORTING				
					NR*	EXC	GOOD	FAIR	POOR
A. SOIL APPLIED HERBICIDES:									
EPTAM+RO-NEET	1	157	1.0	1.0	0	0	1	0	0
TOTAL-PPI&PRE	1	157	1.0	1.0	0	0	1	0	0
=====									
B. POSTEMERGENCE HERBICIDES:									
PROG+STINGER+UPBEET+OIL	6	11211	70.9	1.7	2	0	0	4	0
SELECT/PRISM	7	7961	50.3	1.4	2	4	1	0	0
PROGRESS+UPBEET	2	5400	34.1	2.0	1	0	1	0	0
PROG+UPBEET+SELECT+OIL	3	5204	32.9	2.3	1	0	1	1	0
PROG+STINGER+UPBEET+SELECT+OIL	7	4750	30.0	1.6	1	0	4	2	0
UPBEET	2	4510	28.5	2.5	1	0	0	1	0
OTHER COMBINATIONS	2	3313	20.9	2.5	1	0	0	1	0
BETX+STINGER+UPBEET+SELECT+OIL	7	3184	20.1	1.4	1	0	4	1	1
BMIX+STINGER+UPBEET+SELECT+OIL	4	2890	18.3	1.5	1	0	2	1	0
PROGRESS	2	2460	15.6	2.0	1	0	0	1	0
BETX+STINGER+UPBEET+OIL	4	2290	14.5	1.0	2	0	1	1	0
PROG+STINGER+UPBEET+POAST+OIL	2	2290	14.5	2.5	0	0	2	0	0
BMIX+STINGER+UPBEET+NORT+OIL	2	2017	12.8	2.0	0	0	1	1	0
STINGER	1	2000	12.6	2.0	0	0	1	0	0
BETANEX	3	1580	10.0	1.3	1	0	1	1	0
BETX+STINGER+UPBEET	2	1500	9.5	1.0	0	0	2	0	0
BETX+STINGER+UPBEET+NORT+OIL	1	1400	8.9	2.0	0	0	1	0	0
PROG+STINGER+UPBEET+NORT+OIL	2	996	6.3	2.0	1	0	0	1	0
BETX+UPBEET+SELECT+OIL	1	750	4.7	3.0	0	0	0	1	0
BETANEX+UPBEET	5	621	3.9	1.4	1	0	1	3	0
BETAMIX	1	400	2.5	1.0	0	0	0	1	0
BETAMIX+UPBEET	1	400	2.5	1.0	0	0	1	0	0
BMIX+STINGER+UPBEET+OIL	2	375	2.4	1.0	0	0	1	1	0
PROGRESS+STINGER	1	200	1.3	2.0	1	0	0	0	0
ASSURE II	1	164	1.0	1.0	0	1	0	0	0
BETX+STINGER+UPBEET+POAST+OIL	1	54	0.3	1.0	0	0	0	1	0
BMIX+UPBEET+SELECT+OIL	1	25	0.2	1.0	0	0	1	0	0
TOTAL-POST	73	67945	429.5	1.6	18	5	26	23	1
=====									
C. PREEMERGE & LAY-BY HERBICIDES:									
ROUNDUP (PRE)	4	724	4.6	1.0	1	3	0	0	0
TOTAL-PRE&LAY-BY	4	724	4.6	1.0	1	3	0	0	0
=====									
D. OTHER WEED CONTROL METHODS:									
ROTARY HOE	6	3165	20.0	1.2	2	0	1	3	0
HARROW	2	400	2.5	1.0	0	0	2	0	0
WEED PULLER	4	240	1.5	1.3	1	1	0	2	0
SWATH/FLAIL/MOW	1	100	0.6	1.0	1	0	0	0	0
TOTAL-OTHER	13	3905	24.7	1.2	4	1	3	5	0
=====									
TOTAL TREATMENTS	91	72731	459.8	1.5	23	9	30	28	1

*NO RESPONSE

TABLE 8. **NORMAN AND MAHNOMEN COUNTY:** 17 GROWERS REPORTED ON 8,050 ACRES.

TREATMENT	NO. RPTG.	ACRES TRTED	% OF TOTAL	Avg # of App	NO. OF GROWERS REPORTING				
					WEED CONTROL				
					NR*	EXC	GOOD	FAIR	POOR
B. POSTEMERGENCE HERBICIDES:									
BETX+STINGER+UPBEET+SELECT+OIL	9	5577	69.3	1.8	3	0	1	4	1
PROG+STINGER+UPBEET+SELECT+OIL	5	4684	58.2	2.2	0	0	1	4	0
BETX+STINGER+UPBEET+POAST+OIL	1	4200	52.2	2.0	0	0	0	1	0
BMIX+STINGER+UPBEET+SELECT+OIL	5	3545	44.0	2.2	2	0	0	2	1
BMIX+STINGER+UPBEET+OIL	2	2850	35.4	3.0	0	1	0	1	0
BMIX+STINGER+UPBEET+POAST+OIL	1	2100	26.1	1.0	0	0	0	1	0
BETX+STINGER+UPBEET+OIL	2	1100	13.7	2.5	0	1	0	1	0
SELECT/PRISM	1	990	12.3	3.0	0	1	0	0	0
BETANEX+UPBEET	1	824	10.2	1.0	0	0	0	1	0
PROG+STINGER+UPBEET+POAST+OIL	1	768	9.5	3.0	0	0	0	0	1
BETX+UPBEET+SELECT+OIL	1	750	9.3	1.0	1	0	0	0	0
PROG+STINGER+UPBEET+OIL	2	684	8.5	2.0	0	1	1	0	0
BETX+STINGER+UPBEET	1	530	6.6	2.0	0	0	0	1	0
BETX+STINGER+UPBEET+NORT+OIL	1	312	3.9	1.0	0	0	1	0	0
PROG+UPBEET+SELECT+OIL	1	265	3.3	1.0	0	0	1	0	0
BMIX+STINGER+UPBEET+NORT+OIL	1	240	3.0	1.0	0	0	0	1	0
PROG+STINGER+UPBEET+NORT+OIL	1	240	3.0	1.0	0	0	0	1	0
TOTAL-POST	36	29659	368.4	1.9	6	4	5	18	3
C. PREEMERGE & LAY-BY HERBICIDES:									
ROUNDUP (PRE)	2	325	4.0	1.0	0	2	0	0	0
OUTLOOK (LAY-BY)	2	310	3.9	1.0	0	0	1	0	1
TOTAL-PRE&LAY-BY	4	635	7.9	1.0	0	2	1	0	1
D. OTHER WEED CONTROL METHODS:									
ROTARY HOE	4	2189	27.2	1.3	1	0	1	2	0
SWATH/FLAIL/MOW	2	220	2.7	1.0	1	0	1	0	0
TOTAL-OTHER	6	2409	29.9	1.2	2	0	2	2	0
TOTAL TREATMENTS	46	32703	406.2	1.8	8	6	8	20	4

*NO RESPONSE

TABLE 9. **PEMBINA COUNTY:** 17 GROWERS REPORTED ON 7,290 ACRES.

