

TABLE 13 – Toxicity, Solubility, Adsorptivity, and Persistence of Herbicides

HERBICIDE	TOXICITY ¹ LD ₅₀ mg/kg		WATER SOLUBILITY (ppm at 25°C)	ADSORPTIVITY TO SOIL	SOIL PERSISTENCE AT STANDARD RATE (months)	RUNOFF/ ² LEACHING POTENTIAL	RESTRICTED ³ ENTRY INTERVAL
	Oral	Dermal					
Accent	>5000	>2000	70 (pH 7.0)	weak-moderate	1-10	3/1	4 hrs
Accent Gold/ Accent Gold WDG	>5000	>2000	-	-	-	3/1	48 hrs
Aim EW	>5000	>5000	22	strong	-	-/-	12 hrs
Assure II	4100-5900	>2000	<1	moderate	0.5	1/2	12 hrs
Atrazine	1075-4346	>3100	33	strong	2-8	2/1	12 hrs
Authority	2416	>5000	110	moderate	2-8	-/-	12 hrs
Axiom	1042-1308	>5000	56	moderate	2	2/1	12 hrs
Banvel/Clarity	2629-3512	>2000	4500	weak	1-6	3/1	24 hrs
Basagran	2063	>10,000	500	weak	0.5	3/1	4-8 hrs
Basis	>5000	>2000	-	-	-	-/-	4 hrs
Basis Gold	3090-3900	>2000	-	-	-	-/-	12 hrs
Beacon	>5050	>2010	18,000 (pH 7.2)	weak	1-5	2/1	12 hrs
Betamix	4059	>1980	1	moderate	1	1/3	24 hrs
Betanex	3960	>9900	7	moderate	1	1/3	24 hrs
Ultra Blazer	4790	3250	infinite	strong	1	2/2	48 hrs
Buctril/Moxy	780	2000	50	moderate	0.5	2/3	12 hrs
Callisto	>5000	>5000	-	-	-	-	12 hrs
Canopy SP	5018	-	-	-	-	-	12 hrs
Classic	>5000	>2000	300	strong	1-10	2/1	12 hrs
Cobra	2400-2600	>2000	0.1	strong	0.5	2/3	12 hrs
Command	2084-5000	2000-5000	1100	v. strong	3-6	2/2	12 hrs
2,4-D	375-1492	>2000	900	weak	1	2/2	12-48 hrs
2,4-DB	>1706	2000	insoluble	weak	1	2/3	48 hrs
Define	1365	5000	56	moderate	-	-	12 hrs
Degree	2148	4166	223	moderate	1-2	2/2	12 hrs
DESICATE II	233	481	100,000	moderate	0.25	3/2	48 hrs
Reglone	600-810	260-315	infinite	v. strong	-	1/3	24 hrs
Distinct	>1800	>5000	-	-	-	-	12 hrs
Domain	1830-1920	>2000	56	moderate	2	2/1	12 hrs
Dual II Magnum/ Cinch	2672-2952	>2020	530	strong	1-3	2/1	24 hrs
Eptam	1325-5000	1500-5000	370	strong	1.5-2	2/3	12 hrs
Express	>5000	>2000	286	-	0.5	2/2	12 hrs
FirstRate	>5000	>2000	184	moderate	1-4	-/-	12 hrs
Fusilade DX	>5000	>2000	2	moderate	0.25	1/3	12 hrs
Fusion	3154	>2000	2 to 0.9	moderate	0.5	1/3	24 hrs
glyphosate***	>5000	>5000	900,000 (pH 7.0)	v. strong	1	1/3	SL
Gramoxone Max	283	>2000	infinite	v. strong	1	1/3	12-48 hrs
Harmony Extra	>5000	>2000	*	*	0.5	2/2	12 hrs
Harness	1249-2948	4166-5000	223	moderate	1-2	2/2	12 hrs
Hornet WDG	>5000	>5000	-	-	-	3/1	48 hrs
Kerb	>5000	>2000	15	strong	2-9	2/1	24 hrs
Lasso/MicroTech/ IntRRo	2000-5000	5000-7800	242	strong	1-2	2/2	12 hrs
Liberty	2119-2030	1390-5319	-	-	-	-	12 hrs
Lightning	>5000	>2000	-	-	-	2/1	12 hrs
Lorox	3600-4833	>2000	75	v. strong	2-4	1/2	24 hrs
Matrix	>5000	>2000	-	-	-	-/-	4 hrs
MCPA	800	1500	insoluble	v. weak	1-4	1/3	48 hrs
Nortron SC	>2100	>4100	110	strong	1-4	2/2	12 hrs

