



ADAMA



INSECTICIDE

CORMORAN®

Multiple modes of action for codling moth control in apples and Colorado potato beetle control in potatoes as well as a wide range of other insects in specialty crops.



GROUPS 4 & 15

Active Ingredients

Novaluron 100 g/L and
Acetamiprid 80 g/L = EC

Packaging

Case: 2 x 10.08 L jugs

Application Rates and Acres Treated

Rate: 440–1200 ml/ha

Acres Treated: 8–25 ha/jug

Water Volume

Ground: 200–900 L/ha
(50–260 US gal/ha)

Aerial: Do not apply by air.

Rainfastness

Avoid application when
heavy rain is forecast.

SERIOUS INSECT PROTECTION

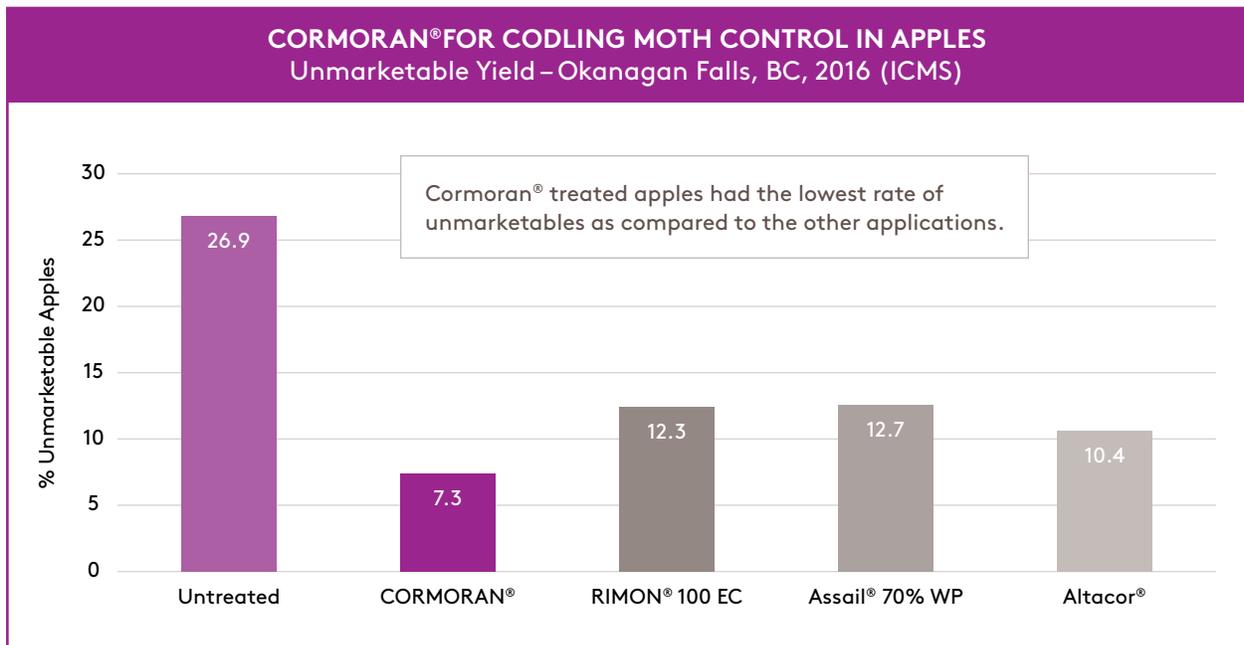
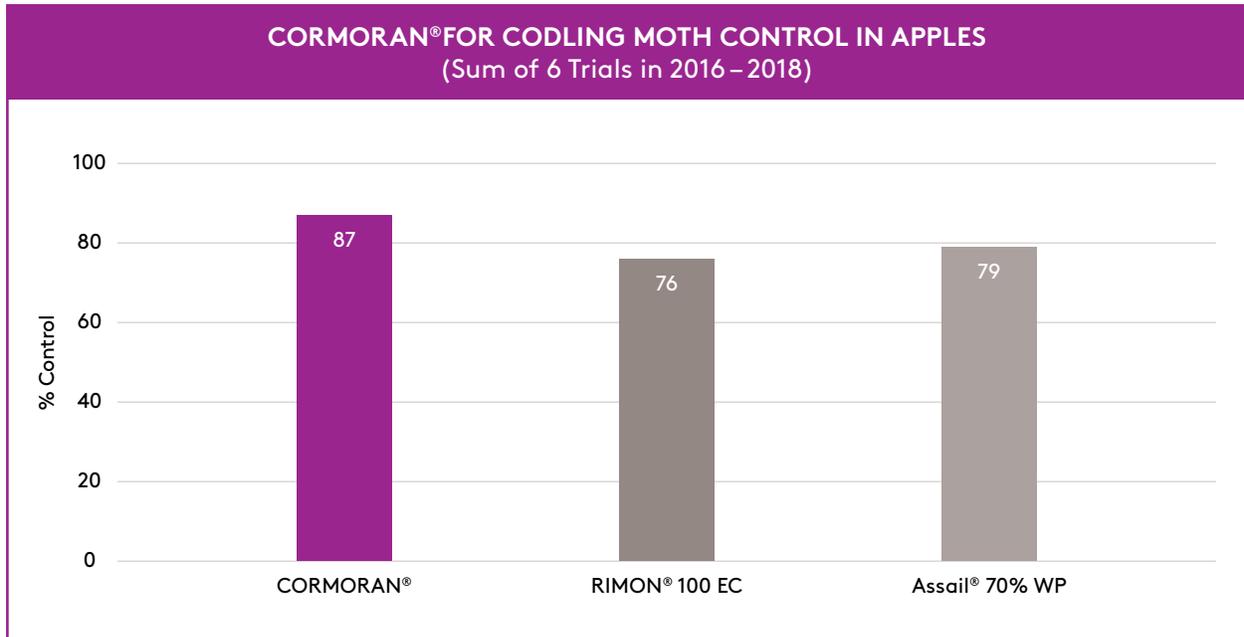
Why include CORMORAN® in an insecticide rotation?

