USE TRENDS OF BIOPESTICIDES.

Table 17: *The reported pounds of pesticides used that are biopesticides. Biopesticides include microorganisms and naturally occurring compounds, or compounds similar to those found in nature that are not toxic to the target pest (such as pheromones). Use includes both agricultural and reportable nonagricultural applications. Data are available at <ftp://transfer.cdpr.ca.gov/pub/outgoing/pur/data/ >.*

AI	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
(3S, 6R)-3-METHYL-6-ISOPROPENYL-9-DECEN-1-YL ACETATE	0	<1	0	0	<1	0	<1	0	<1	7
(3S, 6S)-3-METHYL-6-ISOPROPENYL-9-DECEN-1-YL ACETATE	0	<1	0	0	<1	0	<1	0	<1	7
(E)-4-TRIDECEN-1-YL-ACETATE	176	80	94	0	0	0	23	0	0	0
(E)-5-DECEN-1-OL	0	0	0	0	<1	<1	<1	1	8	1
(E)-5-DECENOL	2	1	1	<1	2	3	1	33	8	95
(E)-5-DECENYL ACETATE	8	4	5	2	10	7	4	25	133	84
(E,E)-9, 11-TETRADECADIEN-1-YL ACETATE	28	11	2	6	3	4	3	3	1	12
(E,Z)-7,9-DODECADIEN-1-YL ACETATE	0	0	50	249	270	24	24	0	0	0
(S)-KINOPRENE	252	276	277	191	300	285	311	429	327	253
(S)-VERBENONE	0	0	0	0	55	0	0	781	633	28
(Z)-11-HEXADECEN-1-YL ACETATE	0	681	0	1	0	0	0	0	<1	98
(Z)-11-HEXADECENAL	0	0	0	0	0	0	0	1	1	98
(Z)-4-TRIDECEN-1-YL-ACETATE	6	3	3	0	0	0	1	0	0	0
(Z)-9-DODECENYL ACETATE	<1	<1	<1	<1	<1	<1	<1	<1	0	0
(Z,E)-7,11-HEXADECADIEN-1-YL ACETATE	<1	3	2	0	0	0	0	0	0	0
(Z,Z)-11,13-HEXADECADIENAL	<1	0	<1	571	271	321	619	969	1,072	1,086
(Z,Z)-7,11-HEXADECADIEN-1-YL ACETATE	0	3	3	0	0	0	0	0	0	0
1,4-DIMETHYLNAPHTHALENE	837	1,544	1,152	544	893	2,225	1,085	891	660	133
1,7-DIOXASPIRO-(5,5)-UNDECANE	<1	<1	<1	<1	<1	1	<1	1	0	0
1-METHYLCYCLOPROPENE	<1	<1	<1	<1	1	1	<1	1	1	1
1-NAPHTHALENEACETAMIDE	55	32	25	20	20	19	22	18	14	11
1-OCTEN-3-OL	0	0	0	0	0	0	<1	<1	0	0
2,4-DECADIENOIC ACID, ETHYL ESTER, (2E,4Z)-	0	0	0	0	0	0	<1	4	3	3
2-METHYL-1-BUTANOL	0	0	0	0	0	<1	<1	<1	<1	1
3,13 OCTADECADIEN-1-YL ACETATE	44	0	1	12	0	<1	0	<1	142	0
3,7-DIMETHYL-6-OCTEN-1-OL	1	5	23	12	28	54	42	49	72	92
ACETIC ACID	21	79	1,732	73	601	43	62	20,806	9,111	5,355
AGROBACTERIUM RADIOBACTER	32	142	124	95	28	230	271	137	2,561	64
AGROBACTERIUM RADIOBACTER, STRAIN K1026	<1	1	<1	<1	<1	34	<1	<1	<1	0

