

INSECTICIDES (+ LD 50)- for ICCRI

	GREEN LIST	YELLOW LIST	YELLOW/RED LIST	YELLOW/RED LIST	RED LIST Not to use
IRAC MoA grouping		3A& 4A Botani	1A Cb	1B OP	2A&B OC
Chemical class	IGR + otherBotanical	3A Synthetic Pyrethroid 4A Neonicotinoids	Carbamates	Organo Phosphate	Organo Chloride (Chlorinated-hydrocarbon)
Insects	LD50mg/kg	(LD50 mg/kg)	(LD50 mg/kg)	(LD50 mg/kg)	(LD50mg/kg)
	Nicotine (10)	3A Synthetic Pyrethroid			
Sucking pest* and Chewing pest**	Abamectin	Lambda-cyhalothrin (56) (Karate/ Matador)	Carbofuran (8)		
	Avermectin	Alphacypermethrin (79) (Fastac/ Bestox)	Methomyl (17) (Lannate)	Methylparathion (9)	
	Emamectinbenzoate (Proclaim)	Deltamethrin (128) (Decis)	Formetanate (20) (Dicarzol)	Monocrotophos (8)	Heptachlor (40)
	IGR	Cypermethrin (200)	Bendiocarb (40) Garvox	Methamidophos (30) (Tamaron)	Endosulfan (40)
	Lufenuron (Match)		Propoxur (90) (Baygon)	DDVP (56) Dichlorvos	Lindane BHC (88)
	Chlorfluazuron (1000) (Atabron)	Permethrin (450) (Ambush)	Pirimicarb (147) (Pirimor)	Chlorpyrifos (135) (Lorsban)	DDT (113)
	Buprofezin (2198) (Applaud)	Pydrin (451) (Fenvalerate , Sumicidin)	Carbosulfan (209)	Fenthion (190) (Lebaycid)	
	Cyromazine (3387) (Trigard)	Cyfluthrin (500) (Baythroid)	Cartap (325) (Padan)	Dimethoate (225) (Rogor)	Chlordane (250)
	Diflubenzuron (4640) (Dimilin)		MPMC (380)	Diazinon (300) (Basudin)	
	Tefluron (5000) (Nomolt)		Carbaryl (500) (Sevin, Avin)	Profenofos (358) (Selecron)	
	Hexaflumuron >5000				
	Others	4A Neonicotinoids	BPMC (623) (Bassa, Hopcin)		
	Diafenthiuron (Pegasus)	Acetamiprid (Mospilan)	Fenobucarb (620)	Trichlorfon (450) (Dipterex)	
	Indoxacarb (268)	Imidacloprid (450) (Confidor)		Fipronil (92) (Regent3G,50S C)	
Spinosad (3738)	Thiamethoxam () (Actara)		Fenitrothion (490) (Sumithion)		

	Spinetoram (>5000)			Acephate(866) (Orthene)	
	Pymetrozine (Plenum 50WG)			Malathion (1375)	Morestan (1520)
	Chlorantraniliprole (>5000)				
	Azadirachtin (Neem)		Fenoxycarb (9220) (Dicare)		
	White oil				
	Bt Bacillus thuringiensis (>4000)				
Mites	Amitraz (800) (Mitac)				Dicofol (684) (Kelthane)
	Propargite (2200) (Omite)				
	Fenpyroximate (Ortus) (245)				
Mosquito larva				Biothion (2030) (Abate)	
Nematodes				Phenamiphos (15) (Nemacur)	
Snails	Metaldehyde (1000)				
	Niclosamide ethanolamine (Bayluscide)				
	Rotenone (132- 1500)				
Bird repellent			Methiocarb (130) (Mesurol)		
Storage pest				Pirimiphos-methyl (2050) (Actellic)	

*Sucking pest = Aphids, hoppers, mealy bug, scale insect, thrips, whitefly

**Chewing pest = caterpillars, beetles, weevils

Note: the LD 50 shown above is based on active ingredient and not on formulated product which could have a higher LD50 value.

WHO classification

For oral dose

Class 1b – **RED**, - Highly hazardous = LD50 below 200 for liquids

Class 2 – **YELLOW** – Moderately hazardous = LD50 of 200 – 2,000 for liquids

Class 3 – **BLUE** – Slightly hazardous = LD50 of 2,000 – 20,000 for liquids

Class 4 – **WHITE** – Low hazard - unlikely to present a hazard = LD 50 over 20,000 for liquids (5,000 for solids)