

**Table 7. Agricultural Chemicals Used, Including Fertilizer and Lime: 1982 and 1978**

[Data are based on a sample of farms. For meaning of abbreviations and symbols, see introductory text]

Chemicals used	County								
	Minnesota	Aitkin	Anoka	Becker	Beltrami	Benton	Big Stone	Blue Earth	
Commercial fertilizer ----- farms, 1982..	66 165	241	381	642	347	805	478	1 063	
	1978..	74 431	332	443	695	460	863	499	1 277
	acres on which used, 1982..	12 800 063	14 193	35 980	146 723	34 489	92 665	164 390	170 341
	1978..	13 314 628	19 297	31 271	149 788	43 790	76 004	163 620	214 434
Cropland fertilized, except pastureland ----- farms, 1982..	65 820	241	367	642	341	800	478	1 062	
	1978..	74 308	332	443	683	460	863	499	1 277
	acres on which used, 1982..	12 710 295	13 753	35 717	146 545	33 967	91 815	164 065	169 288
	1978..	13 199 305	18 162	31 107	148 249	43 450	75 563	163 620	213 746
Pastureland and rangeland fertilized ----- farms, 1982..	2 690	19	23	16	21	29	12	32	
	1978..	3 544	30	18	7	38	-	16	
	acres on which used, 1982..	89 768	440	263	178	522	850	325	1 053
	1978..	115 323	1 135	164	1 539	340	441	-	688
Lime ----- farms, 1982..	4 168	14	110	6	-	140	-	24	
	1978..	5 252	51	55	34	22	-	82	
	acres on which used, 1982..	162 255	294	1 763	60	5 059	-	1 080	
	1978..	234 202	823	1 335	1 089	2 435	-	4 563	
tons, 1982..	388 055	656	4 366	240	-	8 358	-	3 960	
	1978..	612 066	2 673	2 910	2 817	7 230	-	11 235	
Sprays, dusts, granules, fumigants, etc., to control--									
	Insects on hay and other crops ----- farms, 1982..	18 131	16	40	93	57	105	38	332
	1978..	22 803	66	83	146	79	195	88	519
acres on which used, 1982..	2 496 835	3 080	6 186	12 275	2 947	6 220	11 492	58 220	
	1978..	3 502 124	6 180	6 483	25 693	5 970	14 002	27 820	95 293
Nematodes in crops ----- farms, 1982..	1 684	-	19	-	-	9	8	36	
	1978..	3 104	32	14	5	1	16	79	
	acres on which used, 1982..	232 199	-	199	-	-	1 160	1 160	6 535
	1978..	383 001	1 440	548	5	(D)	1 751	1 751	12 438
Diseases in crops and orchards ----- farms, 1982..	2 256	9	43	24	1	7	5	49	
	1978..	2 354	73	7	29	18	1	35	
	acres on which used, 1982..	468 165	3 547	3 682	4 855	(D)	(D)	1 088	1 782
	1978..	382 674	7 274	1 224	1 642	837	(D)	3 436	3 205
Weeds, grass, or brush in crops and pasture ----- farms, 1982..	55 125	92	285	524	183	636	457	1 012	
	1978..	58 118	159	259	457	294	599	496	1 108
	acres on which used, 1982..	12 948 024	4 659	25 917	117 604	24 359	64 263	167 532	246 601
	1978..	11 509 076	6 253	24 376	109 505	30 473	46 070	160 407	229 649
Chemicals used for defoliation or for growth control of crops or thinning of fruit ----- farms, 1982..	1 323	1	2	36	9	26	10	15	
	1978..	1 686	1	11	18	7	18	44	
	acres on which used, 1982..	215 064	(D)	(D)	2 298	(D)	1 762	1 079	3 955
	1978..	216 095	(D)	243	1 122	176	107	6 022	1 643
Chemicals used	County								
	Brown	Carlton	Carver	Cass	Chippewa	Chisago	Clay	Clearwater	
Commercial fertilizer ----- farms, 1982..	1 129	250	754	249	770	744	877	267	
	1978..	1 235	331	825	299	901	817	966	312
	acres on which used, 1982..	148 759	11 084	73 051	16 595	169 955	67 090	439 133	20 065
	1978..	173 159	14 709	77 318	22 585	203 811	60 679	400 452	37 071
Cropland fertilized, except pastureland ----- farms, 1982..	1 129	250	754	242	770	737	871	267	
	1978..	1 235	331	825	299	901	817	966	312
	acres on which used, 1982..	148 639	10 724	72 907	16 005	169 955	66 785	438 009	20 065
	1978..	172 654	13 956	76 784	(D)	203 650	60 419	397 877	35 675
Pastureland and rangeland fertilized ----- farms, 1982..	10	18	12	8	-	35	48	-	
	1978..	27	32	11	1	11	31	33	14
	acres on which used, 1982..	120	360	144	590	-	305	1 124	-
	1978..	505	753	534	(D)	161	260	2 575	1 396
Lime ----- farms, 1982..	28	65	11	1	-	169	-	4	
	1978..	38	111	8	42	14	19	8	
	acres on which used, 1982..	936	1 400	165	(D)	-	5 294	-	40
	1978..	1 851	1 739	177	727	1 950	2 678	815	1 493
tons, 1982..	1 104	2 732	336	(D)	-	11 998	-	40	
	1978..	3 703	5 680	680	2 808	560	6 627	2 453	4 672
Sprays, dusts, granules, fumigants, etc., to control--									
	Insects on hay and other crops ----- farms, 1982..	268	32	380	11	135	148	254	57
	1978..	346	41	371	30	213	133	253	55
acres on which used, 1982..	30 835	1 055	30 399	1 334	24 725	5 759	72 037	2 945	
	1978..	54 435	1 749	28 325	1 138	57 983	8 115	69 475	7 621
Nematodes in crops ----- farms, 1982..	42	6	40	5	2	5	69	-	
	1978..	20	9	93	-	27	60	33	14
	acres on which used, 1982..	4 629	12	3 783	335	(D)	754	14 284	-
	1978..	4 065	47	5 455	-	5 138	4 736	9 644	1 308
Diseases in crops and orchards ----- farms, 1982..	14	2	15	11	84	32	144	18	
	1978..	16	15	19	8	30	46	48	14
	acres on which used, 1982..	345	(D)	280	1 139	13 371	560	40 442	2 958
	1978..	496	561	1 533	740	4 718	890	19 994	3 336
Weeds, grass, or brush in crops and pasture ----- farms, 1982..	1 042	99	545	181	740	607	753	205	
	1978..	1 000	194	686	141	744	597	802	297
	acres on which used, 1982..	187 885	5 045	50 113	17 636	208 892	50 598	395 429	14 740
	1978..	179 074	5 692	56 234	12 349	197 316	43 284	299 374	29 546
Chemicals used for defoliation or for growth control of crops or thinning of fruit ----- farms, 1982..	11	6	-	12	13	15	33	19	
	1978..	4	5	9	-	17	18	-	
	acres on which used, 1982..	1 030	192	-	1 236	4 092	1 559	5 924	528
	1978..	1 293	40	1 782	-	2 312	181	3 069	-

