

Non Organic Orchard Spray Ingredients and their Risks – Codling Moth Example

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Diane Emerson, for Garden Green, <http://gardengreen.webs.com/>

Source of recommended ingredients: Pacific Northwest Insect Management Handbook




Printed page URL: <https://pnwhandbooks.org/node/7489>

Hollingsworth, C.S. (Ed.). 2018 Pacific Northwest Insect Management Handbook.

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







These are some of the home orchard ingredients recommended by PNW Extension agents for Codling moth. Safety data provided by the scientists at Thurston County, through the Grow Smart, Grow Safe website: <https://www.growsmartgrowsafe.org>

Rating symbols

-  The active ingredient is low in hazard for that category.
-  The active ingredient is rated moderate in hazard for that category.
-  The active ingredient is rated high in hazard for that category.
- X Useful data is not available.

Acetamiprid

EPA-Registered Pesticides (Total: 9)

Product Name	Active Ingredients	Signal Word	Human	Pet and Wildlife	Aquatic Life	Water Pollution
Highest Hazard						
ACETAMIPRID RTU INSECTICIDE	ACETAMIPRID	!				
END ZONE INSECTICIDE STICKER	ACETAMIPRID	!				
ORTHO BUG B GON GARDEN INSECT KILLER R-T-U	ACETAMIPRID	!				
ORTHO BUG B GON SYSTEMIC INSECT KILLER CONC.	ACETAMIPRID	!				
ORTHO FLOWER, FRUIT & VEGETABLE INSECT KILLER CONC.	ACETAMIPRID	!				
ORTHO FLOWER, FRUIT & VEGETABLE INSECT KILLER R-SPRAY	ACETAMIPRID	!				
ORTHO FLOWER, FRUIT & VEGETABLE INSECT KILLER R-SPRAY II	ACETAMIPRID	!				
ORTHO FLOWER, FRUIT & VEGETABLE INSECT KILLER R-T-U	ACETAMIPRID	!				
ORTHO ROSE & FLOWER INSECT KILLER R-T-U	ACETAMIPRID	!				

Carbaryl EPA-Registered Pesticides (Total: 13)

Product Name	Active Ingredients	Signal Word	Human	Pet and Wildlife	Aquatic Life	Water Pollution
Highest Hazard						
BAYER ADV COMPLETE INSECT KILLER/GARDENS R-T-U	CARBARYL (CARBAMATE)	!	■■■	■██	■■■	■██
GARDENTECH SEVIN CONC. BUG KILLER	CARBARYL (CARBAMATE)	!	■■■	■██	■■■	■██
GARDENTECH SEVIN GARDEN BUG KILLER & HOME PERIMETER GRANULES	CARBARYL (CARBAMATE)	!	■■■	■██	■■■	■██
GARDENTECH SEVIN LAWN INSECT GRANULES	CARBARYL (CARBAMATE)	!	■■■	■██	■■■	■██
GARDENTECH SEVIN R-T-SPRAY BUG KILLER	CARBARYL (CARBAMATE)	!	■■■	■██	■■■	■██
GARDENTECH SEVIN RTU	CARBARYL (CARBAMATE)	!	■■■	■██	■■■	■██
GARDENTECH SEVIN-5 RTU 5% DUST BUG KILLER	CARBARYL (CARBAMATE)	!	■■■	■██	■■■	■██
THE ANDERSONS PROF TURF 8% GRANULAR INSECTICIDE W/CARBARYL	CARBARYL (CARBAMATE)	!	■■■	■██	■■■	■██

Esfenvalerate EPA-Registered Pesticides (Total: 11)

Product Name	Active Ingredients	Signal Word	Human	Pet and Wildlife	Aquatic Life	Water Pollution
Highest Hazard						
BONIDE TERMITE & CARPENTER ANT KILLER II	ESFENVALERATE	!	■■■	■■■	■■■	■██
CLAIRE FAST KILL RESIDUAL ROACH & ANT KILLER	ESFENVALERATE	!	■■■	■■■	■■■	■██
HARTZ ULTRA GUARD YARD & KENNEL SPRAY	ESFENVALERATE	!	■■■	■■■	■■■	■██
MONTEREY BUG BUSTER II	ESFENVALERATE	!	■■■	■■■	■■■	■██
OPTI-GRO INDOOR SECT-B-GONE RESIDUAL INSECTICIDE	ESFENVALERATE	!	■■■	■■■	■■■	■██

Lambda-Cyhalothrin EPA-Registered Pesticides (Total: 51)

Product Name	Active Ingredients	Signal Word	Human	Pet and Wildlife	Aquatic Life	Water Pollution
Low Hazard						
PEST XPERT FOAMING INSECT KILLER	LAMBDA-CYHALOTHRIN					
BONIDE CATERPILLAR KILLER	LAMBDA-CYHALOTHRIN					
BONIDE FLEA BEATER F&T CONTROL R-T-SPRAY	LAMBDA-CYHALOTHRIN					
CUTTER BACKYARD BUG CONTROL SPRAY CONC	LAMBDA-CYHALOTHRIN					
CUTTER DECK & PATIO BUG CONTROL R-T-U	LAMBDA-CYHALOTHRIN					
CUTTER DECK & PATIO BUG CONTROL RTU2	LAMBDA-CYHALOTHRIN					
CYHALOCAP CS CONTROLLED RELEASE INSECTICIDE	LAMBDA-CYHALOTHRIN					
CYZMIC CS CONTROLLED RELEASE INSECTICIDE	LAMBDA-CYHALOTHRIN					
DEMAND G INSECTICIDE	LAMBDA-CYHALOTHRIN					

Malathion (an organophosphate) EPA-Registered Pesticides (Total: 7)

