

**Table 10. Agricultural Chemicals Used, Including Fertilizer: 1997 and 1992**

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

Chemicals used	Iowa	Adair	Adams	Allamakee	Appanoose	Audubon	Benton
	Commercial fertilizer ..... farms, 1997..	65 495	616	376	599	440	495
..... 1992..	74 271	682	459	765	523	587	1 050
acres on which used, 1997..	14 473 220	126 115	75 934	70 453	54 466	132 340	219 603
..... 1992..	14 775 107	140 858	83 384	109 300	70 360	128 350	217 497
Cropland fertilized, except pastureland ..... farms, 1997..	63 748	588	332	587	387	485	790
..... 1992..	73 100	666	418	765	452	587	1 048
acres on which used, 1997..	13 896 682	112 976	59 955	65 833	43 250	126 475	218 225
..... 1992..	14 262 894	125 599	62 573	102 722	46 674	123 210	215 620
Pastureland and rangeland fertilized..... farms, 1997..	9 014	181	152	105	135	104	46
..... 1992..	8 112	190	118	120	243	80	79
acres on which used, 1997..	576 538	13 139	15 979	4 620	11 216	5 865	1 378
..... 1992..	512 213	15 259	20 811	6 578	23 686	5 140	1 877
Sprays, dusts, granules, fumigants, etc., to control—							
Insects on hay and other crops ..... farms, 1997..	24 957	255	102	355	20	176	375
..... 1992..	37 097	412	222	558	225	289	552
acres on which used, 1997..	3 241 067	35 495	15 284	36 768	3 157	13 725	51 994
..... 1992..	4 673 005	39 233	18 221	59 476	8 844	45 246	59 779
Nematodes in crops ..... farms, 1997..	1 426	—	—	20	29	1	25
..... 1992..	2 371	61	—	46	10	5	24
acres on which used, 1997..	175 517	—	—	1 395	3 408	(D)	1 891
..... 1992..	290 834	2 557	—	4 521	389	645	2 429
Diseases in crops and orchards..... farms, 1997..	1 122	—	—	17	29	—	35
..... 1992..	863	7	1	13	9	3	16
acres on which used, 1997..	131 187	—	—	406	2 415	—	3 983
..... 1992..	92 697	364	(D)	2 875	105	1 001	948
Weeds, grass, or brush in crops and pasture ..... farms, 1997..	53 909	444	329	373	312	456	744
..... 1992..	59 568	568	367	553	317	426	868
acres on which used, 1997..	16 674 094	126 871	95 267	39 911	45 593	169 932	267 003
..... 1992..	16 580 787	156 595	80 954	59 294	46 084	136 801	232 967
Chemicals used on crops to control growth, thin fruit, or defoliate ..... farms, 1997..	43	—	—	—	1	—	—
..... 1992..	1 124	8	18	10	—	2	31
acres on which used, 1997..	1 594	—	—	—	(D)	—	—
..... 1992..	162 801	524	1 260	370	—	(D)	3 240
Chemicals used	Black Hawk	Boone	Bremer	Buchanan	Buena Vista	Butler	Calhoun
Commercial fertilizer ..... farms, 1997..	783	648	749	888	713	801	721
..... 1992..	900	783	850	959	877	854	764
acres on which used, 1997..	157 874	154 922	128 969	195 039	165 915	166 157	184 402
..... 1992..	182 514	163 859	148 445	214 112	174 650	168 934	181 301
Cropland fertilized, except pastureland ..... farms, 1997..	783	640	733	881	706	777	721
..... 1992..	900	758	839	946	877	845	763
acres on which used, 1997..	157 500	153 401	127 817	193 476	165 591	164 180	182 480
..... 1992..	182 069	162 535	148 036	213 298	174 169	168 689	179 804
Pastureland and rangeland fertilized..... farms, 1997..	35	45	65	68	17	82	53
..... 1992..	16	46	38	35	21	28	42
acres on which used, 1997..	374	1 521	1 152	1 563	324	1 977	1 922
..... 1992..	445	1 324	409	814	481	245	1 497
Sprays, dusts, granules, fumigants, etc., to control—							
Insects on hay and other crops ..... farms, 1997..	270	139	321	376	84	346	127
..... 1992..	438	221	382	535	245	435	122
acres on which used, 1997..	24 633	23 002	27 876	58 672	16 778	35 503	34 075
..... 1992..	52 867	27 768	45 106	78 455	29 243	50 592	13 693
Nematodes in crops ..... farms, 1997..	6	12	26	34	13	16	7
..... 1992..	26	20	26	48	16	18	17
acres on which used, 1997..	913	1 558	1 615	2 343	1 355	1 050	365
..... 1992..	4 108	2 540	3 188	8 621	1 862	1 408	851
Diseases in crops and orchards..... farms, 1997..	28	9	2	16	2	16	6
..... 1992..	19	19	—	9	11	11	—
acres on which used, 1997..	903	(D)	(D)	268	(D)	2 287	300
..... 1992..	361	1 580	—	324	(D)	621	—
Weeds, grass, or brush in crops and pasture ..... farms, 1997..	654	514	639	812	631	662	626
..... 1992..	688	623	703	749	730	743	691
acres on which used, 1997..	195 577	205 999	148 140	217 485	250 744	202 284	259 090
..... 1992..	199 108	224 326	152 008	196 164	245 088	205 361	276 105
Chemicals used on crops to control growth, thin fruit, or defoliate ..... farms, 1997..	1	—	—	—	14	—	—
..... 1992..	3	31	9	12	6	2	10
acres on which used, 1997..	(D)	—	—	—	651	—	—
..... 1992..	(D)	6 410	1 778	978	2 400	(D)	3 362

