



Cormoran[®] Insecticide

The Ideal Rotation Partner

ADAMA

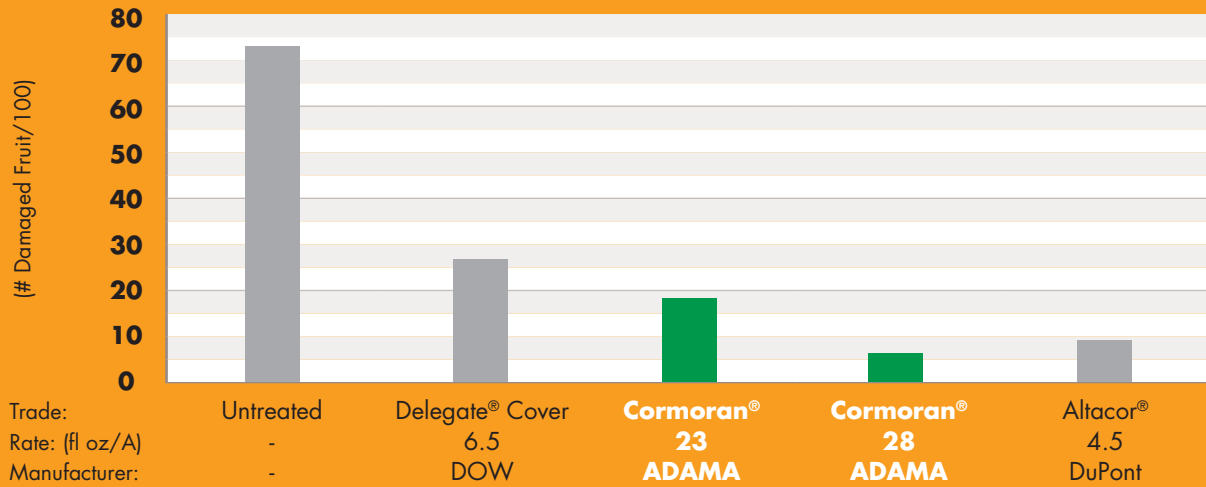


What is Cormoran®?

- Cormoran is a **foliar-applied insecticide** that provides excellent control of a broad range of damaging pests, including codling moth and pear psylla as well as many other secondary pome fruit pests.
- Cormoran **controls all damaging stages** of target insects including eggs, immatures and adults with a quick knockdown and excellent residual activity.
- Cormoran is an optimized pre-mix containing **two distinct modes of action** that BOTH provide excellent pest control without exhibiting a harsh negative effect on beneficial insects.

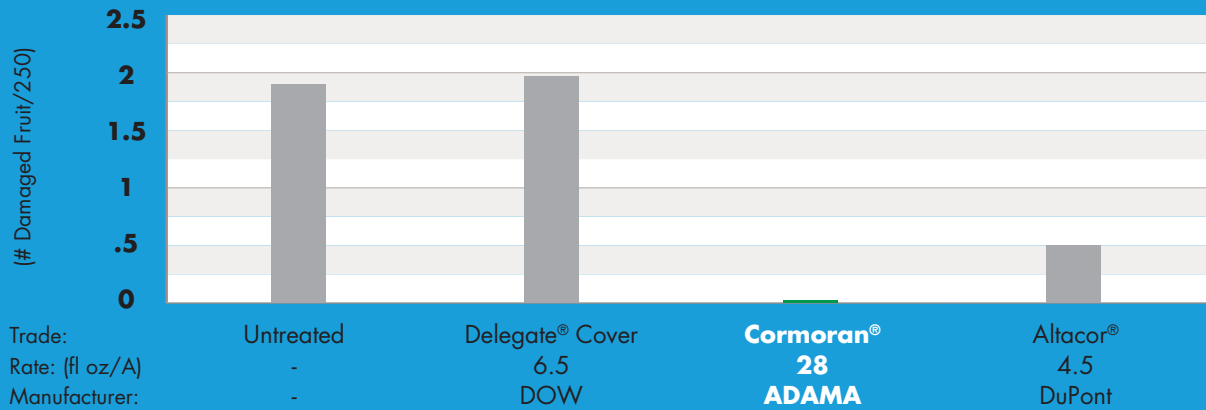


Control of Codling Moth in Apple



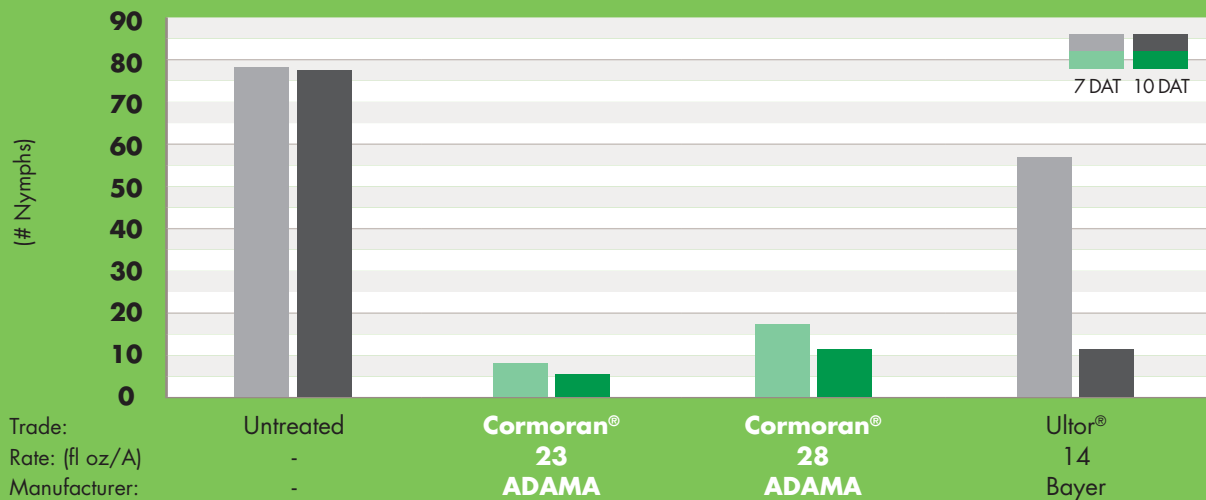
Applications: 2 trt sprays, 6 cover sprays, P = 0.05 *Trial conducted in Washington State