TREATMENT	NO. RPTG.	ACRES TRTED	% OF TOTAL	Avg # of App	NO. OF GROWERS REPORTING WEED CONTROL				
					NR*	EXC	GOOD	FAIR	POOR
B. POSTEMERGENCE HERBICIDES:									
PROG+STINGER+UPBEET+SELECT+OIL	8	11126	152.6	2.8	0	1	4	3	0
BETX+STINGER+UPBEET+SELECT+OIL	6	3843	52.7	1.8	2	0	2	2	0
BMIX+STINGER+UPBEET+SELECT+OIL	5	2967	40.7	1.6	2	0	1	2	0
BETANEX+UPBEET	1	1800	24.7	3.0	0	0	1	0	0
BETANEX	2	1700	23.3	1.5	1	0	1	0	0
UPBEET	1	1500	20.6	2.0	1	0	0	0	0
POAST	1	1500	20.6	2.0	1	0	0	0	0
PROG+STINGER+UPBEET+NORT+OIL	2	1390	19.1	2.5	0	0	0	2	0
BMIX+UPBEET+SELECT+OIL	2	960	13.2	2.0	1	0	0	1	0
BETAMIX	2	900	12.3	1.0	1	0	1	0	0
STINGER	1	750	10.3	1.0	1	0	0	0	0
PROG+UPBEET+SELECT+OIL	1	744	10.2	3.0	0	0	0	1	0
BMIX+STINGER+UPBEET+OIL	1	540	7.4	2.0	0	1	0	0	0
BMIX+STINGER+UPBEET+NORT+OIL	1	540	7.4	2.0	0	0	1	0	0
BETX+UPBEET+SELECT+OIL	1	400	5.5	1.0	0	0	1	0	0
PROG+STINGER+UPBEET+OIL	1	270	3.7	1.0	0	1	0	0	0
SELECT/PRISM	1	186	2.6	1.0	0	1	0	0	0
TOTAL-POST	37	31116	426.8	2.0	10	4	12	11	0
C. PREEMERGE & LAY-BY HERBICIDES:									
OUTLOOK (LAY-BY)	4	789	10.8	1.0	0	0	1	3	0
ROUNDUP (PRE)	4	460	6.3	1.0	0	4	0	0	0
TOTAL-PRE&LAY-BY	8	1249	17.1	1.0	0	4	1	3	0
D. OTHER WEED CONTROL METHODS:									
ROTARY HOE	3	1578	21.6	1.3	1	0	1	1	0
ELECTRICAL (EDS)	1	20	0.3	1.0	1	0	0	0	0
SWATH/FLAIL/MOW	1	5	0.1	1.0	0	0	0	1	0
TOTAL-OTHER	5	1603	22.0	1.2	2	0	1	2	0
TOTAL TREATMENTS	50	33968	466.0	1.7	12	8	14	16	0

*NO RESPONSE

TABLE 10. **POLK COUNTY:** 38 GROWERS REPORTED ON 22,071 ACRES.

TREATMENT	NO. RPTG.	ACRES TRTED	% OF TOTAL	Avg # of App	NO. OF GROWERS REPORTING				
					WEED CONTROL				
					NR*	EXC	GOOD	FAIR	POOR
A. SOIL APPLIED HERBICIDES:									
EPTAM	1	230	1.0	1.0	0	0	1	0	0
TOTAL-PPI&PRE	1	230	1.0	1.0	0	0	1	0	0
=====									
B. POSTEMERGENCE HERBICIDES:									
BMIX+STINGER+UPBEET+SELECT+OIL	14	14283	64.7	1.6	2	1	9	2	0
PROG+STINGER+UPBEET+SELECT+OIL	11	8969	40.6	1.5	1	0	10	0	0
BETX+STINGER+UPBEET+SELECT+OIL	9	7773	35.2	1.7	1	1	4	3	0
BMIX+STINGER+UPBEET+OIL	6	7398	33.5	1.5	0	0	3	3	0
OTHER COMBINATIONS	4	6040	27.4	2.5	1	0	3	0	0
BETX+STINGER+UPBEET+NORT+OIL	1	4804	21.8	2.0	0	0	1	0	0
PROG+STINGER+UPBEET+OIL	3	4400	19.9	2.0	0	1	0	2	0
PROG+UPBEET+SELECT+OIL	7	4300	19.5	1.0	0	0	6	0	1
BMIX+STINGER+UPBEET+NORT+OIL	3	3240	14.7	2.3	2	0	1	0	0
PROG+STINGER+UPBEET+ASSURE+OIL	1	2800	12.7	4.0	0	0	1	0	0
BETX+STINGER+UPBEET+OIL	3	2757	12.5	1.7	0	0	1	1	1
SELECT/PRISM	4	2588	11.7	1.5	0	3	1	0	0
PROG+STINGER+UPBEET+NORT+OIL	3	2164	9.8	1.3	1	0	2	0	0
PROG+STINGER+UPBEET+POAST+OIL	1	1860	8.4	4.0	0	0	0	1	0
PROGRESS+UPBEET	2	1723	7.8	2.5	0	0	0	1	1
BETX+STINGER+UPBEET	2	1723	7.8	1.5	0	0	1	0	1
BETX+STINGER+UPBEET+ASSURE+OIL	1	1644	7.4	2.0	0	1	0	0	0
BMIX+STINGER+UPBEET	3	1628	7.4	1.3	0	0	2	0	1
BMIX+STINGER+UPBEET+POAST+OIL	1	1140	5.2	4.0	0	0	1	0	0
BETANEX+UPBEET	2	910	4.1	1.5	0	0	0	2	0
BETX+UPBEET+SELECT+OIL	2	900	4.1	1.0	0	0	1	1	0
BMIX+UPBEET+SELECT+OIL	1	800	3.6	1.0	0	1	0	0	0
PROG+STINGER+UPBEET	1	724	3.3	1.0	0	0	0	0	1
BETAMIX+UPBEET	1	354	1.6	1.0	0	0	0	1	0
ASSURE II	1	240	1.1	1.0	1	0	0	0	0
BETANEX+STINGER	1	86	0.4	1.0	0	0	1	0	0
TOTAL-POST	88	85248	386.2	1.7	9	8	48	17	6
=====									
C. PREEMERGE & LAY-BY HERBICIDES:									
TREFLAN (LAY-BY)	5	5046	22.9	1.6	1	0	3	1	0
OUTLOOK (LAY-BY)	12	3848	17.4	1.0	0	3	7	1	1
ROUNDUP (PRE)	9	1980	9.0	1.1	3	2	3	1	0
TOTAL-PRE&LAY-BY	26	10874	49.3	1.2	4	5	13	3	1
=====									
D. OTHER WEED CONTROL METHODS:									
ROTARY HOE	18	15213	68.9	1.4	4	2	5	6	1
WEED PULLER	3	667	3.0	1.0	1	1	0	1	0
HARROW	2	650	2.9	1.0	1	0	1	0	0
ELECTRICAL (EDS)	1	630	2.9	1.0	0	0	1	0	0
SWATH/FLAIL/MOW	2	15	0.1	1.0	0	0	0	0	2
TOTAL-OTHER	26	17175	77.8	1.3	6	3	7	7	3
=====									
TOTAL TREATMENTS	141	113527	514.4	1.5	19	16	69	27	10

*NO RESPONSE

TABLE 11. **RENVILLE, FARIBAULT, LAC QUI PARLE, REDWOOD, SIBLEY AND YELLOW MEDICINE COUNTY:** 56 GROWERS REPORTED ON 20,273 ACRES.