**Table 7. Agricultural Chemicals Used, Including Fertilizer and Lime: 1982 and 1978—Con.**

[Data are based on a sample of farms. For meaning of abbreviations and symbols, see introductory text]

Chemicals used	County							
	Cook	Cottonwood	Crow Wing	Dakota	Dodge	Douglas	Faribault	Fillmore
Commercial fertilizer ----- farms, 1982..	3	872	310	703	660	794	1 030	1 353
1978..	3	1 022	357	827	801	908	1 258	1 568
acres on which used, 1982..	(D)	160 248	17 563	135 237	148 696	121 360	205 269	183 242
1978..	16	194 388	21 535	139 017	153 044	104 737	241 255	192 423
Cropland fertilized, except pastureland ----- farms, 1982..	2	872	306	703	660	786	1 030	1 338
1978..	3	1 022	346	827	801	908	1 257	1 564
acres on which used, 1982..	(D)	159 561	16 082	134 379	148 046	120 935	205 164	175 564
1978..	(D)	193 612	21 054	137 570	152 289	103 864	240 873	183 232
Pastureland and rangeland fertilized ----- farms, 1982..	1	20	10	20	21	19	4	236
1978..	1	24	14	76	40	32	19	260
acres on which used, 1982..	(D)	687	1 481	858	650	425	105	7 678
1978..	(D)	776	481	1 447	755	873	382	9 191
Lime ----- farms, 1982..	1	11	39	48	82	7	6	170
1978..	1	15	52	157	132	14	57	238
acres on which used, 1982..	(D)	41	786	4 640	7 022	350	553	9 358
1978..	(D)	2 257	806	10 409	6 990	3 190	4 112	8 797
tons, 1982..	(D)	61	2 123	9 544	15 382	658	1 131	25 049
1978..	(D)	2 575	2 757	27 848	21 424	7 220	10 587	23 473
Sprays, dusts, granules, fumigants, etc., to control—								
Insects on hay and other crops ----- farms, 1982..	-	151	60	408	356	125	275	1 008
1978..	-	286	29	274	304	138	394	819
acres on which used, 1982..	-	29 233	1 270	60 440	69 989	17 762	46 866	119 351
1978..	(D)	56 359	554	41 339	64 666	16 233	83 160	87 521
Nematodes in crops ----- farms, 1982..	-	6	-	15	39	46	17	60
1978..	-	28	6	61	53	5	60	85
acres on which used, 1982..	-	366	-	3 817	8 447	6 372	5 648	4 370
1978..	-	3 258	180	4 382	5 820	50	8 162	9 476
Diseases in crops and orchards ----- farms, 1982..	-	10	16	57	40	13	7	19
1978..	-	19	6	48	18	23	41	18
acres on which used, 1982..	-	1 600	40	2 903	12 250	1 782	3 159	1 195
1978..	-	3 460	6	1 563	2 147	3 061	3 373	1 794
Weeds, grass, or brush in crops and pasture ----- farms, 1982..	1	794	161	548	512	704	927	936
1978..	-	810	285	573	677	811	1 017	1 106
acres on which used, 1982..	(D)	243 613	9 341	115 582	151 536	88 134	292 367	136 609
1978..	-	230 076	14 563	110 929	147 214	93 380	262 991	133 769
Chemicals used for defoliation or for growth control of crops or thinning of fruit ----- farms, 1982..	-	7	12	26	14	38	8	42
1978..	-	13	9	20	10	16	17	12
acres on which used, 1982..	-	3 312	532	3 132	4 966	5 507	2 197	2 768
1978..	-	1 985	166	5 378	1 056	590	1 745	1 039