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

AI	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
ALLYL ISOTHIOCYANATE	0	0	0	0	<1	0	0	0	<1	0
ALMOND, BITTER	<1	<1	<1	<1	<1	<1	<1	<1	0	<1
AMINO ETHOXY VINYL GLYCINE HYDROCHLORIDE	1,073	543	1,024	1,194	1,368	1,444	1,757	2,011	1,380	1,289
AMMONIUM BICARBONATE	2	<1	9	14	7	51	34	42	0	0
AMMONIUM NITRATE	48,460	52,922	55,872	74,925	90,839	125,016	121,852	120,383	115,073	108,272
AMMONIUM NONANOATE	0	0	0	0	0	1,937	3,131	3,399	27,116	15,550
AMPELOMYCES QUISQUALIS	0	<1	<1	0	0	0	0	0	0	0
ASPERGILLUS FLAVUS STRAIN AF36	0	0	0	<1	4	4	8	9	14	15
AUREOBASIDIUM PULLULANS STRAIN DSM 14940	0	0	0	0	0	81	458	356	1,095	2,493
AUREOBASIDIUM PULLULANS STRAIN DSM 14941	0	0	0	0	0	81	458	356	1,095	2,493
AZADIRACHTIN	2,246	2,500	1,880	2,020	2,637	3,387	4,325	5,108	4,757	4,870
BACILLUS AMYLOLIQUEFACIENS STRAIN D747	0	0	0	0	869	84,957	177,589	131,295	209,773	395,457
BACILLUS AMYLOLIQUEFACIENS STRAIN MBI 600	0	0	0	0	<1	<1	0	0	14	71
BACILLUS FIRMUS (STRAIN I-1582)	0	0	0	0	0	0	42	190	170	212
BACILLUS MYCOIDES ISOLATE J	0	0	0	0	0	0	0	0	0	1,085
BACILLUS POPILLIAE	0	0	0	0	0	<1	<1	<1	<1	0
BACILLUS PUMILUS, STRAIN QST 2808	8,138	6,987	6,783	7,546	6,733	6,245	7,957	8,118	7,879	9,229
BACILLUS SPHAERICUS 2362, SEROTYPE H5A5B, STRAIN ABTS 1743 FERMENTATION SOLIDS, SPORES AND INSECTICIDAL TOXINS	21,441	18,178	13,013	10,602	9,123	10,500	10,499	12,357	13,104	16,362
BACILLUS SUBTILIS GB03	1	<1	<1	<1	1	1	2	3	3	4
BACILLUS SUBTILIS VAR. AMYLOLIQUEFACIENS STRAIN FZB24	0	0	0	0	2	94	119	178	6	<1
BACILLUS THURINGIENSIS (BERLINER)	16	4	6	26	18	11	4	29	21	14
BACILLUS THURINGIENSIS (BERLINER), SUBSP. AIZAWAI, GC-91 PROTEIN	20,484	27,539	20,397	11,666	17,042	13,265	18,776	16,771	18,882	34,097
BACILLUS THURINGIENSIS (BERLINER), SUBSP. AIZAWAI, SEROTYPE H-7	2,373	894	814	814	696	359	333	184	47	90
BACILLUS THURINGIENSIS (BERLINER), SUBSP. ISRAELENSIS, SEROTYPE H-14	9,433	17,202	11,401	22,640	12,632	9,269	11,779	15,761	15,810	17,733

