

PlantwisePlus Pesticide Red List

It is PlantwisePlus policy¹ that plant doctors should not recommend the use of chemicals that are banned or restricted by international agreements. The table below lists the pesticides identified as Classes Ia and Ib by the WHO Recommended Classification of Pesticides by Hazard, as well as pesticides banned or restricted by the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, the Stockholm Convention on Persistent Organic Pollutants, and the Montreal Protocol on Substances that Deplete the Ozone Layer.

Please note: This table was updated following the last meeting of the Conference of Parties of the Stockholm Conventions in May 2023. Under these agreements, procedures exist for restricting additional chemicals and, as a consequence, the list of restricted chemicals changes on a regular basis. Refer to the websites of the agreements (given below) for the most up-to-date lists of banned and restricted pesticides. Likewise, the websites provide additional information on the hazards associated with each chemical. For more information, you can also contact plantwiseplus@cabi.org.

Active ingredient	International agreements under which the pesticide is restricted			
	WHO Classification ²	Rotterdam Convention (PIC) ³	Stockholm Convention (POP) ⁴	Montreal Protocol ⁵
2,4,5-T and its salts and esters	Ia	✗		
3-Chloro-1,2-propanediol	Ib			
Abamectin	Ib			
Acrolein	Ib			
Alachlor		✗		
Aldicarb	Ia	✗		
Aldrin		✗	✗	
Allyl alcohol	Ib			
Alpha hexachlorocyclohexane			✗	
Alphachlorohydrin, <i>also called 3-Chloro-2,3-propanediol</i>	Ib			
Azinphos-ethyl	Ib			
Azinphos-methyl	Ib	✗		

¹ Latest version of the PlantwisePlus Pesticide Red List : <http://www.plantwise.org/pesticide-restrictions>

² WHO classification of pesticides by hazard - Extremely and highly hazardous pesticides: <https://www.who.int/publications/i/item/9789240005662>

³ Rotterdam Convention Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade - Annex III: <http://www.pic.int/TheConvention/Chemicals/AnnexIIIChemicals/tabid/1132/language/en-US/Default.aspx>

⁴ Stockholm Convention on Persistent Organic Pollutants - pesticides targeted for elimination and with restrictions for production and use: <https://chm.pops.int/TheConvention/ThePOPs/AllPOPs/tabid/2509/Default.aspx>

⁵ Montreal Protocol on Substances that Deplete the Ozone Layer – substances being phased out: <https://ozone.unep.org/treaties/montreal-protocol/montreal-protocol-substances-deplete-ozone-layer>

Active ingredient	International agreements under which the pesticide is restricted			
	WHO Classification ²	Rotterdam Convention (PIC) ³	Stockholm Convention (POP) ⁴	Montreal Protocol ⁵
Benomyl		x ⁶		
Binapacryl		x		
Beta hexachlorocyclohexane			x	
Beta-cyfluthrin	lb			
Blasticidin-S	lb			
Brodifacoum	la			
Bromadiolone	la			
Bromethalin	la			
Bromophos-ethyl	lb			
Butocarboxim	lb			
Butoxycarboxim	lb			
Cadusafos	lb			
Calcium arsenate	lb			
Calcium cyanide	la			
Captafol	la	x		
Carbofuran	lb	x		
Chlordane		x	x	
Chlordecone			x	
Chlordimeform		x		
Chlorethoxyfos	la			
Chlorfenvinphos	lb			
Chlormephos	la			
Chlorobenzilate		x		
Chlorophacinone	la			
Coumaphos	lb			
Coumatetralyl	lb			
CVP, <i>also called Chlorfenvinphos</i>	lb			
Cyfluthrin / Beta-cyfluthrin	lb			
DDT (Dichlorodiphenyltrichloroethane)		x	x ⁷	
DDVF, <i>also called Dichlorvos</i>	lb			
DDVP, <i>also called Dichlorvos</i>	lb			
Demeton-S-methyl	lb			

⁶ Dustable powder formulations containing a combination of benomyl at or above 7%, carbofuran at or above 10% and thiram at or above 15%