TREATMENT	NO. RPTG.	ACRES TRTED	% OF TOTAL	Avg # of App	NO. OF GROWERS REPORTING				
					WEED CONTROL				
					NR*	EXC	GOOD	FAIR	POOR
A. SOIL APPLIED HERBICIDES:									
NORTRON (PRE/PPI)	6	2776	13.7	1.0	1	1	4	0	0
EPTAM+RO-NEET	3	315	1.6	1.0	0	0	1	2	0
EPTAM	1	120	0.6	1.0	0	0	1	0	0
RO-NEET	1	105	0.5	1.0	0	0	1	0	0
TOTAL-PPI&PRE	11	3316	16.4	1.0	1	1	7	2	0
B. POSTEMERGENCE HERBICIDES:									
BMIX+STINGER+UPBEET+OIL	22	18675	92.1	1.6	1	3	9	8	1
BETX+STINGER+UPBEET+OIL	16	15272	75.3	1.9	1	0	8	5	2
SELECT/PRISM	14	4520	22.3	1.1	1	8	3	2	0
BETX+STINGER+UPBEET+SELECT+OIL	11	4323	21.3	1.0	0	1	5	3	2
BMIX+STINGER+UPBEET	6	4130	20.4	1.3	0	1	2	2	1
BETAMIX	17	3118	15.4	1.1	2	1	5	7	2
POAST	14	2517	12.4	1.0	0	13	1	0	0
BETX+UPBEET+SELECT+OIL	3	2458	12.1	1.7	2	0	0	0	1
BETANEX	6	2223	11.0	1.2	2	0	2	2	0
BETAMIX+STINGER	12	1834	9.0	1.3	0	0	8	4	0
OTHER COMBINATIONS	4	1477	7.3	1.0	0	1	3	0	0
BETX+STINGER+UPBEET	4	1471	7.3	1.3	1	0	0	1	2
PROG+STINGER+UPBEET+OIL	5	1228	6.1	1.2	0	0	4	0	1
BETANEX+UPBEET	4	1137	5.6	1.0	1	1	0	1	1
BMIX+STINGER+UPBEET+SELECT+OIL	5	989	4.9	1.2	0	2	1	1	1
BETAMIX+UPBEET	3	780	3.8	1.3	0	1	1	1	0
BETX+STINGER+UPBEET+ASSURE+OIL	1	575	2.8	1.0	1	0	0	0	0
PROGRESS	3	520	2.6	1.3	0	1	1	1	0
PROGRESS+STINGER	6	434	2.1	1.0	0	0	5	1	0
PROG+STINGER+UPBEET+SELECT+OIL	3	405	2.0	1.0	0	0	3	0	0
BMIX+UPBEET+SELECT+OIL	2	393	1.9	1.0	0	0	1	1	0
BMIX+STINGER+UPBEET+POAST+OIL	1	348	1.7	1.0	0	0	1	0	0
BMIX+STINGER+UPBEET+ASSURE+OIL	1	348	1.7	1.0	0	0	1	0	0
BETANEX+STINGER	2	265	1.3	1.0	0	1	0	1	0
BETX+STINGER+UPBEET+NORT+OIL	2	245	1.2	1.0	0	0	1	1	0
UPBEET	1	200	1.0	1.0	0	0	1	0	0
ASSURE II	2	190	0.9	1.0	1	1	0	0	0
PROG+STINGER+UPBEET	1	120	0.6	1.0	0	1	0	0	0
STINGER	1	100	0.5	1.0	0	1	0	0	0
TOTAL-POST	172	70295	346.7	1.3	13	37	66	42	14
C. PREEMERGE & LAY-BY HERBICIDES:									
OUTLOOK (LAY-BY)	35	11192	55.2	1.0	3	1	20	9	2
ROUNDUP (PRE)	1	120	0.6	1.0	0	0	0	0	1
TREFLAN (LAY-BY)	1	40	0.2	1.0	0	0	0	0	1
TOTAL-PRE&LAY-BY	37	11352	56.0	1.0	3	1	20	9	4
D. OTHER WEED CONTROL METHODS:									
ROTARY HOE	17	12882	63.5	1.4	1	3	3	9	1
SWATH/FLAIL/MOW	3	198	1.0	1.0	1	1	0	1	0
TOTAL-OTHER	20	13080	64.5	1.3	2	4	3	10	1
TOTAL TREATMENTS	240	98043	483.6	1.2	19	43	96	63	19

*NO RESPONSE

TABLE 12. **RICHLAND COUNTY:** 28 GROWERS REPORTED ON 14,669 ACRES.

TREATMENT	NO. RPTG.	ACRES TRTED	% OF TOTAL	Avg # of App	NO. OF GROWERS REPORTING WEED CONTROL				
					NR*	EXC	GOOD	FAIR	POOR
A. SOIL APPLIED HERBICIDES:									
NORTRON (PRE/PPI)	1	136	0.9	1.0	0	0	1	0	0
TOTAL-PPI&PRE	1	136	0.9	1.0	0	0	1	0	0
B. POSTEMERGENCE HERBICIDES:									
BMIX+STINGER+UPBEET+SELECT+OIL	10	10894	74.3	2.2	2	1	4	2	1
BETX+STINGER+UPBEET+SELECT+OIL	9	9696	66.1	2.1	0	1	4	3	1
BMIX+STINGER+UPBEET+NORT+OIL	5	9210	62.8	2.6	1	2	2	0	0
BMIX+STINGER+UPBEET+OIL	6	8183	55.8	2.2	0	0	5	1	0
PROG+STINGER+UPBEET+OIL	4	5116	34.9	2.3	0	0	2	1	1
PROG+STINGER+UPBEET+SELECT+OIL	6	4396	30.0	1.8	1	1	4	0	0
BETX+STINGER+UPBEET+ASSURE+OIL	3	3480	23.7	2.3	0	1	2	0	0
SELECT/PRISM	5	3327	22.7	1.6	0	4	0	1	0
BETX+STINGER+UPBEET+OIL	2	1747	11.9	1.0	0	0	1	1	0
BMIX+STINGER+UPBEET+ASSURE+OIL	1	1620	11.0	2.0	0	0	1	0	0
BETAMIX	1	1240	8.5	4.0	0	0	0	1	0
UPBEET	1	1240	8.5	4.0	0	0	1	0	0
STINGER	1	1240	8.5	4.0	0	0	1	0	0
PROG+STINGER+UPBEET+ASSURE+OIL	1	700	4.8	1.0	0	1	0	0	0
PROGRESS+STINGER	1	628	4.3	2.0	1	0	0	0	0
ASSURE II	3	486	3.3	1.0	1	1	1	0	0
PROGRESS	1	350	2.4	2.0	0	0	1	0	0
BETX+STINGER+UPBEET+NORT+OIL	1	222	1.5	1.0	0	0	1	0	0
TOTAL-POST	61	63775	434.8	2.1	6	12	30	10	3
C. PREEMERGE & LAY-BY HERBICIDES:									
OUTLOOK (LAY-BY)	11	5372	36.6	1.0	1	2	2	4	2
ROUNDUP (PRE)	6	1211	8.3	1.0	0	4	1	0	1
TOTAL-PRE&LAY-BY	17	6583	44.9	1.0	1	6	3	4	3
D. OTHER WEED CONTROL METHODS:									
ROTARY HOE	3	850	5.8	1.0	1	0	2	0	0
SWATH/FLAIL/MOW	5	700	4.8	1.0	1	1	0	0	3
HARROW	1	600	4.1	1.0	0	1	0	0	0
TOTAL-OTHER	9	2150	14.7	1.0	2	2	2	0	3
TOTAL TREATMENTS	88	72644	495.2	1.8	9	20	36	14	9

