

Appendix III—Tables on Pesticide Use by Crop and Active Ingredient

Appendix table 3.1—Pesticide use by State, corn 1996

State	Planted acreage	Percent of acres treated and total applied							
		Herbicide		Insecticide ¹		Fungicide		Other chemical	
	<i>1,000 acres</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>
Illinois	11,000	99	34,223	27	2,143				
Indiana	5,600	98	18,856	35	1,466				
Iowa	12,700	99	36,109	17	1,779				
Kansas	2,500	94	5,784	40	515				
Kentucky	1,300	99	4,159	24	43				
Mississippi	2,650	98	7,250	21	318				
Minnesota	7,500	97	17,819	13	614				
Missouri	2,750	98	7,547	27	492				
Nebraska	8,500	98	19,817	51	3,068				
North Carolina	1,000	97	2,565	37	376				
Ohio	2,900	100	10,029	28	591				
Pennsylvania	1,450	98	4,371	54	419				
South Carolina	400	98	1,017	26	84				
South Dakota	4,000	91	7,091	25	422				
Texas	2,100	91	2,770	74	712				
Wisconsin	3,900	93	7,570	37	1,176				
Total	70,250	97	186,977	30	14,218				

¹ Total applied excludes Bt's (*Bacillus thuringiensis*) because amounts of active ingredient are not comparable between products.

Source: USDA, 1997d.

Appendix table 3.2—Pesticide applications for States surveyed, corn 1996

Agricultural chemical	Area applied	Applications	Rate per application	Rate per crop year	Total applied
	<i>Percent</i>	<i>Number</i>	<i>-Pounds per acre-</i>		<i>1,000 lbs</i>
Herbicides:					
2,4-D	11	1.0	0.39	0.40	3,237
Acetochlor	22	1.0	1.88	1.89	29,850
Alachlor	9	1.0	1.64	1.65	10,188
Atrazine	71	1.1	0.99	1.07	53,466
Bentazon	3	1.0	0.40	0.41	806
Bromoxynil	7	1.0	0.26	0.26	1,345
Butylate	1	1.0	4.63	4.63	2,475
Clopyralid	*	1.0	0.10	0.10	29
Cyanazine	13	1.0	2.20	2.28	20,795
Dicamba	25	1.0	0.32	0.32	5,545
Dimethenamid	6	1.0	1.04	1.05	4,110
EPTC	2	1.0	3.81	3.81	5,117
Flumetsulam	1	1.0	0.05	0.05	49
Glyphosate	4	1.0	0.68	0.71	2,200
Halosulfuron	2	1.0	0.04	0.04	46
Imazethapyr	1	1.0	0.05	0.05	20
Metolachlor	30	1.0	1.89	1.92	41,135
Metribuzin	1	1.0	0.10	0.10	38
Nicosulfuron	12	1.0	0.03	0.03	245
Paraquat	2	1.0	0.54	0.56	637
Pendimethalin	3	1.0	1.11	1.12	2,631
Primisulfuron	7	1.0	0.02	0.02	106
Propachlor	*	1.0	2.73	2.73	337
Prosulfuron	5	1.0	0.02	0.02	59
Rimsulfuron	1	1.0	0.01	0.01	6
Simazine	2	1.0	1.31	1.31	2,059
Thifensulfuron	1	1.0	0.005	0.005	3
Insecticides:					
Bifenthrin	1	1.0	0.05	0.05	45
Bt (Bacillus thur.)	1	1.0			
Carbofuran	1	1.0	0.94	0.94	727
Chlorpyrifos	8	1.0	1.04	1.05	5,877
Cyfluthrin	1	1.0	0.007	0.007	4
Dimethoate	*	1.0	0.46	0.46	127
Esfenvalerate	1	1.0	0.03	0.03	11
Fonofos	1	1.0	1.07	1.07	619
Lambdacyhalothrin	2	1.0	0.02	0.02	25
Methyl parathion	2	1.2	0.43	0.51	704
Permethrin	4	1.0	0.12	0.12	324
Phorate	1	1.0	1.11	1.11	636
Phostebupirim	1	1.0	0.13	0.13	72
Tefluthrin	5	1.0	0.09	0.09	321
Terbufos	6	1.0	1.09	1.09	4,516

* Area applied is less than 1 percent.