**Table 10. Agricultural Chemicals Used, Including Fertilizer: 1997 and 1992—Con.**

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

Chemicals used	County						
	Carroll	Cass	Cedar	Cerro Gordo	Cherokee	Chickasaw	Clarke
Commercial fertilizer ..... farms, 1997..	902	644	708	596	704	654	407
..... 1992..	972	721	861	646	784	772	391
acres on which used, 1997..	196 048	156 109	175 606	155 527	154 081	131 267	51 615
..... 1992..	189 261	168 255	196 983	177 471	160 983	149 735	45 252
Cropland fertilized, except pastureland ..... farms, 1997..	884	621	708	591	704	654	364
..... 1992..	970	714	861	646	784	772	340
acres on which used, 1997..	192 326	136 102	172 400	155 069	147 462	130 219	39 678
..... 1992..	185 265	151 261	194 732	177 201	155 682	148 854	38 482
Pastureland and rangeland fertilized..... farms, 1997..	67	223	63	30	105	34	151
..... 1992..	70	199	62	8	58	30	118
acres on which used, 1997..	3 722	20 007	3 206	458	6 619	1 048	11 937
..... 1992..	3 996	16 994	2 251	270	5 301	881	6 770
Sprays, dusts, granules, fumigants, etc., to control—							
Insects on hay and other crops ..... farms, 1997..	305	273	433	208	291	255	75
..... 1992..	462	408	689	348	335	373	135
acres on which used, 1997..	23 250	38 520	48 562	28 142	25 728	29 483	10 893
..... 1992..	44 034	54 739	102 973	57 063	54 786	58 344	16 827
Nematodes in crops ..... farms, 1997..	11	9	26	—	2	3	—
..... 1992..	5	26	17	8	24	30	2
acres on which used, 1997..	1 817	1 356	4 261	—	(D)	4 116	—
..... 1992..	658	2 779	3 004	1 490	2 930	3 585	(D)
Diseases in crops and orchards..... farms, 1997..	20	1	8	15	8	10	1
..... 1992..	12	1	25	19	1	11	—
acres on which used, 1997..	1 288	(D)	1 325	820	80	5 735	(D)
..... 1992..	366	(D)	440	2 559	(D)	4 992	—
Weeds, grass, or brush in crops and pasture ..... farms, 1997..	772	533	602	486	613	489	341
..... 1992..	831	654	672	565	672	569	268
acres on which used, 1997..	227 388	163 631	203 537	182 682	194 469	162 354	56 518
..... 1992..	234 824	187 235	185 634	207 888	191 462	141 636	41 758
Chemicals used on crops to control growth, thin fruit, or defoliate ..... farms, 1997..	—	—	2	1	—	—	1
..... 1992..	7	3	39	1	23	12	9
acres on which used, 1997..	—	—	(D)	(D)	—	—	(D)
..... 1992..	1 212	(D)	2 628	(D)	1 820	2 208	342
Chemicals used							
	Clay	Clayton	Clinton	Crawford	Dallas	Davis	Decatur
Commercial fertilizer ..... farms, 1997..	560	1 045	913	821	575	536	384
..... 1992..	657	1 185	1 080	985	695	582	347
acres on which used, 1997..	127 712	182 704	196 758	206 254	139 071	82 129	57 345
..... 1992..	139 916	190 965	209 958	218 139	145 151	70 474	51 355
Cropland fertilized, except pastureland ..... farms, 1997..	559	1 031	896	799	566	483	320
..... 1992..	649	1 179	1 056	942	680	556	330
acres on which used, 1997..	122 739	179 142	193 420	189 400	136 045	65 172	(D)
..... 1992..	138 316	185 573	204 101	200 485	140 875	60 133	38 574
Pastureland and rangeland fertilized..... farms, 1997..	123	79	86	226	87	212	185
..... 1992..	35	129	106	255	50	149	107
acres on which used, 1997..	4 973	3 562	3 338	16 854	3 026	16 957	(D)
..... 1992..	1 600	5 392	5 857	17 654	4 276	10 341	12 781
Sprays, dusts, granules, fumigants, etc., to control—							
Insects on hay and other crops ..... farms, 1997..	128	726	622	332	189	159	84
..... 1992..	170	986	843	524	258	226	150
acres on which used, 1997..	15 503	90 371	76 298	44 154	20 145	14 735	8 393
..... 1992..	27 522	117 427	104 707	74 704	29 207	17 838	9 265
Nematodes in crops ..... farms, 1997..	11	36	53	16	17	5	1
..... 1992..	—	86	42	33	8	8	8
acres on which used, 1997..	130	3 398	8 607	3 085	3 422	60	(D)
..... 1992..	—	9 053	6 132	2 866	1 349	308	435
Diseases in crops and orchards..... farms, 1997..	11	4	31	7	21	14	7
..... 1992..	—	13	7	9	18	—	7
acres on which used, 1997..	230	(D)	999	105	1 612	217	378
..... 1992..	—	533	(D)	588	3 766	—	140
Weeds, grass, or brush in crops and pasture ..... farms, 1997..	490	837	801	707	499	341	259
..... 1992..	596	933	782	767	610	367	249
acres on which used, 1997..	180 834	156 018	198 364	241 933	189 218	61 862	45 806
..... 1992..	203 416	138 576	178 648	194 270	203 001	49 629	38 790
Chemicals used on crops to control growth, thin fruit, or defoliate ..... farms, 1997..	—	—	6	—	—	—	—
..... 1992..	11	2	6	9	—	4	—
acres on which used, 1997..	—	—	12	—	—	—	—
..... 1992..	2 304	(D)	(D)	(D)	—	122	—

