

USE TRENDS OF BIOPESTICIDES.

Table 17: The reported pounds of pesticides used that are biopesticides. Biopesticides include microorganisms and naturally occurring compounds, or compounds essentially identical to naturally occurring compounds that are not toxic to the target pest (such as pheromones). Use includes both agricultural and reportable non-agricultural applications. Data are from the Department of Pesticide Regulation's Pesticide Use Reports.

AI	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
(3S, 6R)-3-METHYL-6-ISOPROPENYL-9-DECEN-1-YL ACETATE	0	0	<1	0	0	<1	0	<1	0	<1
(3S, 6S)-3-METHYL-6-ISOPROPENYL-9-DECEN-1-YL ACETATE	0	0	<1	0	0	<1	0	<1	0	<1
(E)-4-TRIDECEN-1-YL-ACETATE	113	176	80	94	0	0	0	23	0	0
(E)-5-DECEN-1-OL	0	0	0	0	0	<1	<1	<1	1	8
(E)-5-DECENYL ACETATE	2	2	1	1	<1	2	3	1	28	8
(E)-5-DECENYL ACETATE	7	8	4	5	2	10	7	4	23	133
(E,E)-9, 11-TETRADECADIEN-1-YL ACETATE	39	28	11	2	6	3	4	3	3	1
(E,Z)-7,9-DODECADIEN-1-YL ACETATE	0	0	0	50	249	270	24	24	0	0
(S)-KINOPRENE	238	252	276	277	190	300	285	311	429	322
(S)-VERBENONE	0	0	0	0	0	55	0	0	781	633
(Z)-11-HEXADECEN-1-YL ACETATE	2	0	681	0	1	0	0	0	0	<1
(Z)-11-HEXADECENAL	2	0	0	0	0	0	0	0	1	1
(Z)-4-TRIDECEN-1-YL-ACETATE	4	6	3	3	0	0	0	1	0	0
(Z)-9-DODECENYL ACETATE	1	<1	<1	<1	<1	<1	<1	<1	<1	0
(Z,E)-7,11-HEXADECADIEN-1-YL ACETATE	0	<1	3	2	0	0	0	0	0	0
(Z,Z)-11,13-HEXADECADIENAL	<1	<1	0	<1	571	271	321	619	969	1,072
(Z,Z)-7,11-HEXADECADIEN-1-YL ACETATE	0	0	3	3	0	0	0	0	0	0
1,4-DIMETHYLNAPHTHALENE	18	837	1,544	1,152	544	893	2,225	1,085	891	660
1,7-DIOXASPIRO-(5,5)-UNDECANE	<1	<1	<1	<1	<1	<1	1	<1	1	0
1-METHYLCYCLOPROPENE	<1	<1	<1	<1	<1	1	1	<1	1	1
1-NAPHTHALENEACETAMIDE	49	55	32	25	20	20	19	22	18	14
1-OCTEN-3-OL	0	0	0	0	0	0	0	<1	<1	0
2,4-DECADIENOIC ACID, ETHYL ESTER, (2E,4Z)-	0	0	0	0	0	0	0	<1	4	3
2-METHYL-1-BUTANOL	0	0	0	0	0	0	<1	<1	<1	<1
3,13 OCTADECADIEN-1-YL ACETATE	0	44	0	1	12	0	<1	0	<1	142
3,7-DIMETHYL-6-OCTEN-1-OL	0	1	5	23	12	28	54	42	49	72
ACETIC ACID	1	21	79	1,732	73	601	43	62	20,806	9,111
AGROBACTERIUM RADIOBACTER	577	32	142	124	95	28	236	271	137	2,560

