



ADAMA



INSECTICIDE

# CORMORAN®

Unique new option with multiple modes of action to control multiple stages of target pests in specialty crops for resistance management, longer protection and improved return on investment.



## Active Ingredients:

Novaluron and Acetamiprid

## Insecticide Groups:

Group 4 and Group 15

## Formulation:

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

## Application Rates and Packaging:

2 x 10.08 L

Varies by crop and pest,  
see label for details.

## SERIOUS INSECT PROTECTION

### Why include CORMORAN® in an insecticide rotation?

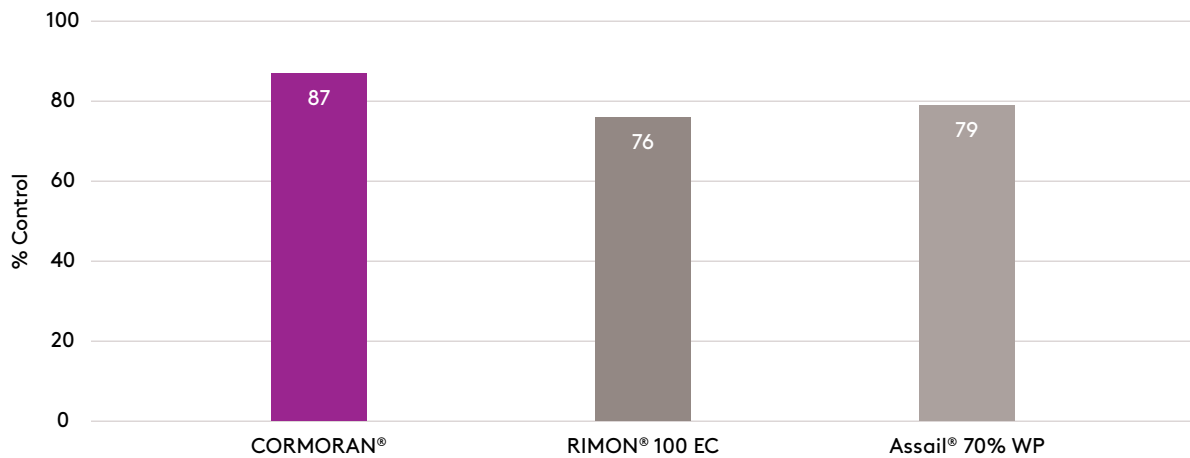
- Rapid knockdown action combined with extended residual control
- Dual modes of action for resistance management
- Controls all damaging stages of target insects including immatures and adults
- Two distinct modes of action providing excellent control
- Excellent rotational product



