Use Trends of Biopesticides: Pounds Applied

Text files of data are available. The reported pounds applied of biopesticides. Biopesticides include naturally occurring substances that control pests (biochemical pesticides) and microorganisms that control pests (microbial pesticides). The definition may also include new technologies that do not easily fit into one of those two categories. Values greater than one are rounded. For more information, see Pesticide Use Annual Report Data Access, References, and Definitions Guide.

Chemical	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
(3s,6r)-3-methyl-6-isopropenyl-9-decen-1-yl acetate	0	< 1	12	148	65	51	53	49	177	240
(3s,6s)-3-methyl-6-isopropenyl-9-decen-1-yl acetate	0	< 1	12	148	65	51	53	49	177	240
(e)-4-tridecen-1-yl-acetate	0	0	0	< 1	< 1	< 1	0	0	0	0
(e)-5-decen-1-ol	25	20	100	26	54	1,072	32	13	6	17
(e)-5-decenyl acetate	23	150	110	152	760	5,752	479	68	39	20
(e,e)-8,10-dodecadien-1-ol	1,290	1,004	5,367	1,195	798	1,220	942	1,307	1,048	1,048
(e,e)-9, 11-tetradecadien-1-yl acetate	3	1	12	2	< 1	< 1	< 1	< 1	< 1	10
(s)-kinoprene	446	337	253	378	531	481	361	315	337	260
(s)-verbenone	781	633	28	5	26	12	14	4	28	43
(z)-11-hexadecen-1-yl acetate	0	< 1	98	34	30	92	294	335	253	472
(z)-11-hexadecenal	1	< 1	98	33	19	92	293	335	253	472
(z)-4-tridecen-1-yl-acetate	0	0	0	< 1	3	6	0	0	0	0
(z)-9-dodecenyl acetate	< 1	0	0	0	0	0	0	0	0	0
(z,e)-7,11-hexadecadien-1-yl acetate	0	0	0	0	0	< 1	0	0	0	0

Chemical	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
(z,z)-11,13-hexadecadienal	969	1,072	1,086	1,404	1,846	1,511	1,644	2,266	3,748	3,915
(z,z)-3,13-octadecadien-1-ol acetate	< 1	142	0	0	0	0	0	0	0	0
(z,z)-7,11-hexadecadien-1-yl acetate	0	0	0	0	0	< 1	0	0	0	0
1,4-dimethylnaphthalene	891	660	133	836	379	274	411	1,520	485	2,357
1,7-dioxaspiro-(5,5)-undecane	< 1	0	0	0	0	0	0	0	0	0
1-aminocyclopropane-1-carboxylic acid	0	0	0	0	0	0	0	234	40	116
1-methylcyclopropene	8	1	1	< 1	< 1	< 1	< 1	< 1	< 1	2
2,4-decadienoic acid, ethyl ester, (2e,4z)-	4	3	3	2	1	48	4	< 1	3	4
2-methyl-1-butanol	< 1	< 1	< 1	< 1	< 1	1	2	2	4	4
3,7-dimethyl-6-octen-1-ol	49	72	95	98	70	62	60	42	22	4
3-decen-2-one	0	0	0	0	443	0	0	0	0	0
Acetic acid	20,808	9,111	5,364	4,248	1,508	2,017	286	699	547	77
Aggregated adjuvant data	218	1,679	1,363	575	534	3,075	478	262	630	13,314
Agrobacterium radiobacter strain: k1026	< 1	< 1	0	0	0	0	0	0	0	0
Agrobacterium radiobacter strain: k84	137	2,561	64	59	248	49	49	52	61	176
Albifimbia verrucariasolids and solubles strain: aarc-0255	30,810	26,033	22,923	23,021	21,639	22,057	11,418	13,030	2,029	1,392
Allyl isothiocyanate	0	< 1	0	0	< 1	0	0	0	0	0

