2007 STATUS REPORT
PESTICIDE CONTAMINATION PREVENTION ACT

Annual Report

California Environmental Protection Agency
DEPARTMENT OF PESTICIDE REGULATION

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California Department of Pesticide Regulation

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2007 Status Report
Pesticide Contamination
Prevention Act

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EXECUTIVE SUMMARY

PURPOSE

The provisions of Food and Agricultural Code (FAC) section 13144(b) require the Department of Pesticide Regulation (DPR) to annually post to the department's web site information regarding the status of the ground water protection data call-in of pesticidal active ingredients registered for agricultural use, the pesticide active ingredients with data exceeding specific numerical values (SNVs), and sales and use information. The ground water protection data for each active ingredient include information on certain physical and chemical properties and environmental fate. Active ingredients with properties that exceed the SNVs established by DPR are considered to have the potential to contaminate ground water. Active ingredients exceeding the SNV criteria are listed with the information on the reported sale and use in California.

BACKGROUND

The Pesticide Contamination Prevention Act (PCPA) of 1985 added sections 13141 – 13152 to the FAC and established a set of data requirements for identifying and tracking potential and actual ground water contaminants. The PCPA required DPR to establish SNVs as a basis to estimate relative risk to ground water of pesticide active ingredients. Pesticides classified as potential ground water contaminants (leachers) are potentially subject to monitoring to determine whether they have contaminated ground water. The PCPA establishes procedures for reviewing chemicals found in ground water or in soil as a result of legal agricultural use and for modifying or canceling use of such chemicals.

Under the data call-in provisions of the PCPA, California registrants of agricultural use pesticides must provide DPR with data on physical and chemical properties and environmental fate of the active ingredients in their products. Based on this information, DPR identified active ingredients with data that meet or exceed the SNVs for water solubility, soil adsorption, hydrolysis half-life, aerobic soil metabolism half-life, and anaerobic soil metabolism half-life. Since the enactment of the PCPA, the ability to establish an SNV for field dissipation has not been scientifically determined.

Active ingredients that meet or exceed criteria for SNVs and are labeled for agricultural use are placed on the Ground Water Protection List (GWPL) found in Title 3 of the California Code of Regulations. The GWPL consists of two sublists. One sublist [6800(b)] consists of chemicals that meet the conditions specified in FAC section 13145(d). These chemicals must also have pesticide product labels that allow application by chemigation or by application to or injection into the soil, or that application be followed by flood or furrow irrigation within 72 hours. This list is used to determine the pesticides to sample for their presence in ground water. The second sublist [6800(a)] consists of chemicals that have been detected in ground water or soil in California pursuant to FAC section 13149. DPR takes immediate regulatory measures for these chemicals under the PCPA.

REPORT SUMMARY

This report complies with the requirements of FAC section 13144(b). In 1986, 524 registered active ingredients were potentially subject to a data call-in for physical-chemical properties. However, DPR exempted 377 of these compounds for one or more of the following reasons: they were used indoors; they were used in ways that would not result in contact with the soil; they were applied in amounts below limits of detection; they occurred naturally in soil; or they were no longer registered for agricultural use in California. Acceptable data is on file with DPR for the remaining 147 pesticidal active ingredients.

Throughout the years, the list has been subject to decline from active ingredients that were no longer registered for use in California and to increases from active ingredients with new registrations. The list from last year (2006) contained 164 active ingredients meeting or exceeding the SNVs. For this current year, ten additional active ingredients were added that met or exceeded the SNVs and were registered for use in California. The mean physical-chemical properties relating to the SNVs are given in the report. Information on California sales of these active ingredients, a description of their use, and statewide applications are also specified.

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REPORT REQUIREMENTS PURSUANT TO THE PESTICIDE CONTAMINATION PREVENTION ACT

The Pesticide Contamination Prevention Act of 1985 requires the Department of Pesticide Regulation (DPR) to provide the following information for economic poisons registered for agricultural use in California. The information is reported on the department's web site.

1. A list of each active ingredient, other specified ingredient, or degradation product of an active ingredient of an economic poison for which there is a ground water protection data gap.

2. A list of economic poisons that contain an active ingredient, other specified ingredient, or degradation product of an active ingredient that is greater than one or more of the numerical values established pursuant to the Act or is less than the numerical value in the case of the soil adsorption coefficient in both of the following categories:
   (a) Water solubility or soil adsorption coefficient (K_{oc}); and
   (b) Hydrolysis, aerobic soil metabolism, anaerobic soil metabolism, or field dissipation.

3. Provide for each economic poison listed pursuant to number 2 (if information is available), the amount sold in California during the most recent year (for which sales information is available), and where and for what purpose the economic poison was used.

The information is presented in two sections: 1) "Status of the Ground Water Protection Data Call-in", 2) "Physical-Chemical Properties, Sales, Use, and Mode of Action for Active Ingredients Exceeding the Specific Numerical Values", which lists the properties of pesticides associated with leaching potential and the specific numerical values established by DPR.

SECTION 1: STATUS OF THE GROUND WATER PROTECTION DATA CALL-IN

A. Total active ingredients for possible data call-in:…… 524
(This list was established in 1986.)

Active ingredients not subject to the data call-in:…… 377

Active ingredients no longer registered:……... 152

Active ingredients on which data are not required at this time[1]:…….. 225

The number of active ingredients subject to the data call-in:……... 147

B. Status of the active ingredients subject to the data call-in:

Adequate studies on file:…….. 147

Inadequate or pending studies:……. 0

[1]Products that are not registered for agriculture use, or are registered for uses for which data are not currently required such as indoor use or animal ear tags.

SECTION 2: PHYSICAL-CHEMICAL PROPERTIES, SALES, USE, AND MODE OF ACTION FOR ACTIVE INGREDIENTS EXCEEDING THE SPECIFIC NUMERICAL VALUES

This report includes an evaluation of the potential of pesticide active ingredients to leach to ground water. Section 13144(a) of the Pesticide Contamination Prevention Act of 1985 (PCPA, Stats. 1985, Ch. 1298, section 1) requires DPR to establish thresholds known as specific numerical values (SNVs) for six physicochemical characteristics of environmental fate: water solubility, soil adsorption coefficient (K_{oc}), hydrolysis half-life, aerobic and anaerobic soil metabolism half-lives, and field dissipation half-life. These parameters are presumed by the PCPA to correlate with the potential of a pesticide to leach to ground water. Water solubility and K_{oc} are considered indicators of the mobility of an active ingredient within the soil, while the half-lives for hydrolysis, aerobic and anaerobic soil metabolism and field dissipation are considered indicators of the persistence of the chemical in the soil.