  

Chemicals used	County							
	Freeborn	Goodhue	Grant	Hennepin	Houston	Hubbard	Isanti	Itasca
Commercial fertilizer ----- farms, 1982..	1 200	1 277	539	515	895	204	631	177
1978..	1 372	1 534	597	602	959	223	700	205
acres on which used, 1982..	217 831	170 237	189 270	45 096	79 654	33 311	69 333	9 462
1978..	244 045	183 969	201 922	40 275	75 553	23 405	49 716	9 441
Cropland fertilized, except pastureland ----- farms, 1982..	1 200	1 264	539	512	869	204	631	163
1978..	1 372	1 534	597	602	959	223	700	205
acres on which used, 1982..	216 985	167 963	189 198	44 816	73 675	32 965	69 303	9 242
1978..	243 073	179 662	200 448	40 003	72 119	23 270	49 200	8 946
Pastureland and rangeland fertilized ----- farms, 1982..	30	95	8	26	167	16	6	20
1978..	37	210	26	25	138	9	41	14
acres on which used, 1982..	846	2 274	72	280	5 979	346	30	220
1978..	972	4 307	1 474	272	3 434	135	516	495
Lime ----- farms, 1982..	54	237	-	24	242	26	145	40
1978..	103	248	1	16	194	37	132	37
acres on which used, 1982..	2 533	9 559	-	451	5 797	1 950	5 886	671
1978..	5 042	10 356	(D)	203	7 491	853	4 478	550
tons, 1982..	4 291	24 304	-	1 356	16 230	3 432	16 439	821
1978..	13 946	26 940	(D)	439	23 100	2 041	11 697	1 758
Sprays, dusts, granules, fumigants, etc., to control—								
Insects on hay and other crops ----- farms, 1982..	506	665	92	186	648	32	87	28
1978..	551	720	75	218	529	58	99	28
acres on which used, 1982..	68 623	69 089	15 414	14 369	46 996	5 708	9 388	2 018
1978..	94 390	72 483	22 206	16 065	36 442	8 434	8 362	782
Nematodes in crops ----- farms, 1982..	17	43	23	15	35	7	1	-
1978..	46	103	5	39	63	-	21	5
acres on which used, 1982..	4 099	11 422	1 297	1 600	3 900	980	(D)	-
1978..	3 240	6 905	230	1 923	3 928	-	410	397
Diseases in crops and orchards ----- farms, 1982..	34	26	54	27	11	15	14	17
1978..	40	25	18	70	37	11	36	9
acres on which used, 1982..	5 126	1 012	10 049	1 843	622	5 362	955	607
1978..	6 231	1 577	3 300	4 798	2 656	3 617	2 523	153
Weeds, grass, or brush in crops and pasture ----- farms, 1982..	1 120	1 073	532	412	560	76	500	87
1978..	1 128	1 133	531	486	599	107	519	69
acres on which used, 1982..	282 945	144 831	204 702	41 069	42 741	20 758	53 944	5 193
1978..	260 851	132 670	187 409	26 713	39 515	17 515	36 398	2 373
Chemicals used for defoliation or for growth control of crops or thinning of fruit ----- farms, 1982..	25	14	7	10	11	1	2	15
1978..	29	33	10	25	42	6	10	8
acres on which used, 1982..	4 853	1 140	1 680	1 512	83	(D)	(D)	405
1978..	3 578	1 538	2 372	1 577	1 328	90	642	160

**Table 7. Agricultural Chemicals Used, Including Fertilizer and Lime: 1982 and 1978—Con.**

[Data are based on a sample of farms. For meaning of abbreviations and symbols, see introductory text]