*NO RESPONSE

TABLE 13. **TRAILL COUNTY:** 13 GROWERS REPORTED ON 6,653 ACRES.

TREATMENT	NO. RPTG.	ACRES TRTED	% OF TOTAL	Avg # of App	NO. OF GROWERS REPORTING WEED CONTROL				
					NR*	EXC	GOOD	FAIR	POOR
B. POSTEMERGENCE HERBICIDES:									
BETX+STINGER+UPBEET+SELECT+OIL	7	7695	115.7	2.0	2	1	4	0	0
BMIX+STINGER+UPBEET+SELECT+OIL	8	6518	98.0	2.6	1	1	4	2	0
PROG+STINGER+UPBEET+SELECT+OIL	4	5500	82.7	2.8	0	1	3	0	0
BETX+STINGER+UPBEET+NORT+OIL	1	1000	15.0	2.0	0	0	0	1	0
PROG+STINGER+UPBEET+NORT+OIL	1	800	12.0	4.0	0	0	1	0	0
PROG+UPBEET+SELECT+OIL	1	450	6.8	1.0	1	0	0	0	0
BETX+UPBEET+SELECT+OIL	1	368	5.5	2.0	0	1	0	0	0
BMIX+STINGER+UPBEET+ASSURE+OIL	1	216	3.2	1.0	0	0	1	0	0
SELECT/PRISM	1	80	1.2	1.0	0	1	0	0	0
TOTAL-POST	25	22627	340.1	2.3	4	5	13	3	0
C. PREEMERGE & LAY-BY HERBICIDES:									
OUTLOOK (LAY-BY)	5	830	12.5	1.0	1	0	4	0	0
TREFLAN (LAY-BY)	2	640	9.6	1.0	1	0	1	0	0
ROUNDUP (PRE)	3	545	8.2	1.0	1	1	1	0	0
TOTAL-PRE&LAY-BY	10	2015	30.3	1.0	3	1	6	0	0
D. OTHER WEED CONTROL METHODS:									
ROTARY HOE	2	510	7.7	1.0	0	0	2	0	0
HARROW	2	455	6.8	1.0	1	0	0	1	0
TOTAL-OTHER	4	965	14.5	1.0	1	0	2	1	0
TOTAL TREATMENTS	39	25607	384.9	1.8	8	6	21	4	0

*NO RESPONSE

TABLE 14. TRAVERSE, BIG STONE, GRANT AND STEVENS COUNTY: 16 GROWERS REPORTED ON 5979 ACRES.

TREATMENT	NO. RPTG.	ACRES TRTED	% OF TOTAL	Avg # of App	NO. OF GROWERS REPORTING WEED CONTROL				
					NR*	EXC	GOOD	FAIR	POOR
A. SOIL APPLIED HERBICIDES:									
EPTAM+RO-NEET	1	500	8.4	1.0	0	0	1	0	0
EPTAM	1	140	2.3	1.0	0	1	0	0	0
TOTAL-PPI&PRE	2	640	10.7	1.0	0	1	1	0	0
B. POSTEMERGENCE HERBICIDES:									
PROG+STINGER+UPBEET+POAST+OIL	5	6678	111.7	2.6	1	1	3	0	0
BETX+STINGER+UPBEET+SELECT+OIL	2	3425	57.3	3.5	0	1	0	1	0
BMIX+STINGER+UPBEET+OIL	2	2316	38.7	3.5	0	0	0	1	1
PROG+STINGER+UPBEET+SELECT+OIL	2	2089	34.9	3.5	1	0	1	0	0
BETX+STINGER+UPBEET+NORT+OIL	1	2000	33.5	4.0	0	0	0	0	1
PROG+STINGER+UPBEET+OIL	2	1270	21.2	1.5	2	0	0	0	0
BETX+STINGER+UPBEET+POAST+OIL	3	1216	20.3	2.7	1	0	1	0	1
PROG+STINGER+UPBEET	2	961	16.1	1.5	0	1	1	0	0
SELECT/PRISM	1	500	8.4	1.0	0	0	1	0	0
BETANEX+STINGER	1	500	8.4	1.0	0	0	0	1	0
BETAMIX+STINGER	1	500	8.4	1.0	0	0	0	1	0
BETX+STINGER+UPBEET+OIL	1	350	5.9	1.0	1	0	0	0	0
PROG+STINGER+UPBEET+NORT+OIL	1	214	3.6	1.0	1	0	0	0	0
TOTAL-POST	24	22019	368.3	2.4	7	3	7	4	3
C. PREEMERGE & LAY-BY HERBICIDES:									
OUTLOOK (LAY-BY)	10	3505	58.6	1.1	3	1	4	1	1
TOTAL-PRE&LAY-BY	10	3505	58.6	1.1	3	1	4	1	1
D. OTHER WEED CONTROL METHODS:									
HARROW	1	155	2.6	1.0	0	0	1	0	0
TOTAL-OTHER	1	155	2.6	1.0	0	0	1	0	0
TOTAL TREATMENTS	37	26319	440.2	1.9	10	5	13	5	4

*NO RESPONSE

TABLE 15. **WALSH COUNTY:** 17 GROWERS REPORTED ON 6,412 ACRES.