(Continued on next page)

TABLE 13 – Toxicity, Solubility, Adsorptivity, and Persistence of Herbicides (continued)

HERBICIDE	TOXICITY ¹ LD ₅₀ mg/kg		WATER SOLUBILITY (ppm at 25°C)	ADSORPTIVITY TO SOIL	SOIL PERSISTENCE AT STANDARD RATE (months)	RUNOFF/ ² LEACHING POTENTIAL	RESTRICTED ³ ENTRY INTERVAL
	Oral	Dermal					
Option	>3881	>5000	–	–	–	–/–	12 hrs
Outlook	695	>2000	1174	moderate	1–2	2/2	12 hrs
Permit	1287	>5000	15	–	–	2/2	12 hrs
Harmony GT	>5000	>2000	2400	–	0.25	2/2	4 hrs
Poast	2200–4100	2000–5000	48	moderate	0.25	2/3	12 hrs
Princep	>5000	2000–2500	5	strong	2–8	2/1	12 hrs
Prowl/Pendimax/ Prowl H ₂ O	3956	>2200	<1	v. strong	3–6	1/3	24 hrs
Pursuit	3506–5000	>2000	1,400	weak	2–8	1/1	12–24 hrs
Pyramin	1160	>2000	1	strong	1–2	2/2	12 hrs
Python	>5000	>2000	49	moderate	2–8	3/1	12 hrs
Raptor	>5000	>4000	–	weak	1–2	–/–	4 hrs
Reflex/Flexstar	3683–8160	>1000	600,000	weak	6	2/1	24 hrs
Resource	3200–4100	>2000	.189	strong	–	3/2	12 hrs
Ro-Neet	3160–3690	>4640	85	strong	1–3	2/2	12 hrs
Scepter	5000–6598	2000–5000	60	moderate	2–8	3/1	12–48 hrs
Select	2920–3610	>5000	infinite	moderate	0.25	3/3	24 hrs
Sencor	1500–2794	>5000	1200	moderate	2–4	2/1	12 hrs
Sinbar	5000–7500	>5000	710	moderate	5–6	2/1	12 hrs
Sonalan	3300–5000	>5000	1	v. strong	3–5	1/3	24 hrs
Steadfast	>5000	>2000	–	–	–	–	4 hrs
Stinger	>5000	>5000	1000	moderate	1–10	3/1	12 hrs
Surpass	1426–1942	>2240	223	moderate	1–2	2/2	12 hrs
Touchdown IQ	>5000	>5000	infinite	v. strong	1	1/3	12 hrs
Treflan	3738	>2000	<1	v. strong	3–6	1/3	12 hrs
Ultra Blazer	4790	3250	infinite	strong	1	2/2	48 hrs
Upbeet	>5000	>2000	110 (pH 7.0)	weak	–	–/–	4 hrs
Valor	>5000	>2000	1.78	–	–	–	12 hrs
Velpar	1100–4120	>5000	33,000	strong	4–6	2/1	24 hrs
(Table Salt)	3320	–	360,000	–	–	–	–
(Aspirin)	1200	–	2,500	–	–	–	–

-- No information available.

Sources: numerous, including *Herbicide Handbook, 1989 Herbicide Manual for Ag Chem. Dealers*, Iowa State; *U of Illinois Custom Spray Operation Training Manual, 1979*; *1987 Illinois Pest Control; Farm Chemical Handbook*.

¹ The LD50 is a standard toxicological term which indicates the number of milligrams (mg) of pesticide per kilogram (kg) of test animal body weight required to kill 50% of a test animal population. Values less than 10 indicate extremely high toxicity to mammals. The LD50 data have been obtained from the Material Data Safety Sheets or Farm Chemical Handbook.

² The runoff/leaching potential ratings are from the ARS/NRCS pesticide properties database and were developed for use with the NRCS soils ratings for water quality in the NRCS "Soil-Pesticide Interaction Ratings." 1=high, 2=medium, 3=low.

³ Read and follow label directions. Post areas or give oral warnings that areas have been treated to warn workers not to enter until the REI has elapsed as required by the label. SL= See Label.

* Combination of *Express* and the active ingredient in *Harmony GT*.

** Combination of *Lexone* plus chlorimuron.

*** Glyphosate IPA salt; active ingredient in products in Table 10.

Premixes: Refer to Tables 1H and 2E for components of herbicide premixes.