- Rapid knockdown action combined with extended residual control
- Dual modes of action for resistance management
- Controls all damaging stages of target insects including immatures and adults
- Two distinct modes of action providing excellent control
- Excellent rotational product



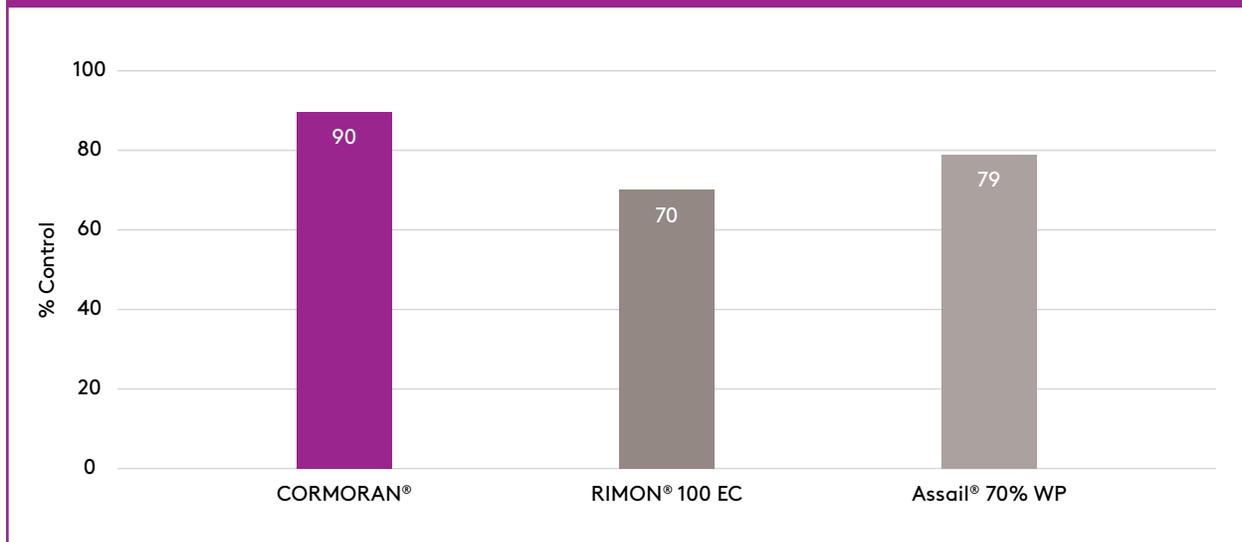
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Field Test Results