Statistical comparison procedures were used to calculate the SNVs. Based on nationwide ground water studies, a list of pesticide active ingredients was created and separated into two groups: 1) chemicals that had been detected in ground water as a result of legal agricultural use (leachers), and 2) chemicals that had been sampled for and not found in ground water as a result of legal agricultural use (non-leachers). Estimates of the physicochemical parameter values for the chemicals in each group were determined from data available in the open literature and from DPR-approved studies submitted by pesticide registrants in fulfillment of the data call-in requirements in FAC section 13143. The data for each of the parameter values were tested for their usefulness in discriminating between leachers and non-leachers by determining whether the means of the two groups were significantly different. The tests showed that the means of the data for water solubility, hydrolysis half-life, K_{oc}, and the anaerobic soil metabolism half-life for chemicals identified as leachers were significantly different from the means of chemicals identified as non-leachers. The SNVs for these properties were established as those values that would identify as leachers 90 percent of the chemicals found in ground water due to agricultural use (Wilkerson and Kim, 1986). The means of the two groups for aerobic soil metabolism, however, were not significantly different. Because the PCPA requires DPR to establish an SNV for each physicochemical property, the SNV for the aerobic soil metabolism half-life was set at a value that minimized its importance in the discrimination procedure. The SNVs established by DPR are reevaluated periodically to incorporate new data into the calculations. Details on revisions to the SNVs can be found in subsequent reports (Johnson, 1991; Johnson, 1989; Johnson, 1988). The SNVs currently in regulation (Title 3, California Code of Regulations, section 6804) are:

(a)	Water solubility	3 ppm
(b)	Soil adsorption coefficient (K_{oc})	1900 cm^3/g
(c)	Hydrolysis half-life	14 days
(d)	Aerobic soil metabolism half-life	610 days
(e)	Anaerobic soil metabolism half-life	9 days

The SNV for field dissipation half-life has not yet been established. FAC section 13144 requires SNVs to be at least equal to those established by the United States Environmental Protection Agency (USEPA). To date, the USEPA has not established any SNVs.

Pursuant to FAC section 13144(b), pesticide active ingredients are placed on a list of candidates as potential leachers if both the mobility and persistence parameter values exceed (or are less than in the case of the K_{oc}) the corresponding SNVs. If a candidate potential leacher has a pesticide label that requires or recommends the application method to be by injection into the soil or by chemigation or that application is to be followed by flood or furrow irrigation within 72 hours, then the chemical is placed on the Groundwater Protection List [FAC section 6800(b)]. Table 1 is a list of candidate potential leachers that are contained in currently registered economic poisons specifying their respective mean physicochemical parameter values.

There are ten active ingredients that are new to the 2007 list of potential leachers:

Dimethenamid-P
Flurprimidol
Glyphosate[a]
Imazapic
Imazethapyr, ammonium salt
Metolachlor[a]
Propamocarb hydrochloride
Spinetoram
Sulfosulfuron
Triallate[b]

Spinetoram is an insecticide, while propamocarb hydroxide is a fungicide; the remaining eight active ingredients are herbicides.

PCPA section 13144(b) also requires DPR to provide, for each active ingredient in Table 1, a list of the amount sold in California, and a list of where and for what purpose the economic poison was used. The 2006 pesticide sales data are shown in Table 2. Information on the active ingredients and their modes of action can be found in Table 3. The 2006 Pesticide Use Reporting, the most recent and complete set of data available, are found in Table 4. DPR's Registration Branch web site, available at http://www.cdpr.ca.gov/docs/registration/regmenu.htm, provides updated information on the status of pesticide active ingredients and their respective products.

[a]Older AI placed on the list due to availability of updated chemistry data
[b]Older AI placed on the list due to registration of a new product

Table 1. Active ingredients exceeding the specific numerical values (SNVs) and their respective mean physical-chemical property values (2007 Report).

Active ingredient	Actively Registered	Solubility (ppm) SNV > 3	K_{oc} (cm^3/g) SNV < 1,900	Aerobic metabolism (days) SNV > 610	Anaerobic metabolism (days) SNV > 9	Hydrolysis (days) SNV > 14
2,4-D	X	27,600	46	34	333	39[a]
2,4-D, 2-ethylhexyl	X	0	46	34	333	1
2,4-D, alkanolamine salts		657,000	46	34	333	39[a]
2,4-D, butoxyethanol	X	NA[b]	46	34	333	1
2,4-D, butyl ester		9	46	34	333	39[a]
2,4-D, diethanolamine	X	657,000	46	34	333	39[a]
2,4-D, diethylamine		657,000	46	34	333	39[a]
2,4-D, dimethylamine	X	657,000	46	34	333	39[a]
2,4-D, isooctyl ester	X	NA	46	34	333	1
2,4-D, n-oleyl-1,3-propylenediamine salt		657,000	46	34	333	39[a]
2,4-D, octyl ester		0	46	34	333	1
2,4-D, propylene glycol butyl		0	46	34	333	1
2,4-D, triethylamine salt		0	46	34	333	1
4(2,4-DB), dimethylamine salt	X	742,000	191	25	269	35
Acephate	X	818,000	3	3	6	169
Acetamiprid	X	3,660	343	10	330	35[a]
Acibenzolar-s-methyl	X	8	1,100	4	50	76
Alachlor	X	200	131	20	5	30[a]
Aldicarb	X	5,870	239	2	2	28[a]
Ametryne		204	245	37	189	28
Aminopyralid		207,000	15	204	NA	30[a]
Amitrole		370,000	121	4	186	34
Anilazine		8	2,210	1	41	19
Atrazine	X	33	93	146	159	30[a]
Azafenidin		17	311	186	51	30[a]
Azinphos-methyl	X	28	882	44	68	19
Azoxystrobin	X	6	581	112	119	31[a]
Bensulfuron methyl	X	281	332	75	168	103
Bensulide	X	6	16,600	432	1,890	220
Bentazon, sodium salt	X	530	116	40	365	30[a]
Bifenazate	X	4	4,060	1	78	1