Chemical	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Aminoethoxyvinylglycine hydrochloride	2,011	1,380	1,296	2,532	2,984	3,003	2,270	1,962	993	1,049
Ammonium bicarbonate	42	0	0	0	0	< 1	0	0	< 1	< 1
Ammonium nitrate	91,580	89,253	86,913	78,362	84,593	80,390	73,447	64,505	60,133	65,790
Ammonium nonanoate	3,399	27,356	19,625	17,272	5,421	8,751	9,007	10,798	4,703	3,232
Aspergillus flavus strain nrrl #21882	0	0	0	0	0	0	0	82	249	232
Aspergillus flavus strain: af-36	9	14	15	16	18	20	24	22	10	10
Aureobasidium pullulans subspecies pullulans dsm # 14940	356	1,095	2,493	3,956	2,794	2,355	2,220	1,652	829	651
Aureobasidium pullulans subspecies pullulans dsm # 14941	356	1,095	2,493	3,956	2,794	2,355	2,220	1,652	829	651
Azadirachtin	5,114	4,775	4,884	4,427	5,018	6,332	6,692	22,732	5,715	4,098
Bacillus altitudinis strain: qst 2808	8,124	7,890	9,239	7,552	7,734	10,181	8,702	7,338	6,891	7,703
Bacillus amyloliquefacens strain: f727	0	0	0	0	0	32,134	17,773	30,001	62,012	79,242
Bacillus amyloliquefaciens subsp. plantarum strain: fzb42	0	0	0	0	0	0	0	0	229	15
Bacillus firmus strain: i-1582	190	170	212	160	33	28	7	21	0	0
Bacillus mycoides isolate j	0	0	1,085	568	531	423	178	220	251	185
Bacillus popilliae	< 1	< 1	0	< 1	0	0	0	0	0	0

Chemical	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Bacillus sphaericus 2362 serotype h5a5b strain: abts 1743	12,357	13,122	16,362	10,812	11,726	10,440	7,198	7,248	12,978	7,859
Bacillus subtilis strain: afs032321	0	0	0	0	0	0	0	0	3,703	95
Bacillus subtilis strain: fmch002	0	0	0	0	0	0	0	0	0	< 1
Bacillus subtilis subspecies subtilis strain: iab/bs03	0	0	0	5	48	18	166	53	84	86
Bacillus subtilis var. amyloliquefaciens strain fzb24	178	6	< 1	0	0	0	0	0	10	< 1
Bacillus thuringiensis (berliner)	< 1	4	3	2	< 1	2	2	2	3	< 1
Bacillus thuringiensis (berliner), subsp. aizawai, serotype h-7	184	73	118	48	548	43	82	40	26	20
Bacillus thuringiensis (berliner), subsp. kurstaki, serotype 3a,3b	18	34	73	91	23	4	3	3	2	3
Bacillus thuringiensis (berliner), subsp. kurstaki, strain sa-11	61,494	59,224	56,544	76,877	82,254	99,228	79,847	86,242	65,374	62,280
Bacillus thuringiensis (berliner), subsp. san diego	0	0	0	0	2	0	0	0	0	0
Bacillus thuringiensis subsp. aizawai strain: abts-1857	55,955	72,261	92,931	88,725	118,092	129,650	149,328	162,121	145,792	145,318
Bacillus thuringiensis subsp. aizawai strain: gc-91	16,788	18,908	34,178	45,073	54,344	58,215	58,295	66,033	35,144	49,413

Chemical	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Bacillus thuringiensis subsp. aizawai strain: sd-1372, lepidopteran active toxins	43	13	6	16	2	1	6	3	10	0
Bacillus thuringiensis subsp. israelensis strain: am 65-52	55,727	80,139	73,504	75,358	66,835	74,439	67,993	59,371	87,939	64,633
Bacillus thuringiensis subsp. israelensis strain: sum-6218	0	0	0	0	0	0	< 1	< 1	2	1
Bacillus thuringiensis subsp. kurstaki delta endotoxin protein (crya(c)), genetically engineered in kill pseudomonas fluorescens	0	< 1	0	5	0	< 1	< 1	0	0	0
Bacillus thuringiensis subsp. kurstaki strain: abts-351	95,898	118,627	135,306	121,707	160,898	132,220	127,421	113,342	129,067	140,606
Bacillus thuringiensis subsp. kurstaki strain: eg7826, genetically engineered	0	7	0	15	0	0	0	0	0	0
Bacillus thuringiensis subsp. kurstaki strain: eg7841 , genetically engineered	3	43	3	< 1	2,503	14,065	15,602	9,192	2,121	2,757
Bacillus thuringiensis subsp. kurstaki strain: evb-113-19	0	0	0	0	0	3,620	18,175	35,674	53,969	29,090
Bacillus thuringiensis subsp. kurstaki strain: m-200	< 1	0	< 1	< 1	< 1	0	0	0	0	0

