

# Use Trends of Cholinesterase-Inhibiting Pesticides: Pounds Applied

Text files of data are available at <<https://files.cdpr.ca.gov/pub/outgoing/pur/data/>>. The reported pounds of chemicals used that are organophosphorus or carbamate cholinesterase-inhibiting pesticides. Use includes both agricultural and reportable nonagricultural applications. The word "none" or "N/A" indicates no use at all that year. Values > 1 are rounded.

Chemical	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
<b>3-iodo-2-propynyl butylcarbamate</b>	19	0	28	2,980	3,002	2,636	1,303	1,415	1,403	2,102
<b>Acephate</b>	185,274	144,640	170,760	159,354	192,145	171,300	158,655	123,746	121,352	117,919
<b>Aldicarb</b>	1,487	126	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Azinphos-methyl</b>	32	N/A	1	N/A	1	N/A	N/A	N/A	N/A	N/A
<b>Bendiocarb</b>	2	4	1	4	3	2	2	1	1	1
<b>Bensulide</b>	285,697	319,400	346,179	293,204	285,284	312,138	312,609	336,684	341,080	327,048
<b>Butylate</b>	88	53	N/A	10	N/A	N/A	N/A	N/A	N/A	N/A
<b>Carbaryl</b>	117,272	131,744	155,525	221,095	107,470	128,818	113,587	110,403	99,402	84,128
<b>Carbophenothion</b>	N/A	N/A	N/A	N/A	0	N/A	N/A	0	N/A	N/A
<b>Chlorpyrifos</b>	1,469,645	1,312,209	1,107,417	903,260	948,004	602,946	12,817	14,121	7,566	1,839
<b>Coumaphos</b>	14	N/A	1	N/A	<0.01	5	N/A	N/A	N/A	N/A
<b>Crotoxyphos</b>	N/A	N/A	N/A	0	N/A	N/A	N/A	N/A	N/A	N/A
<b>Cycloate</b>	30,619	36,566	39,691	45,150	49,844	41,749	43,662	41,520	41,710	40,466
<b>Ddvp</b>	4,630	4,034	4,084	3,868	3,456	3,515	3,309	4,517	3,508	4,944
<b>Ddvp, other related</b>	278	162	165	123	113	109	84	153	65	95
<b>Diazinon</b>	61,224	61,126	52,665	48,991	72,612	33,497	40,113	45,569	36,397	42,553
<b>Dicrotophos</b>	N/A	5	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Dimethoate</b>	276,329	334,563	288,769	243,736	223,336	167,955	161,809	152,998	92,538	86,637
<b>Dioxathion</b>	9	N/A	N/A	N/A	0	N/A	N/A	N/A	<0.01	N/A
<b>Dioxathion, other related</b>	4	N/A	N/A	N/A	0	N/A	N/A	N/A	<0.01	N/A

Chemical	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Disulfoton	1,924	2,219	415	10	12	16	20	4	1	1
Epn	20	425	1	2	0	1	4	16	38	11
Eptc	187,349	235,271	238,014	255,431	259,751	218,451	187,734	181,345	133,018	153,580
Ethephon	397,060	348,653	319,356	399,909	485,226	433,751	445,009	348,589	318,312	333,362
Ethion	N/A	0	1	N/A	0	N/A	2	N/A	99	1
Ethoprop	2,502	3,076	1,820	2,023	2,134	5,848	5,950	7,792	9,490	14,200
Fenamiphos	2,244	865	97	143	131	0	N/A	N/A	N/A	N/A
Fenoxycarb	1	1	9	2	3	1	0	0	0	1
Fenthion	N/A	0	N/A	<0.01	N/A	N/A	0	<0.01	N/A	0
Formetanate hydrochloride	26,912	28,333	31,172	42,037	36,709	40,183	42,675	34,132	55,236	55,719
Malathion	446,890	502,997	443,128	355,223	334,893	361,816	325,226	360,218	252,111	450,398
Methamidophos	55	N/A	N/A	N/A	1	0	N/A	N/A	N/A	N/A
Methidathion	6,375	3,614	245	146	11	140	2	0	3	N/A
Methiocarb	3,679	3,722	3,371	2,810	2,803	2,485	1,848	1,327	1,002	557
Methomyl	260,662	278,690	282,507	260,627	234,580	224,662	204,228	259,238	236,158	251,949
Methyl parathion	21,520	481	182	24	5	10	4	74	54	22
Methyl parathion, other related	1,131	0	5	0	N/A	N/A	0	0	N/A	N/A
Mevinphos	0	8	9	4	N/A	7	150	19	N/A	N/A
Mevinphos, other related	N/A	5	6	3	N/A	5	100	12	N/A	N/A
Mexacarbate	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Molinate	0	<0.01	0	5	N/A	N/A	0	4	N/A	N/A
Naled	218,690	225,285	288,485	316,868	283,944	330,866	317,840	209,914	199,272	226,060
Oxamyl	73,003	65,785	17,236	2,466	38,302	78,741	103,801	63,438	26,011	36,590
Oxydemeton-methyl	10,656	8,407	6,610	3,764	1,533	1,460	9	1	0	<0.01
Parathion	0	1	836	41	3	3	49	11	0	198
Parathion, other related	N/A	N/A	1	<0.01	N/A	N/A	N/A	N/A	N/A	10

<b>Chemical</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
<b>Phorate</b>	30,909	32,683	19,519	20,378	29,897	25,477	30,815	17,841	10,604	10,109
<b>Phosacetin</b>	<0.01	<0.01	<0.01	N/A	<0.01	0	0	N/A	N/A	N/A
<b>Phosmet</b>	60,903	44,344	19,278	28,971	16,869	22,596	24,856	32,075	23,973	13,271
<b>Phosphamidon</b>	N/A	N/A	N/A	6	N/A	N/A	1	N/A	N/A	39
<b>Phosphamidon, other related</b>	N/A	N/A	N/A	0	N/A	N/A	0	N/A	N/A	1
<b>Profenofos</b>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Propetamphos</b>	127	3,047	5	2	0	0	1	1	0	0
<b>Propoxur</b>	373	251	100	49	43	29	15	5	3	3
<b>Ronnel</b>	1	1	112	16	12	N/A	0	2	10	N/A
<b>S,s,s-tributyl phosphorotrithioate</b>	19,077	11,683	6,472	6,882	8,151	8,911	8,104	6,546	6,804	3,789
<b>Sodium dimethyl dithio carbamate</b>	22,187	16,535	9,357	18,414	18,854	11,257	4,797	1,082	7	0
<b>Temephos</b>	8	10	5	3	4	2	2	3	1	9
<b>Tetrachlorvinphos</b>	2,660	629	173	66	55	109	63	31	38	0
<b>Thiobencarb</b>	289,946	373,930	523,582	698,888	603,226	592,804	654,018	595,147	393,690	231,986
<b>Thiodicarb</b>	156	N/A	N/A	N/A	1	N/A	N/A	N/A	N/A	N/A
<b>Triallate</b>	4,530	5,886	4,830	5,217	1,568	3,796	1,422	287	898	326
<b>Trichlorfon</b>	25	11	0	0	<0.01	4	7	2	0	0
<b>Total</b>	4,524,200	4,541,479	4,382,226	4,342,204	4,243,990	3,828,102	3,206,702	2,950,285	2,411,858	2,489,924