

Table 20: *The reported cumulative acres treated with pesticides 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 primarily agricultural applications (Most non-production-agricultural pesticide use reports are not required to report acreage. A zero indicates some non-agricultural use occurred, but acreage was not reported. The word "none" indicates no use at all that year). The grand total for acres treated may be less than the sum of acres treated for all active ingredients because some products contain more than one active ingredient. Data are available at <ftp://transfer.cdpr.ca.gov/pub/outgoing/pur/data/ >.*

AI	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
(3S, 6R)-3-METHYL-6-ISOPROPENYL-9-DECEN-1-YL ACETATE	3	None	None	7	None	24	None	215	8,683	35,138
(3S, 6S)-3-METHYL-6-ISOPROPENYL-9-DECEN-1-YL ACETATE	3	None	None	7	None	24	None	215	8,683	35,138
(E)-4-TRIDECEN-1-YL-ACETATE	3,982	3,995	None	None	None	1,074	None	None	None	0
(E)-5-DECEN-1-OL	None	None	None	53	83	20	166	354	264	242
(E)-5-DECENOL	118	249	166	502	837	639	348	368	832	1,053
(E)-5-DECENYL ACETATE	118	249	166	555	920	659	514	721	1,095	1,295
(E,E)-9, 11-TETRADECADIEN-1-YL ACETATE	3	474	759	608	985	466	645	349	361	364
(E,Z)-7,9-DODECADIEN-1-YL ACETATE	None	5,168	18,104	22,856	2,479	1,623	None	None	None	None
(S)-KINOPRENE	510	490	346	506	675	750	990	691	679	869
(S)-VERBENONE	None	None	None	100	None	None	0	0	2	1
(Z)-11-HEXADECEN-1-YL ACETATE	1,622	None	49	None	None	None	None	26	2,994	1,807
(Z)-11-HEXADECENAL	None	None	None	None	None	None	74	145	2,951	1,351
(Z)-4-TRIDECEN-1-YL-ACETATE	3,982	3,995	None	None	None	1,074	None	None	None	0
(Z)-9-DODECENYL ACETATE	123	74	1,814	392	555	1,966	950	None	None	None
(Z,E)-7,11-HEXADECADIEN-1-YL ACETATE	93	1	None	None	None	None	None	None	None	None
(Z,Z)-11,13-HEXADECADIENAL	None	763	11,336	17,283	20,591	38,681	61,037	66,068	67,233	89,479
(Z,Z)-7,11-HEXADECADIEN-1-YL ACETATE	93	1	None	None	None	None	None	None	None	None
1,4-DIMETHYLNAPHTHALENE	0	0	0	0	0	0	0	0	0	0
1,7-DIOXASPIRO-(5,5)-UNDECANE	6	0	<1	30	43	25	32	None	None	None
1-METHYLCYCLOPROPENE	61	3	1	17	21	14	10	6	13	5
1-NAPHTHALENEACETAMIDE	607	408	315	393	343	394	257	338	318	483
2,4-DECADIENOIC ACID, ETHYL ESTER, (2E,4Z)-	None	None	None	None	None	179	3,246	1,308	1,014	582
2-METHYL-1-BUTANOL	None	None	None	None	0	0	0	0	0	0
3,13 OCTADECADIEN-1-YL ACETATE	None	50	131	None	<1	None	10	25	None	None
3,7-DIMETHYL-6-OCTEN-1-OL	349	1,531	788	2,220	3,939	3,545	3,111	4,331	5,936	5,749
ACETIC ACID	226	110	162	3,165	3,114	10,301	15,775	10,437	18,729	13,906

Table 20: (continued) *The reported cumulative acres treated with pesticides 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	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