Chemical	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Bacillus thuringiensis subsp. kurstaki strain: sa-12	28,042	25,543	42,089	42,831	34,280	43,948	38,982	38,656	29,704	15,860
Bacillus thuringiensis subspecies israelensis strain bmp 144	6,672	5,859	5,972	5,591	8,444	5,891	5,616	4,249	6,255	3,842
Bacillus thuringiensis subspecies kurstaki strain bmp 123	0	0	0	0	0	5	0	0	0	0
Bacillus thuringiensis, subsp. kurstaki, strain hd-1	1,860	186	111	13	24	16	28	19	20	4
Bacillus velezensis strain: d747	131,325	209,780	395,706	273,485	298,897	231,886	231,273	240,187	200,436	190,193
Bacillus velezensis strain: env503	0	0	0	0	0	0	0	0	0	0
Bacillus velezensis strain: gb03	3	3	4	3	3	2	2	2	< 1	< 1
Bacillus velezensis strain: mbi 600	0	15	79	275	699	1,300	1,595	3,394	2,747	1,961
Bacillus velezensis strain: qst 713	20,921	21,167	21,952	21,291	25,551	19,083	16,998	15,682	13,809	13,371
Bacteriophage active against pseudomonas syringae pathovar tomato	0	0	< 1	0	< 1	< 1	0	0	< 1	0
Bacteriophages active against xylella fastidiosa	0	0	0	0	0	< 1	< 1	< 1	< 1	< 1
Balsam fir oil	< 1	< 1	0	< 1	< 1	0	0	0	0	0
Beauveria bassiana hf23	0	37	55	67	72	78	83	39	53	41
Beauveria bassiana strain: ant-03	0	0	0	0	0	783	3,775	4,687	2,723	3,288

Chemical	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Beauveria bassiana strain: gha	3,514	2,850	5,690	7,346	6,773	7,139	7,745	9,150	11,310	8,841
Beauveria bassiana strain: ppri 5339	0	0	0	0	11	141	563	40	30	11
Beta-conglutin	6,762	6,099	7,383	4,314	2,968	4,819	6,915	11,816	25,753	18,050
Burkholderia rinojensis strain a396	58,593	53,655	115,528	216,932	423,880	567,552	570,787	599,050	526,256	460,125
Calcium acetate	0	0	0	< 1	0	0	0	0	< 1	< 1
Calcium salts of phosphorous acid	0	0	0	0	< 1	0	0	0	< 1	10
Canola oil	97	247	286	2,177	2,833	3,051	1,446	1,485	2,769	2,875
Capsicum oleoresin	92	125	203	635	409	419	287	255	465	421
Castor oil	< 1	4	0	3	0	15	< 1	8	0	5
Cerevisane (cell walls of saccharomyces cerevisiae strain las117)	0	0	0	0	0	0	0	173	3,611	4,443
Chromobacterium subtsugae strain: praa4-1	46,121	31,460	36,396	42,933	39,062	37,390	28,779	34,995	35,499	35,728
Cinnamaldehyde	0	0	59	< 1	0	4,032	3,173	1,567	3,859	1,875
Citric acid	126,198	142,124	136,402	152,412	166,154	178,097	192,416	213,798	193,224	230,171
Clarified hydrophobic extract of neem oil	222,940	166,397	173,115	138,383	143,566	240,622	103,436	316,691	79,148	76,378
Clonostachys rosea strain: j1446	0	0	0	0	0	0	0	95	185	827
Clove oil	0	0	0	0	0	62	0	0	0	0
Coniothyrium minitans strain: con/m/91-08	786	657	667	424	216	543	489	871	435	637
Corn syrup	4,342	4,850	14,882	22,773	18,305	16,166	14,012	19,589	13,649	0
Cottonseed oil	87,451	55,082	45,678	35,072	39,589	16,873	21,704	10,959	3,206	14,015

