Use Trends of Cholinesterase-Inhibiting Pesticides: Cumulative Acres Treated

Text files of data are available. The reported cumulative acres treated that are cholinesterase-inhibiting pesticides. Cholinesterase (ChE) inhibiting pesticides block the enzyme cholinesterase that breaks down acetylcholine, which can result in overstimulation of the nervous symptom. Organophosphates and carbamates are the two primary chemical classes of ChE-inhibiting pesticides, although not all pesticides in these two classes exhibit Ch-E inhibition. Acres treated totals are cumulative, meaning that if a one-acre field was treated three times in a year, the cumulative acres treated would equal three acres. Cumulative acres treated totals include pesticide use reports (PURs) with unit treated equal to acres (A) or square feet (S), the latter of which was converted to acres. PURs with volume (cubic feet, etc.), weight (tons, lbs, etc.), or miscellaneous units (bins, holes, etc.) are not included in the acres treated totals. Most nonagricultural PURs are not required to report acres treated, so the acres treated totals are predominantly agricultural pesticide uses. If pounds were reported for a year but acres treated is zero, then the pesticide use was non-agricultural. The total for acres treated may be less than the sum of the table rows because the total is adjusted to prevent the overcounting of acreage for pesticide products with more than one active ingredient. 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
3-iodo-2-propynyl butylcarbamate	0	0	3	8	5	0	0	0	830	0
Acephate	163,105	173,542	177,380	158,447	155,264	128,238	122,153	113,571	136,924	161,042
Azinphos-methyl	< 1	0	0	0	0	0	0	0	0	0
Bendiocarb	0	0	0	0	0	0	0	0	0	0
Bensulide	94,211	79,796	77,374	85,846	85,171	90,366	93,678	90,711	99,788	98,267
Butylate	0	8	0	0	0	0	0	0	0	0
Carbaryl	136,319	116,667	106,725	99,823	98,844	108,678	108,335	106,094	107,895	109,693
Carbophenothion	0	0	< 1	0	0	< 1	0	0	0	0
Chlorpropham	132	224	46	98	129	146	88	0	0	100,000
Chlorpyrifos	829,326	641,560	691,056	432,121	6,999	7,489	2,759	167	263	259
Coumaphos	62	0	0	< 1	0	0	0	0	0	0
Crotoxyphos	0	0	0	0	0	0	0	0	0	0
Cycloate	21,088	23,495	23,962	20,943	23,471	21,461	20,902	20,296	19,437	19,836
Ddvp	6,282	3,317	787	12	829	735	868	2,192	1,301	1,404
Ddvp, other related	539	1,805	0	1	600	418	554	1,681	1,113	1,260

Chemical	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Desmedipham	887	893	275	1,021	1,082	157	760	0	1	0
Diazinon	27,004	24,353	24,579	17,936	18,253	20,432	15,988	17,360	15,455	7,881
Dicrotophos	0	0	0	0	0	0	0	0	0	0
Dimethoate	627,043	531,530	499,453	436,246	466,481	443,976	294,209	272,650	275,158	303,405
Dioxathion	0	0	0	0	0	0	0	0	0	0
Dioxathion, other related	0	0	0	0	0	0	0	0	0	0
Disulfoton	204	16	0	0	0	0	0	0	0	0
Epn	0	2	0	0	0	5	62	0	2	< 1
Eptc	91,525	100,883	104,142	91,173	74,727	72,473	52,168	57,474	49,228	57,905
Ethephon	363,812	452,937	552,299	495,629	501,533	417,729	382,337	383,371	395,343	436,681
Ethion	306	0	30	0	94	0	0	< 1	0	8
Ethoprop	591	575	582	1,712	1,682	2,299	2,466	3,428	3,084	2,821
Fenamiphos	0	0	20	0	0	0	0	0	0	0
Fenoxycarb	15	33	76	20	6	11	3	51	5	10
Fenthion	0	60	0	0	0	0	0	0	0	0
Formetanate hydrochloride	31,515	41,115	36,188	38,494	40,361	32,178	51,017	50,872	63,320	27,307
Malathion	266,899	218,785	204,397	217,048	200,956	218,918	157,279	174,218	172,350	181,425
Methamidophos	0	0	2	0	0	0	0	0	0	0
Methidathion	453	198	27	138	6	0	13	0	0	3
Methiocarb	2,444	1,771	1,934	1,380	1,133	945	844	303	222	113
Methomyl	453,848	433,670	386,649	375,205	339,451	412,002	369,029	384,261	316,819	327,260
Methyl parathion	298	60	0	27	4	75	177	7	2	< 1
Methyl parathion, other related	36	18	0	0	0	4	0	0	0	0
Mevinphos	51	23	0	136	123	150	0	0	1	0
Mevinphos, other related	51	23	0	136	123	150	0	0	1	0

Chemical	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Molinate	1	< 1	0	0	0	0	0	0	0	0
Naled	164,587	175,205	175,253	190,237	218,432	145,264	137,602	142,397	114,295	168,828
Oxamyl	21,033	3,301	40,943	90,629	108,677	64,609	28,745	41,780	92,335	98,568
Oxydemeton-methyl	7,355	7,883	3,555	3,111	17	0	< 1	< 1	0	0
Parathion	207	82	60	0	304	80	0	0	86	0
Parathion, other related	10	4	0	0	0	0	0	0	86	0
Phenmedipham	1,304	1,515	722	1,630	1,626	517	1,060	506	377	501
Phorate	14,682	16,300	23,653	20,590	24,751	14,039	8,011	8,246	2,902	8,910
Phosacetin	0	0	< 1	3	4	0	0	0	0	0
Phosmet	10,336	11,297	7,751	8,407	9,538	16,737	10,488	6,529	2,708	8,318
Phosphamidon	0	35	0	0	4	0	0	13	0	0
Phosphamidon, other related	0	35	0	0	4	0	0	13	0	0
Potassium dimethyldithiocarbamate	0	0	0	0	0	0	0	0	0	0
Propamocarb	7	0	0	0	13	38	17	41	8	10
Propamocarb hydrochloride	82,246	74,435	72,551	68,770	67,874	75,435	70,390	80,281	65,136	89,756
Propetamphos	0	0	0	0	0	0	0	0	0	0
Propoxur	39	19	0	25	0	0	0	0	9	0
Ronnel	0	0	0	0	2	0	0	0	0	0
S,s,s-tributyl phosphorotrithioate	7,582	7,725	10,624	11,007	6,091	5,106	5,449	3,997	2,776	2,435
Sodium dimethyl dithio carbamate	0	6	10	1	0	0	0	0	0	0
Temephos	0	0	0	0	0	0	0	0	0	0
Tetrachlorvinphos	1,044	5	3	0	0	< 1	0	10	0	1
Thiobencarb	148,349	197,836	178,307	172,814	190,273	177,061	116,302	69,419	139,075	75,935

Chemical	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Thiodicarb	0	0	0	0	0	0	0	0	0	0
Triallate	3,221	3,665	1,064	2,525	1,023	191	599	286	582	619
Trichlorfon	0	0	0	0	0	0	< 1	< 1	0	0
Total	3,577,119	3,343,899	3,402,159	3,042,119	2,644,147	2,477,381	2,052,975	2,030,458	2,077,650	2,289,201