AGROBACTERIUM RADIOBACTER	215	362	507	852	622	664	806	613	99	570
AGROBACTERIUM RADIOBACTER, STRAIN K1026	5,086	81	19	4,947	9,016	754	745	<1	None	None
ALLYL ISOTHIOCYANATE	None	None	None	0	None	None	None	0	None	None
ALMOND, BITTER	471	74	412	271	88	68	73	None	4	198
AMINO ETHOXY VINYL GLYCINE HYDROCHLORIDE	5,611	10,179	11,108	14,991	16,371	17,666	20,248	14,254	13,067	25,478
AMMONIUM BICARBONATE	6	0	<1	30	43	25	32	None	None	None
AMMONIUM NITRATE	679,859	726,842	817,316	867,336	1,085,302	953,176	988,164	882,572	829,331	742,539
AMMONIUM NONANOATE	None	None	None	None	239	284	452	459	320	455
AMPELOMYCES QUISQUALIS	22	2	None	None	None	None	None	None	None	None
ASPERGILLUS FLAVUS STRAIN AF36	None	None	260	48,833	89,337	147,011	159,586	183,128	188,090	207,257
AUREOBASIDIUM PULLULANS STRAIN DSM 14940	None	None	None	None	254	2,823	1,569	5,376	8,675	18,077
AUREOBASIDIUM PULLULANS STRAIN DSM 14941	None	None	None	None	254	2,823	1,569	5,376	8,675	18,077
AZADIRACHTIN	82,722	71,707	70,228	98,803	113,960	159,292	193,929	175,608	175,645	150,779
BACILLUS AMYLOLIQUEFACIENS STRAIN D747	None	None	None	2,337	29,684	41,678	38,545	57,375	90,603	68,085
BACILLUS AMYLOLIQUEFACIENS STRAIN MBI 600	None	None	None	2	<1	None	None	165	1,607	4,793
BACILLUS FIRMUS (STRAIN I-1582)	None	None	None	None	None	12	45	41	43	29
BACILLUS MYCOIDES ISOLATE J	None	None	None	None	None	None	None	None	11,591	5,455
BACILLUS POPILLIAE	None	None	None	None	0	0	0	0	None	0
BACILLUS PUMILUS, STRAIN QST 2808	75,509	72,582	84,256	76,229	68,102	83,406	89,485	83,283	95,326	84,823
BACILLUS SPHAERICUS 2362, SEROTYPE H5A5B, STRAIN ABTS 1743 FERMENTATION SOLIDS, SPORES AND INSECTICIDAL TOXINS	0	9	0	231	38	110	118	233	542	0
BACILLUS SUBTILIS GB03	2	<1	6	<1	20	302	467	609	2,293	1,473
BACILLUS SUBTILIS STRAIN IAB/BS03	None	None	None	None	None	None	None	None	None	3,277
BACILLUS SUBTILIS VAR. AMYLOLIQUEFACIENS STRAIN FZB24	None	None	None	406	1,702	3,516	4,328	152	0	None
BACILLUS THURINGIENSIS (BERLINER)	82	127	877	292	248	91	249	247	573	186
BACILLUS THURINGIENSIS (BERLINER), SUBSP. AIZAWAI, GC-91 PROTEIN	48,842	40,395	18,657	25,262	22,511	28,611	26,155	25,221	48,924	53,734

Table 20: (continued) *The reported cumulative acres treated with pesticides 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	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
BACILLUS THURINGIENSIS (BERLINER), SUBSP. AIZAWAI, SEROTYPE H-7	7,888	6,943	7,766	6,064	3,296	2,941	1,360	624	1,025	451
BACILLUS THURINGIENSIS (BERLINER), SUBSP. ISRAELENIS, SEROTYPE H-14	501	1,873	337	773	1,107	1,254	1,713	334	836	149
BACILLUS THURINGIENSIS (BERLINER), SUBSP. KURSTAKI STRAIN SA-12	19,700	10,721	8,222	15,379	9,855	10,751	10,850	13,714	3,214	326