**Table 10. Agricultural Chemicals Used, Including Fertilizer: 1997 and 1992—Con.**

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

Chemicals used	Delaware	Des Moines	Dickinson	Dubuque	Emmet	Fayette	Floyd	Franklin
	Commercial fertilizer ..... farms, 1997..	987	477	368	1 073	403	988	625
..... 1992..	1 037	526	443	1 327	450	1 124	700	766
acres on which used, 1997..	184 776	91 273	103 307	150 816	113 171	223 492	168 946	200 753
..... 1992..	192 114	93 058	93 527	159 628	97 410	215 472	152 402	182 873
Cropland fertilized, except pastureland ..... farms, 1997..	980	466	361	1 066	403	972	613	690
..... 1992..	1 029	526	443	1 304	450	1 118	692	766
acres on which used, 1997..	182 982	88 085	102 031	147 378	110 714	220 001	168 615	200 223
..... 1992..	189 142	91 296	90 234	155 426	96 580	213 542	151 533	182 759
Pastureland and rangeland fertilized..... farms, 1997..	70	72	22	105	45	67	17	21
..... 1992..	109	32	16	187	25	57	43	10
acres on which used, 1997..	1 794	3 188	1 276	3 438	2 457	3 491	331	530
..... 1992..	2 972	1 762	3 293	4 202	830	1 930	869	114
Sprays, dusts, granules, fumigants, etc., to control—								
Insects on hay and other crops ..... farms, 1997..	686	191	89	687	49	508	186	268
..... 1992..	777	216	156	851	101	735	277	322
acres on which used, 1997..	81 574	14 527	12 883	74 993	5 661	76 233	20 235	42 398
..... 1992..	114 966	26 502	15 041	82 941	15 165	104 941	35 978	44 950
Nematodes in crops ..... farms, 1997..	76	1	—	78	8	27	—	—
..... 1992..	50	10	—	166	3	21	15	7
acres on which used, 1997..	9 552	(D)	—	7 135	430	2 640	—	—
..... 1992..	7 029	1 149	—	14 796	260	4 428	2 726	4 306
Diseases in crops and orchards..... farms, 1997..	19	26	8	28	—	10	3	10
..... 1992..	4	31	1	8	—	13	9	3
acres on which used, 1997..	2 236	1 087	32	1 465	—	2 017	9	3 188
..... 1992..	977	444	(D)	1 340	—	1 746	1 402	576
Weeds, grass, or brush in crops and pasture ..... farms, 1997..	782	412	315	671	323	757	566	577
..... 1992..	751	414	382	891	398	829	573	609
acres on which used, 1997..	157 935	106 684	111 708	97 642	122 311	199 666	212 465	224 953
..... 1992..	142 913	107 434	126 246	91 441	151 838	179 856	161 567	224 549
Chemicals used on crops to control growth, thin fruit, or defoliate ..... farms, 1997..	—	—	—	1	—	—	1	—
..... 1992..	16	16	1	24	12	23	8	1
acres on which used, 1997..	—	—	—	(D)	—	—	(D)	—
..... 1992..	1 291	140	(D)	1 885	1 457	1 852	1 985	(D)
Chemicals used								
	Fremont	Greene	Grundy	Guthrie	Hamilton	Hancock	Hardin	Harrison
Commercial fertilizer ..... farms, 1997..	423	634	622	581	639	704	659	697
..... 1992..	528	727	672	709	712	781	794	779
acres on which used, 1997..	134 484	157 488	174 531	115 569	173 304	187 057	171 685	206 251
..... 1992..	137 098	170 809	170 943	127 609	176 787	183 847	171 164	217 023
Cropland fertilized, except pastureland ..... farms, 1997..	408	627	622	547	639	704	659	681
..... 1992..	497	727	667	676	712	781	786	772
acres on which used, 1997..	126 356	156 489	173 422	100 830	(D)	186 889	169 952	198 091
..... 1992..	130 186	169 950	169 869	118 623	176 613	183 755	169 774	207 981
Pastureland and rangeland fertilized..... farms, 1997..	128	16	24	144	1	9	41	101
..... 1992..	93	20	18	127	15	8	44	149
acres on which used, 1997..	8 128	999	1 109	14 739	(D)	168	1 733	8 160
..... 1992..	6 912	859	1 074	8 986	174	92	1 390	9 042
Sprays, dusts, granules, fumigants, etc., to control—								
Insects on hay and other crops ..... farms, 1997..	144	75	303	167	136	174	233	233
..... 1992..	216	165	309	193	108	249	357	557
acres on which used, 1997..	28 597	12 911	44 418	19 081	25 689	17 859	46 945	35 151
..... 1992..	46 909	20 236	48 904	26 886	19 504	31 194	49 891	71 538
Nematodes in crops ..... farms, 1997..	17	1	2	6	—	1	8	31
..... 1992..	2	16	33	13	2	1	29	31
acres on which used, 1997..	5 535	(D)	(D)	126	—	(D)	2 240	5 019
..... 1992..	(D)	1 509	7 857	441	(D)	(D)	5 323	5 660
Diseases in crops and orchards..... farms, 1997..	16	11	44	6	7	—	25	16
..... 1992..	1	2	27	9	2	10	22	33
acres on which used, 1997..	6 085	733	11 590	300	(D)	—	2 570	1 040
..... 1992..	(D)	(D)	7 954	9	(D)	43	832	6 964
Weeds, grass, or brush in crops and pasture ..... farms, 1997..	403	607	582	516	574	619	574	504
..... 1992..	440	654	613	565	669	748	719	568
acres on which used, 1997..	178 730	231 216	241 227	148 649	242 154	234 338	192 798	190 825
..... 1992..	175 911	267 025	240 999	159 925	262 971	266 899	229 723	229 464
Chemicals used on crops to control growth, thin fruit, or defoliate ..... farms, 1997..	—	—	—	—	6	—	—	1
..... 1992..	6	8	13	8	12	2	12	20
acres on which used, 1997..	—	—	—	—	6	—	—	(D)
..... 1992..	600	1 793	1 788	1 527	1 601	(D)	574	3 843