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

AI	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
BACILLUS THURINGIENSIS (BERLINER), SUBSP. KURSTAKI STRAIN SA-12	12,325	12,128	7,424	4,679	10,361	8,246	7,971	8,473	9,799	2,218
BACILLUS THURINGIENSIS (BERLINER), SUBSP. KURSTAKI, SEROTYPE 3A,3B	460	402	150	244	234	53	41	18	34	76
BACILLUS THURINGIENSIS (BERLINER), SUBSP. KURSTAKI, STRAIN EG 2348	369	118	66	478	44	500	514	344	645	396
BACILLUS THURINGIENSIS (BERLINER), SUBSP. KURSTAKI, STRAIN EG2371	0	0	<1	<1	0	0	0	0	0	0
BACILLUS THURINGIENSIS (BERLINER), SUBSP. KURSTAKI, STRAIN SA-11	66,612	80,565	75,036	115,663	52,411	77,932	80,401	80,953	74,963	96,211
BACILLUS THURINGIENSIS (BERLINER), SUBSP. SAN DIEGO	0	<1	<1	0	0	0	0	0	0	0
BACILLUS THURINGIENSIS SUBSPECIES KURSTAKI STRAIN BMP 123	764	118	14	0	0	0	0	0	0	0
BACILLUS THURINGIENSIS SUBSPECIES KURSTAKI, GENETICALLY ENGINEERED STRAIN EG7841 LEPIDOPTERAN ACTIVE TOXIN	277	42	1	75	298	116	65	3	43	3
BACILLUS THURINGIENSIS VAR. KURSTAKI STRAIN M-200	0	<1	0	0	0	0	0	<1	0	<1
BACILLUS THURINGIENSIS VAR. KURSTAKI, GENETICALLY ENGINEERED STRAIN EG7826	442	95	0	0	528	0	0	0	7	0
BACILLUS THURINGIENSIS, SUBSP. AIZAWAI, STRAIN ABTS-1857	39,464	31,043	26,250	24,308	30,646	29,863	49,186	55,901	72,261	92,842
BACILLUS THURINGIENSIS, SUBSP. AIZAWAI, STRAIN SD-1372, LEPIDOPTERAN ACTIVE TOXIN(S)	256	243	130	88	1	18	6	43	13	6
BACILLUS THURINGIENSIS, SUBSP. ISRAELENSIS, STRAIN AM 65-52	52,969	53,778	71,050	52,787	173,151	49,682	42,766	46,599	70,128	83,869

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

AI	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
BACILLUS THURINGIENSIS, SUBSP. KURSTAKI, STRAIN ABTS-351, FERMENTATION SOLIDS AND SOLUBLES	78,527	69,545	96,988	82,858	95,146	83,413	111,388	95,431	117,621	133,852
BACILLUS THURINGIENSIS, SUBSP. KURSTAKI, STRAIN HD-1	2,068	3,747	3,579	2,525	3,187	2,323	1,928	1,916	441	642
BACILLUS THURINGIENSIS, VAR. KURSTAKI DELTA ENDOTOXINS CRY 1A(C) AND CRY 1C (GENETICALLY ENGINEERED) ENCAPSULATED IN PSEUDOMONAS FLUORESCENS (KILLED)	26	28	<1	<1	4	0	<1	0	<1	0
BACTERIOPHAGE ACTIVE AGAINST XANTHOMONAS CAMPESTRIS PV. VESICATORIA AND PSEUDOMONAS SYRINGAE PV. TOMATO	0	0	0	<1	<1	<1	<1	0	0	<1
BALSAM FIR OIL	0	0	<1	0	<1	<1	<1	1	<1	0
BEAUVERIA BASSIANA HF 23	0	0	0	0	0	0	0	0	37	55
BEAUVERIA BASSIANA STRAIN GHA	569	378	357	622	1,220	1,796	2,749	3,511	2,850	5,685
BETA-CONGLUTIN	0	0	0	0	0	0	0	6,762	6,099	7,383
BUFFALO GOURD ROOT POWDER	279	1	11	0	1	25	5	6	8	3
BURKHOLDERIA SP STRAIN A396 CELLS AND FERMENTATION MEDIA	0	0	0	0	0	0	2,829	58,593	53,655	115,396
BUTYL MERCAPTAN	0	0	0	0	<1	0	0	0	0	0
CANOLA OIL	25	17	131	26	15	28	61	97	246	285
CAPSICUM OLEORESIN	5	2	4	4	12	10	27	92	125	203
CARBON DIOXIDE	44,315	7,727	17,550	21,239	19,040	15,739	18,297	17,675	25,366	20,606
CASTOR OIL	4	21	7	<1	2	<1	8	<1	4	0
CHENOPODIUM AMBROSIODES NEAR AMBROSIODES	0	20,330	10,336	7,897	10,230	20,261	17,504	12,828	10,207	8,300
CHROMOBACTERIUM SUBTSUGAE STRAIN PRAA4-1	0	0	0	0	1,169	30,262	46,419	45,894	31,445	36,333
CINNAMALDEHYDE	354	0	0	1	0	0	0	0	0	59
CITRIC ACID	57,085	55,421	73,858	82,141	94,945	128,839	115,038	126,206	142,166	136,050
CLARIFIED HYDROPHOBIC EXTRACT OF NEEM OIL	104,822	106,271	115,931	70,540	76,408	119,298	197,351	222,602	166,055	172,972
CODLING MOTH GRANULOSIS VIRUS	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
CONIOTHYRIUM MINITANS STRAIN CON/M/91-08	0	127	80	176	245	611	641	786	657	665
CORN GLUTEN MEAL	<1	0	0	0	0	0	0	0	0	0