Product Name	Active Ingredients	Signal Word	Human	Pet and Wildlife	Aquatic Life	Water Pollution
Highest Hazard						
BONIDE MALATHION INSECT CONTROL CONC.	MALATHION (ORGANOPHOSPHATE)					
HI-YIELD 55% MALATHION SPRAY	MALATHION (ORGANOPHOSPHATE)					
ORTHO MAX MALATHION INSECT SPRAY CONC	MALATHION (ORGANOPHOSPHATE)					
SPECTRACIDE MALATHION INSECT SPRAY CONC	MALATHION (ORGANOPHOSPHATE)					
GORDONS MALATHION 50% SPRAY /LISTED GARDEN INSECTS	MALATHION (ORGANOPHOSPHATE)					
BONIDE COMPLETE FRUIT TREE SPRAY CONC.	CAPTAN; CARBARYL (CARBAMATE); MALATHION (ORGANOPHOSPHATE)					
GORDONS LIQUID FRUIT TREE SPRAY	CAPTAN; CARBARYL (CARBAMATE); MALATHION (ORGANOPHOSPHATE)					

Permethrin

Product Name	Active Ingredients	Signal Word	Human	Pet and Wildlife	Aquatic Life	Water Pollution
Highest Hazard						
BONIDE EIGHT INSECT CONTRL VEGETABLE, FRUIT & FLOWER CONC	PERMETHRIN	!	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■
BONIDE EIGHT INSECT CONTROL GARDEN & HOME R-T-U	PERMETHRIN	!	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■
BONIDE EIGHT INSECT CONTROL GARDEN DUST	PERMETHRIN	!	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■
BONIDE EIGHT INSECT CONTROL YARD & GARDEN R-T-SPRAY	PERMETHRIN	!	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■
BONIDE MOSQUITO BEATER R-T-SPRAY	PERMETHRIN	!	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■
BONIDE SPIDER & GROUND BEE KILLER	PERMETHRIN	!	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■
CLAIRE BED BUG, LICE AND DUST MITE SPRAY	PERMETHRIN	!	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■
COUNTRY VET FARM & RANCH RTU SPRAY /INSECT CONTROL	PERMETHRIN	!	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■
DURVET SCREW WORM AEROSOL	PERMETHRIN	!	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■

Zeta-Cypermethrin EPA-Registered Pesticides (Total: 18)

Product Name	Active Ingredients	Signal Word	Human	Pet and Wildlife	Aquatic Life	Water Pollution
Highest Hazard						
AMDRO PEST BLOCK HOME PERIMETER R-T-S	ZETA-CYPERMETHRIN	○	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■
AMDRO POWERFLEX HOME PEST INDOOR INSECT KILLER CONC.	ZETA-CYPERMETHRIN	○	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■
AMDRO POWERFLEX YARD & PERIMETER OUTDOOR INSECT KILLER CONC.	ZETA-CYPERMETHRIN	○	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■
AMDRO QUICK KILL LAWN & LANDSCAPE INSECT KILLER CONC.	ZETA-CYPERMETHRIN	○	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■
AMDRO QUICK KILL LAWN & LANDSCAPE INSECT KILLER R-T-S	ZETA-CYPERMETHRIN	○	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■
GORDONS BUG-NO-MORE LARGE PROPERTY INSECT CONTROL	ZETA-CYPERMETHRIN	○	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■
GORDONS BUG-NO-MORE LAWN & GARDEN INSECT CONTROL	ZETA-CYPERMETHRIN	○	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■
ORTHO BUG B GON INSECT KILLER /LAWNS & GARDENS CONC.	BIFENTHRIN; ZETA-CYPERMETHRIN	!	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■
ORTHO BUG B GON INSECT KILLER /LAWNS & GARDENS CONC1	BIFENTHRIN; ZETA-CYPERMETHRIN	!	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■

“The simplest management approach is to continually reapply the pesticide every 10 to 14 days until fruit harvest.”

Source: <http://cru.cahe.wsu.edu/CEPublications/FS120E/FS120E.pdf> November, 2013

Washington State University Extension Fact Sheet: Codling Moth and Your Backyard Fruit Tree

Neem Oil

For contrast, let's look at Neem Oil, both an insecticide, a miticide, and a fungicide, and a key ingredient in the Holistic Orchard Spray:

EPA-Registered Pesticides (Total: 18)

Product Name	Active Ingredients	Signal Word	Human	Pet and Wildlife	Aquatic Life	Water Pollution
Low Hazard						
BAYER ADV NATRIA NEEM OIL CONC /ROSES, FLOWERS, FRUITS & VEG./ORGANIC GARDENING	NEEM OIL, CLARIFIED HYDROPHOBIC EXTRACT	!				X
BAYER ADV NATRIA NEEM OIL RTU /ROSES, FLOWERS, FRUITS & VEG./ORGANIC GARDENING	NEEM OIL, CLARIFIED HYDROPHOBIC EXTRACT	!				X
BONIDE NEEM OIL FUNGICIDE-MITICIDE-INSECTICIDE CONC.	NEEM OIL, CLARIFIED HYDROPHOBIC EXTRACT	!				X
BONIDE NEEM OIL FUNGICIDE-MITICIDE-INSECTICIDE RTU	NEEM OIL, CLARIFIED HYDROPHOBIC EXTRACT	!				X
BONIDE ROSE RX 3 IN 1 RTU	NEEM OIL, CLARIFIED HYDROPHOBIC EXTRACT	!				X
BONIDE ROSE RX 3IN1 CONC. /ORGANIC GARDENING	NEEM OIL, CLARIFIED HYDROPHOBIC EXTRACT	!				X
GARDEN SAFE FUNGICIDE 3	NEEM OIL, CLARIFIED HYDROPHOBIC EXTRACT	!				X