

Table S1. Physicochemical properties of all pesticides selected in this study.

Compound	Type	Family	Log K _{ow}	pKa	Water Solubility	K _{oc}	DT ₅₀ soil	K _f	Soil / Environmental Fate ^a
Thiamethoxam	Insecticide	Neonicotinoid	-0.13 ^b	0.4 ^c	4100 ^a	56 ^a	50 ^a	n.d	Moderately persistent. High mobility in soil.
Imidacloprid	Insecticide	Neonicotinoid	0.57 ^b	11.1 ^b	610 ^a	33 ^d	191 ^a	2.2 ^a	Persistent. Low mobility in soil.
Dimethoate	Insecticide	Organophosphorous	0.78 ^b	15.9 ^e	25900 ^a	17 ^d	2.5 ^a	0.4 ^a	Non-persistent. High mobility in soil.
Acetamiprid	Insecticide	Neonicotinoid	0.80 ^b	0.7 ^a	2950 ^a	200 ^a	1.6 ^a	1.6 ^a	Non-persistent. High mobility in soil.
Propamocarb	Fungicide	Carbamate	1.12 ^b	9.5 ^a	900000 ^a	100 ^b	14 ^a	n.d	Non-persistent. High mobility in soil.
Thiacloprid	Insecticide	Neonicotinoid	1.26 ^b	1.6 ^c	184 ^a	1100 ^b	0.8 ^a	4.4 ^a	Non-persistent. Medium mobility in soil.
Carbendazim	Fungicide	Benzimidazole	1.52 ^b	4.2 ^a	8 ^a	120 ^d	40 ^a	3.4 ^a	Moderately persistent. Medium mobility in soil.
DEET	Insecticide	Benzamides	2.18 ^a	n.d	912 ^a	277 ^a	15 ^a	n.d	Persistent. Medium mobility in soil.
Thiabendazol	Fungicide	Benzimidazole	2.39 ^a	4.7 ^a	30 ^a	3983 ^a	500 ^a	35 ^a	Very persistent. Low mobility in soil.
Azoxystrobin	Fungicide	Strobilurin	2.50 ^a	0.9 ^c	6.7 ^a	589 ^a	78 ^a	7.3 ^a	Moderately persistent. Medium mobility in soil.
Imazalil	Fungicide	Imidazole	2.56 ^a	6.5 ^a	184 ^a	2080-6918 ^b	76 ^a	127 ^a	Moderately persistent. Non-mobility.
Hexythiazox	Insecticide	Chlorobenzenes	2.67 ^a	n.d	0.1 ^a	6200 ^b	30 ^a	207 ^a	Moderately persistent. Non-mobility.
Malathion	Insecticide	Organophosphorous	2.75 ^a	-6.8 ^c	148 ^a	1800 ^a	0.2 ^a	1.6 ^a	Non-persistent. Medium mobility in soil.
Diuron	Herbicide	Urea	2.87 ^a	13.2 ^c	35 ^a	680 ^a	146 ^a	7 ^a	Persistent. Low mobility in soil.
Myclobutanil	Fungicide	Triazole	2.89 ^a	2.3 ^a	132 ^a	950 ^b	560 ^a	5.0 ^a	Very persistent. Low mobility in soil.
Fluxapyroxad	Fungicide	Pyrazole	3.13 ^a	12.6 ^a	3.4 ^a	1907 ^c	183 ^a	8.3 ^a	Persistent. Low mobility in soil.
Methiocarb	Insecticide	Carbamate	3.18 ^a	n.d	27 ^a	920 ^b	3 ^a	5.9 ^a	Non-persistent. Low mobility in soil.
Fenhexamid	Fungicide	Hydroxyanilide	3.51 ^a	7.3 ^a	24 ^a	475 ^a	0.4 ^a	10.1 ^a	Non-persistent. Low mobility in soil.
Diazinon	Insecticide	Organophosphorous	3.69 ^a	2.6 ^a	60 ^a	609 ^a	9.1 ^a	4.1 ^a	Non-persistent. Low mobility in soil.
Tebuconazole	Fungicide	Triazole	3.70 ^b	5.0 ^a	36 ^a	429 ^d	63 ^a	12.7 ^a	Moderately persistent. Low mobility in soil.
Penconazole	Fungicide	Triazole	3.72 ^a	1.5 ^a	73 ^a	3812 ^d	117 ^a	27.9 ^a	Persistent. Low mobility in soil.
Chlorfenvinphos	Insecticide	Organophosphorous	3.80 ^a	n.d	145 ^a	680 ^a	40 ^a	n.d	Moderately persistent. Low mobility in soil.
Pencycuron	Fungicide	Phenylurea	4.70 ^a	n.d	0.3 ^a	1514 ^d	82 ^a	46.0 ^a	Moderately persistent. Non-mobility.
Buprofezin	Insecticide	Triadiazines	4.93 ^a	-0.4 ^c	0.4 ^a	5363 ^a	50 ^a	98.3 ^a	Moderately persistent. Non-mobility.
Pyriproxyfen	Insecticide	Piridina	5.37 ^a	n.d	0.4 ^a	120000 ^b	10 ^a	227 ^a	Non-persistent. Low mobility in soil.
Pendimethalin	Herbicide	Dinitroaniline	5.40 ^a	2.8 ^a	0.3 ^a	17490 ^a	182 ^a	220 ^a	Persistent. Non-mobility.
Pyridaben	Insecticide	Pyridazines	6.37 ^a	-4.1 ^e	0.02 ^a	340000 ^b	55 ^a	276 ^a	Moderately persistent. Non-mobility.

^a<https://sitem.herts.ac.uk/aeru/ppdb/en/atoz.htm#>; ^b <https://pubchem.ncbi.nlm.nih.gov/>; ^c <http://www.chemspider.com/>; ^d EPI Suite TM; ^e <http://www.t3db.ca/>;
Data of water solubility at 20 °C (mg/L); **K_{oc}**: average coefficient of sorption (mL/g); **DT₅₀**: time required for the concentration to decline to half of the initial value (days); **K_f**: Freundlich constant; **n.d**: Not data.