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

AI	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
CORN SYRUP	1,893	2,891	3,026	4,377	4,766	3,216	3,344	4,342	4,850	14,751
COTTONSEED OIL	138,841	79,250	152,118	318,700	114,610	105,083	132,464	87,451	55,082	45,527
COYOTE URINE	0	0	<1	1	2	3	9	6	3	6
CYTOKININ	0	0	0	<1	<1	<1	<1	<1	<1	<1
DIALLYL DISULFIDE	0	0	0	0	0	0	0	0	103	94
DIHYDRO-5-HEPTYL-2(3H)-FURANONE	<1	<1	<1	0	0	0	0	0	0	0
DIHYDRO-5-PENTYL-2(3H)-FURANONE	<1	<1	<1	0	0	0	0	0	0	0
E,E-8,10-DODECADIEN-1-OL	2,037	4,978	1,942	1,376	1,995	2,276	1,395	1,445	1,077	5,419
E-11-TETRADECEN-1-YL ACETATE	744	312	100	172	133	142	61	73	32	293
E-8-DODECENYL ACETATE	265	606	898	195	283	273	224	769	389	1,712
ENCAPSULATED DELTA ENDOTOXIN OF BACILLUS THURINGIENSIS VAR. KURSTAKI IN KILLED PSEUDOMONAS FLUORESCENS	18	18	0	1	<1	0	0	0	0	0
ESSENTIAL OILS	0	<1	<1	<1	1	<1	15	12	20	24
ETHYLENE	0	0	97	1,018	954	1,359	1,333	1,683	1,299	1,248
EUCALYPTUS OIL	0	0	22	<1	0	0	0	0	0	0
EUGENOL	0	0	0	0	1	<1	1	<1	1	<1
FARNESOL	2	3	10	5	11	21	17	20	29	37
FENUGREEK	6	17	1	5	8	2	1	7	0	<1
FERRIC SODIUM EDTA	0	0	0	1,979	6,351	5,855	6,790	8,000	12,449	12,328
FISH OIL	0	0	0	1,657	5,466	4,114	0	0	1,078	0
FORMIC ACID	499	280	223	241	634	66	337	2,606	1,243	984
FOX URINE	0	0	<1	<1	2	1	4	3	1	4
GAMMA AMINOBUTYRIC ACID	944	177	118	40	133	28	15	15	0	0
GARLIC	212	36	423	29	1,905	2,832	1,392	667	849	529
GERANIOL	1	5	23	12	28	54	42	49	72	92
GERMAN COCKROACH PHEROMONE	<1	<1	<1	<1	<1	<1	<1	0	<1	<1
GIBBERELLINS	23,516	22,916	21,310	21,659	22,602	41,103	27,422	27,409	23,134	27,085
GIBBERELLINS, POTASSIUM SALT	<1	0	<1	<1	5	0	0	0	0	1
GLIOCLADIUM VIRENS GL-21 (SPORES)	945	356	945	649	1,957	3,538	2,989	4,586	4,395	2,829
GLUTAMIC ACID	944	177	118	40	133	28	15	15	0	0
GS-OMEGA/KAPPA-HXTX-HV1A (VERSITUDE PEPTIDE)	0	0	0	0	0	0	0	0	<1	0
HARPIN PROTEIN	16	14	13	11	1	1	<1	0	<1	<1
HEPTYL BUTYRATE	0	0	<1	<1	<1	14	6	4	3	13
HYDROGEN PEROXIDE	20,740	21,750	69,179	59,122	36,223	47,236	49,936	74,419	130,340	311,566
HYDROPRENE	2,383	1,664	6,382	11,261	3,948	7,352	5,734	6,456	3,859	3,041
IBA	11	6	7	9	12	15	14	13	10	19