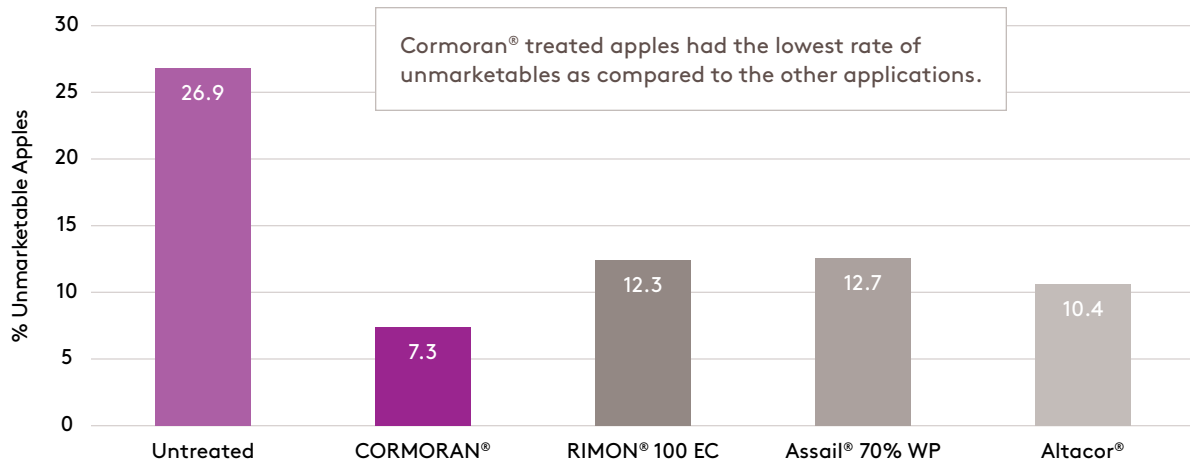
# CORMORAN®

## Field Test Results

### CORMORAN® FOR CODLING MOTH CONTROL IN APPLES (Sum of 6 Trials in 2016 – 2018)

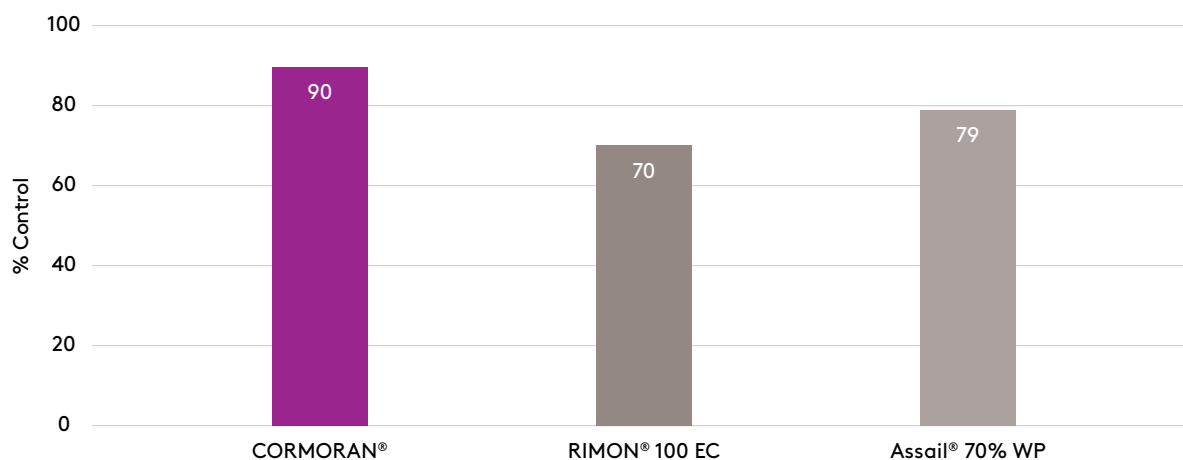


### CORMORAN® FOR CODLING MOTH CONTROL IN APPLES Unmarketable Yield – Okanagan Falls, BC, 2016 (ICMS)

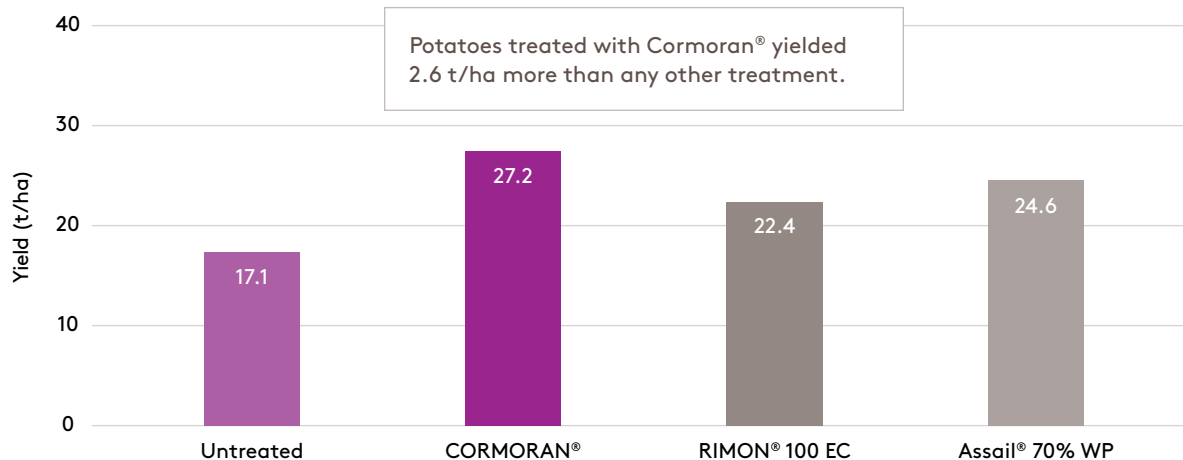


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## CORMORAN® FOR COLORADO POTATO BEETLE CONTROL IN POTATOES (Sum of 7 Trials in 2016 – 2018)



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





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## HOW IT WORKS:

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

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

## WATER VOLUME:

- Ground: 80–400 L/ac
- Do not apply by air

## RAINFASTNESS:

Avoid application when heavy rain is forecast.

## REGISTERED AND SUPPORTED TANK MIXES:

- Acramite<sup>®</sup> 50 WS
- Luna Sensation<sup>™</sup>
- Polyram<sup>®</sup> DF WSP
- Pristine<sup>®</sup> WG
- Syllit<sup>®</sup> 400 FL



Always read and follow label directions.