Source: USDA, 1997d.

Appendix table 3.3—Pesticide use by State, soybeans 1996

State	Planted acreage	Percent of acres treated and total applied							
		Herbicide		Insecticide		Fungicide		Other chemical	
	<i>1,000 acres</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>
Arkansas ¹	3,550	92	4,491						
Illinois	9,900	97	10,670						
Indiana ¹	5,400	97	5,845						
Iowa ¹	9,500	99	10,821						
Louisiana ¹	1,100	94	1,645	32	161				
Minnesota	5,950	98	7,826						
Mississippi ¹	1,800	99	2,287						
Missouri ¹	4,100	98	5,373						
Nebraska ¹	3,050	99	3,459						
Ohio ¹	4,500	98	5,692						
Tennessee ¹	1,200	100	1,770						
Wisconsin ¹	920	99	750						
Total ¹	50,970	97	60,629	1	273				

¹ Insufficient reports to publish data for one or more of the pesticide classes.

Source: USDA, 1997d.

Appendix table 3.4—Pesticide applications, soybeans 1996

Agricultural chemical	Area applied	Applications	Rate per application	Rate per crop year	Total applied
	<i>Percent</i>	<i>Number</i>	<i>-Pounds per acre-</i>		<i>1,000 lbs</i>
Herbicides:					
2,4-D	13	1.0	0.44	0.44	2,802
2,4-DB	*	1.0	0.11	0.11	24
Acifluorfen	11	1.0	0.23	0.24	1,346
Alachlor	5	1.0	2.17	2.17	5,036
Bentazon	11	1.1	0.72	0.80	4,562
Chlorimuron-ethyl	14	1.0	0.02	0.02	143
Clethodim	7	1.0	0.12	0.12	398
Clomazone	3	1.0	0.62	0.62	928
Dimethenamid	1	1.0	0.86	0.86	320
Ethalfuralin	1	1.0	0.59	0.59	215
Fenoxaprop	4	1.0	0.13	0.13	246
Fluazifop-P-butyl	7	1.0	0.09	0.09	342
Flumetsulam	2	1.0	0.06	0.06	54
Flumiclorac Pentyl	2	1.0	0.03	0.03	24
Fomesafen	5	1.0	0.28	0.28	716
Glyphosate	25	1.1	0.63	0.69	8,687
Imazaquin	15	1.0	0.09	0.09	688
Imazethapyr	43	1.0	0.06	0.06	1,229
Lactofen	8	1.0	0.08	0.08	355
Linuron	1	1.0	0.53	0.53	225
Metolachlor	5	1.0	1.78	1.78	4,221
Metribuzin	9	1.1	0.29	0.30	1,460
Paraquat	1	1.0	0.56	0.58	340
Pendimethalin	27	1.0	0.97	1.01	13,810
Quizalofop-ethyl	7	1.0	0.05	0.05	190
Sethoxydim	9	1.0	0.26	0.26	1,158
Thifensulfuron	10	1.0	0.003	0.003	15
Trifluralin	22	1.0	0.88	0.88	10,008
Insecticides:					
Methyl parathion	1	1.2	0.42	0.50	192

* Area applied is less than 1 percent.
Source: USDA, 1997d.

Appendix table 3.5—Pesticide use by State, upland cotton 1996

State	Planted acreage	Percent of acres treated and total applied							
		Herbicide		Insecticide ¹		Fungicide		Other chemical	
		<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>
Arizona	315	75	357	89	1,029		71	1,703	
Arkansas	1,000	99	2,750	93	1,303	28	157	91	1,206
California	1,000	90	1,856	97	2,031		95	5,180	
Georgia	1,350	100	4,079	73	633		48	1,234	
Louisiana	890	81	1,957	97	1,486	17	89	69	546
Mississippi	1,120	99	3,981	95	2,417	7	45	99	2,541
Tennessee	540	100	1,889	89	505	33	97	87	732
Texas	5,700	90	5,692	68	5,832		39	2,064	
Total	11,915	92	22,561	79	15,236	6	397	60	15,206

¹ Total applied excludes Bt's (*Bacillus thuringiensis*) because amounts of Bt active ingredient are not comparable between products.

Source: USDA, 1997d.