Chemicals used	Jackson	Kanabec	Kandiyohi	Kittson	Koochiching	Lac qui Parle	Lake	Lake of the Woods
Commercial fertilizer ----- farms, 1982--	1 033	514	1 102	503	113	881	11	133
1978--	1 149	462	1 221	607	144	959	22	131
acres on which used, 1982--	183 334	38 765	169 944	311 027	9 080	205 932	265	41 987
1978--	219 931	32 370	228 749	328 783	11 328	207 974	300	29 746
Cropland fertilized, except pastureland ----- farms, 1982--	1 026	514	1 102	503	113	881	11	133
1978--	1 149	462	1 221	607	143	959	22	131
acres on which used, 1982--	182 659	36 641	169 767	310 575	9 073	205 040	265	41 987
1978--	217 992	31 070	226 992	327 411	10 393	207 147	(D)	28 344
Pastureland and rangeland fertilized ----- farms, 1982--	30	27	14	7	7	13	-	-
1978--	38	27	50	28	26	29	2	35
acres on which used, 1982--	675	2 124	177	452	7	892	-	-
1978--	1 939	1 300	1 757	1 372	935	827	(D)	1 402
Lime ----- farms, 1982--	7	83	23	-	-	14	-	-
1978--	13	70	11	-	1	22	10	-
acres on which used, 1982--	7	2 234	861	-	-	560	-	-
1978--	695	1 398	170	-	(D)	2 456	120	-
tons, 1982--	7	7 537	3 400	-	-	784	-	-
1978--	2 066	5 166	245	-	(D)	7 826	526	-
Sprays, dusts, granules, fumigants, etc., to control--								
Insects on hay and other crops ----- farms, 1982--	127	83	277	123	-	132	1	15
1978--	355	44	338	166	13	236	11	10
acres on which used, 1982--	22 122	2 449	34 572	37 184	-	21 871	(D)	5 319
1978--	71 221	1 824	61 189	43 129	1 938	46 904	(D)	5 217
Nematodes in crops ----- farms, 1982--	37	-	14	3	-	18	-	-
1978--	40	33	44	22	4	39	-	-
acres on which used, 1982--	5 809	-	594	735	-	4 320	-	-
1978--	7 580	1 413	3 648	5 763	100	2 085	-	-
Diseases in crops and orchards ----- farms, 1982--	22	11	17	43	-	4	1	8
1978--	29	9	22	61	-	30	-	2
acres on which used, 1982--	5 513	220	2 457	21 563	-	2 508	(D)	804
1978--	4 531	524	3 073	31 114	-	2 102	-	(D)
Weeds, grass, or brush in crops and pasture ----- farms, 1982--	917	367	938	468	29	846	1	82
1978--	962	392	1 809	494	87	821	5	106
acres on which used, 1982--	275 635	21 943	210 180	270 882	6 508	242 683	(D)	33 029
1978--	259 954	19 703	184 177	266 665	10 378	204 008	243	15 890
Chemicals used for defoliation or for growth control of crops or thinning of fruit ----- farms, 1982--	44	-	23	14	-	10	1	1
1978--	24	12	9	31	4	20	-	4
acres on which used, 1982--	7 535	-	469	2 858	-	3 169	(D)	(D)
1978--	1 780	840	2 763	6 066	(D)	2 336	-	330

  

Chemicals used	Le Sueur	Lincoln	Lyon	McLeod	Mahnomen	Marshall	Martin	Meeker
Commercial fertilizer ----- farms, 1982--	753	576	847	1 011	329	1 224	1 199	1 044
1978--	900	692	965	1 289	311	1 318	1 315	1 156
acres on which used, 1982--	101 285	111 145	192 615	135 341	108 154	553 287	203 025	176 397
1978--	115 572	131 856	218 614	153 411	89 559	540 224	234 010	163 804
Cropland fertilized, except pastureland ----- farms, 1982--	745	572	840	1 004	329	1 224	1 199	1 039
1978--	896	688	965	1 289	311	1 318	1 315	1 156
acres on which used, 1982--	101 213	110 188	190 684	134 942	105 718	550 149	202 169	175 429
1978--	114 884	131 096	217 591	152 789	88 545	536 794	233 176	163 061
Pastureland and rangeland fertilized ----- farms, 1982--	8	21	38	19	47	37	23	51
1978--	39	23	33	45	14	42	28	50
acres on which used, 1982--	72	957	1 931	399	2 436	3 138	856	968
1978--	688	760	1 023	622	1 014	3 430	834	743
Lime ----- farms, 1982--	14	8	-	15	8	14	7	34
1978--	38	11	13	34	12	27	45	34
acres on which used, 1982--	737	112	-	506	16	2 114	476	414
1978--	1 814	310	1 676	1 931	2 000	339	3 339	1 410
tons, 1982--	1 469	112	-	1 084	72	714	1 428	1 246
1978--	4 314	260	2 336	4 646	6 000	748	8 760	3 370
Sprays, dusts, granules, fumigants, etc., to control--								
Insects on hay and other crops ----- farms, 1982--	261	209	146	247	96	143	265	341
1978--	339	268	410	407	80	304	525	369
acres on which used, 1982--	26 998	27 165	22 882	23 758	20 038	31 891	40 614	39 427
1978--	37 812	40 622	78 464	36 192	17 379	90 729	103 683	43 719
Nematodes in crops ----- farms, 1982--	23	8	16	28	1	66	30	50
1978--	59	40	35	50	4	40	29	55
acres on which used, 1982--	2 340	1 289	3 183	480	(D)	12 183	3 633	4 996
1978--	6 769	2 875	3 386	6 378	516	8 445	4 822	7 054
Diseases in crops and orchards ----- farms, 1982--	1	9	19	14	-	125	11	19
1978--	13	6	45	32	15	84	22	13
acres on which used, 1982--	(D)	180	1 880	1 175	-	44 577	1 700	2 381
1978--	1 980	1 110	5 855	1 507	1 627	24 855	2 320	3 806
Weeds, grass, or brush in crops and pasture ----- farms, 1982--	701	556	767	1 038	243	1 008	1 104	981
1978--	758	615	752	1 086	241	1 067	996	883
acres on which used, 1982--	136 365	124 881	218 265	166 781	81 911	493 903	295 053	177 632
1978--	119 470	123 954	193 389	138 468	63 103	413 048	268 675	140 144
Chemicals used for defoliation or for growth control of crops or thinning of fruit ----- farms, 1982--	23	1	25	8	3	42	21	10
1978--	29	22	17	9	9	90	25	26
acres on which used, 1982--	4 841	(D)	6 783	136	(D)	8 930	3 732	5 804
1978--	3 175	2 886	3 117	1 028	1 034	14 641	2 570	1 345