⁷ Production and use restricted to disease vector control

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	WHO Classification ²	Rotterdam Convention (PIC) ³	Stockholm Convention (POP) ⁴	Montreal Protocol ⁵
Dichlorvos	lb			
Dicofol			x	
Dicrotophos	lb			
Dieldrin		x	x	
Difenacoum	la			
Difethialone	la			
Difolatan, <i>also called Captafol</i>	la			
Dinitro-ortho-cresol (DNOC) and its salts (such as ammonium salt, potassium salt and sodium salt)	lb	x		
Dinoseb and its salts and esters		x		
Dinoterb	lb			
Diphacinone	la			
Disulfoton	la			
DMTP, <i>also called Methidathion</i>	lb			
EDB (1,2-dibromoethane)		x		
EDDP, <i>also called Edifenphos</i>	lb			
Edifenphos	lb			
Endosulfan (technical endosulfan) and its related isomers		x	x	
Endrin			x	
Ethyl p-nitrophenyl phenylphosphorothioate (EPN)	la			
Ethiofencarb	lb			
Ethoprop, <i>also called Ethoprophos</i>	la			
Ethoprophos	la			
Ethylene dichloride		x		
Ethylene oxide		x		
Ethylthiometon, <i>also called Disulfoton</i>	la			
Famphur	lb			
Fenamiphos	lb			
Flocoumafen	la			
Flucythrinate	lb			
Fluoroacetamide	lb	x		
Formetanate	lb			
Furathiocarb	lb			
Hexachlorocyclohexane (HCH) and its mixed isomers such as gamma-HCH (Lindane)		x	x	
Heptachlor		x	x	

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	WHO Classification ²	Rotterdam Convention (PIC) ³	Stockholm Convention (POP) ⁴	Montreal Protocol ⁵
Heptenophos	lb			
Hexachlorobenzene	la	x	x	
Isoxathion	lb			
Lead arsenate	lb			
M74, also called <i>Disulfoton</i>	la			
Mecarbam	lb			
Mercaptodimethur, also called <i>Methiocarb</i>	lb			
Mercuric chloride	la	x		
Mercuric oxide	lb	x		
Mercury compounds, including inorganic mercury compounds, alkyl mercury compounds and alkyloxyalkyl and aryl mercury compounds		x		
Metaphos, also called <i>Methyl-parathion</i>	la			
Methamidophos	lb	x		
Methidathion	lb			
Methiocarb	lb			
Methomyl	lb			
Methoxychlor			x	
Methyl bromide				x
Methylmercaptophos teolovy, also called <i>Demeton-S-methyl</i>	lb			
Methyl-parathion	la	x ⁸		
Metilmerkaptophosoksid, also called <i>Oxydemeton-methyl</i>	lb			
Metiltriazotion, also called <i>Azinphos-methyl</i>	lb			
Mevinphos	la			
Mirex			x	
Monocrotophos	lb	x		
Nicotine	lb			
Omethoate	lb			
Oxamyl	lb			
Oxydemeton-methyl	lb			
Parathion	la	x		

⁸ Emulsifiable concentrates (EC) at or above 19.5% active ingredient and dusts at or above 1.5% active ingredient

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	WHO Classification ²	Rotterdam Convention (PIC) ³	Stockholm Convention (POP) ⁴	Montreal Protocol ⁵
Parathion-methyl, also called <i>Methyl-parathion</i>	la	x ⁸		
Paris green	lb			
Pentachlorobenzene			x	
Pentachlorophenol and its salts and esters	lb	x	x	
Perfluorooctane sulfonic acid			x ⁹	
Phenylmercury acetate	la			
Phorate	la	x		
Phosphamidon	la	x ¹⁰		
Propetamphos	lb			
Sodium arsenite	lb			
Sodium cyanide	lb			
Sodium fluoracetate	la			
Strychnine	lb			
Sulfotep	la			
Tebupirimfos	la			
Tefluthrin	lb			
Terbufos	la	x		
Thallium sulfate	lb			
Thiofanox	lb			
Thiofos, also called <i>Parathion</i>	la	x		
Thiometon	lb			
Thioxamyl, also called <i>Oxamyl</i>	lb			
Thiram		x ⁶		
Timet, also called <i>Phorate</i>	la			
Toxaphene (Camphechlor)		x	x	
Triazophos	lb			
Triazotion, also called <i>Azinphos-ethyl</i>	lb			
Tributyl tin compounds		x		
Trichlorfon		x		
Vamidothion	lb			
Warfarin	lb			
Zeta-cypermethrin	lb			

⁹ Acceptable purpose for production and use restricted to insect baits for control of leaf-cutting ants from *Atta* spp. and *Acromyrmex* spp. Specific exemption for control of red imported fire ants and termites.

¹⁰ Soluble liquid formulations of the substance that exceed 1000 g active ingredient/l

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Zinc phosphide	Ib			