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AGROBACTERIUM RADIOBACTER, STRAIN K1026	<1	<1	1	<1	<1	<1	34	<1	<1	<1
ALLYL ISOTHIOCYANATE	0	0	0	0	0	<1	0	0	0	<1
ALMOND, BITTER	<1	<1	<1	<1	<1	<1	<1	<1	<1	0
AMINO ETHOXY VINYL GLYCINE HYDROCHLORIDE	963	1,073	543	1,024	1,194	1,368	1,444	1,757	2,011	1,371
AMMONIUM BICARBONATE	7	2	<1	9	14	7	51	34	42	0
AMMONIUM NITRATE	35,119	48,460	52,922	55,872	74,916	90,858	125,016	121,744	120,053	114,715
AMMONIUM NONANOATE	0	0	0	0	0	0	1,937	3,131	3,399	21,728
AMPELOMYCES QUISQUALIS	<1	0	<1	<1	0	0	0	0	0	0
ASPERGILLUS FLAVUS STRAIN AF36	0	0	0	0	<1	4	4	8	9	14
AUREOBASIDIUM PULLULANS STRAIN DSM 14940	0	0	0	0	0	0	81	458	356	1,095
AUREOBASIDIUM PULLULANS STRAIN DSM 14941	0	0	0	0	0	0	81	458	356	1,095
AZADIRACTHIN	2,235	2,246	2,500	1,880	2,006	3,417	3,387	4,325	5,108	4,751
BACILLUS AMYLOLIQUEFACIENS STRAIN D747	0	0	0	0	0	869	84,957	177,589	131,295	209,619
BACILLUS FIRMUS (STRAIN I-1582)	0	0	0	0	0	0	0	42	190	170
BACILLUS POPILLIAE	0	0	0	0	0	0	<1	<1	<1	<1
BACILLUS PUMILUS, STRAIN QST 2808	7,062	8,138	6,987	6,783	7,546	6,752	6,245	7,957	8,118	7,878
BACILLUS SPHAERICUS, SEROTYPE H-5A5B, STRAIN 2362	20,192	21,441	18,178	13,013	10,337	9,123	10,500	10,499	12,357	13,104
BACILLUS SUBTILIS GB03	6	1	<1	<1	<1	1	1	2	3	3
BACILLUS SUBTILIS MB1600	0	0	0	0	0	<1	<1	0	0	14
BACILLUS SUBTILIS VAR. AMYLOLIQUEFACIENS STRAIN FZB24	0	0	0	0	0	2	94	119	178	6
BACILLUS THURINGIENSIS (BERLINER)	27	16	4	6	26	18	11	4	29	21
BACILLUS THURINGIENSIS (BERLINER), SUBSP. AIZAWAI, GC-91 PROTEIN	20,474	20,484	27,539	20,397	11,666	17,042	13,265	18,776	16,771	18,882
BACILLUS THURINGIENSIS (BERLINER), SUBSP. AIZAWAI, SEROTYPE H-7	2,877	2,373	894	814	814	714	359	333	184	47
BACILLUS THURINGIENSIS (BERLINER), SUBSP. ISRAELENSIS, SEROTYPE H-14	8,267	9,433	17,202	11,401	22,110	12,632	9,269	11,779	15,761	15,728