BACILLUS THURINGIENSIS (BERLINER), SUBSP. KURSTAKI, SEROTYPE 3A,3B	7,807	2,269	3,063	1,973	818	453	145	274	777	1,274
BACILLUS THURINGIENSIS (BERLINER), SUBSP. KURSTAKI, STRAIN EG 2348	1,302	688	3,428	644	3,580	4,038	2,502	4,480	4,004	132
BACILLUS THURINGIENSIS (BERLINER), SUBSP. KURSTAKI, STRAIN EG2371	None	0	<1	None	None	None	None	None	None	None
BACILLUS THURINGIENSIS (BERLINER), SUBSP. KURSTAKI, STRAIN SA-11	101,522	111,746	84,061	81,574	95,890	111,634	108,411	95,637	120,980	134,836
BACILLUS THURINGIENSIS (BERLINER), SUBSP. SAN DIEGO	<1	<1	None	None	None	None	None	None	None	None
BACILLUS THURINGIENSIS SUBSPECIES KURSTAKI STRAIN BMP 123	310	73	None	None	None	None	None	None	None	None
BACILLUS THURINGIENSIS SUBSPECIES KURSTAKI, GENETICALLY ENGINEERED STRAIN EG7841 LEPIDOPTERAN ACTIVE TOXIN	62	3	200	373	5	99	116	473	8	3
BACILLUS THURINGIENSIS VAR. KURSTAKI STRAIN M-200	0	None	None	None	None	None	0	None	1	0
BACILLUS THURINGIENSIS VAR. KURSTAKI, GENETICALLY ENGINEERED STRAIN EG7826	250	None	None	1,320	None	None	None	9	None	37
BACILLUS THURINGIENSIS, SUBSP. AIZAWAI, STRAIN ABTS-1857	41,724	37,209	35,300	41,720	36,837	68,895	70,582	86,966	111,201	104,319

Table 20: (continued) *The reported cumulative acres treated with pesticides 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	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
BACILLUS THURINGIENSIS, SUBSP. AIZAWAI, STRAIN SD-1372, LEPIDOPTERAN ACTIVE TOXIN(S)	2,136	1,057	640	4	112	47	306	120	77	118
BACILLUS THURINGIENSIS, SUBSP. ISRAELENIS, STRAIN AM 65-52	270	758	1,052	1,305	793	2,524	2,009	1,419	1,088	8,064
BACILLUS THURINGIENSIS, SUBSP. KURSTAKI, STRAIN ABTS-351, FERMENTATION SOLIDS AND SOLUBLES	120,801	162,444	152,510	164,936	147,805	192,454	152,721	193,013	230,441	213,550
BACILLUS THURINGIENSIS, SUBSP. KURSTAKI, STRAIN HD-1	20,295	18,465	15,940	15,228	10,138	7,887	11,007	2,241	2,744	1,221
BACILLUS THURINGIENSIS, VAR. KURSTAKI DELTA ENDOTOXINS CRY 1A(C) AND CRY 1C (GENETICALLY ENGINEERED) ENCAPSULATED IN PSEUDOMONAS FLUORESCENS (KILLED)	52	2	<1	10	None	0	None	0	None	2
BACTERIOPHAGE ACTIVE AGAINST XANTHOMONAS CAMPESTRIS PV. VESICATORIA AND PSEUDOMONAS SYRINGAE PV. TOMATO	None	None	11	25	21	12	None	None	0	None
BALSAM FIR OIL	None	0	None	0	0	0	0	0	None	0
BEAUVERIA BASSIANA HF 23	None	None	None	None	None	None	None	32	69	81
BEAUVERIA BASSIANA STRAIN GHA	2,188	1,686	2,706	4,011	6,857	10,900	14,356	11,145	16,947	17,959
BETA-CONGLUTIN	None	None	None	None	None	None	9,032	12,422	15,510	9,584
BUFFALO GOURD ROOT POWDER	8	138	None	25	161	200	224	114	154	194
BURKHOLDERIA SP STRAIN A396 CELLS AND FERMENTATION MEDIA	None	None	None	None	None	196	5,531	6,816	17,303	35,064
BUTYL MERCAPTAN	None	None	None	0	None	None	None	None	None	None
CANOLA OIL	1,541	4,786	3,872	2,329	5,788	4,272	7,455	20,351	47,851	74,737