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Chemicals used	Henry	Howard	Humboldt	Ida	Iowa	Jackson	Jasper	Jefferson
	Commercial fertilizer ..... farms, 1997..	554	645	519	530	666	847	926
..... farms, 1992..	600	709	604	548	645	857	1 023	579
acres on which used, 1997..	126 848	144 082	136 236	131 468	143 661	123 106	191 636	69 404
..... farms, 1992..	99 281	143 602	143 858	123 235	127 507	117 698	199 314	89 815
Cropland fertilized, except pastureland ..... farms, 1997..	554	645	519	511	652	823	899	416
..... farms, 1992..	593	709	604	548	629	838	1 005	560
acres on which used, 1997..	125 318	142 129	135 808	126 232	129 191	113 359	186 551	63 718
..... farms, 1992..	97 628	142 668	143 756	119 047	122 415	113 161	191 124	87 245
Pastureland and rangeland fertilized..... farms, 1997..	57	55	8	98	162	185	110	95
..... farms, 1992..	36	21	15	67	110	125	167	85
acres on which used, 1997..	1 530	1 953	428	5 236	14 470	9 747	5 085	5 686
..... farms, 1992..	1 653	934	102	4 188	5 092	4 537	8 190	2 570
Sprays, dusts, granules, fumigants, etc., to control—								
Insects on hay and other crops ..... farms, 1997..	217	187	93	190	424	450	421	105
..... farms, 1992..	321	351	102	324	516	650	541	186
acres on which used, 1997..	30 606	21 359	19 156	29 389	55 390	60 860	32 589	9 484
..... farms, 1992..	32 730	57 637	17 879	38 189	84 028	66 383	67 618	19 751
Nematodes in crops ..... farms, 1997..	2	12	8	11	19	24	16	8
..... farms, 1992..	26	20	—	33	58	17	10	14
acres on which used, 1997..	(D)	2 463	2 560	2 245	1 548	3 448	2 290	352
..... farms, 1992..	3 099	5 505	—	6 533	6 618	2 354	431	405
Diseases in crops and orchards..... farms, 1997..	—	2	5	13	22	8	7	11
..... farms, 1992..	—	3	—	—	16	—	5	—
acres on which used, 1997..	—	(D)	10	2 373	1 920	608	602	1 540
..... farms, 1992..	—	(D)	—	373	(D)	—	(D)	—
Weeds, grass, or brush in crops and pasture ..... farms, 1997..	469	533	484	422	548	548	686	295
..... farms, 1992..	437	538	552	484	517	502	780	426
acres on which used, 1997..	139 437	161 515	188 466	154 498	131 972	73 505	219 702	76 064
..... farms, 1992..	119 381	138 747	209 416	147 111	123 444	71 680	206 675	107 061
Chemicals used on crops to control growth, thin fruit, or defoliate ..... farms, 1997..	—	1	—	—	1	—	—	—
..... farms, 1992..	—	18	16	13	1	49	25	31
acres on which used, 1997..	—	(D)	—	—	(D)	—	—	—
..... farms, 1992..	—	4 739	2 080	776	(D)	1 574	2 259	2 965
Chemicals used								
	Johnson	Jones	Keokuk	Kossuth	Lee	Linn	Louisa	Lucas
Commercial fertilizer ..... farms, 1997..	766	749	615	1 162	598	1 024	385	392
..... farms, 1992..	812	868	724	1 427	644	1 027	441	364
acres on which used, 1997..	117 035	172 641	135 074	305 901	113 082	168 314	87 238	66 506
..... farms, 1992..	128 345	164 148	134 467	343 665	104 830	171 960	98 880	51 947
Cropland fertilized, except pastureland ..... farms, 1997..	736	737	602	1 155	578	1 017	368	358
..... farms, 1992..	797	862	701	1 427	644	1 027	428	331
acres on which used, 1997..	113 625	170 367	129 495	305 494	111 401	167 272	85 986	47 650
..... farms, 1992..	125 552	159 070	127 390	343 485	102 516	169 904	97 987	33 597
Pastureland and rangeland fertilized..... farms, 1997..	86	49	126	12	106	52	27	118
..... farms, 1992..	95	103	120	7	63	56	28	104
acres on which used, 1997..	3 410	2 274	5 579	407	1 681	1 042	1 252	18 856
..... farms, 1992..	2 793	5 078	7 077	180	2 314	2 056	893	18 350
Sprays, dusts, granules, fumigants, etc., to control—								
Insects on hay and other crops ..... farms, 1997..	337	496	269	249	224	400	163	95
..... farms, 1992..	616	631	480	300	324	660	275	155
acres on which used, 1997..	41 712	77 074	38 997	32 669	34 736	43 684	21 027	6 589
..... farms, 1992..	79 084	102 055	63 988	30 680	31 703	59 576	36 660	13 019
Nematodes in crops ..... farms, 1997..	13	6	35	9	1	12	16	—
..... farms, 1992..	34	32	42	10	22	17	9	10
acres on which used, 1997..	2 948	2 168	3 608	2 480	(D)	199	2 804	—
..... farms, 1992..	3 060	8 147	7 828	1 758	1 758	2 904	1 000	865
Diseases in crops and orchards..... farms, 1997..	10	5	9	6	37	35	2	1
..... farms, 1992..	18	16	21	2	2	18	1	1
acres on which used, 1997..	451	50	668	60	3 685	378	(D)	(D)
..... farms, 1992..	1 440	3 469	865	(D)	(D)	2 200	(D)	(D)
Weeds, grass, or brush in crops and pasture ..... farms, 1997..	599	610	520	1 061	434	813	326	264
..... farms, 1992..	632	695	561	1 236	446	883	341	189
acres on which used, 1997..	123 560	159 885	128 421	423 654	124 203	180 026	112 179	38 542
..... farms, 1992..	116 556	135 895	113 445	461 983	117 176	190 940	112 710	31 239
Chemicals used on crops to control growth, thin fruit, or defoliate ..... farms, 1997..	—	—	—	—	1	—	—	—
..... farms, 1992..	23	22	15	26	3	26	16	—
acres on which used, 1997..	—	—	—	—	(D)	—	—	—
..... farms, 1992..	2 961	2 454	1 297	3 721	(D)	8 643	7 242	—