Appendix table 3.6—Pesticide applications, upland cotton 1996

Agricultural chemical	Area Applied	Appli-cations	Rate per application	Rate per crop year	Total applied	Agricultural chemical	Area Applied	Appli-cations	Rate per application	Rate per crop year	Total applied
	Percent	Number	Pounds per acre	1,000 lbs			Percent	Number	Pounds per acre	1,000 lbs	
Herbicides:						Insecticides (cont.):					
Clethodim	2	1.2	0.10	0.12	31	Dimethoate	3	1.4	0.20	0.29	111
Clomazone	8	1.0	0.39	0.39	362	Disulfoton	5	1.0	0.71	0.71	441
Cyanazine	20	1.2	0.76	0.89	2,106	Endosulfan	3	1.5	0.60	0.90	283
DSMA	2	1.1	1.51	1.61	447	Esfenvalerate	7	1.4	0.03	0.05	36
Diuron	16	1.1	0.51	0.56	1,091	Imidacloprid	7	1.3	0.04	0.05	38
Fluazifop-P-butyl	2	1.1	0.13	0.14	42	Lambda-cyhalothrin	16	2.1	0.03	0.06	121
Fluometuron	39	1.2	0.58	0.72	3,304	Malathion	17	2.3	0.89	2.07	4,310
Glyphosate	13	1.0	0.63	0.66	991	Methomyl	2	1.4	0.36	0.49	127
Lactofen	1	1.2	0.11	0.13	17	Methyl parathion	19	3.2	0.36	1.16	2,560
MSMA	24	1.5	0.90	1.34	3,819	Oxamyl	13	1.5	0.23	0.35	529
Metolachlor	5	1.0	1.08	1.08	701	Permethrin	1	1.3	0.08	0.10	10
Norflurazon	13	1.1	0.57	0.61	934	Phorate	4	1.0	0.77	0.77	392
Oxyfluorfen	3	1.0	0.26	0.26	82	Profenofos	5	1.6	0.46	0.75	413
Pendimethalin	22	1.1	0.71	0.76	2,010	Propargite	2	1.0	1.14	1.15	339
Prometryn	16	1.1	0.51	0.58	1,133	Pyriproxyfen	1	1.2	0.06	0.07	9
Pyrithiobac-sodium	10	1.0	0.04	0.05	56	Thiodicarb	5	1.6	0.33	0.54	349
Quizalofop-ethyl	1	1.2	0.06	0.07	9	Tralomethrin	3	1.8	0.02	0.04	15
Sethoxydim	1	1.0	0.23	0.23	31	Zeta-cypermethrin	4	1.6	0.04	0.06	34
Trifluralin	57	1.0	0.74	0.76	5,233						
Insecticides:						Fungicides:					
Abamectin	5	1.1	0.007	0.008	5	Etridiazole	2	1.0	0.16	0.17	39
Acephate	12	1.6	0.38	0.59	828	Metalaxyl	3	1.0	0.09	0.09	26
Aldicarb	21	1.0	0.62	0.63	1,596	PCNB	4	1.0	0.62	0.63	279
Amitraz	2	1.4	0.18	0.26	58						
Azinphos-methyl	6	1.9	0.23	0.44	315	Other chemicals:					
Bifenthrin	1	1.0	0.06	0.06	5	Cacodylic acid	2	1.1	0.70	0.79	183
Bt (Bacillus thur.)	3	2.2				Dimethipin	1	1.0	0.27	0.27	36
Buprofezin	*	1.0	0.35	0.35	17	Ethephon	32	1.1	1.03	1.11	4,208
Carbofuran	6	1.0	0.29	0.29	207	Mepiquat chloride	17	1.8	0.02	0.03	64
Chlorpyrifos	5	1.6	0.66	1.07	641	Paraquat	17	1.1	0.28	0.32	655
Cyfluthrin	11	2.0	0.03	0.06	82	Sodium chlorate	10	1.2	3.07	3.62	4,107
Cypermethrin	9	1.7	0.07	0.12	132	Thidiazuron	23	1.1	0.13	0.15	394
Deltamethrin	1	1.6	0.003	0.005	1	Tribufos	38	1.1	0.82	0.88	3,963
Dicofol	4	1.1	1.01	1.09	470						
Diclotophos	11	1.3	0.25	0.33	433						

Source: USDA, 1997d.