Control of Codling Moth in Pear



Applications: 2 trt sprays, 4 cover sprays, P = 0.05 *Trial conducted in Washington State

Control of Pear Psylla in Pear



Applications: 1, P = 0.05 *Trial conducted in Washington State



Why include Cormoran[®] in an insecticide rotation?

- When any insecticide is overused, there is a chance of the targeted insects **developing resistance to that particular chemistry**. That's why rotating products from different insecticide groups (i.e., modes of action) helps prevent insecticide resistance and preserves the effectiveness of all the products being used.
- Cormoran combines two active ingredients—novaluron (Group 15) and acetamiprid (Group 4A)—that are **not currently being used regularly** for pome fruit in an optimum ratio.
- The dual modes of action offered by the two active ingredients in Cormoran—novaluron and acetamiprid—can play an important role in **reducing reliance on other insecticides**.
- Cormoran is pre-mixed to deliver optimum rates of both active ingredients. This **takes the guesswork out of mixing**, while providing an excellent rotational product to prevent insecticide resistance.



Pacific Northwest Apples

	Cormoran®	Altacor®	Delegate®	Intrepid®
Codling Moth	3-4	4	4	3
Pandemis Leafroller	4	4	4	3
Oblique Banded Leafroller	4	4	4	3
White Apple Leafhopper	4	Not labeled	Not labeled	Not labeled
Green Apple Aphid	3-4	Not labeled	Not labeled	Not labeled
Rosy Apple Aphid	3-4	Not labeled	Not labeled	Not labeled
Wooly Apple Aphid	2-3	Not labeled	Not labeled	Not labeled
Campylomma	3-4	Not labeled	Not labeled	Not labeled

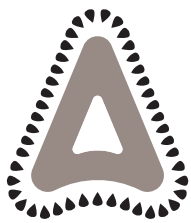
Northeast Apples

	Cormoran®	Altacor®	Delegate®
Codling Moth	3-4	4	4
Apple Maggot	2-3	1	1
Plum Curculio	2-3	1	1
Oriental Fruitmoth	4	4	4
Aphids	3	Not labeled	Not labeled
Oblique Banded Leafroller	4	4	4

● = primary ● = secondary

Ranking is from 1 (suppression) to 4 (excellent control).

*From Washington State Tree Fruit Control Guide



Tips for Best Results using Cormoran®.

Always read and follow label directions.

In 2017, apple and pear growers reported excellent results using Cormoran. Here are some key learnings from a successful year:

- **Consider early applications** (before petal fall) of Cormoran to allow beneficial insects to build up later in the season. Because of its mode of action as an insect growth regulator, and because it is not systemic, Cormoran has no direct effect on fully developed adult stages, such as bees and other beneficial pollinators. However, in order to minimize the possibility of transient effects on honeybee brood development, do not use Cormoran on blooming crops when bees are actively foraging.
- **Don't skimp on Cormoran usage rate.** Use enough volume for good coverage based on trees, set up, etc. By conventional ground sprayers, make applications that are calibrated to deliver no less than 75 gallons per acre on trees less than 10 feet tall, and 100 to 400 gallons per acre on trees greater than 10 feet tall.
- **Calibrate spray equipment** to target the right area, and check calibration frequently.
- Operate spray equipment at proper ground speeds, adequate spray pressure and spray volumes that assure the air volume within the tree canopy is completely replaced by the output from the airblast sprayer, resulting in **adequate coverage of the target crop.**
- If orchards have been historically infested with mites or aphids, be sure to **scout regularly** and use miticides to control their populations.



Cormoran Specifications

Active Ingredients	Novaluron + Acetamiprid
Modes of Action	Chitin Inhibitor + Nicotinic Receptor Modulator
Groups	15 + 4A
Formulation	Dispersible Concentrate (DC)
Restricted Use	No
Signal Word	Caution
Packaging	2x2.5 gallon case
Application Rate	20-28 fl oz with min 100 gal water per acre
Application Method	Ground only
Application Timing	Apples: When trap catches indicate a peak in codling moth activity Pears: When adults become active in spring
Tank Mixing	Mixes well with other products at similar application timing
Personal Protective Equipment	Long sleeve shirt, long pants, chemical resistant gloves, shoes, socks
Handling & Disposal	Standard handling & disposal instructions. See label
Bee Safety	Minimize exposure to bees
Pre-Harvest Interval	Apples: 14 days Pears: 12 days
Other Crops	Cucurbits, potato, fruiting vegetables, stone fruit, berries, brassicas, cotton, and sweet corn



For additional product information call
866-406-6262 or visit adama.com

Always read and follow label directions.

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