**Table 10. Agricultural Chemicals Used, Including Fertilizer: 1997 and 1992—Con.**

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

Chemicals used	Lyon	Madison	Mahaska	Marion	Marshall	Mills	Mitchell	Monona
	Commercial fertilizer ..... farms, 1997..	844	598	693	613	628	372	576
..... farms, 1992..	823	709	865	767	765	432	682	683
acres on which used, 1997..	162 580	98 503	134 773	110 340	149 100	96 773	126 114	211 395
..... farms, 1992..	158 341	101 494	141 078	95 191	169 107	115 134	141 506	200 148
Cropland fertilized, except pastureland ..... farms, 1997..	819	553	670	586	613	336	576	521
..... farms, 1992..	823	685	838	756	751	430	682	671
acres on which used, 1997..	160 308	83 825	132 138	103 834	146 037	88 295	124 855	193 021
..... farms, 1992..	155 726	88 960	134 949	90 661	167 133	111 070	140 803	192 481
Pastureland and rangeland fertilized..... farms, 1997..	84	168	86	131	64	123	23	139
..... farms, 1992..	40	141	110	109	37	86	22	81
acres on which used, 1997..	2 272	14 678	2 635	6 506	3 063	8 478	1 259	18 374
..... farms, 1992..	2 615	12 534	6 129	4 530	1 974	4 064	703	7 667
Sprays, dusts, granules, fumigants, etc., to control—								
Insects on hay and other crops ..... farms, 1997..	301	155	432	186	357	118	279	232
..... farms, 1992..	438	382	492	431	524	213	381	340
acres on which used, 1997..	47 291	13 148	52 137	23 665	46 125	17 288	41 633	55 719
..... farms, 1992..	69 891	26 302	63 700	38 194	73 057	37 116	51 731	71 524
Nematodes in crops ..... farms, 1997..	9	6	38	24	34	—	2	—
..... farms, 1992..	12	13	54	37	31	24	10	21
acres on which used, 1997..	330	537	1 674	4 007	4 232	—	(D)	—
..... farms, 1992..	2 320	1 355	3 140	1 787	1 869	4 704	1 453	4 249
Diseases in crops and orchards..... farms, 1997..	20	2	10	22	28	—	2	10
..... farms, 1992..	2	13	13	2	24	7	5	2
acres on which used, 1997..	6 008	(D)	148	1 395	3 922	—	(D)	4 747
..... farms, 1992..	(D)	525	4 581	(D)	1 002	7	846	(D)
Weeds, grass, or brush in crops and pasture ..... farms, 1997..	707	481	545	440	528	306	521	480
..... farms, 1992..	761	617	684	586	621	382	485	575
acres on which used, 1997..	216 309	121 869	145 819	111 962	193 234	132 617	163 809	210 652
..... farms, 1992..	195 517	130 718	157 361	86 862	206 165	155 750	143 540	225 589
Chemicals used on crops to control growth, thin fruit, or defoliate ..... farms, 1997..	—	—	—	—	—	—	3	—
..... farms, 1992..	—	—	16	5	13	11	4	—
acres on which used, 1997..	—	—	—	—	—	—	(D)	—