TREATMENT	NO. RPTG.	ACRES TRTED	% OF TOTAL	Avg # of App	NO. OF GROWERS REPORTING				
					WEED CONTROL				
					NR*	EXC	GOOD	FAIR	POOR
B. POSTEMERGENCE HERBICIDES:									
BETX+STINGER+UPBEET+SELECT+OIL	6	2839	44.3	1.5	1	0	5	0	0
PROG+STINGER+UPBEET+OIL	3	2626	41.0	1.7	0	1	1	1	0
BMIX+STINGER+UPBEET+SELECT+OIL	3	2547	39.7	2.0	0	0	2	1	0
STINGER	2	1860	29.0	2.5	0	1	0	1	0
SELECT/PRISM	4	1715	26.7	1.5	0	3	0	1	0
BETANEX+UPBEET	2	1660	25.9	1.5	1	0	1	0	0
BETAMIX	1	1560	24.3	4.0	0	0	0	1	0
BETANEX	1	1560	24.3	4.0	0	0	0	1	0
PROG+STINGER+UPBEET+SELECT+OIL	4	1380	21.5	2.8	0	0	2	2	0
UPBEET	1	1170	18.2	3.0	0	0	0	1	0
PROG+STINGER+UPBEET+NORT+OIL	2	920	14.3	1.5	1	0	1	0	0
BETAMIX+UPBEET	1	900	14.0	3.0	0	1	0	0	0
BMIX+STINGER+UPBEET	1	855	13.3	3.0	0	0	1	0	0
BETX+UPBEET+SELECT+OIL	1	700	10.9	1.0	0	0	1	0	0
PROG+STINGER+UPBEET+ASSURE+OIL	2	541	8.4	1.5	0	0	2	0	0
BETX+STINGER+UPBEET+OIL	2	407	6.3	1.5	1	0	0	1	0
BETX+STINGER+UPBEET	1	360	5.6	1.0	0	0	1	0	0
PROG+STINGER+UPBEET+POAST+OIL	1	360	5.6	1.0	0	1	0	0	0
OTHER COMBINATIONS	1	250	3.9	1.0	0	1	0	0	0
BETANEX+STINGER	1	176	2.7	2.0	1	0	0	0	0
PROGRESS+UPBEET	1	150	2.3	1.0	0	0	1	0	0
ASSURE II	1	88	1.4	1.0	1	0	0	0	0
BMIX+UPBEET+SELECT+OIL	1	48	0.7	1.0	0	0	0	1	0
BETX+STINGER+UPBEET+NORT+OIL	1	48	0.7	1.0	0	0	1	0	0
TOTAL-POST	44	24720	385.5	1.8	6	8	19	11	0
C. PREEMERGE & LAY-BY HERBICIDES:									
ROUNDUP (PRE)	4	888	13.8	1.3	0	2	1	1	0
OUTLOOK (LAY-BY)	2	840	13.1	1.0	0	0	1	1	0
TOTAL-PRE&LAY-BY	6	1728	26.9	1.2	0	2	2	2	0
D. OTHER WEED CONTROL METHODS:									
ROTARY HOE	5	1968	30.7	1.2	2	0	1	2	0
WEED PULLER	1	165	2.6	1.0	0	0	1	0	0
HARROW	1	88	1.4	1.0	0	0	0	1	0
TOTAL-OTHER	7	2221	34.6	1.1	2	0	2	3	0
TOTAL TREATMENTS	57	28669	447.1	1.7	8	10	23	16	0

*NO RESPONSE

TABLE 16. **WILKIN AND OTTERTAIL COUNTY:** 25 GROWERS REPORTED ON 11,834 ACRES.

TREATMENT	NO. RPTG.	ACRES TRTED	% OF TOTAL	Avg # of App	NO. OF GROWERS REPORTING				
					WEED CONTROL				
					NR*	EXC	GOOD	FAIR	POOR
A. SOIL APPLIED HERBICIDES:									
NORTRON (PRE/PPI)	1	220	1.9	2.0	0	0	1	0	0
TOTAL-PPI&PRE	1	220	1.9	2.0	0	0	1	0	0
B. POSTEMERGENCE HERBICIDES:									
BETX+STINGER+UPBEET+SELECT+OIL	12	17396	147.0	2.2	3	0	6	3	0
BMIX+STINGER+UPBEET+SELECT+OIL	13	17048	144.1	2.5	2	0	6	5	0
PROG+STINGER+UPBEET+SELECT+OIL	4	2255	19.1	2.3	1	0	1	1	1
BMIX+STINGER+UPBEET	3	936	7.9	1.7	1	0	0	2	0
BETANEX+STINGER	2	910	7.7	1.0	1	0	1	0	0
BETX+STINGER+UPBEET	3	711	6.0	1.3	1	0	2	0	0
BETX+STINGER+UPBEET+ASSURE+OIL	1	700	5.9	1.0	1	0	0	0	0
SELECT/PRISM	3	685	5.8	1.0	1	2	0	0	0
BETX+STINGER+UPBEET+NORT+OIL	2	669	5.7	1.5	0	0	1	1	0
BMIX+STINGER+UPBEET+NORT+OIL	2	405	3.4	2.0	0	1	1	0	0
PROG+STINGER+UPBEET	1	330	2.8	3.0	0	0	0	1	0
ASSURE II	1	117	1.0	1.0	0	0	1	0	0
BETAMIX+STINGER	1	110	0.9	1.0	0	0	1	0	0
TOTAL-POST	48	42272	357.2	2.0	11	3	20	13	1
C. PREEMERGE & LAY-BY HERBICIDES:									
OUTLOOK (LAY-BY)	7	9059	76.6	1.4	3	2	1	0	1
TREFLAN (LAY-BY)	1	120	1.0	1.0	0	0	1	0	0
TOTAL-PRE&LAY-BY	8	9179	77.6	1.4	3	2	2	0	1
D. OTHER WEED CONTROL METHODS:									
ROTARY HOE	4	2315	19.6	1.5	2	0	1	0	1
WEED PULLER	2	125	1.1	1.0	0	0	1	1	0
SWATH/FLAIL/MOW	2	115	1.0	1.0	1	0	0	0	1
TOTAL-OTHER	8	2555	21.6	1.3	3	0	2	1	2
TOTAL TREATMENTS	65	54226	458.2	1.8	17	5	25	14	4

*NO RESPONSE

TABLE 17. **OTHER COUNTY:** 6 GROWERS REPORTED ON 1,833 ACRES.

