



## Product Compatibility

### Molt-X®

Molt-X is an emulsifiable concentrate with 3% azadirachtin active ingredient derived from the seeds of the neem tree. As a botanical Insect Growth Regulator (IGR) it interferes with the key molting hormone, ecdysone, preventing insects from progressing from one life stage to the next. It may also act as an antifeedant or oviposition deterrent against insects.

Products listed below were tested for physical compatibility with Molt-X. Tests were not carried out for plant phytotoxicity. Compatibility was tested at normal tank mix dilutions, not in concentrated stock tank dilutions (such as for injecting at 1:100). Physical compatibility can be impacted by your water quality, tank residues, or the addition of other materials in the spray tank.

Molt-X is active in the pH range of 5.5-6.6, with 7.0 being the maximum before the product begins to break down.

\* Examples of products incompatible due to their influence on pH are provided below.

Fungicides		
Active Ingredient(s)	Brand Name	Compatibility
<i>Bacillus amyloliquefaciens</i> strain F727	Stargus®	Yes
<i>Bacillus subtilis</i> strain GHA	CEASE®	Yes
Bordeaux mix	Various	<b>NO*</b>
Extract of <i>Reynoutria sachalinensis</i>	Regalia®	Yes
Lime sulfur	Brandt Lime Sulfur Fungicide	<b>NO*</b>
Potassium bicarbonate	MilStop® SP	<b>NO*</b> (MilStop SP raises pH too high for Molt-X)
<i>Trichoderma harzianum</i> strain T-22	RootShield® WP or G	Yes
<i>Trichoderma harzianum</i> strain T-22 plus <i>Trichoderma virens</i> strain G-41	RootShield® PLUS <sup>+</sup> WP or G	Yes
Triphenyltin hydroxide	Triphenyltin Hydroxide Flowable Fungicide	<b>NO*</b>
<i>Ulocladium oudemansii</i> U3 Strain	BotryStop®	Yes, at 8 oz/100 gal Molt-X

Insecticides		
Active Ingredient(s)	Brand Name	Compatibility
Abamectin	Abamex, Agri-Mek SC	Yes
Acephate	Orthene	Yes
<i>Bacillus thuringiensis</i>	Dipel 2X, Dipel, Thuricide	Yes
<i>Beauveria bassiana</i> strain GHA	BotaniGard® 22WP, BotaniGard® ES, Mycotrol® WPO, Mycotrol® ESO	Yes
Bifenthrin	Brigade, Bifen	Yes
<i>Burkholderia</i> spp. strain A396	Venerate®	Yes
Chlorpyrifos	Lorsban, Cobalt	Yes
<i>Chromobacterium subtsugae</i> strain PRAA4-1	Grandevo®	Yes
Cyantraniliprole	Mainspring®	Yes
Diflubenzuron	Dimilin, Adept	Yes
Endosulfan	Thiodan, Thionex	Yes
Esfenvalerate	Asana, Onslaught	Yes



Insecticides (continued)		
Active Ingredient(s)	Brand Name	Compatibility
Mineral Oil	SuffOil-X®	Yes (Both contain oils. Test first for phytotoxicity on sensitive species.)
Pyrethrins	Pyganic 1.4 EC, Pyganic 5.0 EC	Yes
Pyrethrum + piperonyl butoxide (for fogging use)	-	Yes
Non-phytotoxic crop oils	-	Yes
<i>Steinernema feltiae</i>	NemaShield®	Yes
<i>Heterorhabditis bacteriophora</i>	NemaShield® HB	Yes

BCAs: Biological Control Agents		
Genus, species	Type, Brand Name	Compatibility
<i>Amblyseius</i> (= <i>Neoseiulus</i> ) <i>andersoni</i>	predatory mite	Ok to apply
<i>Amblyseius californicus</i>	predatory mite	Ok to apply
<i>Amblyseius cucumeris</i>	predatory mite	Ok to apply
<i>Amblyseius swirskii</i>	predatory mite	Ok, but some population reduction
<i>Aphelinus abdominalis</i>	parasitic wasp	Ok to apply
<i>Aphidius colemani</i>	parasitic wasp	Ok to apply
<i>Aphidius ervi</i>	parasitic wasp	Ok to apply
<i>Aphidoletes aphidimyza</i>	predatory midge	Do not apply
<i>Bombus</i> spp	bumblebee	Ok. Close the hive before application.
<i>Chrysoperla</i> ( <i>Chrysopa</i> )	predatory lacewing	Ok to apply
<i>Cryptolaemus montrouzieri</i>	predatory beetle	Ok to apply
<i>Dicyphus hesperus</i>	predatory bug	Ok, but some population reduction
<i>Diglyphus isaea</i>	parasitic wasp	Ok to apply
<i>Encarsia formosa</i>	parasitic wasp	Larva = 1, Adult = 2 (**)
<i>Eretmocerus eremicus</i>	parasitic wasp	Ok to apply
<i>Feltiella acarisuga</i>	predatory midge	Larva = 1, Adult = 2 (**)
<i>Heterorhabditis bacteriophora</i>	NemaShield® HB entomopathogenic nematode	Ok to apply; Ok to tank mix
<i>Orius insidiosus</i>	predatory bug	(Data not available)
<i>Phytoseiulus persimilis</i>	predatory mite	Adult = 1 Larva = 2 (**)
<i>Steinernema feltiae</i>	NemaShield® entomopathogenic nematode	Ok to apply
<i>Stratiolaelaps scimitus</i> (formerly <i>Hypoaspis miles</i> )	predatory mite	Larva = 1 Adult = 2 (**)

\*\*See Toxicity Rating Chart below

IPM Impact Rating <sup>1</sup>	Mortality /Reduction	Toxicity
1	<25%	Non-Toxic
2	25-50%	Slightly Toxic
3	50-75%	Moderately Toxic
4	>75%	Toxic

1. Side-effects Database, IPM Impact, 2019

Refer to product labels for complete application details. Additional technical information is available on our website ([bioworksinc.com](http://bioworksinc.com)) or from your BioWorks Biological Solutions Advisor. Always read and follow label instructions.