CAPSICUM OLEORESIN	325	388	238	576	546	1,541	1,997	2,084	3,777	6,457
CARBON DIOXIDE	0	0	26	917	5	20	19	2	0	0
CASTOR OIL	12	0	0	0	0	0	0	0	None	<1
CHENOPODIUM AMBROSIOIDES NEAR AMBROSIOIDES	6,395	9,265	6,868	13,401	22,552	25,820	19,072	15,804	15,002	635
CHROMOBACTERIUM SUBTUGAE STRAIN PRAA4-1	None	None	None	1,424	38,138	61,191	62,467	43,369	48,863	54,929
CINNAMALDEHYDE	None	None	<1	None	None	None	None	None	110	<1
CITRAL	None	15	None	None	None	None	None	None	None	None
CITRIC ACID	903,198	1,204,981	1,332,600	1,389,801	1,542,524	1,686,317	1,923,049	2,202,219	2,158,303	2,186,430

Table 20: (continued) *The reported cumulative acres treated with pesticides 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	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
CLARIFIED HYDROPHOBIC EXTRACT OF NEEM OIL	47,422	42,281	40,773	42,613	60,212	85,369	87,917	65,680	59,517	47,093
CODLING MOTH GRANULOSIS VIRUS	1,139	984	3,468	3,431	4,339	4,530	3,683	2,938	4,426	4,707
CONIOTHYRIUM MINITANS STRAIN CON/M/91-08	1,204	395	1,107	1,697	4,286	4,886	6,194	4,104	5,134	3,250
CORN SYRUP	14,316	12,877	27,721	27,760	15,992	14,206	18,817	18,940	48,546	74,160
COTTONSEED OIL	74,544	129,722	177,732	95,344	98,797	78,736	67,349	41,034	36,856	35,581
COYOTE URINE	None	0	12	0	0	0	0	0	0	0
CYTOKININ (AS KINETIN)	None	None	199	2,409	352	3,290	1,966	1,910	3,506	5,052
DIALLYL DISULFIDE	None	None	None	None	None	None	None	225	222	None
DIHYDRO-5-HEPTYL-2(3H)-FURANONE	0	0	None	None	None	None	None	None	None	None
DIHYDRO-5-PENTYL-2(3H)-FURANONE	0	0	None	None	None	None	None	None	None	None
E,E-8,10-DODECADIEN-1-OL	15,309	15,283	17,872	15,879	18,241	16,548	10,763	12,918	17,123	15,845
E-11-TETRADECEN-1-YL ACETATE	5,592	5,405	1,701	4,485	4,396	489	696	369	1,000	421
E-8-DODECENYL ACETATE	46,757	49,591	45,667	49,300	47,640	41,405	42,645	39,638	38,080	41,944
ENCAPSULATED DELTA ENDOTOXIN OF BACILLUS THURINGIENSIS VAR. KURSTAKI IN KILLED PSEUDOMONAS FLUORESCENS	37	None	0	0	None	None	None	None	None	None
ESSENTIAL OILS	0	4	0	0	0	0	0	181	61	169
ETHYLENE	None	4	70	49	36	21	28	77	26	17
EUCALYPTUS OIL	None	2	0	None	None	None	None	None	None	None
EUGENOL	None	None	None	0	0	0	0	0	0	0
FARNESOL	503	1,597	826	2,227	3,940	3,547	3,121	4,331	5,936	5,749
FENUGREEK	471	74	412	271	88	68	73	None	4	198
FERRIC SODIUM EDTA	None	None	3,049	8,428	8,038	10,540	12,522	13,115	13,697	14,347
FISH OIL	None	None	0	382	252	None	None	66	None	None
FORMIC ACID	10	60	1	368	5	178	1,203	60	1	402
FOX URINE	None	0	12	0	0	0	0	0	0	0
GAMMA AMINOBUTYRIC ACID	1,786	835	542	1,811	384	314	287	None	None	None
GARLIC	374	1,123	1,369	12,410	14,485	8,509	4,767	7,185	3,819	6,613
GERANIOL	349	1,531	788	2,220	3,939	3,545	3,111	4,331	5,936	5,749
GERMAN COCKROACH PHEROMONE	0	0	0	0	0	0	None	0	0	0