**Table 7. Agricultural Chemicals Used, Including Fertilizer and Lime: 1982 and 1978—Con.**

[Data are based on a sample of farms. For meaning of abbreviations and symbols, see introductory text]

Chemicals used	Mille Lacs	Morrison	Mower	Murray	Nicollet	Nobles	Norman	Olmsted
Commercial fertilizer ----- farms, 1982..	642	1 440	1 087	851	786	1 079	718	1 066
1978..	664	1 614	1 326	1 036	839	1 208	805	1 239
acres on which used, 1982..	53 466	127 513	214 524	152 481	116 538	173 329	356 041	140 308
1978..	38 096	131 121	246 369	164 445	134 420	204 841	388 587	153 285
Cropland fertilized, except pastureland ----- farms, 1982..	632	1 419	1 087	851	786	1 079	718	1 066
1978..	660	1 614	1 326	1 036	839	1 208	805	1 224
acres on which used, 1982..	53 062	125 335	214 004	(D)	116 538	172 652	355 311	136 059
1978..	36 321	129 840	245 647	163 899	133 228	204 385	385 582	149 487
Pastureland and rangeland fertilized ----- farms, 1982..	16	87	36	1	-	32	22	107
1978..	49	31	43	17	60	20	70	115
acres on which used, 1982..	404	2 178	520	(D)	-	677	730	4 249
1978..	1 775	1 281	722	546	1 192	456	3 005	3 798
Lime ----- farms, 1982..	101	257	102	6	27	20	-	162
1978..	117	160	273	21	15	14	16	112
acres on which used, 1982..	2 347	5 766	7 539	1 080	703	1 490	-	5 686
1978..	1 846	3 086	20 587	1 524	939	706	5 485	7 346
tons, 1982..	4 732	14 266	20 458	1 560	753	1 016	-	17 685
1978..	5 881	9 361	55 057	1 919	2 499	1 564	10 969	21 118
Sprays, dusts, granules, fumigants, etc., to control—								
Insects on hay and other crops ----- farms, 1982..	106	205	307	232	250	263	147	597
1978..	164	342	355	414	271	362	130	572
acres on which used, 1982..	7 183	9 204	44 054	44 523	33 207	33 946	30 580	70 770
1978..	8 150	19 048	68 906	73 514	44 114	67 468	36 140	70 460
Nematodes in crops ----- farms, 1982..	8	36	43	5	21	20	10	36
1978..	-	49	34	20	20	34	21	81
acres on which used, 1982..	320	2 004	2 147	235	1 780	2 591	687	2 023
1978..	-	1 463	3 203	2 753	3 849	6 201	6 274	8 146
Diseases in crops and orchards ----- farms, 1982..	6	-	13	25	26	1	83	19
1978..	4	32	25	31	7	23	36	26
acres on which used, 1982..	6	-	1 977	8 719	1 566	(D)	23 158	3 664
1978..	132	2 191	7 684	8 919	1 594	4 135	6 413	1 117
Weeds, grass, or brush in crops and pasture ----- farms, 1982..	462	1 018	978	751	696	995	603	895
1978..	425	1 073	1 094	835	742	977	686	862
acres on which used, 1982..	31 998	79 635	255 579	206 156	151 354	251 447	331 158	129 925
1978..	20 465	76 168	243 809	175 572	151 111	221 531	312 379	106 467
Chemicals used for defoliation or for growth control of crops or thinning of fruit ----- farms, 1982..	16	27	21	18	-	25	20	23
1978..	13	44	23	8	10	15	9	14
acres on which used, 1982..	780	1 512	4 616	4 691	-	3 908	2 129	4 444
1978..	515	2 074	6 505	926	580	4 665	1 054	808