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## CROP STAGING AND RATES:

Crop	Insects Controlled	Rate	Application Instructions
Apples	Leafhopper, Tentiform leafminer	0.28 L/ac	Apply in minimum finished spray volume of 400 L/ac by ground. Repeat applications if needed to maintain control but do not make applications < 12 days apart. Do not apply more than 2.8 L/ac per season.
	Aphids	0.28 – 0.42 L/ac	
	Gypsy moth, Japanese beetle, Mullein bug	0.34 – 0.5 L/ac	
	Green fruitworm	0.42 L/ac	
	Apple maggot, Codling moth, European apple sawfly, Oriental fruit moth, Plum curculio	0.42 – 0.5 L/ac	
	Lesser appleworm, Tarnished plant bug	0.5 L/ac	
	Dogwood borer	0.6 L/ac	
Potatoes	Colorado potato beetle	0.18 – 0.28 L/ac	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 80 L/ac by ground. Do not apply more than once every 10 – 14 days.
	Armyworm, Cabbage looper	0.18 – 0.3 L/ac	
	Leafhopper	0.2 – 0.3 L/ac	
	Aphids, European corn borer	0.26 – 0.3 L/ac	
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)	0.58 – 0.84 L/ac	Maximum 4 applications per season. Apply in minimum finished spray volume of 405 L/ac. 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)	0.84 L/ac	



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Crop	Insects Controlled	Rate (ml/ha)	Application Instructions
Peppers (bell and non-bell)	Colorado potato beetle (CPB)	0.18 – 0.28 L/ac	Do not apply more than 1.05 L/ac per season. Apply in at least 80 L/ac by ground. For CPB, do not apply more than twice to a single generation and do not apply to successive generations. Do not make applications less than 7 days apart.
	Aphids	0.2 L/ac	
	European corn borer	0.26 – 0.3 L/ac	
	Armyworm, Cabbage looper	0.18 – 0.3 L/ac	
Strawberries	Aphids, Leafhopper	0.2 – 0.3 L/ac	Apply in a minimum application volume of 80 L/ac by ground. Do not apply more than once every 10 – 14 days or 3 times per season. Do not apply during bloom.
	Strawberry clipper weevil, Tarnished plant bug	0.36 L/ac	
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	0.18 – 0.3 L/ac	Apply in a minimum finished spray volume of 81 L/ac by ground. Applications per season: 2 at low rate, 1 at high rate. Do not apply more than 0.68 L/ac per season.
	Aphids	0.26 – 0.3 L/ac	
	Lygus bug, Swede midge	0.3 L/ac	
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	0.26 – 0.3 L/ac	Apply in a minimum finished spray volume of 80 L/ac by ground. Do not apply more than once every 7 – 10 days or more than 3 times per season.
Sweet corn	Aphids	0.2 – 0.28 L/ac	Applications per season: 2. Apply in a minimum 80 L/ac spray volume by ground, no more than once every 21 days. Use the higher rate for heavy infestations.



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Crop	Insects Controlled	Rate (ml/ha)	Application Instructions
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, Spotted Wing Drosophila and cultivars, varieties and/or hybrids of these commodities	Aphids, Blueberry gall midge (cranberry tipworm)	0.3 L/ac	Applications per season: 3. Apply in a finished spray volume of 80 L/ac by ground. Do not apply more than once every 10 – 14 days.
	Japanese beetle	0.28 L/ac	
	Blueberry maggot	0.48 – 0.56 L/ac	
	Blueberry flea beetle, Blueberry spanworm, Strawberry rootworm, Cherry fruitworm, Cranberry fruitworm, Thrips	0.56 L/ac	
Alfalfa (grown for seed)	Alfalfa plant bug, Lygus bug	0.3 – 0.36 L/ac	Apply prior to bloom up to when 50% of seed pods are ripe. Use higher rate for heavier infestations. Applications per season: 2. Do not apply more than once in 7 days. Do not exceed more than 0.72 L/ac per season.





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## MIXING INSTRUCTIONS:

1. Be sure sprayer is clean and not contaminated with any other materials or crop injury or sprayer clogging may result.
2. Fill tank ½ full with clean water.
3. Start agitation.
4. Be certain that the agitation system is working properly and creates a rippling or rolling action on the liquid surface.
5. Pour product directly from container into partially filled spray tank.
6. Continue filling tank. Increase agitation if necessary to maintain surface action.
7. Maintain continuous 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:

There are no rotational crop plant restrictions for this product.

## 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:

1. Store in original, tightly closed container.
2. Do not ship or store near food, feed, seed and fertilizers.
3. Store in cool, dry, locked, well-ventilated area without floor drain.
4. 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.



ADAMA

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.  
Toll-free: 1.855.264.6262  
Website: ADAMA.COM/CANADA

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