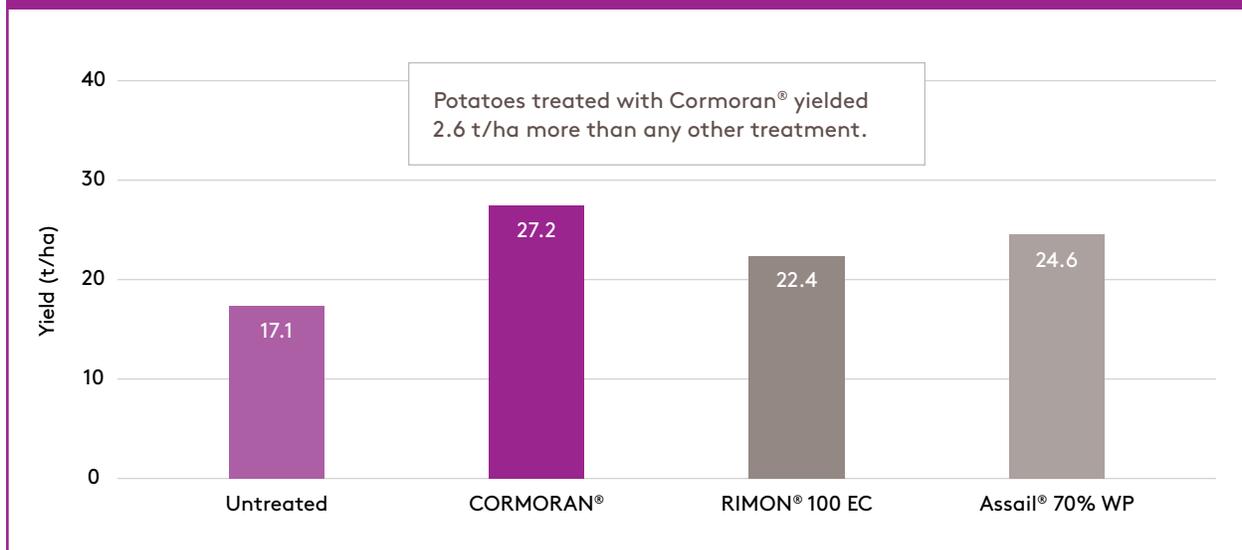


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CORMORAN FOR COLORADO POTATO BEETLE CONTROL IN POTATOES (Sum of 7 Trials in 2016 – 2018)



CORMORAN® FOR INSECT CONTROL IN POTATOES (Sum of 11 Trials in 2016 – 2018)





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HOW IT WORKS

CORMORAN® kills insect eggs by contact and larvae by ingestion. Containing 2 modes of action, CORMORAN® provides both rapid knockdown and residual control of insect pests.

