

## Insect control products approved for use by organic growers, OMRI<sup>a</sup> (Organic Materials Review Institute)

Note, most materials are allowed with restrictions: not permitted until attempts have been made to prevent pest infestations from developing by use of cultural, mechanical, and physical controls.

Generic category on OMRI list	General mode of action	Target pest	Representative Product Name
Pheromones	Insect behavior disruptant (mating disruption)	Moths of certain species only	<ul style="list-style-type: none"> <li>• Isomate-C Plus (codling moth)</li> <li>• CheckMate OFM (oriental fruit moth)</li> </ul>
Virus sprays	Insect pathogen (viruses)	Caterpillars of certain species only	<ul style="list-style-type: none"> <li>• Cyd-X, Virosoft CP4 (codling moth)</li> <li>• GemStar (corn earworm)</li> <li>• Spod-X (beet armyworm)</li> </ul>
Biopesticides	Insect pathogen (viruses)	Caterpillars of certain species only	<ul style="list-style-type: none"> <li>• Carpovirusine (codling moth)</li> </ul>
	Insect pathogen ( <i>Nosema</i> ; protozoan)	Grasshoppers	<ul style="list-style-type: none"> <li>• Semaspore Bait</li> </ul>
	Insect pathogen (bacterium)	Broad spectrum <sup>b</sup>	<ul style="list-style-type: none"> <li>• Grandevo (<i>Chromobacterium subtsugae</i>)</li> </ul>
Biological controls	Insect pathogen (nematodes)	Soil pests	<ul style="list-style-type: none"> <li>• Grub Guard</li> </ul>
<i>Bacillus thuringiensis</i> *	Insect pathogen (bacterium); midgut membrane disruptor	Caterpillars of all species	<ul style="list-style-type: none"> <li>• Javelin WG; Deliver</li> <li>• XenTari DF; Agree</li> </ul>
Microbial products (also <i>Bacillus thuringiensis</i> )	Insect pathogen (bacterium); midgut membrane disruptor	Caterpillars of all species	<ul style="list-style-type: none"> <li>• DiPel DF</li> </ul>
Microbial pesticides	Insect pathogen (fungus)	Whiteflies, aphids, thrips, mites	<ul style="list-style-type: none"> <li>• PFR-97 (<i>Isaria fumosorosea</i>)</li> <li>• NoFly (<i>Paecilomyces fumosoroseus</i>)</li> </ul>
Biological organisms	Insect pathogen (bacterium)	Caterpillars & others	<ul style="list-style-type: none"> <li>• Venerate (<i>Burkholderia</i> spp.)</li> </ul>
Spinosad	Microbially derived nerve poison	Caterpillars, thrips, certain beetles	<ul style="list-style-type: none"> <li>• Entrust</li> <li>• Monterey Garden Insect Spray</li> </ul>
Soap – pesticide	Smothering agent (salts of fatty acids)	Aphids and other soft-bodied insects	<ul style="list-style-type: none"> <li>• M-Pede</li> <li>• Safer's Insecticidal Soap</li> </ul>
Oils, petroleum-based, narrow range	Smothering agent (from petroleum)	Leafhoppers, mites, whiteflies	<ul style="list-style-type: none"> <li>• Saf-T-Side</li> <li>• Organic JMS Stylet Oil</li> <li>• TriTek (mineral oil)</li> <li>• PureSpray Green (mineral oil)</li> </ul>
Summer oils			
Oils, non-synthetic sources			<ul style="list-style-type: none"> <li>• Vegol (canola oil)</li> <li>• SeaCide (cottonseed oil)</li> </ul>
Botanical pesticides	Smothering agent (from plants)	Broad spectrum <sup>b</sup>	<ul style="list-style-type: none"> <li>• Organocide (sesame oil)</li> <li>• Ecotec (rosemary &amp; peppermint oils)</li> <li>• Ecotrol (rosemary &amp; peppermint oils)</li> </ul>
Plant pesticides		Mites, aphids, thrips	<ul style="list-style-type: none"> <li>• GrasRoots (cinnamon oil)</li> </ul>
Neem extract and derivatives		Broad spectrum <sup>b</sup>	<ul style="list-style-type: none"> <li>• Aza-Direct; Azatrol; Ecozin</li> <li>• Neemix; Triact; Trilogy</li> <li>• NeemAzad</li> </ul>
<i>Azadirachta indica</i> (=neem)	Botanical nerve poison (pyrethrins)	Broad spectrum <sup>b</sup>	<ul style="list-style-type: none"> <li>• Pyganic Crop Protection EC</li> </ul>
"Pyrethrum"	Botanical nerve poison (pyrethrins)	Broad spectrum <sup>b</sup>	
Garlic	Botanical chemical repellent	Aphids, beetles, caterpillars	<ul style="list-style-type: none"> <li>• BioRepel</li> <li>• Garlic Barrier</li> </ul>
Limonene	Botanical nerve poison	Ant, flea, roach	<ul style="list-style-type: none"> <li>• Orange Guard Ornamental Plants</li> </ul>
Kaolin, also Mined minerals, unprocessed	Physical repellent (particle films)	Beetles, leafhoppers, grasshoppers, thrips	<ul style="list-style-type: none"> <li>• Surround</li> </ul>
Diatomaceous earth	Disrupt water balance (abrasive dehydrating agent)	Broad spectrum <sup>b</sup> , soft-bodied pests	<ul style="list-style-type: none"> <li>• DE-cide Nature's Cutting Edge</li> </ul>
Potassium silicate, aqueous	Replenishes plant's innate resistance	Mites, aphids, whiteflies	<ul style="list-style-type: none"> <li>• Sil-Matrix</li> </ul>
Sucrose octanoate esters	Penetrate and burn holes in exoskeleton	Aphids, mites, caterpillars, thrips	<ul style="list-style-type: none"> <li>• SucraShield</li> </ul>
Ferric phosphate	Stomach poison; damages digestive tissue of slugs	Slugs	<ul style="list-style-type: none"> <li>• Sluggo</li> </ul>
Sulfur, elemental	(unknown)	Some mites	<ul style="list-style-type: none"> <li>• Dusting Sulfur Fungicide-Insecticide</li> </ul>
Lime sulfur and/or Calcium polysulfide	(unknown)	Scale insects	<ul style="list-style-type: none"> <li>• Rex Lime Sulfur Solution</li> <li>• Brandt Lime Sulfur</li> <li>• Tetrasul 4s5</li> </ul>
Sticky traps and barriers	Entrapment	Whitefly, aphids, thrips	<ul style="list-style-type: none"> <li>• Tanglefoot Tangle-Trap</li> </ul>

<sup>a</sup> OMRI: <http://www.omri.org>

<sup>b</sup> Broad spectrum usually includes sucking pests such as aphids, leafhoppers, and thrips as well as chewing pests such as beetles and caterpillars.