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BACILLUS THURINGIENSIS (BERLINER), SUBSP. KURSTAKI STRAIN SA-12	22,702	12,325	12,128	7,424	4,679	10,361	8,246	7,971	8,473	9,799
BACILLUS THURINGIENSIS (BERLINER), SUBSP. KURSTAKI, SEROTYPE 3A,3B	987	460	402	150	244	234	53	41	18	34
BACILLUS THURINGIENSIS (BERLINER), SUBSP. KURSTAKI, STRAIN EG 2348	147	369	118	66	478	44	500	514	344	645
BACILLUS THURINGIENSIS (BERLINER), SUBSP. KURSTAKI, STRAIN EG2371	0	0	0	<1	<1	0	0	0	0	0
BACILLUS THURINGIENSIS (BERLINER), SUBSP. KURSTAKI, STRAIN SA-11	63,866	66,612	80,565	75,036	115,662	52,421	77,932	80,401	80,953	74,957
BACILLUS THURINGIENSIS (BERLINER), SUBSP. SAN DIEGO	2	0	<1	<1	0	0	0	0	0	0
BACILLUS THURINGIENSIS SUBSPECIES KURSTAKI STRAIN BMP 123	0	764	118	14	0	0	0	0	0	0
BACILLUS THURINGIENSIS SUBSPECIES KURSTAKI, GENETICALLY ENGINEERED STRAIN EG7841 LEPIDOPTERAN ACTIVE TOXIN	632	277	42	1	75	298	116	65	3	43
BACILLUS THURINGIENSIS VAR. KURSTAKI STRAIN M-200	<1	0	<1	0	0	0	0	0	<1	0
BACILLUS THURINGIENSIS VAR. KURSTAKI, GENETICALLY ENGINEERED STRAIN EG7826	154	442	95	0	0	528	0	0	0	7
BACILLUS THURINGIENSIS, SUBSP. AIZAWAI, STRAIN ABTS-1857	32,529	39,464	31,043	26,250	24,264	30,648	29,863	49,186	55,901	72,261
BACILLUS THURINGIENSIS, SUBSP. AIZAWAI, STRAIN SD-1372, LEPIDOPTERAN ACTIVE TOXIN(S)	563	256	243	130	88	1	18	6	43	13
BACILLUS THURINGIENSIS, SUBSP. ISRAELENISIS, STRAIN AM 65-52	40,376	52,969	53,778	71,050	52,777	173,153	49,687	42,766	46,598	68,995

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AI	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
BACILLUS THURINGIENSIS, SUBSP. KURSTAKI, STRAIN ABTS-351, FERMENTATION SOLIDS AND SOLUBLES	71,755	78,527	69,545	96,988	82,850	95,294	83,418	111,388	95,431	117,564
BACILLUS THURINGIENSIS, SUBSP. KURSTAKI, STRAIN HD-1	2,262	2,068	3,747	3,579	2,525	3,187	2,323	1,928	1,916	441
BACILLUS THURINGIENSIS, VAR. KURSTAKI DELTA ENDOTOXINS CRY 1A(C) AND CRY 1C (GENETICALLY ENGINEERED) ENCAPSULATED IN PSEUDOMONAS FLUORESCENS (KILLED)	1	26	28	<1	<1	4	0	<1	0	<1
BACTERIOPHAGE ACTIVE AGAINST XANTHOMONAS CAMPESTRIS PV. VESICATORIA AND PSEUDOMONAS SYRINGAE PV. TOMATO	0	0	0	0	<1	<1	<1	<1	0	0
BALSAM FIR OIL	0	0	0	<1	0	<1	<1	<1	1	<1
BEAUVERIA BASSIANA HF 23	0	0	0	0	0	0	0	0	0	37
BEAUVERIA BASSIANA STRAIN GHA	711	569	378	357	608	1,220	1,796	2,749	3,511	2,839
BETA-CONGLUTIN	0	0	0	0	0	0	0	0	6,762	6,099
BUFFALO GOURD ROOT POWDER	137	279	1	11	0	1	25	5	6	8
BURKHOLDERIA SP STRAIN A396 CELLS AND FERMENTATION MEDIA	0	0	0	0	0	0	0	2,829	58,593	53,655
BUTYL MERCAPTAN	0	0	0	0	0	<1	0	0	0	0
CANOLA OIL	29	25	17	131	26	15	28	57	97	246
CAPSICUM OLEORESIN	10	5	2	4	4	12	10	27	92	125
CARBON DIOXIDE	32,010	44,315	7,727	17,550	21,239	30,826	15,739	18,297	17,675	25,366
CASTOR OIL	4	4	21	7	<1	2	<1	8	<1	4
CHENOPODIUM AMBROSIOIDES NEAR AMBROSIOIDES	0	0	20,330	10,336	7,897	10,231	20,261	17,504	12,828	10,207
CHROMOBACTERIUM SUBTUSUGAE STRAIN PRAA4-1	0	0	0	0	0	1,169	30,262	46,419	45,894	31,438
CINNAMALDEHYDE	3	354	0	0	1	0	0	0	0	0
CITRIC ACID	41,249	57,279	56,086	74,634	82,831	95,653	130,231	115,972	127,401	143,557
CLARIFIED HYDROPHOBIC EXTRACT OF NEEEM OIL	110,881	104,822	106,271	115,931	70,234	77,254	119,298	197,351	222,602	166,005
CODLING MOTH GRANULOSIS VIRUS	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
CONIOTHYRIUM MINITANS STRAIN CON/M/91-08	6	0	127	80	176	245	611	641	786	657
CORN GLUTEN MEAL	0	<1	0	0	0	0	0	0	0	0