Registered Crops	Key Insects Controlled	
<ul style="list-style-type: none"> Alfalfa (grown for seed) Apples Brassica leafy greens (crop subgroup 4-13B) Bushberries (crop subgroup 13-07B) Head and stem brassica vegetable crops (crop group 5-13) Peppers (bell and non-bell) Potatoes Strawberries Stone fruits (crop group 12-09) Sweet corn 	<ul style="list-style-type: none"> Alfalfa looper Alfalfa plant bug Aphids Apple maggot Armyworm Blueberry flea beetle Blueberry gall midge (Cranberry tip worm) Blueberry maggot fly Blueberry spanworm Cabbage looper Cherry fruit fly (suppression) Cherry fruitworm Codling moth Colorado potato beetle Cranberry fruitworm Diamondback moth Dogwood borer European apple sawfly 	<ul style="list-style-type: none"> European corn borer Green fruitworm Gypsy moth Imported cabbageworm Japanese beetle Leafhopper Leafroller Lesser appleworm Lygus bug Mullein plant bug Oriental fruit moth Plum curculio Spotted-wing drosophila Strawberry clipper weevil Strawberry rootworm Swede midge Tarnished plant bug Tentiform leafminer Thrips

REGISTERED AND SUPPORTED TANK MIXES

- Acramite® 50 WS
- Luna Sensation™
- Polyram® DF WSP
- Pristine® WG

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CROP STAGING AND RATES:

Crop	Insects Controlled	Rate (ml/ha)	Application Instructions
Apples	Leafhopper, Tentiform leafminer	700	Do not apply more than 6.9 L/ha per season. Apply in minimum finished spray volume of 405 L/ac by ground. Repeat applications if needed to maintain control but do not make applications < 12 days apart.
	Aphids	700–1,050	
	Gypsy moth, Japanese beetle, Mullein bug	840–1,260	
	Green fruitworm	1,050	
	Apple maggot, Codling moth, European apple sawfly, Oriental fruit moth, Plum curculio	1,050–1,260	
	Lesser appleworm, Tarnished plant bug	1,260	
	Dogwood borer	1,500	
Potatoes	Colorado potato beetle	440–700	Do not apply more than once every 10–14 days. For Colorado potato beetle, do not apply more than twice to a single generation and do not apply to successive generations. Apply in minimum finished spray volume of 200 L/ha by ground.
	Armyworm, Cabbage looper	440–750	
	Leafhopper	490–750	
	Aphids, European corn borer	650–750	
Stone fruits (crop group 12-09): American plum, Apricot, Beach plum, Black cherry, Canada plum, Cherry plum, Chicksaw plum, Chinese jujube, Damson plum, Japanese apricot, Japanese plum, Klamath plum, Nanking cherry, Nectarine, Peach, Plum, Prune plum, Plumcot, Sloe, Sweet cherry, Tart cherry and cultivars, varieties and/or hybrids of these commodities	Oriental fruit moth (Ontario only)	1,450–2,100	Applications per season: 4 Apply in minimum finished spray volume of 1,000 L/ha. Use the high rate under heavy pest pressure. Do not apply during bloom. Minimum re-application interval of 10 days.
	Cherry fruit fly (suppression, cherry only), Plum curculio (under high plum curculio pest pressure, the level of damage reduction may be limited to suppression)	2100	



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Crop	Insects Controlled	Rate (ml/ha)	Application Instructions
Peppers (bell and non-bell)	Colorado potato beetle (CPB)	440 – 700	Do not make applications less than 7 days apart.
	Aphids	490	Do not apply more than 6.9 L/ha per season.
	European corn borer	650 – 750	
	Armyworm, Cabbage looper	440 – 750	Apply in at least 200 L/ha by ground. For CPB, do not apply more than twice to a single generation and do not apply to successive generations.
Strawberries	Aphids, Leafhopper	500 – 750	Applications per season: 3
	Strawberry clipper weevil, Tarnished plant bug	900	Do not apply more than once every 10–14 days. Apply in a min. application volume of 200 L/ha by ground. Do not apply during bloom.
Brassica (cole) leafy vegetables (crop group 5): Broccoli, Chinese broccoli, Broccoli raab (rapini), Brussels sprouts, Cabbage, Chinese cabbage (bok choy or napa), Chinese mustard cabbage (gai choy), Cauliflower, Cavalo broccoli, Collards, Kale, Kohlrabi, Mizuna, Mustard greens, Mustard spinach, Rape greens and cultivars, varieties and/or hybrids of these commodities	Alfalfa looper, Armyworm, Cabbage looper, Diamondback moth, Imported cabbageworm	440 – 750	Applications per season: • Two at low rate • One at high rate Do not apply more than 6.9 L/ha per season.
	Aphids	650 – 750	Apply in a minimum finished spray volume of 200 L/ha by ground.
	Lygus bug, Swede midge	740	Do not apply more than once every 7–10 days.
Leafy vegetables – Brassica leafy greens (crop subgroup 4): Arugula, Broccoli raab, Chinese broccoli, Abyssinian cabbage, Seakale cabbage, Bok choy (Chinese cabbage), Collards, Garden cress, Upland cress, Hanover salad, Kale, Maca, Mizuna, Mustard greens, Radish leaves, Rape greens, Wild rocket, Shepherd's purse, Turnip greens, Watercress, as well as cultivars, varieties and hybrids of these commodities	Aphids	650 – 750	Applications per season: 3 Do not apply more than once every 7 – 10 days. Apply in a minimum finished spray volume of 200 L/ha by ground.