GIBBERELLINS	514,164	493,034	509,758	529,744	548,185	530,086	523,059	544,711	501,836	505,422
GIBBERELLINS, POTASSIUM SALT	None	34	150	795	None	None	None	None	58	None
GLIOCLADIUM VIRENS GL-21 (SPORES)	716	1,401	1,076	3,172	5,444	5,187	7,439	7,140	4,914	4,300
GLUTAMIC ACID	1,786	835	542	1,811	384	314	287	None	None	None
GS-OMEGA/KAPPA-HXTX-HV1A (VERSITUDE PEPTIDE)	None	None	None	None	None	None	None	1	None	1

Table 20: (continued) *The reported cumulative acres treated with pesticides 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	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
HARPIN PROTEIN	1,562	1,631	1,582	115	95	0	None	112	<1	None
HEPTYL BUTYRATE	None	0	0	0	0	0	0	0	0	0
HYDROGEN PEROXIDE	14,521	23,208	39,194	21,863	22,955	27,951	32,676	69,022	65,560	103,587
HYDROPRENE	82	0	0	2	4	<1	<1	7	28	35
IBA	150	227	1,156	1,283	962	940	489	808	1,437	527
INDOLE	None	None	None	None	0	None	0	0	0	0
IRON HEDTA	None	None	None	0	2	0	0	0	2	0
IRON PHOSPHATE	4,561	6,345	5,477	6,519	6,286	8,109	8,618	13,322	11,965	9,264
KAOLIN	66,850	82,636	51,100	57,755	80,075	88,044	101,645	115,468	103,356	98,959
KINOPRENE	3	4	9	3	6	25	7	3	<1	6
LACTIC ACID	None	None	None	None	None	None	38	59	225	3
LACTOSE	80,355	81,164	91,936	68,442	80,242	61,764	81,390	77,746	74,127	70,016
LAGENIDIUM GIGANTEUM (CALIFORNIA STRAIN)	None	None	None	2	None	None	None	None	None	None
LAURYL ALCOHOL	4,705	5,495	6,443	6,652	7,807	5,681	5,725	4,718	4,354	4,765
LAVANDULYL SENECCIOATE	2,375	7,025	11,754	6,666	5,869	6,294	8,424	18,076	74,825	141,775
LIMONENE	55,465	29,621	15,514	73,605	29,552	32,924	45,208	40,224	68,084	54,142
LINALOOL	1	0	0	0	0	2	0	0	0	0
MARGOSA OIL	None	40	4,260	7,977	9,546	19,013	19,917	25,809	32,241	23,369
MENTHOL	None	2	0	None	20	None	None	None	None	None
METARHIZIUM ANISOPLIAE STRAIN F52	None	None	None	202	133	634	122	55	2	<1
METARHIZIUM ANISOPLIAE, VAR. ANISOPLIAE, STRAIN ESF1	None	0	0	None	None	None	None	None	None	None
METHOPRENE	211	4	896	0	0	0	0	42	106	0
METHYL ANTHRANILATE	550	380	2,043	215	1,092	808	895	1,463	2,490	2,041
METHYL EUGENOL	None	None	0	None	0	None	None	0	0	0
METHYL NONYL KETONE	1	0	None	None	<1	0	0	0	0	0
METHYL SALICYLATE	0	None	None	None	None	None	None	None	10	44
MUSCALURE	739	300	68	40	50	139	41	19	178	125
MYRISTYL ALCOHOL	4,705	5,495	6,443	6,652	7,807	5,681	5,725	4,718	4,354	4,765
MYROTHECIUM VERRUCARIA, DRIED FERMENTATION SOLIDS & SOLUBLES, STRAIN AARC-0255	5,331	4,840	5,136	4,274	4,456	3,637	8,775	6,473	4,075	5,037
N6-BENZYL ADENINE	2,072	3,352	1,691	1,666	2,954	2,630	2,595	2,999	2,322	3,160
NAA	47	38	219	655	293	109	210	84	84	17
NAA, AMMONIUM SALT	9,024	9,140	9,075	11,922	10,611	9,703	9,966	778	671	2,792
NAA, ETHYL ESTER	1	23	396	384	112	189	37	44	7,899	8,232
NAA, POTASSIUM SALT	None	None	None	None	6	110	35	8,819	8,650	5,764