TREATMENT	NO. RPTG.	ACRES TRTED	% OF TOTAL	Avg # of App	NO. OF GROWERS REPORTING WEED CONTROL				
					NR*	EXC	GOOD	FAIR	POOR
B. POSTEMERGENCE HERBICIDES:									
BMIX+STINGER+UPBEET+OIL	3	2652	144.7	3.0	1	0	1	1	0
PROGRESS+UPBEET	1	2250	122.7	3.0	0	0	0	0	1
PROG+STINGER+UPBEET+SELECT+OIL	1	2250	122.7	3.0	0	0	0	0	1
PROG+STINGER+UPBEET+OIL	1	750	40.9	1.0	0	0	0	0	1
BETX+STINGER+UPBEET+OIL	2	635	34.6	1.5	1	0	1	0	0
BMIX+STINGER+UPBEET+NORT+OIL	1	234	12.8	2.0	0	0	0	1	0
BETAMIX	1	106	5.8	1.0	1	0	0	0	0
SELECT/PRISM	1	106	5.8	1.0	1	0	0	0	0
TOTAL-POST	11	8983	490.1	2.1	4	0	2	2	3
C. PREEMERGE & LAY-BY HERBICIDES:									
OUTLOOK (LAY-BY)	3	291	15.9	1.0	3	0	0	0	0
TOTAL-PRE&LAY-BY	3	291	15.9	1.0	3	0	0	0	0
D. OTHER WEED CONTROL METHODS:									
SWATH/FLAIL/MOW	1	900	49.1	2.0	0	0	0	1	0
ROTARY HOE	2	417	22.7	1.0	0	0	1	1	0
TOTAL-OTHER	3	1317	71.8	1.3	0	0	1	2	0
TOTAL TREATMENTS	17	10591	577.8	1.8	7	0	3	4	3

*NO RESPONSE

TABLE 18. Worst weed problem in sugarbeet, 2002.

County	Responses	No Problem	CATH ¹	COCB	COLQ	COMA	VELE	EBNS	FXTL
-----% of respondents-----									
Cass	19	2	0	5	16	0	0	0	0
Chippewa ²	58	0	0	2	22	0	7	0	0
Clay ³	31	0	0	0	6	0	0	0	0
Grand Forks	23	0	0	0	4	0	0	0	0
Kittson	20	0	0	0	0	0	0	0	0
Marshall	23	0	0	0	4	0	0	0	0
Norman ⁴	23	0	0	4	9	0	0	0	0
Pembina	18	0	0	0	0	0	0	0	0
Polk	41	0	0	2	0	2	0	0	0
Renville ⁵	57	0	0	2	39	0	9	0	0
Richland	32	3	0	0	22	0	0	0	0
Trails	12	8	0	0	17	0	0	0	0
Traverse ⁶	17	0	0	0	24	0	0	0	6
Walsh	18	0	0	0	0	0	0	6	0
Wilkin ⁷	30	0	0	3	10	0	0	0	0
Other									
Total	427	1	0	1	14	<1	2	<1	<1

Table continued

TABLE 18 (con't). Worst weed problem in sugarbeet, 2002.

County	KOCZ	LASA	PIWE	SMWE	WAHE	WIBW	WIMU	WIOA	Other ⁸
-----% of respondents-----									
Cass	26	5	42	0	0	0	0	0	5
Chippewa ²	2	0	36	10	19	0	0	0	0
Clay ³	42	0	52	0	0	0	0	0	0
Grand Forks	39	0	57	0	0	0	0	0	0
Kittson	50	0	45	0	0	5	0	0	0
Marshall	57	0	39	0	0	0	0	0	0
Norman ⁴	35	4	48	0	0	0	0	0	0
Pembina	50	0	44	0	0	6	0	0	0
Polk	39	0	56	0	0	0	0	0	0
Renville ⁵	2	0	21	16	12	0	0	0	0
Richland	16	0	53	3	0	0	0	3	0
Trails	50	0	25	0	0	0	0	0	0
Traverse ⁶	12	0	53	0	6	0	0	0	0
Walsh	50	0	33	6	0	0	0	6	0
Wilkin ⁷	17	0	67	0	3	0	0	0	0
Other ⁸									
Total	26	<1	44	4	5	<1	0	<1	<1

¹CATH = Canada thistle; COCB = Common cocklebur; COLQ = Common lambsquarters; COMA = Common mallow; VELE = velvetleaf; EBNS = eastern black nightshade; FXTL = Green & yellow foxtail; KOCZ = Kochia; LASA = Lanceleaf sage; PIWE = pigweed species; SMWE = Smartweed; WAHE = Waterhemp; WIBW = Wild buckwheat; WIOA = Wild oats.

²Includes Swift and Kandiyohi Counties.

³Includes Becker County.

⁴Includes Mahnomen County.

⁵Includes Redwood, Faribault, Yellow Medicine, Lac Qui Parle and Sibley Counties.

⁶Includes Grant, Stevens and Big Stone Counties.

⁷Includes Ottertail County.

⁸Other weeds = biennial wormwood.

⁹Other counties = Stearns, not specified.

TABLE 1. SUMMARY OF ALL HERBICIDES USED IN SUGARBEET REPORTED IN 2002.
 390 GROWERS REPORTED ON 185,656 ACRES: OF THIS TOTAL 1 GROWER
 WITH 217 ACRES REPORTED NO HERBICIDES USED.

HERBICIDES (IN ORDER OF ACRES TREATED)	NUMBER GROWERS RPTG.	ACRES TREATED % OF TOTAL	Avg no. of appl	% GROWERS REPORTING WEED CONTROL					
				NR*	EXC	GOOD	FAIR	POOR	
C. PREEMERGE & LAY-BY HERBICIDES:									
OUTLOOK (LAY-BY)	133	26.5	1.1	17	9	42	23	8	
ROUNDUP (PRE)	51	5.7	1.0	18	53	22	4	4	
TREFLAN (LAY-BY)	13	3.7	1.2	15	15	54	8	8	
TOTAL-PRE&LAY-BY	197	35.8	1.1	17	21	38	17	7	
D. OTHER WEED CONTROL METHODS:									
ROTARY HOE	103	38.1	1.3	23	8	26	38	5	
HARROW	20	3.5	1.0	20	5	50	20	5	
SWATH/FLAIL/MOW	30	1.8	1.1	30	10	10	23	27	
ELECTRICAL (EDS)	6	0.7	1.3	50	17	33	0	0	
WEED PULLER	10	0.6	1.1	20	20	20	40	0	
TOTAL-OTHER	169	44.8	1.2	25	9	26	32	8	
TOTAL TREATMENTS	1348	472.6	1.6	17	14	39	23	7	

*NO RESPONSE

TABLE 19. Most serious production problem in sugarbeet, 2002.

County	Responses	No Prob	Weeds	Emerg/ Stand	Labor Mangmt	Root Maggot	CLS ¹	Rhizo- mania	Rhizoctonia/ Aphanomyces	Weather	Other ⁹
-----% of respondents-----											
Cass	17	12	65	12	0	0	0	6	6	0	0
Chippewa ²	51	8	47	24	2	0	0	8	12	0	0
Clay ³	29	3	55	14	0	0	0	0	0	28	0
Grand Forks	22	0	82	5	0	0	5	0	0	9	0
Kittson	18	6	56	11	0	0	0	0	0	28	0
Marshall	23	0	61	26	0	0	0	0	0	13	0
Norman ⁴	20	0	45	15	0	0	0	5	5	30	0
Pembina	17	6	41	41	0	0	0	0	0	12	0
Polk	37	5	49	19	0	0	0	3	5	19	0
Renville ⁵	54	2	35	19	0	2	0	4	30	6	4
Richland	27	4	67	7	4	0	0	0	11	7	0
Traill	13	8	38	23	0	0	0	0	15	15	0
Traverse ⁶	15	7	73	20	0	0	0	0	0	0	0
Walsh	16	0	50	38	0	0	0	0	6	6	0
Wilkin ⁷	26	0	65	12	4	0	0	4	12	4	0
Other ⁸	6	0	50	50	0	0	0	0	0	0	0
Total	391	4	53	19	1	<1	<1	3	9	11	1

¹CLS = Cercospora leaf spot.