Appendix table 3.7—Pesticide use by State, fall potatoes, 1996

State	Planted acreage	Area receiving and total applied							
		Herbicide		Insecticide		Fungicide		Other chemical	
		<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>	<i>Percent</i>	<i>1,000 lbs</i>
Idaho	410	90	1,131	73	649	85	1,089	39	30,529
Maine	78	98	49	90	46	100	737	98	580
Washington	163	93	322	94	485	85	986	72	12,064
Red River Valley ¹	146	64	75	97	190	100	1,117	64	696
Total	797	87	1,577	83	1,370	89	3,929	56	43,869

¹ Red River Valley includes the counties of Clay, Clearwater, Kittson, Mahnomen, Marshall, Norman, Pennington, Polk, Red Lake, Roseau, and Wilkin in Minnesota; and Cass, Grand Forks, Pembina, Richland, Steele, Traill, and Walsh in North Dakota.

Source: USDA, 1997d.

Appendix table 3.8—Pesticide applications, fall potatoes 1996

Agricultural chemical	Area applied	Applications	Rate per application	Rate per crop year	Total applied
	<i>Percent</i>	<i>Number</i>	<i>-Pounds per acre-</i>		<i>1,000 lbs</i>
Herbicides:					
EPTC	37	1.0	3.78	3.91	1,156
Glyphosate	1	1.0	0.70	0.74	3
Linuron	2	1.0	0.68	0.68	8
Metolachlor	3	1.0	2.53	2.53	55
Metribuzin	64	1.0	0.45	0.45	229
Pendimethalin	18	1.0	0.68	0.68	99
Rimsulfuron	11	1.0	0.02	0.02	2
Sethoxydim	2	1.1	0.16	0.16	3
Trifluralin	6	1.0	0.43	0.43	20
Insecticides:					
Aldicarb	4	1.0	2.82	2.82	93
Azinphos-methyl	9	1.2	0.34	0.42	29
Carbaryl	2	1.1	0.99	1.09	19
Carbofuran	31	1.3	0.69	0.87	214
Dimethoate	1	1.2	0.47	0.56	6
Endosulfan	10	1.2	0.65	0.78	62
Esfenvalerate	7	1.1	0.03	0.04	2
Ethoprop	4	1.0	4.62	4.62	142
Fonofos	4	1.0	2.29	2.29	77
Imidacloprid	9	1.0	0.13	0.13	10
Methamidophos	29	1.4	0.86	1.19	272
Permethrin	7	1.7	0.12	0.20	11
Phorate	16	1.0	2.67	2.67	339
Propargite	3	1.1	1.74	1.84	46
Fungicides:					
Chlorothalonil	78	4.1	0.82	3.35	2,079
Copper ammonium	1	4.5	0.35	1.59	17
Copper hydroxide	13	1.7	0.80	1.36	140
Cymoxanil	1	1.7	0.12	0.20	2
Iprodione	7	1.1	1.00	1.07	57
Mancozeb	36	2.5	1.16	2.87	814
Maneb	9	3.5	1.00	3.54	251
Metalaxyl	26	1.6	0.18	0.28	58
Metiram	5	3.0	1.49	4.53	196
Propamocarb hydroch.	4	1.1	0.75	0.84	29
Sulfur	2	3.1	4.71	14.41	239
Triphenyltin hydrox.	8	2.3	0.15	0.35	22
Other chemicals:					
Dichloropropene	6	1.0	178.03	178.03	8,635
Diquat	33	1.6	0.30	0.47	124
Maleic hydrazide	6	1.0	1.98	1.98	93
Metam-sodium	11	1.0	116.19	119.09	10,888
Sulfuric acid	9	1.0	333.51	340.00	23,664

Source: USDA, 1997d.

Appendix table 3.9—Pesticide use by State, winter wheat 1996

State	Harvested acreage	Percent of acres treated and total applied							
		Herbicide		Insecticide ¹		Fungicide		Other chemical	
		Percent	1,000 lbs	Percent	1,000 lbs	Percent	1,000 lbs	Percent	1,000 lbs
Colorado	2,200	61	756	11	139				
Idaho	860	80	433						
Kansas	8,800	47	1,304	7	212				
Montana	1,980	93	1,385						
Nebraska	2,100	61	332						
Oklahoma	4,900	35	655	27	391				
Oregon	850	99	503			8	21		
South Dakota	1,580	65	390						
Texas	2,900	27	319	38	447				
Washington	2,350	96	1,304			8	43		
Total	28,520	56	7,381	12	1,214	1	101		

¹ Total applied excludes Bt's (*Bacillus thuringiensis*) because amounts of Bt active ingredient are not comparable between products.