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

AI	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
INDOLE	0	0	0	0	0	<1	0	<1	<1	<1
IRON HEDTA	0	0	0	0	43	92	120	91	170	213
IRON PHOSPHATE	1,901	1,435	2,351	2,872	2,327	2,119	2,007	2,071	2,250	3,475
KAOLIN	1,460,552	2,371,254	3,040,482	1,686,870	1,999,426	2,473,768	2,854,542	3,411,278	3,590,907	3,182,553
KINOPRENE	23	3	3	9	3	8	33	17	10	1
LACTIC ACID	0	0	0	0	0	0	0	2	1	7
LACTOSE	11,341	9,160	7,967	9,195	6,554	7,143	6,616	7,855	8,501	8,875
LAGENIDIUM GIGANTEUM (CALIFORNIA STRAIN)	<1	0	0	0	0	0	0	0	0	0
LAURYL ALCOHOL	830	432	736	497	755	449	293	501	317	2,565
LAVANDULYL SENECIOATE	140	462	437	6,120	586	477	3,166	507	1,029	1,150
LIMONENE	45,536	56,495	56,406	62,921	74,366	61,293	68,137	72,906	67,550	92,187
LINALOOL	63	62	1,104	95	137	72	62	93	15	11
MARGOSA OIL	0	0	579	7,886	9,106	12,189	22,585	26,019	32,493	25,018
MENTHOL	0	0	5	<1	0	20	0	0	0	0
METARHIZIUM ANISOPLIAE STRAIN F52	0	0	0	0	116	89	121	20	54	2
METARHIZIUM ANISOPLIAE, VAR. ANISOPLIAE, STRAIN ESF1	<1	0	<1	<1	0	0	0	0	0	0
METHOPRENE	2,620	1,568	1,492	1,777	1,304	1,350	3,556	1,390	1,271	1,063
METHYL ANTHRANILATE	118	312	343	448	300	1,237	634	672	789	1,118
METHYL EUGENOL	0	0	0	5	0	9	0	0	126	386
METHYL NONYL KETONE	<1	<1	<1	0	0	<1	<1	<1	<1	<1
METHYL SALICYLATE	0	<1	0	0	0	0	0	0	0	<1
MUSCALURE	19	20	15	15	16	13	17	23	29	44
MYRISTYL ALCOHOL	169	88	150	102	155	91	60	102	64	520
MYROTHECIUM VERRUCARIA, DRIED FERMENTATION SOLIDS & SOLUBLES, STRAIN AARC-0255	23,867	23,273	22,813	27,757	25,556	26,005	17,675	30,810	26,033	22,923
N6-BENZYL ADENINE	153	168	217	129	168	183	184	230	221	161
NAA	31	3	5	4	9	15	12	18	11	100
NAA, AMMONIUM SALT	1,193	1,203	976	839	1,400	1,056	945	996	125	180
NAA, ETHYL ESTER	8	3	6	23	4	3	5	3	38	10,502
NAA, POTASSIUM SALT	0	0	0	0	0	53	15	2	934	1,017
NAA, SODIUM SALT	1	2	0	0	0	2	1	<1	<1	0
NATAMYCIN	0	0	0	0	0	<1	1	1	1	<1
NEROLIDOL	2	6	24	12	28	54	42	49	72	92
NITROGEN, LIQUEFIED	11,945	2,181	135	216	74	594	6	0	0	0
NONANOIC ACID	11,093	9,063	17,322	17,892	18,199	21,545	17,530	14,482	13,301	14,586
NONANOIC ACID, OTHER RELATED	584	477	912	942	958	1,134	923	762	700	767