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Crop	Insects Controlled	Rate (ml/ha)	Application Instructions
Sweet corn	Aphids	500–700	Applications per season: 2 Apply in a minimum 200 L/ha spray volume by ground, no more than once every 21 days. Use the higher rate for heavy infestations.
Bushberries (crop group 13-07B): Aronia berry, Blueberry (lowbush, highbush), Chilean guava, Cranberry (highbush), Currant (black, buffalo, red), Elderberry, European barberry, Gooseberry, Honeysuckle (edible), Huckleberry, Jostaberry, Juneberry (Saskatoon berry), Lingonberry, Native currant, Salal, Sea buckthorn and cultivars, varieties and/or hybrids of these commodities	Aphids, Blueberry gall midge (cranberry tipworm)	750	Applications per season: 3 Apply in a finished spray volume of 200 L/ha by ground. Do not apply more than once every 10–14 days.
	Japanese beetle	700	
	Blueberry maggot fly	1,200–1,400	
	Blueberry flea beetle, Blueberry spanworm, Strawberry rootworm, Cherry fruitworm, Cranberry fruitworm, Spotted-wing drosophila, Thrips	1,400	
Alfalfa (grown for seed)	Alfalfa plant bug, Lygus bug	750–900	Applications per season: 2 Apply prior to bloom up to when 50% of seed pods are ripe. Do not exceed more than 1.8 L/ac per season. Do not apply more than once in 7 days. Use higher rate for heavier infestations.



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MIXING INSTRUCTIONS

1. Fill clean tank ½ full with clean water. and start agitation.
2. Pour required amount of product directly from container into partially filled spray tank.
3. Continue filling tank. Increase agitation if necessary, to maintain surface action.
4. Keep agitation during mixing and application to assure uniform suspension. If mixture sits without agitation for extended periods, agitate the mixture for at least 10 minutes before use.

CROP ROTATIONS

No restrictions

PRE-HARVEST INTERVALS

- Strawberries: 1 day
- Brassica leafy vegetables (crop group 5 and subgroup 4), Peppers, Potatoes, Stone fruits: 7 days
- Bushberries (crop group 13-07B): 8 days
- Sweet corn: 10 days
- Alfalfa (grown for seed), Apples: 14 days

STORAGE

- Store in original, tightly closed container.
- Do not ship or store near food, feed, seed and fertilizers.
- Store in cool, dry, locked, well-ventilated area without floor drain.
- Keep away from fire or open flame, or other sources of heat.

Quick Tips

Consider early applications (before petal fall) of CORMORAN[®] to allow beneficial insects to build up later in the season. To minimize the possibility of transient effects on honeybee brood development, do not use CORMORAN[®] on blooming crops when bees are actively foraging. If orchards have been historically infested with mites or aphids, be sure to scout regularly and use miticides to control their populations.



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Always read and follow registered product label instructions. It is an offence under the Pest Control Products Act to use this product in a way that is inconsistent with the directions on the label.
1.855.264.6262 ADAMA.COM

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