



KWIAHT

Center for the Historical Ecology of the Salish Sea
PO Box 415, Lopez, WA 98261

**TOXICITY OF PESTICIDES AND HERBICIDES
IN COMMON USE IN SAN JUAN COUNTY for which DATA ARE AVAILABLE**

The most toxic and persistent products in each category are marked in red

Activeingredient	Acute toxicity in ppb or µg/bee				Max persistence in days		BCF
	Rat	Rainbow	Daphnia	Honeybee	Soil	Water	
2,4-D	25000	358000	100000	94	59	∞	10
Acephate	1030000	110000	67200	1.2	3	50	0.03
Aldehyde	-	569000	17000	-	-	-	-
Allethrin	685000	19000	21	3.4	60	-	3281
Aminopyralid	5000000	100000	100000	100	147	712	100
B. thuringensis	5050000	656	13000	-	120	-	-
Benefin (Bifluralin)	5000000	1.9	100000	100	86	∞	1572
Bifenazate	5000000	17	500	8.5	5	1	-
Bifenthrin	54500	0.15	1.6	0.015	244	∞	11750
Captan	2000000	186	7100	100	70	∞	140
Carbaryl	614000	2600	6	0.14	99	12	44
Chlorothalanyl	5000000	380	84	40	87	∞	100
Chlorpyrifos	66000	1.3	0.1	0.059	141	72	1374
Copper sulfate	300000	13200	2300	23.5	∞	∞	-
Cyfluthrin	16200	0.47	0.16	0.001	54	215	506
Cyhalothrin	140000	0.46	380	0.027	82	-	1950
Cypermethrin	287000	2.8	0.3	0.02	199	179	1204
Deltamethrin	87000	0.26	0.56	0.0015	104	48	1400
Dicamba	1581000	100000	110700	100	25	∞	15
Dichlobenil	4460000	5000	6200	11	70	150	63
Dichlorprop	567000	109000	100000	200	19	∞	-
Diquat dibromide	218000	21000	1200	13	∞	∞	1
Disulfoton	39000	39	1.3	4.1	30	300	460
Esfenvalerate	7900	0.25	0.9	0.06	44	10	3250
Etofenprox	2000000	2.7	1.2	0.13	25	∞	2000
Fatty acids, salts	5000000	59200	100000	25	-	-	-
Fenbutatin	3000	1.1	480	200	365	1	730
Fenvalerate	451000	3.6	0.03	0.23	40	115	1664
Ferrous sulfate	319000	1220	-	-	∞	∞	-
Fluazifop	2000000	1310	1000	200	38	78	320
Glyphosate	1760000	8200	-	100	180	∞	0.5
Hydramethylnon	1130000	160	1140	30	45	10	34900
Imazapyr	2000000	100000	100000	25	90	30	2.54
Imidacloprid	131000	211000	85100	0.0037	341	∞	0.61
Imiprothrin	900000	38	5.6	-	15	59	-
Limonene	4400000	35000	69600	-	-	-	-
Malathion	34400	22	0.7	0.16	1	98	103
Mecoprop	431000	50000	22700	100	21	∞	3
Metaldehyde	283000	75000	78400	87.5	73	∞	11
Methanearsonate	2449000	100000	58000	24	∞	∞	-
Methoxychlor	6000000	520	0.78	23.6	120	-	16222
Miclobutanil	1600000	2000	17000	171	574	∞	-
MCPA	962000	50000	190000	200	41	∞	1

Activeingredient	Acute toxicity in ppb or µg/bee				Max persistence in days		BCF
	Rat	Rainbow	Daphnia	Honeybee	Soil	Water	
MGK264	2800000	1400	2300	-	-	-	-
Naphthalene	49000	110	15000	-	-	∞	-
Naphylacetic acid	1000000	28	180	-	50	-	-
Neem oil	4241000	480	1160	2.5	26	∞	-
Oryzalin	5000000	3540	1020	32	122	∞	66
Oxyfluorfen	5000000	250	720	100	60	∞	1637
Pelargonic acid	5000000	91000	96000	-	-	-	-
Permethrin	430000	12	6	0.029	42	31	300
Phenothrin	5000000	2.7	4.3	-	1	-	730
Prallethrin	460000	12	6.2	-	-	-	-
Prometon	2276000	12000	20000	30	500	∞	69
Propiconazole	958000	830	310	100	411	54	116
Pyrethrin	200000	32	2.5	0.15	12	35	-
Pyriproxifen	5000000	270	400	100	25	∞	1379
Resmethrin	2500000	170	3.7	0.063	30	485	68
Rotenone	132000	1.9	4	0.24	3	1	26
Sethoxydim	2676000	170000	1500	10	25	242	22.5
Spinosad	2000000	30000	1400	0.0029	15	200	0.1
Sulfur	5000000	180000	5000000	50	1500	∞	-
Tebuconazole	1700000	4400	2790	83.5	610	∞	78
Tetramethrin	5000000	16	45	0.16	3	-	-
Tralomethrin	99000	1.6	0.04	0.13	27	∞	1200
Triadimefon	300000	4080	7160	25	26	∞	64
Trichlopyr	630000	117000	132000	100	54	9	0.77
Trifluralin	5000000	88	245	100	375	∞	5674
Triforine	16000000	1000000	25000	10	21	2	1
Zinc oxide	8437000	320000	24600	-	∞	∞	-

Notes:

The main source for this table is FOOTPRINT, a European Community toxicology database, <http://sitem.herts.ac.uk/aeru/footprint/en/index.htm>

Acute toxicity is shown as LC50 (Lethal Concentration 50%) in parts per billion (micrograms per liter of water, µg/L) for rainbow trout and the crustacean *Daphnia magna*; and as LD50 (Lethal Dose 50%) in micrograms per bee for honeybees

Maximum observed persistence shown in whole days; persistence may vary greatly depending on temperature, pH (acidity), and exposure to light

BCF = Bio-Concentration Factor, calculated experimentally (from FOOTPRINT)

Red blocks show products that are at least 1000 times more toxic than the least toxic alternative; or persist for six months or longer; or have a bio-concentration factor of 500 or greater.