NAA, SODIUM SALT	257	None	None	None	153	85	55	11	None	None

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AI	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
NATAMYCIN	None	None	None	None	7	32	35	27	5	None
NEROLIDOL	503	1,597	826	2,227	3,940	3,547	3,121	4,331	5,936	5,749
NITROGEN, LIQUEFIED	0	0	0	0	0	5	None	None	None	None
NONANOIC ACID	703	412	828	480	2,166	2,074	1,040	653	1,889	1,394
NONANOIC ACID, OTHER RELATED	701	412	828	460	2,166	2,074	1,040	653	1,219	619
NOSEMA LOCUSTAE SPORES	132	12	12	1,612	1,206	910	750	50	<1	1
OIL OF ANISE	None	None	0	0	0	0	0	0	0	0
OIL OF BLACK PEPPER	0	0	0	0	0	0	0	0	0	0
OIL OF CEDARWOOD	None	15	None	None	None	None	0	0	None	None
OIL OF CITRONELLA	None	34	48	None	None	0	0	0	0	0
OIL OF GERANIUM	None	15	None	None	None	None	None	None	None	None
OIL OF JOJOBA	7,203	8,255	1,762	1,077	316	323	83	16	5	None
OIL OF LEMON EUCALYPTUS	None	None	0	0	None	None	None	None	None	None
OIL OF ORANGE	None	None	None	None	None	None	21,472	37,651	66,215	53,652
OIL OF PEPPERMINT	None	15	None	None	None	None	None	None	None	None
OXYPURINOL	None	None	None	None	None	6	None	None	None	None
PAECILOMYCES FUMOSOROSEUS AOPKA STRAIN 97	None	None	None	2,109	12,822	18,487	19,076	31,000	26,577	15,462
PANTOEA AGGLOMERANS STRAIN E325, NRRL B-21856	698	55	25	50	50	None	None	None	None	None
PHENYLETHYL PROPIONATE	94	0	0	0	0	0	0	0	0	0
PHOSPHORIC ACID, MONOPOTASSIUM SALT	0	1,021	1,275	561	219	0	1,837	3,142	2,284	2,025
PIPERINE	0	0	0	0	0	0	0	0	0	0
POLYHEDRAL OCCLUSION BODIES (OB'S) OF THE NUCLEAR POLYHEDROSIS VIRUS OF HELICOVERPA ZEA (CORN EARWORM)	254	302	14,752	1,297	337	518	1,011	4,902	8,857	8,803
POLYOXIN D, ZINC SALT	1,299	19,082	69,674	95,645	143,483	165,601	191,654	231,736	242,630	261,976
POTASSIUM BICARBONATE	69,155	101,283	118,642	75,356	85,844	85,701	112,047	156,452	162,321	124,850
POTASSIUM PHOSPHITE	36,665	92,671	82,323	115,741	131,552	214,917	199,571	299,256	387,605	411,056
POTASSIUM SILICATE	274	48	808	537	3,524	12,973	13,499	12,133	14,938	8,228
POTASSIUM SORBATE	2	105	None	None	None	None	None	None	None	None
PROPYLENE GLYCOL	381,957	591,332	662,523	676,470	974,665	1,069,976	1,107,603	1,122,784	1,209,430	1,171,518
PROPYLENEGLYCOL MONOLAURATE	3	12	None	None	159	76	None	None	None	None
PSEUDOMONAS FLUORESCENS, STRAIN A506	2,463	1,472	1,281	372	431	1,178	376	601	524	533
PSEUDOMONAS SYRINGAE, STRAIN ESC-10	None	3	None	None	0	None	None	None	None	None

Table 20: (continued) *The reported cumulative acres treated with pesticides 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	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
PURPUREOCILLIUM LILACIUNUM STRAIN 251	None	1,115	2,330	3,531	20,039	25,826	32,089	26,924	22,662	15,819
PUTRESCENT WHOLE EGG SOLIDS	33	2	0	0	0	0	0	0	0	0