Active ingredient	Actively Registered	Solubility (ppm) SNV > 3	K_{oc} (cm^3/g) SNV < 1,900	Aerobic metabolism (days) SNV > 610	Anaerobic metabolism (days) SNV > 9	Hydrolysis (days) SNV > 14
Bispyribac-sodium	X	73,000	272	50	101	476
Bromacil	X	929	17	347	73	30[a]
Bromoxynil butyrate		27	202	NA	NA	52
Bromoxynil heptanoate	X	27	202	NA	NA	52
Bromoxynil octanoate	X	27	1,003	NA	NA	52
Butylate	X	44	397	70	64	533
Cacodylic acid	X	2,570,000	2,660	NA	365	35[a]
Calcium acid methanearsonate	X	1,040,000	1,680	269	NA	35[a]
Carbaryl	X	116	326	6	87	12
Carbofuran	X	351	NA	22	20	18
Chloropicrin	X	2,000	25	3	NA	191[a]
Chlorothalonil	X	1	1,790	35	8	49[a]
Chlorsulfuron	X	28,300	35	28	162	1,230
Clethodim	X	6,630	116	3	191	30[a]
Clomazone	X	1,100	244	66	19	34[a]
Clopyralid	X	106,000	5	152	365	30[a]
Clopyralid, monoethanolamine salt	X	106,000	5	152	365	30[a]
Clopyralid, triethylamine salt	X	106,000	5	152	365	NA
Clothianidin	X	259	160	214	27	33[a]
Cyanazine		155	188	15	108	3,680
Cycloate	X	95	12,900	43	109	30[a]
Cyprodinil	X	16	1,470	126	183	32[a]
Cyromazine	X	13,600	756	63	97	28[a]
Dazomet	X	3,630	NA	1	14	0
Diazinon	X	60	1,580	40	16	138
Dicamba	X	27,200	5	10	88	30[a]
[c]Dicamba, diethanolamine salt		675,000	5	10	88	30[a]
Dicamba, diglycolamine salt	X	675,000	5	10	88	30[a]
Dicamba, dimethylamine salt	X	NA	5	10	88	30[a]
Dicamba, monoethanolamine salt		675,000	5	10	88	30[a]
Dicamba, sodium salt	X	675,000	5	10	88	30[a]
Dichlobenil	X	21	0	NA	NA	1,810
Dichlorprop-P		130,000	16	14	159	30[a]
Dichlorprop-P, dimethylamine salt	X	130,000	16	14	159	30[a]

Active ingredient	Actively Registered	Solubility (ppm) SNV > 3	K_{oc} (cm^3/g) SNV < 1,900	Aerobic metabolism (days) SNV > 610	Anaerobic metabolism (days) SNV > 9	Hydrolysis (days) SNV > 14
Dichlorprop-P, isooctyl ester	X	130,000	16	14	159	30[a]
Dicloran	X	6	804	549	66	72[a]
Dicrotophos		NA	74	5	NA	72
Diethatyl-ethyl		120	178	NA	NA	33
Difenzoquat methyl salt	X	817,000	74,100	1,600	6,810	NA
Diflufenzopyr, sodium salt	X	4,200	292	55	164	NA
[c]Dimethenamid-P	X	1,450	223	NA	NA	30[a]
Dimethipin	X	4,600	11	NA	1280	60[a]
Dimethoate	X	39,800	11	2	22	68
Dimethomorph	X	12	1,360	NA	26	NA
Dinotefuran	X	NA	30	51	NA	365
Diphenamid		210	107	249	642	31
Diquat dibromide	X	677,000	353,000	3,450	1,060	30[a]
Disulfoton	X	12	522	9	NA	177
Dithiopyr	X	1	1,040	871	21,700	NA
Diuron	X	36	499	372	995	1,290
Dodecyl ammonium methanearsonate		1,040,000	1,680	269	NA	35
Dodemorph acetate		419	20,200	NA	NA	3,810
Dodine	X	1040	2,570,000	7	365	914
DSMA		1,040,000	1680	269	NA	35
Emamectin benzoate	X	101	283,000	211	427	42[a]
Endothall, dipotassium salt	X	NA	750	9	8	36[a]
Endothall, disodium salt		110,000	750	9	8	36[a]
Endothall, mono (N,N-dimethyl alkylamine) salt	X	110,000	750	9	8	36[a]
EPTC	X	345	170	42	65	30[a]
Ethofumesate	X	50	150	93	NA	2,900
Ethoprop	X	843	161	34	130	449
Fenamiphos	X	482	341	24	88	301
Fenarimol	X	15	757	1,100	1,620	28
Fenhexamid	X	150	853	1	97	30[a]
Fenoxycarb	X	6	1,540	85	136	3,140
Fensulfothion		NA	621	NA	NA	144
Fenthion		4	1,870	NA	NA	41
Fipronil	X	22	749	366	123	30[a]

Active ingredient	Actively Registered	Solubility (ppm) SNV > 3	K_{oc} (cm^3/g) SNV < 1,900	Aerobic metabolism (days) SNV > 610	Anaerobic metabolism (days) SNV > 9	Hydrolysis (days) SNV > 14
Fludioxonil	X	2	1,610	102	365	30[a]
Flonicamid	X	5,200	13	1	161	30[a]
Fluazifop-butyl		1	1,770	1	3	30[a]
Fluometuron		111	80	11	29	469
[c]Flurprimidol	X	127	314	NA	3,620	153,000
Flutolanil	X	NA	905	NA	NA	30[a]
Fonofos		17	916	80	150	432
Foramsulfuron	X	32,600	78	28	31	128
Formetanate hydrochloride	X	822,000	371	8	15	1
Fosetyl-al	X	136,000	325	0	2	30[a]
Glufosinate-ammonium	X	NA	785	20	NA	30[a]
[c]Glyphosate	X	11,600	6,920	96	22	35[a]
Glyphosate, isopropylamine salt	X	11,600	6,920	96	22	35[a]
Glyphosate-trimesium		3,310,000	24,700	6	52	796
Halofenozide		12	233	219	60	30[a]
Halosulfuron	X	1,650	124	51	23	14
Hexazinone	X	29,800	640	222	232	56[a]
Hymexazol		63,700	72	NA	5	30[a]
Imazamox, ammonium salt	X	4,410	58	134	213	30[a]
[c]Imazapic	X	259,000	81	1,200	2,400	30[a]
Imazapic, ammonium salt	X	259,000	81	1,200	2,400	30[a]
Imazapyr	X	10,500	348	507	30	30[a]
Imazethapyr	X	351	54	2,410	568	30[a]
[c]Imazethapyr, ammonium salt	X	351	54	2,410	568	30[a]
Imidacloprid	X	514	262	997	27	30[a]
Iodomethane		14,200	34	0	17	113
Iprodione	X	12	NA	64	32	5
Isazophos		168	158	4	8	51
Isoxaben	X	2	351	205	NA	1,270
Kresoxim-methyl	X	2	437	2	1	34
Linuron	X	77	341	22	102	262
Malathion	X	125	291	3	30	6
[c]Mandipropamid		4	859	44	169	30[a]
MCPA, dimethylamine salt	X	1,470,000	34	24	1,870	30[a]