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AI	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
CORN SYRUP	81	1,893	2,891	3,026	4,377	4,766	3,216	3,344	4,342	4,850
COTTONSEED OIL	178,546	138,841	79,250	152,118	318,700	114,610	105,083	132,464	87,451	55,082
COYOTE URINE	0	0	0	<1	1	2	3	9	6	3
CYTOKININ	0	0	0	0	<1	<1	<1	<1	<1	<1
DIALLYL DISULFIDE	0	0	0	0	0	0	0	0	0	103
DIHYDRO-5-HEPTYL-2(3H)-FURANONE	<1	<1	<1	<1	0	0	0	0	0	0
DIHYDRO-5-PENTYL-2(3H)-FURANONE	<1	<1	<1	<1	0	0	0	0	0	0
E,E-8,10-DODECADIEN-1-OL	2,273	2,037	4,978	1,942	1,376	1,995	2,276	1,395	1,445	1,076
E-11-TETRADECEN-1-YL ACETATE	2,399	744	312	100	172	133	142	61	73	32
E-8-DODECENYL ACETATE	236	265	606	898	195	283	273	224	683	389
ENCAPSULATED DELTA ENDOTOXIN OF BACILLUS THURINGIENSIS VAR. KURSTAKI IN KILLED PSEUDOMONAS FLUORESCENS	32	18	18	0	1	<1	0	0	0	0
ESSENTIAL OILS	<1	0	<1	<1	<1	1	<1	15	12	20
ETHYLENE	0	0	0	97	1,018	954	1,359	1,333	1,651	1,182
EUCALYPTUS OIL	0	0	0	22	<1	0	0	0	0	0
EUGENOL	0	0	0	0	0	1	<1	1	<1	1
FARNESOL	2	2	3	10	5	11	21	17	20	29
FENUGREEK	31	6	17	1	5	8	2	1	7	0
FERRIC SODIUM MEDIA	0	0	0	0	1,979	6,351	5,855	6,790	8,000	12,449
FISH OIL	0	0	0	0	1,657	5,466	4,114	0	0	1,078
FORMIC ACID	1,509	499	280	223	241	634	66	337	2,606	1,243
FOX URINE	0	0	0	<1	<1	2	1	4	3	1
GAMMA AMINOBUTYRIC ACID	1,936	944	177	118	40	133	28	15	15	0
GARLIC	142	212	36	423	29	1,905	2,832	1,392	667	849
GERANIOL	0	1	5	23	12	28	54	42	49	72
GERMAN COCKROACH PHEROMONE	<1	<1	<1	<1	<1	<1	<1	<1	0	<1
GIBBERELLINS	25,094	23,516	22,916	21,310	21,271	23,214	41,103	27,422	27,408	23,116
GIBBERELLINS, POTASSIUM SALT	<1	<1	0	<1	<1	5	0	0	0	0
GLIOCLADIUM VIRENS GL-21 (SPORES)	152	945	356	945	649	1,957	3,558	2,989	4,586	4,395
GLUTAMIC ACID	1,936	944	177	118	40	133	28	15	15	0
GS-OMEGA/KAPPA-HXTX-HV1A (VERSITUDE PEPTIDE)	0	0	0	0	0	0	0	0	0	<1
HARPIN PROTEIN	32	16	14	13	11	1	1	<1	0	<1
HEPTYL BUTYRATE	0	0	0	<1	<1	<1	14	6	4	3
HYDROGEN PEROXIDE	11,860	20,740	21,750	69,179	58,928	36,302	47,236	49,936	74,419	129,523
HYDROPRENE	2,282	2,383	1,664	6,382	11,261	3,948	7,352	5,734	6,456	3,793
IBA	20	11	6	7	9	12	15	14	13	10