  

Chemicals used	Otter Tail	Pennington	Pine	Pipestone	Polk	Pope	Ramsey	Red Lake
Commercial fertilizer ----- farms, 1982..	2 067	459	647	616	1 428	786	49	246
1978..	2 088	615	792	617	1 588	757	69	454
acres on which used, 1982..	345 709	186 460	49 593	138 871	748 445	164 294	586	118 044
1978..	278 802	199 143	49 567	132 934	733 111	150 560	2 080	135 159
Cropland fertilized, except pastureland ----- farms, 1982..	2 067	459	647	616	1 428	786	47	246
1978..	2 083	610	792	606	1 588	757	68	450
acres on which used, 1982..	341 545	185 235	48 479	137 366	747 190	161 871	505	117 369
1978..	277 765	196 361	48 613	131 241	729 142	149 657	1 988	132 627
Pastureland and rangeland fertilized ----- farms, 1982..	55	28	13	47	19	36	3	23
1978..	32	58	46	37	57	40	3	47
acres on which used, 1982..	4 164	1 225	1 114	1 505	1 255	2 423	81	675
1978..	1 037	2 782	954	1 693	3 969	903	92	2 532
Lime ----- farms, 1982..	108	1	155	-	4	23	5	-
1978..	129	4	186	16	40	12	15	-
acres on which used, 1982..	11 198	(D)	2 393	-	4 905	656	20	-
1978..	4 653	200	3 514	2 566	11 745	805	149	-
tons, 1982..	22 928	(D)	7 928	-	8 110	799	24	-
1978..	15 552	600	11 371	1 582	24 157	555	330	-
Sprays, dusts, granules, fumigants, etc., to control—								
Insects on hay and other crops ----- farms, 1982..	180	50	66	303	409	188	32	16
1978..	306	90	108	246	459	225	26	97
acres on which used, 1982..	24 081	10 144	2 731	49 272	123 703	35 217	(D)	3 421
1978..	25 871	31 355	3 699	45 434	129 206	45 972	382	25 787
Nematodes in crops ----- farms, 1982..	8	2	-	48	57	22	-	1
1978..	45	2	1	41	152	63	7	8
acres on which used, 1982..	385	(D)	-	7 545	14 288	4 503	-	(D)
1978..	4 604	(D)	(D)	3 849	34 672	7 482	108	4 848
Diseases in crops and orchards ----- farms, 1982..	23	16	-	11	319	20	22	13
1978..	85	2	7	29	222	23	19	17
acres on which used, 1982..	2 083	1 874	-	2 349	103 508	6 020	60	11 396
1978..	11 665	(D)	665	5 460	73 889	3 882	288	10 253
Weeds, grass, or brush in crops and pasture ----- farms, 1982..	1 711	395	383	553	1 291	662	25	204
1978..	1 745	471	541	545	1 319	657	41	314
acres on which used, 1982..	274 272	159 577	24 289	126 423	640 566	153 088	(D)	85 793
1978..	224 320	136 038	23 308	119 098	569 523	114 599	1 445	94 817
Chemicals used for defoliation or for growth control of crops or thinning of fruit ----- farms, 1982..	38	7	9	-	42	15	5	10
1978..	37	43	21	16	84	18	10	33
acres on which used, 1982..	4 664	415	165	-	9 922	5 942	10	2 558
1978..	4 538	4 940	925	4 668	18 968	6 032	43	5 588

**Table 7. Agricultural Chemicals Used, Including Fertilizer and Lime: 1982 and 1978—Con.**

[Data are based on a sample of farms. For meaning of abbreviations and symbols, see introductory text]