Active ingredient	Actively Registered	Solubility (ppm) SNV > 3	K_{oc} (cm^3/g) SNV < 1,900	Aerobic metabolism (days) SNV > 610	Anaerobic metabolism (days) SNV > 9	Hydrolysis (days) SNV > 14
MCPP	X	734	26	13	541	31
MCPP, diethanolamine salt		1,060,000	26	13	541	31[a]
MCPP, dimethylamine	X	1,060,000	26	13	541	31
MCPP, potassium salt	X	1,060,000	26	13	541	31
Mecoprop-P	X	869	119	20	NA	30[a]
Mefenoxam (Metalaxyl-M)	X	8,410	163	62	68	1,000
Mepiquat chloride	X	500,000	NA	40	359	NA
Mesosulfuron-methyl	X	21	NA	39	23	NA
Metalaxyl	X	8,410	163	62	68	1,000
Metaldehyde	X	190	35	67	223	6,150
Methamidophos	X	1,200,000	8	1	NA	21
Methidathion	X	221	341	3	NA	26
Methiocarb	X	27	655	64	64	24
Methomyl	X	54,700	43	46	1	30[a]
Methoxyfenozide	X	3	501	680	654	30[a]
Methyl isothiocyanate	X	8,230	NA	NA	NA	20
Methyl parathion	X	70	476	12	1	45
Metiram	X	NA	913	1	15	1,070
[c]Metolachlor	X	493	190	26	61	200
Metribuzin	X	1,030	106	140	276	4,760
Metsulfuron-methyl		NA	57	24	65	30[a]
Mevinphos		2,000	72	5	17	25
Milbemectin	X	4	2,820	30	241	30[a]
Molinate	X	970	199	NA	105	1,560
MSMA	X	1,040,000	1,680	269	NA	35[a]
Napropamide	X	74	726	455	51	35[a]
Naptalam, sodium salt		249,000	1,170	NA	241	878
Nicosulfuron	X	18,500	37	26	63	30[a]
Nitrapyrin	X	72	333	30	59	8
Norflurazon	X	34	617	172	348	2,650
Octylammonium methanearsonate		1,040,000	1,680	269	NA	35[a]
Orthosulfamuron		629	353	31	NA	24
Oryzalin	X	3	848	63	10	28[a]
Oxydemeton-methyl	X	NA	30	6	4	40

Active ingredient	Actively Registered	Solubility (ppm) SNV > 3	K_{oc} (cm^3/g) SNV < 1,900	Aerobic metabolism (days) SNV > 610	Anaerobic metabolism (days) SNV > 9	Hydrolysis (days) SNV > 14
Paraquat dichloride	X	626,000	NA	620	644	30[a]
Parathion		13	1,610	NA	NA	302
Pebulate		100	457	108	257	234
Penoxsulam	X	470	119	57	8	30[a]
Phenmedipham	X	6	NA	54	47	1
Phorate	X	29	657	3	14	3
Phosalone		3	2,870	NA	NA	51
Phosmet	X	20	5,810	7	27	0
Phosphamidon		NA	66	1	NA	65
Picloram, potassium salt		370,000	22	NA	300	NA
Piperalin	X	20	23,600	NA	NA	16
Piperonyl butoxide	X	14	1,810	79	927	251
Profenofos	X	28	2,010	2	3	43
Prohexadione calcium	X	179	570	NA	NA	65
Prometon	X	718	124	459	61	1,130
Prometryn	X	33	277	274	316	28[a]
[c]Propamocarb hydrochloride	X	101,000	619	77	92	30[a]
Propanil	X	152	518	2	3	5,000
Propiconazole	X	100	656	72	211	NA
Propoxycarbazone-sodium		28,900	48	98	22	32
Propyzamide	X	13	889	392	762	42[a]
Pymetrozine	X	290	1,100	491	91	30[a]
Pyraclostrobin	X	20	9,300	136	3	30[a]
Pyrazon	X	380	13,800	124	489	NA
Pyridate		1	55	39	30	1
Pyrithiobac-sodium	X	NA	14	60	128	35[a]
Quinclorac	X	72	37	211	364	30[a]
Rimsulfuron	X	3,750	49	21	18	7
S-metolachlor	X	480	185	38	61	200
Sethoxydim	X	6,950	47	7	25	47
Siduron	X	22	201	895	3,770	30[a]
Simazine	X	6	340	110	71	28[a]
[c]Spinetoram	X	216	1,510	40	NA	30[a]
Sulfentrazone	X	400	169	331	3,300	291

Active ingredient	Actively Registered	Solubility (ppm) SNV > 3	K_{oc} (cm^3/g) SNV < 1,900	Aerobic metabolism (days) SNV > 610	Anaerobic metabolism (days) SNV > 9	Hydrolysis (days) SNV > 14
Sulfometuron-methyl	X	4,250	89	52	116	30[a]
[c]Sulfosulfuron	X	710	33	33	136	168
Sulprofos		0	781	77	NA	485
Tebuconazole	X	NA	1,000	597	1,260	28[a]
Tebufenozide	X	1	605	405	179	30[a]
Tebuthiuron	X	2,600	90	1,220	1,520	395[a]
Terbacil		NA	56	520	178	NA
Terbutryn		22	5,600	70	37	NA
Terrazole	X	105	107	19	1	92
Thiamethoxam	X	4,100	64	229	NA	6,080
Thiazopyr	X	2	204	274	338	30[a]
Thifensulfuron-methyl		5,100	29	NA	27	182
Thiobencarb	X	28	530	37	306	160[a]
Thiophanate-methyl	X	25	225	1	2	41
Tralkoxydim	X	6	131	5	NA	112
Triadimefon	X	64	365	6	23	1,760
[c]Triallate	X	3	60	47	NA	1,170
Triclopyr, butoxyethyl ester	X	7	62	13	27	7
Triclopyr, triethylamine salt	X	NA	62	13	1,600	NA
Trifloxysulfuron-sodium	X	26	1,770	55	24	20
Triflumizole	X	18	1,240	23	67	116
Triflusulfuron-methyl	X	2,820	61	89	23	32[a]
Trinexapac-ethyl	X	11,400	440	0	13	456
Triticonazole		8	523	220	235	30[a]
Uniconizole-P	X	8	NA	332	NA	30[a]
Vernolate		108	83	83	61	722
Vinclozolin	X	3	260	28	15	1
Zoxamide		1	1,190	19	14	16

[a]No hydrolysis occurred during the study. The hydrolysis half-life is greater that the value listed, which is the length of the study.
[b]Not available.
[c]New active ingredient; these active ingredients were not listed in the 2006 report.

