

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 2025. 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	Ib	✗	✗	
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 Plantwise 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/11132/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		
Carbosulfan		x		
Chlordane		x	x	
Chlordecone			x	
Chlordimeform		x		
Chlorethoxyfos	la			
Chlorfenvinphos	lb			
Chlormephos	la			
Chlorobenzilate		x		
Chlorophacinone	la			
Chlorpyrifos			x	
Coumaphos	lb			
Coumatetralyl	lb			
CVP, also called Chlorfenvinphos	lb			
Cyfluthrin	lb			
DDT (Dichlorodiphenyltrichloroethane)		x	x ⁷	
DDVF, also called Dichlorvos	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

Active ingredient	International agreements under which the pesticide is restricted			
	WHO Classification ²	Rotterdam Convention (PIC) ³	Stockholm Convention (POP) ⁴	Montreal Protocol ⁵
DDVP, also called <i>Dichlorvos</i>	Ib			
Demeton-S-methyl	Ib			
Dichlorvos	Ib			
Dicofol	II		×	
Dicrotophos	Ib			
Dieldrin	Ia	×	×	
Difenacoum	Ia			
Difethialone	Ia			
Difolatan, also called <i>Captafol</i>	Ia			
Dinitro-ortho-cresol (DNOC) and its salts (such as ammonium salt, potassium salt and sodium salt)	Ib	×		
Dinoseb and its salts and esters	Ib	×		
Dinoterb	Ib			
Diphacinone	Ia			
Disulfoton	Ia			
DMTP, also called <i>Methidathion</i>	Ib			
EDB (1,2-dibromoethane)		×		
EDDP, also called <i>Edifenphos</i>	Ib			
Edifenphos	Ib			
Endosulfan (technical endosulfan) and its related isomers		×	×	
Endrin			×	
Ethyl p-nitrophenyl phenylphosphorothioate (EPN)	Ia			
Ethiofencarb	Ib			
Ethoprop, also called <i>Ethoprophos</i>	Ia			
Ethoprophos	Ia			
Ethylene dichloride		×		
Ethylene oxide		×		
Ethylthiometon, also called <i>Disulfoton</i>	Ia			
Famphur	Ib			
Fenamiphos	Ib			
Fenthion		× ⁸		
Flocoumafen	Ia			
Flucythrinate	Ib			
Fluoroacetamide	Ib	×		
Formetanate	Ib			

⁸ Ultra-low-volume formulations at or above 640 g active ingredient/L

Active ingredient	International agreements under which the pesticide is restricted			
	WHO Classification ²	Rotterdam Convention (PIC) ³	Stockholm Convention (POP) ⁴	Montreal Protocol ⁵
Furathiocarb	lb			
Hexachlorocyclohexane (HCH) and its mixed isomers such as gamma-HCH (Lindane)		✗	✗	
Heptachlor		✗	✗	
Heptenophos	lb			
Hexachlorobenzene	la	✗	✗	
Isoxathion	lb			
Lead arsenate	lb			
M74, also called Disulfoton	la			
Mecarbam	lb			
Mercaptodimethur, also called Methiocarb	lb			
Mercuric chloride	la	✗		
Mercuric oxide	lb	✗		
Mercury compounds, including inorganic mercury compounds, alkyl mercury compounds and alkyloxyalkyl and aryl mercury compounds		✗		
Metaphos, also called Methyl-parathion	la			
Methamidophos	lb	✗		
Methidathion methoxychlor	lb			
Methiocarb	lb			
Methomyl	lb			
Methoxychlor			✗	
Methyl bromide				✗
Methylmercaptophos teolovy, also called Demeton-S-methyl	lb			
Methyl-parathion	la	✗ ⁹		
Metilmerkaptophosoksid, also called Oxydemeton-methyl	lb			
Metritriazotion, also called Azinphos-methyl	lb			
Mevinphos	la			
Mirex			✗	
Monocrotophos	lb	✗		
Nicotine	lb			

⁹ Emulsifiable concentrates (EC) at or above 19.5% active ingredient and dusts at or above 1.5% active ingredient

Active ingredient	International agreements under which the pesticide is restricted			
	WHO Classification ²	Rotterdam Convention (PIC) ³	Stockholm Convention (POP) ⁴	Montreal Protocol ⁵
Omethoate	Ib			
Oxamyl	Ib			
Oxydemeton-methyl	Ib			
Parathion	Ia	x		
Parathion-methyl, also called Methyl-parathion	Ia	x ⁸		
Paris green	Ib			
Pentachlorobenzene			x	
Pentachlorophenol and its salts and esters	Ib	x	x	
Perfluorooctane sulfonic acid			x ¹⁰	
Phenylmercury acetate	Ia			
Phorate	Ia			
Phosphamidon	Ia	x ¹¹		
Properamphos	Ib			
Sodium arsenite	Ib			
Sodium cyanide	Ib			
Sodium fluoracetate	Ia			
Strychnine	Ib			
Sulfotep	Ia			
Tebupirimfos	Ia			
Tefluthrin	Ib			
Terbufos	Ia			
Thallium sulfate	Ib			
Thiofanox	Ib			
Thiofos, also called Parathion	Ia	x		
Thiometon	Ib			
Thioxamyl, also called Oxamyl	Ib			
Thiram		x ⁶		
Timet, also called Phorate	Ia			
Toxaphene (Camphechlor)		x	x	
Triazophos	Ib			
Triazotion, also called Azinphos-ethyl	Ib			
Tributyl tin compounds		x		
Trichlorfon		x		

¹⁰ 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.

¹¹ Soluble liquid formulations of the substance that exceed 1000 g active ingredient/l

Active ingredient	International agreements under which the pesticide is restricted			
	WHO Classification ²	Rotterdam Convention (PIC) ³	Stockholm Convention (POP) ⁴	Montreal Protocol ⁵
Vamidothion	Ib			
Warfarin	Ib			
Zeta-cypermethrin	Ib			
Zinc phosphide	Ib			