PYTHIUM OLIGANDRUM DV74	None	None	2	2	63	None	None	None	None	None
QST 713 STRAIN OF DRIED BACILLUS SUBTILIS	81,484	100,689	118,033	124,702	141,250	138,006	140,825	130,215	128,141	143,369
QUILLAJA	22,595	22,949	30,225	22,907	28,538	30,232	31,107	53,339	53,857	68,592
REYNOUTRIA SACHALINENSIS	1,297	70,363	90,750	94,114	96,188	95,988	105,535	128,066	124,832	111,531
S-ABSCISIC ACID	502	5,197	9,528	14,974	11,645	12,761	11,202	11,471	12,079	8,770
S-METHOPRENE	47,350	65,114	62,628	87,637	49,491	53,371	102,129	76,961	53,963	71,084
SAWDUST	0	0	None	74	108	None	None	160	None	None
SESAME OIL	1,448	1,912	1,938	39	1	None	None	None	None	6
SILVER NITRATE	None	<1	0	5	None	None	None	<1	1	None
SODIUM BICARBONATE	57	1	967	1,026	291	544	706	796	162	0
SODIUM CARBONATE PEROXYHYDRATE	1,453	3,666	6,566	13,797	11,764	17,035	8,051	10,137	7,129	12,824
SODIUM CHLORIDE	0	0	2	73	207	135	66	134	144	42
SODIUM LAURYL SULFATE	0	0	0	0	0	0	0	0	0	0
SORBITOL OCTANOATE	268	None	42	None	None	None	None	None	<1	None
SOYBEAN OIL	4,557	6,845	3,636	3,302	4,524	6,275	5,476	7,018	7,910	18,418
STREPTOMYCES GRISEOVIRIDIS STRAIN K61	<1	<1	1	<1	5	10	18	5	4	5
STREPTOMYCES LYDICUS WYEC 108	4,009	6,998	6,404	10,367	16,071	14,050	16,546	20,474	15,963	10,132
SUCROSE OCTANOATE	930	1,172	148	1	5	10	2	12	0	None
SUGAR	4,507	1,526	5,807	4,843	1,062	1,427	452	504	86	212
THYME	68	0	0	0	0	0	0	0	0	0
THYME OIL	None	None	None	None	None	None	0	0	0	0
THYMOL	50	422	10	18	1	1	1,267	490	44	311
TRICHODERMA HARZIANUM RIFAI STRAIN KRL-AG2	320	7,253	871	1,088	994	2,497	2,346	2,207	2,244	2,404
TRICHODERMA ICC 012 ASPERELLUM	None	None	86	704	604	35	251	159	92	139
TRICHODERMA ICC 080 GAMSII	None	None	86	704	604	35	251	159	92	139
TRIMETHYLAMINE	None	None	None	None	0	None	0	0	0	0
ULOCADIUM OUDEMANSII (U3 STRAIN)	None	None	None	None	19	707	406	150	28	1,674
VANILLIN	471	74	412	271	88	68	73	None	4	198
VEGETABLE OIL	211,586	292,501	458,756	266,226	350,771	243,680	311,693	405,341	603,896	584,304
XANTHINE	None	None	None	None	None	6	None	None	None	None
YEAST	3,957	1,306	5,261	3,729	325	142	220	25	6	14
YUCCA SCHIDIGERA	598	2,316	4,907	16,093	19,524	11,285	7,347	9,376	6,289	10,926

Table 20: (continued) *The reported cumulative acres treated with pesticides 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	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Z,E-9,12-TETRADECADIEN-1-YL ACETATE	1,622	0	49	0	0	0	0	0	43	506
Z-11-TETRADECEN-1-YL ACETATE	5,589	4,931	942	3,877	3,411	23	51	20	639	57
Z-8-DODECENOL	46,757	49,591	45,667	49,300	47,640	41,405	42,645	39,638	38,080	41,944
Z-8-DODECENYL ACETATE	46,757	49,591	45,667	49,300	47,640	41,405	42,645	39,638	38,080	41,944
TOTAL	3,986,178	4,910,149	5,503,387	5,585,447	6,547,837	6,925,141	7,487,719	8,018,198	8,558,267	8,604,231