Table 1. Characteristics of Codling Moth Control Products – Current to February 2026 – Always Refer to Product Label

Pesticides for use against codling moth. Apply with an air-blast sprayer to commercial pome fruit plantings. Only apply control products when needed. **Always read the product labels before mixing and applying. Rotate Group No.(s) between generations. Organic status listed in General Notes; However, always check status with your certifying body.**

Product	Group No.	Rate/ ha	Stable pH	Target life stage	Max. appl'ns / year	Spray Interval (days)	Label REI	PHI (days)	General Notes
Imidan 50-WP Instapak (Phosmet)	1 B	3.75 kg	5 – 6	Larvae	2	14-21	12 hrs to 9 days	22	Strong, long-lasting larvicide. Apply when egg hatch begins. **Adjust tank pH to 5.5.** (with an additive such as Li 700). Suitable when spray coverage is challenging, and pest pressure is high (>5% infested fruit). Also controls obliquebanded/threelined leafroller, bud moth, apple aphid, San Jose scale.
Assail 70 WP (acetamiprid)	4	120-240 g	5 - 6	Eggs, larvae	4	12-14	2-6 days	7	Strong larvicide, with some ovicide activity when applied over eggs. Also control aphids, leafhoppers, leafminer, and psylla. (applying Assial more than twice/season can cause mite problems).
Delegate WG (spinetoram)	5	420 g	5 - 9	Larvae	3	14	12 hr	7	Larvicide, apply after eggs begin hatching. Also controls all leafroller and bud moth larvae when present. Some control of twospotted spider mite.
Entrust (spinosad)	5	364 mL	6 - 9	Larvae	3	7-10	4 hr	7	**Will only supress codling moth**, but not necessarily control it to economically acceptable levels. Controls leafrollers and bud moth. **Organic.**
Rimon 10 EC (novaluron)	15	0.9 – 1.4 L	5 - 9	Eggs, larvae	4 or 11.0 L	10-14	12 hr	14	Very effective against eggs and larvae. Apply before and during egg laying. Do not apply more than 2x times/season to avoid mite problems. For water Volume exceeding 1000 L/ha, check label for additional recommendations.
Cormoran (acetamiprid/ novaluron)	4/15	1-1.2 L	5 - 9	Eggs, Larvae	6.9L/ha	12	12 hr-7 days	14	Cormoran is a mixture of Assail and Rimon. This product will target a range of apple pests. See comments for Assail and Rimon.
Intrepid (methoxyfenozide)	18	1L	5 - 9	Eggs, Larvae	2	14-21	12 hr	14	Very effective against eggs and larvae. Also effective against obliquebanded, threelined and bud moth larvae, but not fruittree or European leafroller. Relatively low impact on beneficial insects.
Altacor Max (chlorantraniliprole)	28	73 - 108 g	5 - 9	Eggs, Larvae	3	10-14	12 hr	5	Group 28 insecticides (diamides) include "first-series diamides" like Altacor Max and "second-series diamides" like Exirel, Vayego, and Harvanta. All work against codling moth eggs/larvae and leafrollers. Exirel also controls rosy apple aphid and leafhopper, Vayego also suppresses aphids. Group 28 insecticides are generally soft on beneficial insects, but second-series diamides have a broader spectrum and may be harder on some beneficial insects. **Overreliance on these four insecticides will promote resistance to the entire group. Rotate groups between generations, and do not use the same group year after year**.
Exirel (cyantraniliprole)	28	500-750 mL	5-9	Eggs, Larvae	4	10-14	12 hr	3	
Vayego 200 SC (Tetraniliprole)	28	225 mL	5-9	Eggs, Larvae	3	10-14	12 hr	7	
Harvanta 50SL (cyclaniliprole)	28	1.2-1.6 L	5-9	Eggs, Larvae	3	14	12 h	7	
Purespray Green (Spray Oil 13E)	U	10L or 1% Oil : Water		Eggs	8 or 10 L/Ha	10-14 (100 DD)	12 h	0	Apply at 200 DD and delay first larvicide to 290 DD. Controls Rosey aphids, European red might and powdery mildew. Do not apply within 7 days of Sulphur (e.g. Captan, Kumulus). Suitable **for organic or conventional orchards.**
Virosoft (CpGv-4)	U	250 mL	5 - 8	Larvae	NA	5-7	4 hr	0	Virus specific to codling moth, will not affect other insects. Virus residue degrades rapidly in sunlight, lasting only 5-8 days. Apply in evenings if possible. Do not mix with copper. Store below 5°C. **Organic.**

Management Tips and Spray Programs

In most orchards, sterile insect releases (SIR) alone are sufficient to control codling moth. However, if populations in or around your orchard are high, supplemental sprays are required to prevent damage to fruit and reduce moth numbers to a level where SIR can be effective on its own.

Codling moth typically has two to three generations per year, with control of the first generation being the most critical. Depending on the products selected, two to four consecutive sprays are needed to adequately cover the first generation. These applications must be made according to the product label's reapplication interval.

In cases of severe infestation, control of the second generation may also be necessary. Degree-day information from the BC Decision Aid System (**ca.decisionaid.system**) or from your SIR supervisor is essential for determining optimal spray timing. Decisions on whether to spray should be based on trap counts, damage from previous years, and proximity to nearby infested orchards.

If you are ever unsure whether spraying is required, contact your SIR supervisor. If you do not know who your supervisor is, call the SIR mainline at 1-800-363-6684 for assistance.

Both spray programs outlined below provide effective control. The Washington State program includes summer oil, which has recently been registered for use in Canada against codling moth. This program is slightly less expensive, and the timing of pesticide residues aligns more closely with peak egg hatch, improving protection.

SIR Staff Name: _____ Phone: _____

Spray Timing	Traditional Spray Program
100 Degree Days (DD)	First wild moths captured. **Not time to spray yet**.
230 DD (Egg hatch starts)	1st Spray: Ovicide/Larvicide
+ 10-14 days*	2nd Spray: Ovicide/Larvicide
+ 10-14 days*	3rd Spray: Ovicide/Larvicide
+ 10-14 days* **550 DD is the end of the 1st generation egg hatch.	4th Spray: Larvicide if needed (Contact SIR or check BC DAS to determine if egg hatch for the generation has ended)
785 DD	Start of 2nd Generation Egg hatch. Contact SIR to determine if sprays are needed

Spray Timing	Washington State Program (Delayed 1st Larvicide Cover)
100 Degree Days (DD)	First wild moths captured. **Not time to spray yet**.
200 DD (Egg laying)	1st Spray: Purespray Green Oil***
280-300 DD	2nd Spray: Ovicide/Larvicide
+ 10-14 days*	3rd Spray: Ovicide/Larvicide
+ 10-14 days* **550 DD is the end of the 1st generation egg hatch.	4th Spray: Larvicide if needed (Contact SIR or check BC DAS to determine if egg hatch the generation has ended)
785 DD	Start of 2nd Generation Egg hatch. Contact SIR to determine if sprays are needed

*Check spray intervals for specific product. Use shorter interval for high pressure.

** The First generation can be longer or shorter depending on the weather. If pest pressure is high and wild captures continue, it is likely that the 1st generation has not ended, and an additional spray is needed.

***Oil cannot be applied within 1 week of sulphur containing products (*Cumulus*, *Captan* etc.). Follow label rate of 10 L/ha, but do not exceed a concentration of 1% to avoid phytotoxicity.