²Includes Swift and Kandiyohi Counties.

³Includes Becker County.

⁴Includes Mahnomen County.

⁵Includes Redwood, Faribault, Yellow Medicine, Lac Qui Parle and Sibley Counties.

⁶Includes Grant, Stevens and Big Stone Counties.

⁷Includes Ottertail County.

⁸Other counties = Stearns, not specified.

⁹Other = root aphid, low sugar %.

TABLE 20. Sugarbeet acreage that was hand weeded and thinned by various methods, 2002.

County	Acres planted by respondents	Hand weeded	Mech ¹ thinner	Elec ¹ thinner	Hand thinned	Not thinned
-----% of acres planted-----						
Cass	8670	61	5	8	0	83
Chippewa ²	18228	52	1	0	<1	96
Clay ³	15996	17	0	0	0	100
Grand Forks	12952	23	0	4	0	88
Kittson	8928	6	2	0	<1	98
Marshall	15818	6	3	0	0	91
Norman ⁴	8050	2	<1	0	0	95
Pembina	7290	30	1	0	3	92
Polk	22071	5	2	0	3	96
Renville ⁵	20273	77	3	<1	1	97
Richland	14669	47	7	0	0	92
Traill	6653	21	2	0	0	98
Traverse ⁶	5979	35	5	0	1	94
Walsh	6412	38	8	0	0	92
Wilkin ⁷	11834	46	16	0	5	79
Other ⁸	1833	19	0	0	0	100
Total	185,656	32	3	1	1	93

¹Mech = Mechanical, harrow, rotary hoe; Elec = Electronic.

²Includes Swift and Kandiyohi Counties.

³Includes Becker County.

⁴Includes Mahnomen County.

⁵Includes Redwood, Faribault, Yellow Medicine, Lac Qui Parle and Sibley Counties.

⁶Includes Grant, Stevens and Big Stone Counties.

⁷Includes Ottertail County.

⁸Includes Stearns and unspecified Counties.

TABLE 21. Method of herbicide application, 2002.

Herbicide	Method of application		
	Band	Broadcast ground	Broadcast air
	-----% of acres-----		
Eptam + Ro-Neet, Eptam, Ro-Neet	8	92	0
Nortron (PRE/PPI)	83	17	0
Betamix/Betanex/Progress	25	51	24
Poast, Select, Assure II	23	63	14
Bnex/Bmix/Progress+UpBeet	8	38	54
Bnex/Bmix/Progress+Stinger	25	72	3
Bnex/Bmix/Progress+UpB+Stinger	30	47	23
Bnex/Bmix/Prog+UpB+Sting+Grass	46	47	7
All herbicides	38	48	14

TABLE 22. Cost of hand weeding and hand thinning sugarbeet, 2002.

County	Respondents	Dollars per acre					
		0	1-10	11-15	16-20	21-25	26-30
		-----% of respondents-----					
Cass	18	22	6	0	6	17	33
Chippewa ²	47	19	13	4	11	19	9
Clay ³	28	54	4	0	4	7	11
Grand Forks	23	52	0	9	4	9	9
Kittson	19	63	0	0	0	11	16
Marshall	22	73	0	0	0	0	5
Norman ⁴	17	94	0	0	6	0	0
Pembina	17	41	0	0	6	12	24
Polk	38	74	0	0	5	11	5
Renville ⁵	56	14	21	14	18	11	7
Richland	28	25	0	7	21	32	0
Traill	13	46	0	8	0	23	8
Traverse ⁶	16	44	13	0	0	13	6
Walsh	17	29	0	6	12	29	12
Wilkin ⁷	25	40	0	0	8	28	4
Other ⁸	6	67	0	0	0	0	0
Total	390	43	6	4	8	14	9

Table continued.

TABLE 22 (con't) Cost of hand weeding and hand thinning sugarbeet, 2002.

County	Dollars per acre								
	31-35	36-40	41-45	46-50	51-55	56-60	61-70	>70	
		-----% of respondents-----							
Cass	6	6	0	0	0	6	0	0	
Chippewa ²	11	4	0	6	2	0	0	2	
Clay ³	4	0	4	7	0	0	4	4	
Grand Forks	4	9	4	0	0	0	0	0	
Kittson	5	0	0	0	5	0	0	0	
Marshall	9	0	5	5	0	0	5	0	
Norman ⁴	6	0	0	0	0	0	0	0	
Pembina	0	0	0	6	6	0	0	0	
Polk	3	0	0	0	0	0	0	3	
Renville ⁵	5	4	2	4	0	0	0	0	
Richland	11	4	0	0	0	0	0	0	
Traill	8	0	8	0	0	0	0	0	
Traverse ⁶	6	6	0	6	0	0	6	0	
Walsh	0	0	6	6	0	0	0	0	
Wilkin ⁷	4	0	0	0	0	4	4	8	
Other ⁸	0	17	17	0	0	0	0	0	
Total	6	3	2	3	1	1	1	1	

²Includes Swift and Kandiyohi Counties.

³Includes Becker County.

⁴Includes Mahnomon County.

⁵Includes Redwood, Faribault, Yellow Medicine, Lac Qui Parle and Sibley Counties.

⁶Includes Grant, Stevens and Big Stone Counties.

⁷Includes Ottertail County.

⁸Includes Stearns and non-specified Counties.

TABLE 23. Total sugarbeet acreage operated by respondents to the survey, 2002.

County	Respondents	Acres of sugarbeet					
		<50	50-99	100-199	200-299	300-399	400-599
		-----% of respondents-----					
Cass	18	0	6	11	11	22	22
Chippewa ¹	47	2	6	28	13	11	21
Clay ²	28	4	0	11	18	14	25
Grand Forks	23	0	4	4	13	9	26
Kittson	19	0	5	5	21	37	11
Marshall	22	0	0	0	9	5	32
Norman ³	17	0	6	24	29	6	6
Pembina	17	0	0	6	35	18	18
Polk	38	0	0	5	16	8	21
Renville ⁴	56	4	13	27	16	16	9
Richland	28	4	0	7	11	21	21
Trail	13	0	0	8	15	8	46
Traverse ⁵	16	6	0	13	13	25	31
Walsh	17	12	6	0	18	24	18
Wilkin ⁶	25	0	8	16	16	16	12
Other ⁷	6	17	0	33	0	17	17
Total	390	2	4	14	16	15	20

Table continued.