Chemical	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Coyote urine	6	3	6	3	3	3	2	27	< 1	1
Cydia pomonella granulosis virus	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Cytokinin (as kinetin)	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	3
Diallyl disulfide	0	103	94	0	0	26	0	0	1	0
Dihydro-5-heptyl-2(3h) -furanone	0	0	0	0	< 1	0	0	0	0	0
Dihydro-5-pentyl-2(3h) -furanone	0	0	0	0	< 1	0	0	0	0	0
Dysphania ambrosioides	12,828	10,207	8,598	387	186	85	144	23	652	43
E-11-tetradecen-1-yl acetate	65	27	288	39	8	12	2	5	3	4
E-8-dodecenyl acetate	632	393	1,716	271	326	537	219	225	262	610
Essential oils	2	1	< 1	< 1	< 1	< 1	< 1	< 1	0	< 1
Ethylene	1,683	1,299	1,248	953	1,022	1,206	828	1,531	396	1,197
Eugenol	< 1	1	< 1	< 1	0	0	0	< 1	0	82
Extract of caesalpinia spinosa	0	0	0	0	0	0	0	0	0	467
Farnesol	20	29	38	39	28	25	24	17	9	2
Ferric sodium edta	7,999	12,449	12,329	8,118	8,755	5,866	4,310	4,153	5,834	4,670
Formic acid	2,606	1,243	984	1,647	352	6,569	220	236	450	2,653
Fox urine	3	1	4	2	1	2	< 1	8	< 1	< 1
Gamma aminobutyric acid	15	0	0	0	0	0	0	0	0	0
Garlic	667	849	529	1,127	1,098	1,556	1,141	736	1,516	1,259
Geraniol	49	72	95	98	70	62	60	42	22	168
German cockroach pheromone	0	< 1	< 1	< 1	< 1	0	0	0	< 1	0
Gibberellins	27,409	23,144	27,104	28,675	25,413	29,073	18,996	18,473	15,754	16,425

Chemical	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Gibberellins, potassium salt	0	0	1	0	0	0	0	0	0	0
Glutamic acid	15	0	0	0	0	0	0	0	0	0
Glutens, corn	157,077	114,415	99,618	86,665	73,186	101,375	89,949	80,550	50,012	67,340
Gs-omega/kappa-hxtx-hv1a, versitude peptide	0	< 1	0	3	22	1,423	3,890	11,989	8,403	6,102
Harpin protein	0	< 1	< 1	0	0	0	< 1	< 1	3	15
Heptyl butyrate	4	3	13	4	28	12	6	9	16	17
Hydrogen peroxide	74,428	130,417	312,188	359,155	461,211	570,933	575,735	821,443	661,680	653,335
Hydroprene	6,456	3,920	3,155	2,935	4,250	2,826	1,818	8,497	4,113	8,448
Hypocrea (teleomorph)	2	9	4	< 1	32	24	50	81	164	205
Hypocrea atroviridis	2	9	4	< 1	32	24	50	81	164	205
Hypocrea atroviridis (telomorph)	0	0	0	0	0	0	0	0	4	0
Iba	13	10	19	17	29	38	50	35	60	57
Indole	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Iron hedta	91	170	213	113	157	185	209	185	6,398	15,997
Iron phosphate	2,071	2,250	3,482	2,837	3,208	3,543	2,682	3,640	3,027	3,509
Isaria fumosorosea apopka strain: 97	5,638	8,947	8,659	5,100	8,416	8,853	5,990	1,303	1,862	5,757
Isaria fumosorosea strain: fe 9901	0	0	0	0	0	0	20	455	817	984
Kaolin	3,411,740	3,591,384	3,193,218	3,272,397	2,723,609	2,958,027	2,618,288	2,864,928	3,291,196	3,710,371
Kinoprene	0	0	< 1	0	0	0	< 1	< 1	0	0
Lactic acid	0	3	12	0	15	19	23	15	14	88
Lactose	7,421	8,350	8,868	7,943	8,175	7,391	7,563	6,836	8,155	7,069
Laminarin	0	0	0	0	0	25	196	228	136	278
Lauryl alcohol	501	319	2,566	309	230	437	261	358	224	295
Lavandulyl senecioate	507	1,035	1,312	2,288	4,190	3,326	2,689	3,159	76,266	8,835