Chemicals used	Counties								
	Redwood	Renville	Rice	Rock	Roseau	St. Louis	Scott	Sherburne	
Commercial fertilizer ----- farms, 1982--	1 265	1 391	916	692	989	288	612	454	
	1978--	1 370	1 502	1 068	763	310	647	483	
	acres on which used, 1982--	230 327	290 256	113 764	120 940	317 508	9 845	55 564	(D)
	1978--	242 980	303 199	125 947	125 429	305 387	12 861	66 689	58 287
Cropland fertilized, except pastureland ----- farms, 1982--	1 265	1 391	905	692	975	282	606	454	
	1978--	1 370	1 502	1 068	763	310	647	483	
	acres on which used, 1982--	229 876	290 041	113 107	120 695	310 109	9 653	55 337	64 912
	1978--	241 732	302 971	124 957	123 826	300 395	11 266	66 060	57 435
Pastureland and rangeland fertilized ----- farms, 1982--	31	16	29	8	136	18	21	1	
	1978--	58	17	38	41	78	37	19	25
	acres on which used, 1982--	451	215	657	245	7 399	192	227	(D)
	1978--	1 248	228	990	1 603	4 992	1 595	629	852
Lime ----- farms, 1982--	7	1	54	2	6	12	27	96	
	1978--	14	14	86	12	5	58	42	100
	acres on which used, 1982--	67	(D)	2 017	(D)	540	246	673	5 134
	1978--	79	1 005	3 568	567	15	955	1 714	3 011
Sprays, dusts, granules, fumigants, etc., to control--	tons, 1982--	87	(D)	5 537	(D)	1 555	486	1 801	11 072
	1978--	137	3 515	12 648	1 029	35	2 834	3 995	6 539
	Insects on hay and other crops ----- farms, 1982--	175	204	473	266	112	32	203	93
		1978--	344	448	467	450	198	100	253
acres on which used, 1982--		34 849	39 867	58 543	42 645	27 623	515	17 240	14 847
1978--		67 086	88 536	50 852	67 400	27 134	5 440	30 016	13 993
Nematodes in crops ----- farms, 1982--	22	14	42	34	7	-	27	8	
	1978--	18	34	103	109	7	6	33	23
	acres on which used, 1982--	1 898	1 884	5 433	4 439	2 100	-	1 709	1 915
	1978--	2 933	3 952	12 265	12 545	2 350	108	3 648	2 067
Diseases in crops and orchards ----- farms, 1982--	16	95	20	1	8	7	8	40	
	1978--	20	94	24	13	12	3	28	37
	acres on which used, 1982--	2 315	20 995	3 560	(D)	1 402	16	316	7 184
	1978--	1 210	12 631	1 430	1 060	4 321	10	1 910	3 676
Weeds, grass, or brush in crops and pasture ----- farms, 1982--	1 092	1 210	781	666	759	52	522	334	
	1978--	1 205	1 286	848	665	795	110	582	324
	acres on which used, 1982--	317 431	372 091	110 057	152 103	258 054	3 037	56 288	45 055
	1978--	313 038	342 112	100 698	124 208	239 257	2 217	60 129	35 144
Chemicals used for defoliation or for growth control of crops or thinning of fruit ----- farms, 1982--	17	9	31	1	10	1	28	16	
	1978--	9	14	33	11	20	-	33	22
	acres on which used, 1982--	2 250	3 708	5 839	(D)	1 943	(D)	4 294	2 416
	1978--	1 475	888	4 163	1 741	2 881	-	5 804	2 553

  

Chemicals used	Counties								
	Sibley	Stearns	Steele	Stevens	Swift	Todd	Traverse	Wabasha	
Commercial fertilizer ----- farms, 1982--	1 060	2 290	852	565	859	1 316	441	799	
	1978--	1 293	2 468	944	617	936	1 443	904	
	acres on which used, 1982--	169 164	276 417	138 955	215 538	237 051	118 809	225 098	100 178
	1978--	194 890	255 094	143 177	226 106	240 489	124 536	233 024	101 303
Cropland fertilized, except pastureland ----- farms, 1982--	1 054	2 254	852	565	855	1 310	441	793	
	1978--	1 293	2 458	934	617	936	1 443	896	
	acres on which used, 1982--	168 732	274 749	138 865	214 468	236 751	117 381	224 951	97 889
	1978--	193 594	252 501	142 912	224 917	239 974	123 954	(D)	95 968
Pastureland and rangeland fertilized ----- farms, 1982--	23	93	6	9	12	36	14	57	
	1978--	36	93	28	14	20	2	113	
	acres on which used, 1982--	432	1 668	90	1 070	300	1 428	147	2 289
	1978--	1 296	2 593	265	1 189	515	582	(D)	5 335
Lime ----- farms, 1982--	12	286	26	5	-	105	7	220	
	1978--	31	133	39	4	26	-	271	
	acres on which used, 1982--	530	8 908	902	60	-	2 232	350	7 821
	1978--	3 266	3 566	1 032	800	2 217	3 291	-	9 367
Sprays, dusts, granules, fumigants, etc., to control--	tons, 1982--	420	22 281	2 851	60	-	5 739	154	24 693
	1978--	6 421	11 962	3 032	232	4 793	8 260	-	29 038
	Insects on hay and other crops ----- farms, 1982--	226	681	394	87	175	114	112	491
		1978--	413	791	366	182	435	252	100
acres on which used, 1982--		24 089	65 387	48 543	34 324	31 056	9 863	32 772	47 974
1978--		56 001	69 085	61 009	51 912	88 963	23 507	31 528	37 876
Nematodes in crops ----- farms, 1982--	29	71	17	-	8	9	17	69	
	1978--	45	66	90	8	21	20	43	
	acres on which used, 1982--	2 130	6 149	1 467	-	2 975	870	12 376	5 346
	1978--	6 174	8 217	7 320	3 522	1 371	552	25 577	3 649
Diseases in crops and orchards ----- farms, 1982--	27	20	4	8	6	17	24	16	
	1978--	27	19	35	1	17	15	11	
	acres on which used, 1982--	1 323	5 451	722	1 658	1 710	993	3 641	998
	1978--	2 308	2 992	5 087	(D)	3 684	4 655	2 706	610
Weeds, grass, or brush in crops and pasture ----- farms, 1982--	993	1 678	609	507	698	1 063	363	680	
	1978--	1 054	1 884	738	501	665	1 045	409	677
	acres on which used, 1982--	223 373	193 531	124 499	213 543	249 169	85 671	219 080	71 671
	1978--	190 951	168 608	119 856	172 877	199 829	89 260	177 874	66 716
Chemicals used for defoliation or for growth control of crops or thinning of fruit ----- farms, 1982--	-	41	11	6	19	21	13	22	
	1978--	32	34	12	6	34	9	7	
	acres on which used, 1982--	-	3 778	3 640	1 056	4 906	1 874	1 870	1 173
	1978--	2 427	2 381	1 625	2 002	2 082	3 444	585	905