Table 2. Sales during 2006 of active ingredients exceeding the specific numerical values (2007 Report).

Active ingredient	Pounds Sold[a]
2,4-D	306,920.60
2,4-D, 2-ethylhexyl ester	40,475.97
2,4-D, alkanolamine salts	875.61
2,4-D, butoxyethanol ester	7,113.01
2,4-D, diethanolamine salt	6,690.33
2,4-D, dimethylamine salt	764,781.53
2,4-D, isooctyl ester	24,984.85
4(2,4-DB), dimethylamine salt	76,391.50
Acephate	163,769.17
Acetamiprid	47,293.72
Acibenzolar-s-methyl	14,520.00
Alachlor	21,759.00
Aldicarb	237,112.20
Atrazine	40,283.65
Azinphos-methyl	50,820.00
Azoxystrobin	166,728.67
Bensulfuron methyl	11,013.18
Bensulide	336,954.36
Bentazon, sodium salt	9,127.17
Bifenazate	96,387.83
Bispyribac-sodium	11,639.20
Bromacil	104,459.78
Bromoxynil heptanoate	45,416.64
Bromoxynil octanoate	54,681.12
Butylate	2,391.78
Cacodylic acid	5.25
Calcium acid methanearsonate	7,863.72
Carbaryl	411,710.66
Carbofuran	30,872.80
Chloropicrin	12,664,971.85
Chlorothalonil	1,275,207.12
Chlorsulfuron	30,414.38
Clethodim	44,744.81
Clomazone	60,130.00
Clopyralid	0.91
Clopyralid, monoethanolamine salt	16,555.05
Clopyralid, triethylamine salt	1,906.11
Clothianidin	142.51
Cycloate	68,918.41
Cyprodinil	192,942.66
Cyromazine	208,283.76
Dazomet	589,477.82
Diazinon	419,698.14
Dicamba	9,051.96

Active ingredient	Pounds Sold[a]
Dicamba, diglycolamine salt	61,375.60
Dicamba, dimethylamine salt	70,415.30
Dicamba, sodium salt	69,849.64
Dichlobenil	57,963.29
Dicloran	115,610.86
Diflufenzopyr, sodium salt	745.01
Dimethoate	352,843.50
Dimethomorph	31,692.24
Dinotefuran	8,041.70
Diquat dibromide	168,039.54
Disulfoton	50,795.34
Dithiopyr	17,678.52
Diuron	1,793,218.60
Emamectin benzoate	8,807.64
Endothall, dipotassium salt	6,568.31
Endothall, mono (N,N-dimethyl alkylamine) salt	2,542.98
EPTC	246,239.89
Ethofumesate	20,221.42
Ethoprop	33,452.46
Fenamiphos	56,297.65
Fenarimol	5,788.78
Fenhexamid	71,749.13
Fenoxycarb	4.45
Fipronil	23,553.59
Flonicamid	60.50
Fluazifop-P-butyl	23,533.88
Fludioxonil	83,971.01
Flurprimidol	0.51
Flutolanil	21,143.70
Foramsulfuron	197.26
Formetanate hydrochloride	46,524.40
Fosetyl-al	436,669.08
Glufosinate-ammonium	182,561.33
Glyphosate	1,216,630.19
Glyphosate, isopropylamine salt	9,026,223.60
Halosulfuron-methyl	17,752.31
Hexazinone	153,017.50
Imazamox, ammonium salt	5,608.58
Imazapic	139.68
Imazapic, ammonium salt	1,454,19
Imazapyr	50.10
Imazethapyr	81.90
Imazethapyr, ammonium salt	9,672.01
Imidacloprid	406,205.06
Iprodione	349,618.26
Isoxaben	19,046.43

Active ingredient	Pounds Sold[a]
Kresoxim-methyl	20,433.00
Linuron	87,850.00
Malathion	669,841.44
MCPA, dimethylamine salt	311,584.79
MCPP	9,619.52
MCPP, dimethylamine salt	11,253.39
MCPP, potassium salt	1,711.94
Mecoprop-P	122,725.94
Mefenoxam	279,334.57
Mepiquat chloride	21,443.25
Mesosulfuron-methyl	384.79
Metalaxyl	1,464.55
Metaldehyde	382,843.85
Methamidophos	37,024.64
Methidathion	53,009.53
Methiocarb	2,707.60
Methomyl	366,603.92
Methoxyfenozide	239,766.93
Methyl parathion	105,706.54
Metribuzin	45,065.32
Molinate	171,557.59
MSMA	150,128.00
Napropamide	33,850.73
Nicosulfuron	22,300.00
Nitrapyrin	47.49
Norflurazon	121,727.82
Oryzalin	1,079,781.23
Oxydemeton-methyl	147,294.27
Paraquat dichloride	2,262,189.81
Penoxsulam	2,905.89
Phenmedipham	5,510.27
Phorate	24,872.00
Phosmet	782,803.75
Piperalin	4,052.66
Piperonyl butoxide	162,958.14
Profenofos	19,699.77
Prohexadione calcium	156.75
Prometon	24,638.94
Prometryn	179,112.91
Propamocarb hydrochloride	5,027.29
Propanil	1,659,622.07
Propiconazole	51,088.22
Propyzamide	147,246.25
Pymetrozine	47,558.72
Pyraclostrobin	191,777.12
Pyrazon	11,544.00

Active ingredient	Pounds Sold[a]
Pyrithiobac-sodium	111,792.00
Quinclorac	4,599.91
Rimsulfuron	37,630.00
Sethoxydim	55,805.09
Siduron	24,782.80
Simazine	924,464.01
Sulfometuron-methyl	12,372.02
Tebuconazole	73,850.08
Tebufenozide	8,783.67
Tebuthiuron	9,141.26
Terrazole	1,213.80
Thiamethoxam	356,461.17
Thiazopyr	4,459.29
Thiobencarb	278,013.99
Thiophanate-methyl	184,381.43
Tralkoxydim	107.80
Triadimefon	15,048.53
Triclopyr, butoxyethyl ester	164,099.22
Triclopyr, triethylamine salt	101,399.07
Trifloxysulfuron-sodium	31,810.58
Triflumizole	31,038.74
Triflusulfuron-methyl	7,360.00
Trinexapac-ethyl	22,347.52
Uniconizole-P	282.60
Vinclozolin	426.25
Total	46,489,189.55

[a]Sales data derived from DPR sales database for year 2006.