..... farms, 1992..	—	—	3 770	576	2 276	390	1 828	—

  

Chemicals used	Monroe	Montgomery	Muscatine	O'Brien	Osceola	Page	Palo Alto	Plymouth
	Commercial fertilizer ..... farms, 1997..	390	420	549	824	553	629	652
..... farms, 1992..	361	506	605	928	625	750	729	1 273
acres on which used, 1997..	53 602	111 789	107 938	173 337	140 230	127 678	146 619	252 277
..... farms, 1992..	37 575	109 189	105 334	180 461	141 139	131 870	160 899	269 541
Cropland fertilized, except pastureland ..... farms, 1997..	356	405	532	822	553	617	643	1 078
..... farms, 1992..	328	499	588	928	617	741	729	1 244
acres on which used, 1997..	43 453	101 148	107 011	171 368	138 965	109 798	145 338	243 823
..... farms, 1992..	28 000	93 775	102 899	179 634	140 430	116 724	160 317	255 329
Pastureland and rangeland fertilized..... farms, 1997..	123	144	40	30	43	200	37	114
..... farms, 1992..	115	164	39	28	17	190	20	218
acres on which used, 1997..	10 149	10 641	927	1 969	1 265	17 880	1 281	8 454
..... farms, 1992..	9 575	15 414	2 435	827	709	15 146	582	14 212
Sprays, dusts, granules, fumigants, etc., to control—								
Insects on hay and other crops ..... farms, 1997..	92	125	284	281	168	169	116	456
..... farms, 1992..	205	241	438	324	166	327	159	562
acres on which used, 1997..	5 505	27 894	34 447	36 808	32 817	24 067	18 106	53 685
..... farms, 1992..	16 328	33 154	44 946	37 926	28 521	15 742	19 821	80 247
Nematodes in crops ..... farms, 1997..	13	11	22	14	2	7	24	65
..... farms, 1992..	12	18	13	25	2	26	8	82
acres on which used, 1997..	1 328	2 207	5 002	6 899	(D)	1 395	3 842	3 410
..... farms, 1992..	270	1 103	2 520	3 411	(D)	1 476	267	7 060
Diseases in crops and orchards..... farms, 1997..	12	7	27	14	—	2	15	13
..... farms, 1992..	—	10	28	—	—	4	7	1
acres on which used, 1997..	450	841	1 018	6 782	—	(D)	3 326	303
..... farms, 1992..	—	575	457	1 090	—	803	98	(D)
Weeds, grass, or brush in crops and pasture ..... farms, 1997..	307	355	425	713	424	555	593	957
..... farms, 1992..	259	426	474	825	522	593	674	1 075
acres on which used, 1997..	44 722	108 159	114 527	241 492	162 160	151 618	229 901	299 770
..... farms, 1992..	29 049	118 099	112 084	243 518	193 024	154 916	238 517	284 453
Chemicals used on crops to control growth, thin fruit, or defoliate ..... farms, 1997..	—	—	—	—	—	—	—	—
..... farms, 1992..	5	7	9	—	2	21	7	7
acres on which used, 1997..	—	—	—	—	—	—	—	—
..... farms, 1992..	40	2 100	134	—	(D)	1 535	28	2 683