Chemical	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Limonene	72,742	67,404	92,244	106,815	56,860	57,305	46,892	33,424	39,258	52,531
Linalool	93	15	11	2	< 1	< 1	< 1	< 1	< 1	< 1
Margosa oil	26,062	32,493	25,061	13,758	44,396	39,020	51,549	70,668	65,318	114,196
Metarhizium robertsii strain: f52	20	54	2	1	< 1	< 1	0	0	47	388
Methoprene	41	54	65	16	10	56	15	972	10	3
Methyl anthranilate	672	789	1,118	958	1,208	1,396	1,581	1,537	1,453	1,136
Methyl eugenol	0	126	386	1,149	1,138	561	691	1,221	1,966	3,075
Methyl mercaptan	0	0	0	0	0	0	0	0	< 1	6
Methyl nonyl ketone	< 1	< 1	< 1	< 1	< 1	< 1	0	0	0	0
Methyl salicylate	0	0	< 1	< 1	0	0	< 1	0	45	0
Muscalure	23	30	44	60	20	14	15	10	9	11
Muscodor albus strain: sa13	0	0	0	0	0	270	0	0	0	0
Myristyl alcohol	102	65	520	63	47	89	53	73	46	60
N6-benzyl adenine	230	221	161	214	587	415	274	1,310	206	205
Natamycin	< 1	< 1	< 1	0	96	288	6	44	723	228
Nerolidol	49	72	95	98	70	62	60	42	22	4
Nitrogen, liquified	0	0	0	0	0	0	0	0	29	1,940
Nonanoic acid	14,482	13,301	14,610	12,755	12,442	13,810	10,368	10,753	8,379	9,129
Nonanoic acid, other related	762	700	769	671	654	727	544	565	436	450
Nosema locustae spores	< 1	< 1	< 1	< 1	0	< 1	< 1	0	0	< 1
Nuranone	0	0	0	0	0	0	0	< 1	0	0
Oil of anise	< 1	< 1	< 1	< 1	< 1	0	0	0	0	0
Oil of black pepper	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Oil of cedarwood	< 1	< 1	0	0	0	0	0	0	0	0
Oil of citronella	5	< 1	< 1	< 1	1	1	< 1	< 1	< 1	4

Chemical	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Oil of jojoba	44	19	2	0	0	0	0	0	0	0
Oxypurinol	0	0	0	0	0	< 1	0	0	0	0
Phenylethyl propionate	185	96	140	34	20	15	42	8	48	13
Phosphoric acid, monopotassium salt	9,585	15,002	11,445	10,125	3,350	275	0	0	0	44
Piperine	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Polyhedral occlusion bodies (obs') of helicoverpa zea (corn earworm) nucleopolyhedrovirus strain: aba-npv-u	4	20	41	41	22	33	46	47	45	60
Polyoxin d, zinc salt	8,613	10,321	10,657	11,460	13,187	11,817	9,512	8,713	13,377	10,439
Potassium bicarbonate	318,264	462,904	489,086	350,416	470,575	317,383	196,534	231,485	430,058	320,255
Potassium carbonate	0	0	0	0	0	5	33	506	2,490	2,890
Potassium phosphite	667,368	955,031	1,167,494	1,205,805	1,653,067	1,409,672	1,261,881	1,180,365	1,307,923	1,243,143
Potassium silicate	36,616	25,901	33,039	13,814	27,998	51,209	26,758	21,798	18,388	13,510
Potassium sorbate	0	0	0	0	0	3	0	0	0	0
Prohydrojasmon	0	0	0	0	< 1	0	0	0	184	207
Pseudomonas chlororaphis subsp. aurantiaca strain: afs009	0	0	0	0	0	3,387	8,474	34,556	40,452	17,388
Pseudomonas fluorescens, strain a506	87	123	111	113	66	38	39	19	148	2
Purpureocillium lilacinum strain 251	6,408	6,273	5,474	3,817	2,939	3,417	3,390	3,327	1,529	1,470
Purpureocillium lilacinum strain: pl11	0	0	0	0	0	0	0	0	0	110
Putrescent whole egg solids	1	6	5	6	2	6	8	1	11	35
Quillaja	829	1,027	1,385	1,452	1,636	1,260	1,095	552	491	1,220