TABLE 23 (cont.). Total sugarbeet acreage operated by respondents to the survey, 2002.

County	Acres of sugarbeet				
	600-799	800-999	1000-1499	1500-1999	>2000
	-----% of respondents-----				
Cass	17	6	0	6	0
Chippewa ¹	6	9	4	0	0
Clay ²	11	7	4	4	4
Grand Forks	30	4	9	0	0
Kittson	11	0	5	5	0
Marshall	27	9	9	9	0
Norman ³	6	18	0	0	6
Pembina	18	0	6	0	0
Polk	32	11	5	3	0
Renville ⁴	5	4	5	0	2
Richland	18	4	14	0	0
Trail	0	15	8	0	0
Traverse ⁵	13	0	0	0	0
Walsh	18	6	0	0	0
Wilkin ⁶	16	12	0	4	0
Other ⁷	17	0	0	0	0
Total	15	7	5	2	1

¹Includes Swift and Kandiyohi Counties.²Includes Becker County.³Includes Mahnomen County.⁴Includes Redwood, Faribault, Yellow Medicine, Lac Qui Parle and Sibley Counties.⁵Includes Grant, Stevens and Big Stone Counties.⁶Includes Ottertail County.⁷Included Stearns and non-specified Counties.

TABLE 24. Number of postemergence row crop cultivations, 2002.

County	Number of cultivations					
	0	1	2	3	4	5
	-----% of respondents-----					
Cass	6	17	72	6	0	0
Chippewa ¹	0	28	62	11	0	0
Clay ²	0	26	44	30	0	0
Grand Forks	5	29	52	14	0	0
Kittson	0	47	42	11	0	0
Marshall	0	50	45	5	0	0
Norman ³	6	41	41	12	0	0
Pembina	0	0	59	41	0	0
Polk	5	22	54	19	0	0
Renville ⁴	0	32	67	4	0	0
Richland	0	11	32	43	11	4
Traill	0	67	33	0	0	0
Traverse ⁵	0	13	56	25	0	6
Walsh	13	25	50	13	0	0
Wilkin ⁶	0	4	42	50	4	0
Other ⁷	0	60	40	0	1	0
Total	2	27	52	18	1	<1

¹Includes Swift and Kandiyohi Counties.²Includes Becker County.³Includes Mahnomon County.⁴Includes Redwood, Faribault, Yellow Medicine, Lac Qui Parle and Sibley Counties.⁵Includes Grant, Stevens and Big Stone Counties.⁶Includes Ottertail County.⁷Includes Steams and non-specified Counties.**TABLE 25. Size of sugarbeet planter, 2002.**

County	Number of rows			
	12	18	24	Other ⁸
	-----% of respondents-----			
Cass	82	0	18	0
Chippewa ¹	46	13	41	0
Clay ²	75	4	18	4
Grand Forks	74	9	13	4
Kittson	88	0	13	0
Marshall	55	0	45	0
Norman ³	56	0	44	0
Pembina	69	0	25	6
Polk	61	0	39	0
Renville ⁴	7	48	43	2
Richland	68	7	25	0
Traill	77	0	23	0
Traverse ⁵	69	0	31	0
Walsh	88	0	13	0
Wilkin ⁶	75	0	21	4
Other ⁷	67	17	17	0
Total	58	10	30	1

¹Includes Swift and Kandiyohi Counties.²Includes Becker County.³Includes Mahnomon County.⁴Includes Redwood, Faribault, Yellow Medicine, Lac Qui Parle and Sibley Counties.⁵Includes Grant, Stevens and Big Stone Counties.⁶Includes Ottertail County.⁷Includes Steams and non-specified Counties.⁸Other planter sizes = 15, 16, and 21 rows.

Table 26. Phosphorus fertilizer application for sugarbeet in 2002.

County	Respondents	Acres	Starter fertilizer Applied	Broadcast P ₂ O ₅ Applied	Starter + BC P ₂ O ₅ Applied	No P ₂ O ₅ Applied	Starter fertilizer Applied	Broadcast P ₂ O ₅ Applied	Starter + BC P ₂ O ₅ Applied	No P ₂ O ₅ Applied
			-----% of respondents-----				-----% of acres-----			
Cass	18	8,670	11	78	17	6	8	81	8	1
Chippewa ¹	47	18,228	0	70	2	34	0	54	2	41
Clay ²	28	15,996	25	46	32	14	32	39	27	9
Grand Forks	23	12,952	26	48	30	17	21	41	23	13
Kittson	19	8,928	47	26	47	21	19	27	43	10
Marshall	22	15,818	27	55	32	9	28	47	31	3
Norman ³	17	8,050	29	47	29	18	24	40	23	13
Pembina	17	7,290	6	65	12	35	17	56	7	12
Polk	38	22,071	29	37	34	11	26	27	39	8
Renville ⁴	56	20,273	4	55	4	43	3	59	2	29
Richland	28	14,669	4	64	36	7	1	59	37	10
Traill	13	6,653	15	69	23	23	16	51	24	5
Traverse ⁵	16	5,979	6	69	13	31	8	52	15	41
Walsh	17	6,412	6	71	24	24	5	78	11	7
Wilkin ⁶	25	11,834	16	68	20	16	6	59	19	12
Other ⁷	6	1,833	0	67	0	33	0	55	0	45
Total	390	185,656	15	57	21	23	14	49	21	15

¹Includes Swift and Kandiyohi Counties.

²Includes Becker County.

³Includes Mahnomon County.

⁴Includes Redwood, Faribault, Yellow Medicine, Lac Qui Parle and Sibley Counties.

⁵Includes Grant, Stevens and Big Stone Counties.

⁶Includes Ottertail County.

⁷Included Stearns and non-specified Counties..

Table 27. Acres that growers believed were affected by Rhizomania in 2002.

County	Respondents	Acres	Growers indicating Rhizomania effect	Acres estimated as Affected
			% of respondents	% of acres
Cass	18	8,670	22	6
Chippewa ¹	47	18,228	70	53
Clay ²	28	15,996	43	8
Grand Forks	23	12,952	17	3
Kittson	19	8,928	5	<1
Marshall	22	15,818	14	2
Norman ³	17	8,050	53	8
Pembina	17	7,290	18	4
Polk	38	22,071	39	6
Renville ⁴	56	20,273	71	46
Richland	28	14,669	32	4
Traill	13	6,653	8	<1
Traverse ⁵	16	5,979	19	2
Walsh	17	6,412	18	3
Wilkin ⁶	25	11,834	20	8
Other ⁷	6	1,833	0	0
Total	390	185,656	37	14

¹Includes Swift and Kandiyohi Counties.

²Includes Becker County.

³Includes Mahnomon County.

⁴Includes Redwood, Faribault, Yellow Medicine, Lac Qui Parle and Sibley Counties.

⁵Includes Grant, Stevens and Big Stone Counties.

⁶Includes Ottertail County.

⁷Includes Stearns and non-specified Counties.