

Cranberry Insecticide Groupings & Traits

by Charles Armstrong (March 2020).

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The table shown here provides an overview of many of our cranberry insecticides. They have been grouped by insecticide class (or Group). **When rotating insecticides to avoid insecticide resistance, try to rotate amongst the groups. Shaded items in the table are highly toxic to bees.**

Chemical Group	Active Ingredient	Example brand name	Spectrum	IPM fit	Mammalian toxicity (oral)
Anthranilic diamides (Group 28) (sustained muscle contraction / paralysis)	chlorantraniliprole cyantraniliprole	Altacor® Exirel®	very narrow	<i>excellent!</i>	very low (no acute toxicity)
Tetronic & tetramic acid derivatives (Group 23) (lipid synthesis inhibitors)	spirotetramat	Movento®	narrow	<i>excellent!</i>	very low (no acute toxicity)
Oxadiazines (Group 22) [nerve action] (sodium channel blockers)	indoxacarb	Avaunt®	fairly narrow	not too bad	moderate
Organophosphates (Group 1B) [nerve action] (Acetylcholinesterase inhibitors)	acephate	Orthene®	broad	poor	slight
	chlorpyrifos	Lorsban®	broad	poor	moderate
	diazinon	Diazinon®	broad	poor	slight
	phosmet	Imidan®	broad	poor	moderate
Carbamates (Group 1A) [nerve action] (cholinesterase inhibitors)	carbaryl	Sevin®	broad	poor	slight
Neonicotinoids (Group 4A) [nerve action] acetylcholine agonists (mimic the action of nicotine on the nerve receptor cells)	thiamethoxam	Actara®	narrow	pros & cons	low
	imidacloprid	Admire®	narrow	pros & cons	moderate
	imidacloprid	Alias®	narrow	pros & cons	moderate
	acetamiprid	Assail®	narrow	not too bad	very low
	clothianidin	Belay® / Arena®	narrow	pros & cons	very low
	dinotefuran	Scorpion®	narrow	pros & cons	low
	dinotefuran	Venom®	narrow	pros & cons	low
Sulfoximines (Group 4C) [nerve action] acetylcholine agonist <i>but</i> with a unique chemical structure versus neonicotinoids; thus, it has a unique SAR (Structure Activity Relationship)	sulfoxaflor	Closer®	very narrow	pros & cons	very low (no acute toxicity)
Insect Growth Regulators (Group 18A) [ecdysone mimics]	tebufenozide	Confirm®	very narrow	good	low
	methoxyfenozide	Intrepid® Troubadour®	very narrow	good	low
	Disruptors or mimics of the insect hormone ecdysone; induces premature molting and metamorphosis.				
Insect Growth Regulators (Group 15) [chitin inhibitors]	novaluron	Rimon®	very narrow	very good	low
Both Group 15 and 4A	novaluron & acetamiprid	Cormoran®	narrow	good	low
Bacillus thuringiensis (Group 11B2)	<i>Bt</i>	DiPel®	very narrow	very good	Essentially non-toxic
Spinosyns (Group 5) [indirect nerve action]	spinosad spinetoram	Entrust® Delegate®	very narrow	good (but toxic to bees when wet)	low

Note that the information in the above table does not imply any endorsement by the University of Maine of these products over other products.