Table 3. Description of use for currently registered active ingredients exceeding the specific numerical values (2007 report).

Active Ingredient	Use	Description
2,4-D	Herbicide	Hormone type
2,4-D, 2-ethylhexyl ester	Herbicide	Hormone type
2,4-D, butoxyethanol and isooctyl esters	Herbicide	Hormone type
2,4-D, diethanolamine salt	Herbicide	Hormone type
2,4-D, dimethylamine salt	Herbicide	Hormone type
2,4-D, isooctyl ester	Herbicide	Hormone type
4(2,4-DB), dimethylamine salts	Herbicide	Selective, post-emergent
Acephate	Insecticide	Contact, systemic
Acetamiprid	Insecticide	Systemic
Acibenzolar-s-methyl	Fungicide	Selective, systemic
Alachlor	Herbicide	Pre-emergent
Aldicarb	Insecticide/ acaricide	Systemic
Atrazine	Herbicide	Selective, residual
Azinphos-methyl	Insecticide	Contact, non-systemic
Azoxystrobin	Fungicide	Foliar
Bensulfuron methyl	Herbicide	Selective
Bensulide	Herbicide	Selective, pre-emergent
Bentazon, sodium salt	Herbicide	Selective, pre-emergent
Bifenazate	Insecticide/ acaricide, miticide	Contact
Bispyribac-sodium	Herbicide	Selective, post-emergent
Bromacil	Herbicide	Pre-emergent
Bromoxynil heptanoate	Herbicide	Selective, post-emergent
Bromoxynil octanoate	Herbicide	Selective, post-emergent
Butylate	Herbicide	Selective, preplant
Cacodylic acid	Herbicide/ silvicide	Harvest aid
Calcium acid methanearsonate	Herbicide	Selective
Carbaryl	Insecticide	Broad spectrum
Carbofuran	Insecticide/ acaricide/ nematicide	Soil, foliar
Chloropicrin	Warning agent/ fumigant	Space, commodity, soil
Chlorothalonil	Fungicide	Broad spectrum, protectant
Chlorsulfuron	Herbicide	Selective
Clethodim	Herbicide	Systemic, post-emergent
Clomazone	Herbicide	Broad spectrum, preplant, pre-emergent
Clopyralid	Herbicide	Selective, post-emergent

Active Ingredient	Use	Description
Clopyralid, monoethanolamine salt	Herbicide	Selective, post-emergent
Clopyralid, triethylamine salt	Herbicide	Selective, post-emergent
Clothianidin	Insecticide	Systemic
Cycloate	Herbicide	Selective, preplant
Cyprodinil	Fungicide	Systemic
Cyromazine	Insecticide	Growth regulator
Dazomet	Fungicide/ nematicide/ herbicide/ slimicide	Preplant
Diazinon	Insecticide/ nematicide	Soil/foliar/seed
Dicamba	Herbicide	Selective, systemic
Dicamba, diglycolamine salt	Herbicide	Selective, systemic
Dicamba, dimethylamine salt	Herbicide	Selective, systemic
Dicamba, sodium salt	Herbicide	Selective, systemic
Dichlobenil	Herbicide	Selective, cellulose
Dichlorprop-P, dimethylamine salt	Herbicide	Selective, post-emergent
Dichlorprop-P, isooctyl ester	Herbicide	Selective, post-emergent
Dicloran	Fungicide	Pre-, post-harvest
Difenzoquat methyl sulfate	Herbicide	Selective, post-emergent
Diflufenzopyr, sodium salt	Herbicide	Selective, post-emergent
Dimethenamid-P	Herbicide	Selective, pre-emergent
Dimethipin	Plant growth regulator	Systemic
Dimethoate	Insecticide/ acaricide	Systemic
Dimethomorph	Fungicide	Selective, post-emergent
Dinotefuran	Insecticide	Selective, systemic
Diquat dibromide	Desiccant/ herbicide	Contact
Disulfoton	Insecticide/ acaricide	Systemic
Dithiopyr	Herbicide	Pre-, post-emergent
Diuron	Herbicide	Selective, general
Dodine	Fungicide	Systemic, preventative, foliar
Emamectin benzoate	Insecticide	Systemic, contact
Endothall, dipotassium salt	Herbicide/ algicide/ growth regulator	Pre-, post-emergent
Endothall, mono (N,N-dimethyl alkylamine) salt	Desiccant/ algicide	Contact
EPTC	Herbicide	Selective
Ethofumesate	Herbicide	Selective
Ethoprop	Insecticide/ nematicide	Soil