Source: USDA, 1997d.

Appendix table 3.10—Pesticide applications, winter wheat 1996

Agricultural chemical	Area applied	Appli- cations	Rate per application	Rate per crop year	Total applied
	Percent	Number	-Pounds per acre-		1,000 lbs
Herbicides:					
2,4-D	33	1.0	0.43	0.45	4,262
Atrazine	1	1.0	0.68	0.68	157
Bromoxynil	7	1.0	0.24	0.24	477
Chlorsulfuron	8	1.0	0.01	0.01	24
Dicamba	9	1.1	0.08	0.09	233
Diclofop-methyl	0	1.0	0.94	0.94	45
Diuron	0	1.0	0.93	0.93	45
Glyphosate	7	1.1	0.37	0.42	856
Imazamethabenz	1	1.0	0.28	0.28	58
MCPA	9	1.0	0.31	0.31	778
Metribuzin	1	1.0	0.17	0.17	58
Metsulfuron-methyl	22	1.0	0.003	0.003	20
Thifensulfuron	4	1.0	0.01	0.01	13
Triallate	1	1.0	1.42	1.42	252
Triasulfuron	7	1.0	0.02	0.02	32
Tribenuron-methyl	5	1.0	0.006	0.006	9
Insecticides:					
Chlorpyrifos	1	1.0	0.43	0.43	65
Dimethoate	6	1.0	0.23	0.23	374
Methyl parathion	5	1.0	0.46	0.47	684
Fungicides:					
Propiconazole	1	1.0	0.16	0.16	36

Source: USDA, 1997d.

Appendix table 3.11—Pesticide use by State, durum and other spring wheat, 1996

State	Planted acreage	Area receiving and total applied							
		Herbicide		Insecticide		Fungicide		Other chemical	
		Percent	1,000 lbs	Percent	1,000 lbs	Percent	1,000 lbs	Percent	1,000 lbs
Durum									
North Dakota	3,000	98	2,087						
Spring									
Minnesota	2,550	96	1,547						
Montana	4,200	76	2,122						
North Dakota	9,600	92	6,170						
Total	16,350	88	9,839	3	216				

Source: USDA, 1997d.

Appendix table 3.12a—Pesticide applications, durum wheat, North Dakota, 1996

Herbicide	Area applied	Appli- cations	Rate per application	Rate per crop year	Total applied
	Percent	Number	-Pounds per acre-		1,000 lbs
2,4-D	71	1.0	0.36	0.36	772
Dicamba	43	1.1	0.07	0.08	100
MCPA	25	1.0	0.34	0.35	265
Triallate	14	1.0	0.94	0.94	394
Triasulfuron	12	1.0	0.02	0.02	7
Tribenuron-methyl	20	1.0	0.01	0.01	6
Trifluralin	40	1.0	0.34	0.34	410

Source: USDA, 1997d.

Appendix table 3.12b—Pesticide applications, other spring wheat 1996

Herbicide	Area applied	Appli- cations	Rate per application	Rate per crop year	Total applied
	Percent	Number	-Pounds per acre-		1,000 lbs
2,4-D	50	1.0	0.34	0.34	2,797
Bromoxynil	14	1.0	0.26	0.27	597
Dicamba	28	1.1	0.08	0.08	376
Fenoxaprop	17	1.0	0.07	0.07	196
Glyphosate	10	1.0	0.34	0.35	565
Imazamethabenz	6	1.0	0.36	0.36	333
MCPA	38	1.1	0.34	0.36	2,225
Metsulfuron-methyl	4	1.0	0.003	0.003	2
Thifensulfuron	14	1.0	0.009	0.01	22
Triallate	11	1.0	1.04	1.04	1,804
Triasulfuron	2	1.0	0.009	0.009	4
Tribenuron-methyl	22	1.1	0.006	0.006	22
Trifluralin	11	1.0	0.34	0.34	603

Source: USDA, 1997d.