**Table 10. Agricultural Chemicals Used, Including Fertilizer: 1997 and 1992—Con.**

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

Chemicals used	County							
	Pocahontas	Polk	Pottawattamie	Poweshiek	Ringgold	Sac	Scott	Shelby
Commercial fertilizer ..... farms, 1997..	720	492	1 111	605	367	672	676	804
..... 1992..	809	567	1 187	698	450	793	710	899
acres on which used, 1997..	189 547	107 160	291 695	130 371	69 484	173 886	149 807	218 520
..... 1992..	189 815	102 506	288 488	132 965	76 351	179 444	149 802	218 808
Cropland fertilized, except pastureland ..... farms, 1997..	720	492	1 078	589	328	664	676	772
..... 1992..	809	561	1 156	668	429	791	701	896
acres on which used, 1997..	189 161	104 346	280 322	119 692	54 023	171 225	149 243	210 460
..... 1992..	189 527	101 587	274 945	126 829	56 740	177 133	148 466	212 709
Pastureland and rangeland fertilized..... farms, 1997..	22	52	208	136	149	56	48	231
..... 1992..	11	19	274	128	120	43	51	144
acres on which used, 1997..	386	2 814	11 373	10 679	15 461	2 661	564	8 060
..... 1992..	288	919	13 543	6 136	19 611	2 311	1 336	6 099
Sprays, dusts, granules, fumigants, etc., to control—								
Insects on hay and other crops ..... farms, 1997..	82	191	430	284	65	171	451	449
..... 1992..	143	219	706	412	214	326	574	655
acres on which used, 1997..	10 650	21 289	45 354	24 753	3 422	28 715	63 361	46 073
..... 1992..	20 802	21 369	89 763	40 653	19 644	47 344	77 219	83 670
Nematodes in crops ..... farms, 1997..	16	4	41	12	1	8	25	23
..... 1992..	8	11	48	8	22	45	49	26
acres on which used, 1997..	1 275	24	3 770	856	(D)	680	1 660	936
..... 1992..	873	841	4 713	1 318	1 686	6 530	6 245	2 542
Diseases in crops and orchards..... farms, 1997..	—	12	9	6	6	3	11	—
..... 1992..	—	12	24	—	12	12	12	6
acres on which used, 1997..	—	465	724	1 465	18	(D)	6 401	—
..... 1992..	—	(D)	1 964	—	1 350	2 909	12	757
Weeds, grass, or brush in crops and pasture ..... farms, 1997..	622	464	890	513	274	583	555	643
..... 1992..	726	456	956	567	352	657	555	633
acres on which used, 1997..	256 933	144 006	324 243	150 923	64 222	232 871	155 867	201 147
..... 1992..	282 653	140 774	321 513	151 922	66 096	214 765	143 242	197 596
Chemicals used on crops to control growth, thin fruit, or defoliate ..... farms, 1997..	—	2	—	—	—	—	—	—
..... 1992..	16	1	6	17	9	21	7	6
acres on which used, 1997..	—	(D)	—	—	—	—	—	—
..... 1992..	3 246	(D)	1 439	2 259	360	3 000	70	1 165
Chemicals used								
	Sioux	Story	Tama	Taylor	Union	Van Buren	Wapello	Warren
Commercial fertilizer ..... farms, 1997..	1 297	755	782	413	399	464	444	689
..... 1992..	1 467	761	941	567	400	514	522	830
acres on which used, 1997..	261 690	181 598	180 516	103 286	69 031	60 040	66 405	86 181
..... 1992..	275 344	166 717	209 059	89 300	69 205	65 283	68 902	104 765
Cropland fertilized, except pastureland ..... farms, 1997..	1 280	749	750	370	355	448	413	668
..... 1992..	1 467	761	926	554	391	513	501	817
acres on which used, 1997..	259 202	180 641	176 387	82 233	53 922	53 273	60 846	79 819
..... 1992..	273 592	165 634	203 194	79 986	54 973	59 560	63 564	100 045
Pastureland and rangeland fertilized..... farms, 1997..	91	31	109	134	151	126	107	99
..... 1992..	64	15	130	95	106	72	74	92
acres on which used, 1997..	2 488	957	4 129	21 053	15 109	6 767	5 559	6 362
..... 1992..	1 752	1 083	5 865	9 314	14 232	5 723	5 338	4 720
Sprays, dusts, granules, fumigants, etc., to control—								
Insects on hay and other crops ..... farms, 1997..	572	167	395	91	75	159	136	242
..... 1992..	925	277	621	221	157	195	218	323
acres on which used, 1997..	82 739	48 977	51 623	24 637	3 320	13 712	14 925	15 330
..... 1992..	134 102	39 667	90 628	21 896	16 462	21 640	18 398	20 124
Nematodes in crops ..... farms, 1997..	23	6	17	12	—	17	—	—
..... 1992..	54	5	91	10	25	2	4	16
acres on which used, 1997..	3 570	330	1 472	165	—	1 420	—	—
..... 1992..	9 209	1 357	11 417	350	1 145	(D)	873	1 450
Diseases in crops and orchards..... farms, 1997..	3	18	23	12	—	7	—	9
..... 1992..	12	23	14	—	10	25	12	20
acres on which used, 1997..	(D)	2 760	2 443	3 373	—	70	—	412
..... 1992..	1 264	1 777	94	—	90	2 210	1 229	1 177
Weeds, grass, or brush in crops and pasture ..... farms, 1997..	1 136	619	637	375	370	351	282	553
..... 1992..	1 158	695	753	406	354	405	318	728
acres on which used, 1997..	315 071	234 358	200 395	98 557	81 498	68 461	67 998	114 129
..... 1992..	257 337	214 469	240 011	91 584	82 952	60 179	64 474	142 905
Chemicals used on crops to control growth, thin fruit, or defoliate ..... farms, 1997..	—	—	—	—	—	—	—	—
..... 1992..	17	15	3	7	18	19	16	7
acres on which used, 1997..	—	—	—	—	—	—	—	—
..... 1992..	7 133	(D)	1 266	3 070	406	2 113	3 402	(D)

