

Herbicide Ecological Toxicities and Characteristics

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Herbicide & Facility Where Used	Acute Toxicity				Physical Properties ^{4,5}			Off-site Movement Potential ^{4,5}	
	Mammals ¹	Avian ¹	Aquatic ¹	Microorganisms ^{2,3}	Persistence	Solubility (mg/l)	Adsorption (K(oc))	Groundwater Leaching	Surface Water Runoff
2,4-D right-of-way non-electric	Moderately Toxic to Practically Non-toxic Depending on Formulation and Species	Slightly Toxic to Practically Non-toxic Depending on Formulation and Species	Highly Toxic to Practically Non-toxic Depending on Formulation and Species	Bees: Practically Non-toxic	Moderate: <1 - >21	3.39x10 ⁴	19 - 109	Moderate	Low
Azafenidin right-of-way electric yard non-electric	Practically Non-toxic	Practically Non-toxic	Slightly Toxic	Bees: Practically Non-toxic	Moderate	18	382	Low	Low
Bromacil right-of-way electric yard	Slightly Toxic	Practically Non-toxic	Slightly Toxic	Bees: Practically Non-toxic	Moderate: 60 days	700	32	High	Moderate
Chlorsulfuron right-of-way	Practically Non-toxic	Practically Non-toxic	Practically Non-toxic	Bees: Practically Non-toxic	Moderate: 40 days	7000	40	High	Low
Clopyralid right-of-way non-electric	Practically Non-toxic	Slightly Toxic	Practically Non-toxic	Bees: Practically Non-toxic	Moderate: 40 days	300,000	6	High	Low
Dicamba right-of-way non-electric	Slightly Toxic	Practically Non-toxic	Practically Non-toxic to Aquatic Invertebrates; Slightly Toxic to Fish and Amphibians	Bees: Practically Non-toxic Earthworm: Low	Low: 14 days	400,000	2	High	Low
Dichlobenil non-electric	Slightly Toxic	Slightly to Moderately Toxic	Moderately Toxic	Bees: Practically Non-toxic	Moderate: 60 days	21	400	Moderate	Moderate
Diuron right-of-way electric yard	Slightly Toxic	Slightly Toxic	Moderately Toxic to Fish and Highly Toxic to Aquatic Invertebrates	Bees: Practically Non-toxic	Moderate: 90 days	42	480	Moderate	High
Fosamine ammonium right-of-way	Practically Non-toxic	Practically Non-toxic	Practically Non-toxic	Bees: Practically Non-toxic	Low: 8 days	Completely Soluble	79	Low	Low
Glyphosate right-of-way electric yard	Practically Non-toxic	Practically Non-toxic	Moderately Toxic	Bees: Practically Non-toxic	Moderate: 47 days	900,000	24,000	Low	High
Halosulfuron-Methyl non-electric	Slightly Toxic	Slightly Toxic	Practically Non-toxic	Bees: Practically Non-toxic	Low: 25-30 days	1630	75	Moderate	Moderate
Hexazinone right-of-way	Slightly Toxic	Practically Non-toxic	Practically Non-toxic to Slightly Toxic Depending on Species	Bees: Practically Non-toxic	High: 175 days	33,000	40	High	Moderate
Imazapyr right-of-way	Practically Non-toxic	Practically Non-toxic	Practically Non-toxic	Bees: Slightly Toxic	Moderate: 90 days	>11,000	100	High	Low
Isoxaben right-of-way electric yard non-electric	Practically Non-toxic	Practically Non-toxic	Moderately Toxic	Earthworm: Practically Non-toxic	High: 100 days	1	1400	Low	High
Mefluidide non-electric	Slightly Toxic	Practically Non-toxic	Practically Non-toxic	Earthworm: Practically Non-toxic	Low: 4 days	180	200	Low	Moderate
Metsulfuron-Methyl right-of-way	Practically Non-toxic	Practically Non-toxic	Practically Non-toxic	Bees: Practically Non-toxic	Moderate: 30 days	9500	35	High	Moderate
Oryzalin non-electric	Practically Non-toxic	Slightly Toxic	Moderately Toxic	Bees: Practically Non-toxic	Low: 20 days	2.5	600	Low	High

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Paclobutrazol right-of-way	Slightly Toxic	Practically Non-toxic	Slightly Toxic	Bees: Practically Non-toxic	High: 200 days	35	400	High	
Picloram right-of-way	Practically Non-toxic	Practically Non-toxic	Moderately Toxic.	Bees: Practically Non-toxic	Moderate: 90 days	200,000	16	High	Low
Sulfometuron-Methyl electric yard	Slightly Toxic	Practically Non-toxic	Slightly Toxic	Bees: Practically Non-toxic	Low: 20 days	70	78	Moderate	Moderate
Tebuthiuron right-of-way electric yard	Moderately Toxic	Slightly Toxic	Slightly Toxic	Bees: Slightly Toxic	High: 360 days	2500	80	High	Low
Triclopyr right-of-way non-electric TEA BEE	Practically Non-toxic Practically Non-toxic	Slightly Toxic Slightly Toxic	Practically Non-toxic Highly Toxic	Bees: Practically Non-toxic Earthworm: Practically Non-toxic	Moderate: 46 days Moderate: 46 days	2,100,000 23	20 780	High Low	Low High
Trinexapac-Ethyl non-electric	Practically Non-toxic	Practically Non-toxic	Slightly Toxic	Bees: Practically Non-toxic	Moderate	<i>data not available</i>	<i>data not available</i>	Moderate	Moderate

¹ See individual herbicide references in **References.** ² Tew, James E, Protecting Honeybees from Pesticides, Alabama Cooperative Extension System, ANR-1088, April 1998 ³ Townsend, Lee, et al., Earthworms: Thatch-Busters, University of Kentucky, January 1994
⁴ Mahler, Robert L., et al., Pesticides and Their Movement in Soil and Water, University of Idaho, Quality Water For Idaho CIS 865, September 1998 ⁵ Vogue, P.A., et al., Oregon State University Extension, Pesticide Properties Database, July 1994