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INDOLE	0	0	0	0	0	0	<1	0	<1	<1
IRON HEDTA	0	0	0	0	0	43	92	120	91	170
IRON PHOSPHATE	1,634	1,901	1,435	2,351	2,871	2,327	2,119	2,007	2,071	2,247
KAOLIN	1,681,292	1,460,552	2,371,254	3,040,482	1,686,870	2,007,204	2,473,768	2,854,542	3,411,278	3,590,641
KINOPRENE	18	23	3	3	9	3	8	33	17	10
LACTIC ACID	0	0	0	0	0	0	0	0	2	1
LACTOSE	9,019	11,341	9,160	7,967	9,192	6,554	7,143	6,616	7,855	8,501
LAGENIDIUM GIGANTEUM (CALIFORNIA STRAIN)	<1	<1	0	0	0	5	0	0	0	0
LAURYL ALCOHOL	503	830	432	736	497	755	449	293	501	317
LAVANDULYL SENECIOATE	0	140	462	437	6,120	586	477	3,166	507	1,029
LIMONENE	68,949	45,536	56,495	56,406	62,921	74,369	61,293	68,134	72,906	67,546
LINALOOL	113	63	62	1,104	95	137	72	62	93	15
MARGOSA OIL	0	0	0	579	7,886	9,106	12,189	22,585	26,019	32,493
MENTHOL	0	0	0	5	<1	<1	20	0	0	0
METARHIZIUM ANISOPLIAE STRAIN F52	0	0	0	0	0	116	89	121	20	54
METARHIZIUM ANISOPLIAE, VAR. ANISOPLIAE, STRAIN ESFI	<1	<1	0	<1	<1	0	0	0	0	0
METHOPRENE	3,357	2,620	1,568	1,492	1,763	1,304	1,350	3,556	1,390	1,236
METHYL ANTHRANILATE	152	118	312	343	448	300	1,237	634	672	789
METHYL EUGENOL	0	0	0	0	5	0	9	0	0	126
METHYL NONYL KETONE	<1	<1	<1	<1	0	0	<1	<1	<1	<1
METHYL SALICYLATE	<1	0	<1	0	0	0	0	0	0	0
MUSCALURE	22	19	20	15	15	16	13	17	23	29
MYRISTYL ALCOHOL	102	169	88	150	102	155	91	60	102	64
MYRTHECIUM VERRUCARIA, DRIED FERMENTATION SOLIDS & SOLUBLES, STRAIN AARC-0255	29,990	23,867	23,273	22,813	27,694	25,556	26,005	17,675	30,810	26,033
N6-BENZYL ADENINE	198	153	168	217	128	168	183	184	230	221
NAA	4	31	3	5	4	9	15	12	18	11
NAA, AMMONIUM SALT	1,253	1,193	1,203	976	839	1,400	1,056	945	996	125
NAA, ETHYL ESTER	2	8	3	6	23	4	3	5	3	38
NAA, POTASSIUM SALT	11	0	0	0	0	0	53	15	2	934
NAA, SODIUM SALT	3	1	2	0	0	0	2	1	<1	<1
NATAMYCIN	0	0	0	0	0	0	<1	1	1	1
NEROLIDOL	2	2	6	24	12	28	54	42	49	72
NITROGEN, LIQUIFIED	15,741	11,945	2,181	135	216	74	594	6	0	0
NONANOIC ACID	10,949	11,093	9,063	17,322	17,891	18,200	21,545	17,530	14,482	13,298
NONANOIC ACID, OTHER RELATED	576	584	477	912	941	958	1,134	923	762	700