Active Ingredient	Use	Description
Fenamiphos	Nematicide	Selective
Fenarimol	Fungicide	Systemic, foliar
Fenhexamid	Fungicide	Systemic, curative, foliar
Fenoxycarb	Insecticide	Growth regulator
Fipronil	Insecticide	Contact, stomach
Flonicamid	Insecticide	Contact, stomach
Fludioxonil	Fungicide	Contact
Flurprimidol	Herbicide	Selective, post-emergent
Flutolanil	Fungicide	Systemic
Foramsulfuron	Herbicide	Selective, post-emergent
Formetanate hydrochloride	Acaricide/ insecticide	Foliar
Fosetyl-AL, technical	Fungicide	Systemic, preventative
Glufosinate-ammonium	Herbicide	Selective
Glyphosate	Herbicide	Nonselective, post-emergent
Glyphosate, isopropylamine salt	Herbicide	Nonselective, post-emergent
Halosulfuron	Herbicide	Pre-, post-emergent
Hexazinone	Herbicide	Contact, residual
Imazamox, ammonium salt	Herbicide	Selective, post-emergent
Imazapic	Herbicide	Selective, pre-, post-emergent
Imazapic, ammonium salt	Herbicide	Selective, pre-, post-emergent
Imazapyr	Herbicide	Nonselective, broad-spectrum systemic
Imazethapyr	Herbicide	Selective, pre-, post-emergent
Imazethapyr, ammonium salt	Herbicide	Selective, pre-, post-emergent
Imidacloprid	Insecticide	Systemic
Iprodione	Fungicide	Contact
Isoxaben	Herbicide	Soil, pre-emergent
Kresoxim-methyl	Fungicide	Non-systemic, preventive, curative, foliar
Linuron	Herbicide	Selective
Malathion	Insecticide	Nonsystemic foliar
MCPA, dimethylamine salt	Herbicide	Hormone-type
MCPP acid (mecoprop, MCPPA)	Herbicide	Systemic
MCPP, dimethylamine salt	Herbicide	Systemic
MCPP, potassium salt	Herbicide	Systemic
Mecoprop-P	Herbicide	Systemic hormone-type
Mefenoxam	Fungicide	Seed treatment, soil, foliar

Active Ingredient	Use	Description
Mepiquat chloride	Bioregulator	Harvest aid
Mesosulfuron-methyl	Herbicide	Selective, post-emergent
Metalaxyl	Fungicide	Seed treatment, soil, foliar
Metaldehyde	Molluscicide	Contact
Methamidophos	Insecticide/ acaricide	Narrow spectrum
Methidathion	Insecticide/ acaricide	Nonsystemic
Methiocarb	Insecticide/ acaricide	Nonsystemic
Methomyl	Insecticide	Broad spectrum
Methoxyfenozide	Insecticide	Insect growth regulator
Methyl isothiocyanate	Fumigant	Soil, preplant
Methyl parathion	Insecticide	Broad spectrum
Metiram	Fungicide	EBDC type, broad spectrum
Metolachlor	Herbicide	Selective, pre-emergent
Metribuzin	Herbicide	Selective, systemic
Milbemectin	Insecticide/ miticide	Contact, stomach action
Molinate	Herbicide	Selective
MSMA	Herbicide	Post-emergent
Napropamide	Herbicide	Selective
Nicosulfuron	Herbicide	Selective, systemic
Nitrapyrin	Nitrification inhibitor	Selective
Norflurazon	Herbicide	Selective, preplant
Orthosulfamuron	Herbicide	Selective, post-emergent
Oryzalin	Herbicide	Selective, pre-emergent
Oxydematon-methyl	Insecticide/ acaricide	Systemic, contact
Paraquat dichloride	Desiccant/ herbicide	Contact
Penoxsulam	Herbicide	Post-emergent
Phenmedipham	Herbicide	Post-emergent
Phorate	Insecticide	Systemic, soil
Phosmet	Insecticide	Broad spectrum
Piperalin	Fungicide	Ornamental
Piperonyl butoxide, technical	Synergist	Use with pyrethroids, pyrethrins
Profenofos	Insecticide/ acaricide	Broad spectrum
Prohexadione calcium	Herbicide	Plant growth regulator
Prometon	Herbicide	Nonselective, pre-, post-emergent
Prometryn	Herbicide	Selective, pre-, post-emergent

Active Ingredient	Use	Description
Propanil	Herbicide	Contact, post-emergent
Propiconazole	Fungicide	Foliar
Propamocarb hydrochloride	Fungicide	Selective
Propyzamide	Herbicide	Pre-, post-emergent
Pymetrozine	Insecticide	Systemic, contact and stomach, soil or foliar
Pyraclostrobin	Fungicide	Foliar, respiration inhibitor
Pyrazon	Herbicide	Pre-, early post-emergent
Pyrithiobac sodium	Herbicide	Pre-, post-emergent
Quinclorac	Herbicide	Selective, pre-, post-emergent
Rimsulfuron	Herbicide	Selective, systemic
S-metolachlor	Herbicide	Selective, preplant
Sethoxydim	Herbicide	Systemic, post-emergent
Siduron	Herbicide	Selective, pre-emergent
Simazine	Herbicide	Selective
Spinetoram	Insecticide	Selective
Sulfentrazone	Herbicide	Selective, pre-, post-emergent
Sulfometuron-methyl	Herbicide	Contact, residual
Sulfosulfuron	Herbicide	Selective, pre-, post-emergent
Tebuconazole	Fungicide	Systemic
Tebufenozide	Insecticide	Systemic
Tebuthiuron	Herbicide	Nonselective
Terrazole	Fungicide	Ornamental, turf
Thiamethoxam	Insecticide	Systemic
Thiazopyr	Herbicide	Selective, pre-emergent
Thiobencarb	Herbicide	Pre-, post-emergent
Thiophanate-methyl	Fungicide	Systemic, broad spectrum
Tralkoxydim	Herbicide	Selective, post-emergent
Triadimefon	Fungicide	Systemic
Triallate	Herbicide	Selective, pre-emergent
Triclopyr, butoxyethyl ester	Herbicide	Systemic, post-emergent
Triclopyr, triethylamine salts	Herbicide	Systemic, post-emergent
Trifloxysulfuron-sodium	Herbicide	Selective, post-emergent
Triflumizole	Fungicide	Systemic, broad spectrum
Triflusulfuron-methyl	Herbicide	Growth regulator, soil
Trinexapac-ethyl	Herbicide	Growth regulator, soil

Active Ingredient	Use	Description
Uniconizole-p	Herbicide	Plant growth regulator
Vinclozolin	Fungicide	Contact, broad spectrum

Information derived from:

i. Farm Chemicals Handbook. 2003. Meister Publishing Co., Willoughby, OH
ii. Thomson, W.T. 2000. Agricultural Chemicals. Books I to IV, Thomson Publications, Fresno, CA
iii. Merck Index, 12th edition. 1996. Merck & Co., Inc. Rahway, NJ

Table 4. Pesticide use reported during 2006 for active ingredients exceeding the specific numerical values (2007 Report).

