

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