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AI	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
NOSEMA LOCUSTAE SPORES	<1	<1	<1	<1	<1	1	<1	<1	<1	1
OIL OF ANISE	<1	<1	0	<1	<1	<1	<1	<1	<1	<1
OIL OF BLACK PEPPER	<1	<1	1	<1	<1	<1	1	1	<1	<1
OIL OF CEDARWOOD	0	0	0	<1	0	0	0	0	<1	<1
OIL OF CITRONELLA	<1	3	0	5	5	0	0	1	5	<1
OIL OF GERANIUM	0	0	0	<1	0	0	0	0	0	0
OIL OF JOJOBA	7,240	12,070	3,418	4,176	1,232	507	135	376	44	19
OIL OF LEMON EUCALYPTUS	0	0	0	0	<1	3	0	0	0	0
OIL OF LEMONGRASS	0	0	0	<1	0	0	0	0	0	0
OIL OF ORANGE	0	0	0	0	0	0	0	0	198	386
OIL OF PEPPERMINT	<1	<1	0	<1	0	0	0	0	0	0
OXYPURINOL	<1	0	0	0	0	0	0	<1	0	0
PAECILOMYCES FUMOSORSEUS	0	0	0	0	0	507	3,302	5,950	5,624	8,947
APOPKA STRAIN 97										
PANTOEA AGGLOMERANS STRAIN E325, NRRL B-21856	0	0	33	4	1	1	1	0	0	0
PHENYLETHYL PROPIONATE	326	502	500	822	423	535	701	712	185	96
PHOSPHORIC ACID, MONOPOTASSIUM SALT	0	0	12	6,984	9,079	3,927	1,918	374	9,585	15,002
PIPERINE	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
POLYHEDRAL OCCLUSION BODIES (OB'S) OF THE NUCLEAR POLYHEDROSIS VIRUS OF HELICOVERPA ZEA (CORN EARWORM)	0	<1	1	1	51	6	1	2	4	20
POLYOXIN D, ZINC SALT	234	331	397	1,296	3,492	4,738	6,731	7,412	8,613	10,296
POTASSIUM BICARBONATE	114,163	109,171	180,858	275,648	357,282	228,900	239,695	223,547	318,099	462,158
POTASSIUM PHOSPHITE	189,512	182,376	141,395	287,730	279,746	281,601	390,300	708,946	666,561	950,741
POTASSIUM SILICATE	76	119	231	39	1,412	988	5,407	23,582	36,525	25,901
POTASSIUM SORBATE	743	0	<1	65	0	0	0	0	0	0
PROPYLENE GLYCOL	28,505	24,132	25,792	54,215	47,878	58,461	86,331	90,353	87,134	89,547
PROPYLENEGLYCOL MONOLAURATE	0	0	7	12	0	0	203	44	0	0
PSEUDOMONAS FLUORESCENS, STRAIN A506	614	390	328	217	274	59	92	270	87	123
PSEUDOMONAS SYRINGAE, STRAIN ESC-10	0	0	0	<1	0	0	3	0	0	0
PURPUREOCILIUM LILACIUNUM STRAIN 251	0	0	0	252	515	840	4,073	5,031	6,408	6,273
PUTRESCENT WHOLE EGG SOLIDS	20	1	143	3	1	1	1	1	1	6
PYTHIUM OLIGANDRUM DV74	0	0	0	0	<1	<1	<1	0	0	0

Table 17: (continued) *The reported pounds of pesticides used that are biopesticides. Biopesticides include microorganisms and naturally occurring compounds, or compounds essentially identical to naturally occurring compounds that are not toxic to the target pest (such as pheromones).*