Active Ingredient	Pounds Applied
2,4-D	1,734.77
2,4-D, 2-ethylhexyl ester	21,056.01
2,4-D, alkanolamine salts (ethanol and isopropanol amines)	16.24
2,4-D, butoxyethanol ester	1,720.29
2,4-D, butyl ester	14.60
2,4-D, diethanolamine salt	2,946.57
2,4-D, dimethylamine salt	439,100.40
2,4-D, isooctyl ester	10,626.67
2,4-D, triethylamine salt	1,614.39
2,4-DP-P, dimethylamine salt	315.73
2,4-DP-P, isooctyl ester	0.16
4(2,4-DB), dimethylamine salt	60,122.14
Acephate	167,668.18
Acetamiprid	31,402.24
Acibenzolar-s-methyl	1,260.04
Alachlor	13,740.04
Aldicarb	176,623.96
Amitrole	2.43
Anilazine	3.93
Atrazine	35,290.85
Azinphos-methyl	38,775.14
Azoxystrobin	122,912.82
Bensulfuron methyl	723.56
Bensulide	288,023.84
Bentazon, sodium salt	2,632.88
Bifenazate	71,975.92
Bispyribac-sodium	1,684.79
Bromacil	62,773.62
Bromoxynil butyrate	5.75
Bromoxynil heptanoate	25,749.39
Bromoxynil octanoate	37,405.56
Butylate	2,671.17
Cacodylic acid	20.06
Calcium acid methanearsonate	1.67
Carbaryl	156,999.45
Carbofuran	25,789.87
Chloropicrin	5,037,168.54
Chlorothalonil	824,948.43
Chlorsulfuron	3,487.57
Clethodim	29,972.63
Clomazone	61,363.36
Clopyralid	0.77
Clopyralid, monoethanolamine salt	11,525.80
Clopyralid,triethylamine salt	1,263.11
Clothianidin	3.10
Cycloate	41,488.11

Active Ingredient	Pounds Applied
Cyprodinil	123,142.06
Cyromazine	10,832.18
Dazomet	34,310.04
Diazinon	386,242.83
Dicamba	1,217.64
Dicamba, dimethylamine salt	29,545.28
Dichlobenil	61,545.46
Dicloran	96,627.01
Dicrotophos	6.34
Diethatyl-ethyl	0.06
Diflufenzopyr, sodium salt	443.49
Dicamba, diglycolamine salt	44,376.55
Dimethoate	294,735.65
Dimethomorph	45,340.39
Dinotefuran	4,144.02
Diquat dibromide	79,457.29
Disulfoton	22,601.34
Dithiopyr	8,591.98
Diuron	1,054,065.05
Dodemorph acetate	10.22
Dodine	9,570.53
Dsma	2.78
Emamectin benzoate	2,064.34
Endothall, dipotassium salt	2,717.95
EPTC	108,228.10
Ethofumesate	17,038.33
Ethoprop	24,485.18
Fenamiphos	33,511.28
Fenarimol	4,711.56
Fenhexamid	68,367.18
Fenoxycarb	7.57
Fenthion	2.10
Fipronil	98,722.33
Flonicamid	39.61
Fluazifop-butyl	25.84
Fludioxonil	10,124.89
Fluometuron	127.20
Flutolanil	11,372.12
Foramsulfuron	102.41
Formetanate hydrochloride	33,738.26
Fosetyl-AL	394,521.86
Glufosinate-ammonium	100,509.63
Glyphosate	527,258.96
Glyphosate, isopropylamine salt	4,836,906.03
Glyphosate-trimesium	13,384.38
Halosulfuron-methyl	3,009.73
Hexazinone	116,265.31
Imazamox, ammonium salt	5,110.07
Imazethapyr	433.13

Active Ingredient	Pounds Applied
Imazethapyr, ammonium salt	7,742.04
Imidacloprid	178,759.13
Iprodione	304,218.18
Isoxaben	26,748.01
Kresoxim-methyl	14,857.56
Linuron	59,164.34
Malathion	411,384.14
MCPA, dimethylamine salt	194,384.94
MCPP	215.23
MCPP, dimethylamine salt	1,812.18
MCPPp, potassium salt	899.04
Mecoprop-P	2,589.84
Mefenoxam	72,960.92
Mepiquat chloride	25,163.15
Mesosulfuron-methyl	464.04
Metalaxyl	105,265.77
Metaldehyde	54,202.13
Methamidophos	30,570.37
Methidathion	56,691.29
Methiocarb	1,789.02
Methomyl	318,088.72
Methoxyfenozide	184,556.58
Methyl isothiocyanate	1,073.23
Methyl parathion	84,784.97
Metiram	0.30
Metolachlor	2,719.15
Metribuzin	33,677.85
Metsulfuron-methyl	1.56
Mevinphos	17.65
Molinate	141,421.27
MSMA	52,718.19
Napropamide	35,663.52
Nicosulfuron	892.81
Norflurazon	107,825.96
Oryzalin	1,136,170.83
Oxydemeton-methyl	119,887.70
Paraquat dichloride	1,170,882.05
Parathion	1,542.02
Pebulate	210.28
Penoxsulam	2,619.98
Phenmedipham	4,045.91
Phorate	38,066.41
Phosmet	628,621.88
Phosphamidon	23.35
Piperalin	2,427.49
Piperonyl butoxide	119,558.05
Profenofos	20,884.67
Prohexadione calcium	74.41
Prometon	7.79

Active Ingredient	Pounds Applied
Prometryn	103,142.96
Propamocarb hydrochloride	363.85
Propanil	1,497,177.05
Propiconazole	29,890.29
Propyzamide	121,710.51
Pymetrozine	5,688.71
Pyraclostrobin	144,439.91
Pyrazon	4,195.61
Pyrithiobac-sodium	4,592.85
Quinclorac	1,157.82
Rimsulfuron	2,148.60
S-metolachlor	358,108.39
Sethoxydim	36,332.41
Siduron	14,891.38
Simazine	637,674.95
Sulfentrazone	0.00
Sulfometuron-methyl	23,509.48
Tebuconazole	37,715.44
Tebufenozide	7,320.85
Tebuthiuron	11,077.97
Terrazole	945.75
Thiamethoxam	13,964.25
Thiazopyr	2,900.43
Thiobencarb	310,351.57
Thiophanate-methyl	114,179.45
Tralkoxydim	395.40
Triadimefon	1,115.99
Triclopyr, butoxyethyl ester	74,658.67
Triclopyr, triethylamine salt	74,448.80
Trifloxysulfuron-sodium	130.97
Triflumizole	24,166.10
Triflusulfuron-methyl	464.43
Trinexapac-ethyl	4,824.40
Uniconizole-P	1.36
Vinclozolin	401.69
Total	25,956,654.31

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