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

AI	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
NOSEMA LOCUSTAE SPORES	<1	<1	<1	<1	1	<1	<1	<1	1	<1
OIL OF ANISE	<1	0	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	<1	0	0	0	0	<1	<1	0
OIL OF CITRONELLA	3	0	5	5	0	0	1	5	<1	1
OIL OF GERANIUM	0	0	<1	0	0	0	0	0	0	0
OIL OF JOJOBA	12,070	3,418	4,176	1,232	507	135	376	44	19	2
OIL OF LEMON EUCALYPTUS	0	0	0	<1	3	0	0	0	0	0
OIL OF LEMONGRASS	0	0	<1	0	0	0	0	0	0	0
OIL OF ORANGE	0	0	0	0	0	0	0	198	386	1,360
OIL OF PEPPERMINT	<1	0	<1	0	0	0	0	0	0	0
OXYPURINOL	0	0	0	0	0	0	<1	0	0	0
PAECILOMYCES FUMOSOROSEUS APOPKA STRAIN 97	0	0	0	0	506	3,302	5,951	5,624	8,947	8,659
PANTOEA AGGLOMERANS STRAIN E325, NRRL B-21856	0	33	4	1	1	1	0	0	0	0
PHENYLETHYL PROPIONATE	502	500	822	423	535	701	712	185	96	140
PHOSPHORIC ACID, MONOPOTASSIUM SALT	0	12	6,984	9,079	3,927	1,918	374	9,585	15,002	11,445
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)	<1	1	1	51	6	1	2	4	20	41
POLYOXIN D, ZINC SALT	331	397	1,296	3,497	4,736	6,731	7,412	8,613	10,305	10,418
POTASSIUM BICARBONATE	109,171	180,858	275,648	357,539	228,269	239,695	223,547	318,099	462,743	487,401
POTASSIUM PHOSPHITE	182,376	141,395	287,730	279,828	281,301	390,300	708,946	666,577	952,390	1,164,449
POTASSIUM SILICATE	119	231	39	1,412	988	5,407	23,582	36,525	25,901	33,016
POTASSIUM SORBATE	0	<1	65	0	0	0	0	0	0	0
PROPYLENE GLYCOL	24,132	25,792	54,215	48,281	58,423	86,331	90,353	87,136	87,839	103,641
PROPYLENEGLYCOL MONOLAURATE	0	7	12	0	0	203	44	0	0	0
PSEUDOMONAS FLUORESCENS, STRAIN A506	390	328	217	274	59	92	270	87	123	111
PSEUDOMONAS SYRINGAE, STRAIN ESC-10	0	0	<1	0	0	3	0	0	0	0
PURPUREOCILLIUM LILACIUNUM STRAIN 251	0	0	252	515	840	4,073	5,031	6,408	6,273	5,416
PUTRESCENT WHOLE EGG SOLIDS	1	143	3	1	1	1	1	1	6	5
PYTHIUM OLIGANDRUM DV74	0	0	0	<1	<1	<1	0	0	0	0