AI	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
QST 713 STRAIN OF DRIED BACILLUS SUBTILIS	17,337	16,703	16,175	21,307	23,942	23,504	24,590	20,969	20,901	21,029
QUILLAJA	276	1,183	410	682	1,081	785	1,040	775	829	1,027
REYNOUTRIA SACHALINENSIS	0	0	179	8,996	14,821	14,803	15,354	16,105	18,358	23,437
S-ABSCISIC ACID	0	7	66	864	1,850	2,651	2,131	2,382	2,114	2,192
S-METHOPRENE	1,726	3,520	3,284	3,921	2,305	2,324	2,331	2,524	2,781	3,219
SAWDUST	<1	1	<1	1	0	4	4	0	0	1
SESAME OIL	883	529	851	1,309	1,327	15	<1	0	0	0
SILVER NITRATE	0	0	0	<1	<1	<1	0	0	0	<1
SODIUM BICARBONATE	0	67	27	3	515	146	44	479	420	13,604
SODIUM CARBONATE PEROXYHYDRATE	11,902	39,470	114,653	101,714	293,876	300,693	295,762	463,448	244,233	261,347
SODIUM CHLORIDE	715	4	3	2	131	112	119	211	216	128
SODIUM LAURYL SULFATE	400	340	146	96	458	884	431	570	1,749	507
SORBITOL OCTANOATE	0	0	2,007	0	35	0	0	0	0	0
SOYBEAN OIL	14,747	12,005	28,359	23,805	24,109	22,022	45,973	59,297	69,771	84,295
STREPTOMYCES GRISEOVIRIDIS STRAIN K61	<1	<1	<1	<1	<1	<1	10	11	18	5
STREPTOMYCES LYDICUS WYEC 108	<1	<1	1	2	1	2	3	3	3	4
SUCROSE OCTANOATE	0	1,685	4,003	1,128	230	55	188	98	203	29
SUGAR	4,180	1,103	993	1,122	448	1,240	51	16	60	667
THYME	485	593	775	1,311	665	844	1,135	1,150	257	122
THYME OIL	0	0	0	0	0	0	0	0	1	3
THYMOL	289	523	1,675	1,539	265	181	398	314	278	534
TRICHODERMA HARZIANUM RIFAI STRAIN KRL-AG2	38	20	11	504	129	158	186	86	65	112
TRICHODERMA ICC 012 ASPERELLUM	0	0	0	0	13	19	43	2	2	9
TRICHODERMA ICC 080 GAMSII	0	0	0	0	13	19	43	2	2	9
TRIMETHYLAMINE	0	0	0	0	0	0	<1	0	<1	<1
ULOCLADIUM OUDEMANSII (U3 STRAIN)	0	0	0	0	0	0	29	792	516	155
VANILLIN	5	1	3	<1	1	1	<1	<1	1	0
VEGETABLE OIL	154,128	270,375	196,078	323,250	513,650	276,278	315,218	267,446	485,628	517,738
XANTHINE	<1	0	0	0	0	0	0	<1	0	0
YEAST	1,030	999	926	470	1,165	818	80	32	86	14
YUCCA SCHIDIGERA	0	7	169	634	1,649	7,147	12,327	5,652	2,565	3,130
Z,E-9,12-TETRADECADIEN-1-YL ACETATE	1	0	6,149	1	7	6	14	122	20	10
Z-11-TETRADECEN-1-YL ACETATE	228	9	9	9	4	8	8	<1	<1	<1
Z-8-DODECENOL	41	46	106	157	34	48	44	38	89	60

Table 17: (continued) *The reported pounds of pesticides used that are biopesticides. Biopesticides include microorganisms and naturally occurring compounds, or compounds essentially identical to naturally occurring compounds that are not toxic to the target pest (such as pheromones).*

AI	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Z-8-DODECENYL ACETATE	3,647	4,051	9,262	13,964	3,007	4,005	3,467	3,248	4,320	4,298
TOTAL	3,125,244	3,025,887	3,925,010	5,164,119	4,434,697	4,320,169	5,125,973	6,202,830	6,911,672	7,703,193