**Table 10. Agricultural Chemicals Used, Including Fertilizer: 1997 and 1992—Con.**

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

Chemicals used	Washington	Wayne	Webster	Winnebago	Winneshiek	Woodbury	Worth	Wright
Commercial fertilizer ..... farms, 1997..	710	499	789	458	982	890	440	569
..... 1992..	778	576	873	519	1 101	949	480	699
acres on which used, 1997..	152 646	67 353	221 511	131 183	159 420	259 716	111 105	194 471
..... 1992..	138 375	96 784	200 599	126 011	151 444	225 597	123 409	186 349
Cropland fertilized, except pastureland ..... farms, 1997..	684	434	781	447	944	819	440	569
..... 1992..	745	575	866	519	1 052	922	480	698
acres on which used, 1997..	150 107	52 903	221 283	130 909	149 205	242 632	109 914	194 277
..... 1992..	133 239	87 176	199 537	126 011	145 920	216 363	122 809	186 124
Pastureland and rangeland fertilized..... farms, 1997..	76	196	14	18	191	198	31	3
..... 1992..	125	133	30	—	198	165	15	4
acres on which used, 1997..	2 539	14 450	228	274	10 215	17 084	1 191	194
..... 1992..	5 136	9 608	1 062	—	5 524	9 234	600	225
Sprays, dusts, granules, fumigants, etc., to control—								
Insects on hay and other crops ..... farms, 1997..	301	133	126	66	588	313	130	114
..... 1992..	498	279	160	151	812	492	231	101
acres on which used, 1997..	41 355	8 973	23 119	13 615	67 034	58 710	13 355	20 076
..... 1992..	70 484	25 677	18 134	15 264	90 856	81 287	30 467	14 770
Nematodes in crops ..... farms, 1997..	8	9	1	2	50	17	1	35
..... 1992..	16	26	7	8	124	10	1	—
acres on which used, 1997..	583	396	(D)	(D)	2 978	5 965	(D)	5 916
..... 1992..	2 329	3 542	1 279	1 193	11 903	3 701	(D)	—
Diseases in crops and orchards..... farms, 1997..	26	—	9	1	18	38	—	7
..... 1992..	7	—	2	2	2	4	2	—
acres on which used, 1997..	3 316	—	1 712	(D)	55	4 317	—	118
..... 1992..	1 561	—	(D)	(D)	(D)	(D)	(D)	—
Weeds, grass, or brush in crops and pasture ..... farms, 1997..	641	292	660	370	731	753	396	502
..... 1992..	650	337	758	447	713	701	388	693
acres on which used, 1997..	186 440	59 869	298 428	165 761	122 691	272 674	144 780	246 712
..... 1992..	154 326	68 616	270 893	170 903	82 879	244 080	131 258	280 356
Chemicals used on crops to control growth, thin fruit, or defoliate ..... farms, 1997..	—	—	—	—	—	—	—	—
..... 1992..	4	2	18	15	26	19	2	12
acres on which used, 1997..	—	—	—	—	—	—	—	—
..... 1992..	970	(D)	2 745	1 620	3 971	882	(D)	2 661