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

AI	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
QST 713 STRAIN OF DRIED BACILLUS SUBTILIS	16,703	16,175	21,307	23,951	23,360	24,590	20,969	20,905	21,038	21,922
QUILLAJA	1,183	410	682	1,081	785	1,040	775	829	1,027	1,385
REYNOUTRIA SACHALINENSIS	0	179	8,996	14,823	14,800	15,354	16,105	18,358	23,489	23,577
S-ABSCISIC ACID	7	66	864	1,850	2,651	2,131	2,382	2,114	2,192	2,220
S-METHOPRENE	3,520	3,284	3,921	2,305	2,324	2,331	2,524	2,781	3,219	3,111
SAWDUST	1	<1	1	0	4	4	0	0	1	0
SESAME OIL	529	851	1,309	1,327	15	<1	0	0	0	0
SILVER NITRATE	0	0	<1	<1	<1	0	0	0	<1	<1
SODIUM BICARBONATE	67	27	3	515	146	44	479	420	13,604	3,679
SODIUM CARBONATE PEROXYHYDRATE	39,470	114,653	101,714	293,876	300,691	295,762	463,448	244,233	261,347	165,621
SODIUM CHLORIDE	4	3	2	131	111	119	211	216	128	81
SODIUM LAURYL SULFATE	340	146	96	458	884	431	570	1,749	507	1,200
SORBITOL OCTANOATE	0	2,007	0	35	0	0	0	0	0	<1
SOYBEAN OIL	12,005	28,359	23,805	24,109	21,979	45,973	59,297	69,771	84,295	80,991
STREPTOMYCES GRISEOVIRIDIS STRAIN K61	<1	<1	<1	<1	<1	10	11	18	5	4
STREPTOMYCES LYDICUS WYEC 108	<1	1	2	1	2	3	3	3	4	3
SUCROSE OCTANOATE	1,685	4,003	1,128	230	55	188	98	203	29	7
SUGAR	1,103	993	1,122	448	1,240	51	16	60	667	4
THYME	593	775	1,311	665	844	1,135	1,150	257	122	181
THYME OIL	0	0	0	0	0	0	0	1	3	12
THYMOL	523	1,675	1,539	265	181	398	314	278	570	409
TRICHODERMA HARZIANUM RIFAI STRAIN KRL-AG2	20	11	504	129	157	186	86	65	112	63
TRICHODERMA ICC 012 ASPERELLUM	0	0	0	13	19	43	2	2	9	4
TRICHODERMA ICC 080 GAMSII	0	0	0	13	19	43	2	2	9	4
TRIMETHYLAMINE	0	0	0	0	0	<1	0	<1	<1	<1
ULOCLADIUM OUDEMANSII (U3 STRAIN)	0	0	0	0	0	29	792	516	155	34
VANILLIN	1	3	<1	1	1	<1	<1	1	0	<1
VEGETABLE OIL	270,375	196,078	323,250	513,650	276,278	315,218	267,446	485,628	517,951	665,567
XANTHINE	0	0	0	0	0	0	<1	0	0	0
YEAST	999	926	470	1,165	818	80	32	86	14	4
YUCCA SCHIDIGERA	7	169	634	1,649	7,147	12,327	5,652	2,565	3,130	2,172
Z,E-9,12-TETRADECADIEN-1-YL ACETATE	0	6,149	1	7	6	14	122	20	10	21
Z-11-TETRADECEN-1-YL ACETATE	9	9	9	4	8	8	<1	<1	<1	<1
Z-8-DODECENOL	46	106	157	34	48	44	38	98	60	201

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

AI	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Z-8-DODECENYL ACETATE	4,051	9,262	13,964	3,007	4,005	3,467	3,248	4,459	4,298	6,452
TOTAL	3,025,693	3,924,345	5,163,344	4,436,637	4,296,188	5,124,564	6,202,013	6,911,104	7,711,247	8,133,027