Chemical	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Reynoutria sachalinensis (giant knotweed) plant extract	18,364	23,508	23,644	20,231	23,705	25,943	20,174	15,344	17,119	12,555
Rhamnolipid biosurfactant	0	0	0	0	0	0	0	0	0	< 1
S-abscisic acid	2,114	2,192	2,220	1,861	1,856	1,222	1,590	1,220	1,102	1,908
S-methoprene	4,183	4,489	4,176	4,872	12,538	5,902	4,576	5,848	5,994	5,688
Saccharomyces cerevisiae strain: las02	0	0	0	0	0	0	0	0	0	64
Sawdust	0	1	0	0	0	< 1	13	7	38	< 1
Silver nitrate	0	< 1	< 1	0	< 1	< 1	1	1	2	< 1
Sodium bicarbonate	420	13,604	3,679	3	0	0	0	0	0	0
Sodium chloride	216	128	81	110	147	82	158	195	74	169
Sodium lauryl sulfate	1,749	507	1,200	1,334	1,148	1,223	1,235	1,471	1,480	1,017
Sodium percarbonate	244,233	261,347	165,621	329,330	276,550	277,981	278,934	294,908	367,185	387,249
Sorbitol octanoate	0	0	< 1	0	0	0	< 1	0	0	0
Soybean oil	69,771	84,295	80,999	82,753	70,341	70,941	67,348	69,366	90,154	154,984
Strepomyces lydicus strain: wyec 108	3	4	3	2	4	2	2	2	1	< 1
Streptomyces acidiscabies strain: rl-110 [jcm 7913]	14	< 1	40	0	0	0	0	0	0	0
Streptomyces griseoviridis strain k61	18	5	4	2	< 1	< 1	< 1	< 1	5	13
Sucrose octanoate	203	29	7	0	0	0	0	0	0	< 1
Sugar	60	667	4	20	775	120	69	4	6	289
Swinglea glutinosa extract	0	0	0	0	0	4	18,709	13,306	10,246	23,654
Tea tree oil	0	0	0	0	0	0	9	4	5	36
Thyme oil	258	125	193	32	18	12	60	4	10	6

Chemical	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Thymol	278	570	564	679	162	455	196	392	155	278
Trichoderma harzianum rifai strain krl-ag2	65	112	64	86	95	80	116	164	156	164
Trichoderma harzianum strain t-78	0	0	0	0	0	0	0	0	< 1	0
Trichoderma virens strain: gl-21	4,586	4,395	2,829	2,707	1,395	136	11	< 1	216	88
Trimethylamine	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	1
Ulocladium oudemansii (u3 strain)	516	155	34	2,131	1,444	836	595	375	375	896
Vegetable oil	485,845	519,572	669,038	829,980	674,254	587,369	459,269	524,559	528,730	752,645
Xanthine	0	0	0	0	0	< 1	0	0	0	0
Yeast	86	14	4	12	< 1	< 1	30	< 1	18	< 1
Yeast extract hydrolysate from saccharomyces cerevisiae	0	0	0	0	0	0	0	0	< 1	0
Yucca, extract	2,565	3,130	2,173	5,733	6,806	4,935	6,510	15,308	2,847	4,808
Z,e-9,12-tetradecadien-1-yl acetate	20	10	21	62	159	20	70	91	57	239
Z-11-tetradecen-1-yl acetate	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Z-7-tetradecen-2-one	0	0	0	0	0	0	0	< 1	0	0
Z-8-dodecenol	84	60	202	47	52	93	38	39	43	89
Z-8-dodecenyl acetate	4,329	4,348	6,514	4,166	4,096	8,201	3,402	3,410	3,560	5,545
Total	6,935,219	7,691,499	8,080,313	8,337,786	8,539,949	8,687,326	7,732,030	8,605,629	8,944,384	9,435,206