**Table 7. Agricultural Chemicals Used, Including Fertilizer and Lime: 1982 and 1978—Con.**

[Data are based on a sample of farms. For meaning of abbreviations and symbols, see introductory text]

Chemicals used	Wadena	Waseca	Washington	Watonwan	Wilkin	Winona	Wright	Yellow Medicine
Commercial fertilizer ----- farms, 1982..	460	719	462	755	482	901	1 203	994
1978..	480	815	546	786	590	991	1 984	1 031
acres on which used, 1982..	45 911	136 581	41 753	135 487	299 730	104 214	124 385	209 518
1978..	39 796	142 549	64 417	140 132	312 945	109 811	118 419	215 681
Cropland fertilized, except pastureland ----- farms, 1982..	460	719	462	755	482	886	1 176	987
1978..	480	815	546	785	590	990	1 983	1 031
acres on which used, 1982..	45 419	136 381	40 765	135 115	299 618	100 393	122 134	209 336
1978..	39 561	142 029	63 361	139 697	312 750	104 077	117 159	215 335
Pastureland and rangeland fertilized ----- farms, 1982..	22	19	44	26	5	122	65	28
1978..	24	17	55	32	4	191	48	11
acres on which used, 1982..	492	200	988	372	112	3 821	2 251	182
1978..	235	520	1 056	435	195	5 734	1 260	346
Lime ----- farms, 1982..	30	11	59	7	1	266	26	-
1978..	76	46	219	26	21	261	79	26
acres on which used, 1982..	577	731	2 115	385	(D)	10 607	470	-
1978..	1 285	1 491	2 559	951	5 804	9 471	1 964	2 727
tons, 1982..	1 781	1 836	6 561	785	(D)	25 600	1 076	-
1978..	3 842	3 499	7 697	2 195	17 203	25 520	5 767	5 136
Sprays, dusts, granules, fumigants, etc., to control—								
Insects on hay and other crops ----- farms, 1982..	13	298	135	201	158	485	415	178
1978..	43	328	173	293	206	496	464	301
acres on which used, 1982..	1 898	47 965	12 203	22 890	39 946	55 835	38 099	23 275
1978..	1 368	56 110	20 785	48 685	75 953	41 261	35 314	57 198
Nematodes in crops ----- farms, 1982..	-	10	17	21	10	43	20	13
1978..	-	53	38	27	29	86	101	37
acres on which used, 1982..	-	1 056	1 090	4 327	1 963	5 392	1 505	1 119
1978..	-	8 517	2 237	4 808	12 019	5 059	6 216	3 118
Diseases in crops and orchards ----- farms, 1982..	-	-	58	9	94	34	23	2
1978..	-	20	36	19	20	66	23	6
acres on which used, 1982..	-	-	1 964	2 317	28 994	2 864	2 479	(D)
1978..	-	3 789	3 153	2 050	3 432	4 238	1 061	890
Weeds, grass, or brush in crops and pasture ----- farms, 1982..	308	680	407	692	440	629	1 084	906
1978..	320	668	369	611	526	707	1 140	804
acres on which used, 1982..	25 135	174 024	40 154	191 900	300 609	58 583	121 254	269 848
1978..	16 052	143 160	43 586	143 997	253 854	64 567	96 711	206 488
Chemicals used for defoliation or for growth control of crops or thinning of fruit ----- farms, 1982..	7	23	31	14	3	13	16	28
1978..	6	18	17	10	44	36	28	40
acres on which used, 1982..	70	1 574	891	2 852	(D)	1 325	2 854	9 064
1978..	720	2 630	3 111	2 029	5 727	2 162	1 702	14 996