

# Effective Codling Moth Control for Organic Apples

## Two effective products to be used in rotation

Controlling pests in organic apples can be a tall task. Damaging pests such as Codling Moth, Leafroller and many others can wreak havoc in an orchard and harm your crop. Controlling pests requires a good integrated pest management program (IPM). With Entrust® SC from Dow AgroSciences and Cyd-X from Certis, you have two great tools that can be used in rotation to control key apple orchard pests.



## Fast effective control of tough apple orchard pests

### Features & Benefits

- FAST knockdown, control within hours
- Broad spectrum control
- Unique Mode of Action, Group 5 Active Ingredient
- OMRI certified

### Use of Entrust® SC in a codling moth management program should take full advantage of the attributes of the product:

Entrust SC used within the first generation reduces those populations and lowers overall numbers in the second and third generations. If leafrollers are a significant pest along with codling moth, shift Entrust SC to the second generation to coincide with summer generation leafrollers.



### BROAD SPECTRUM control



*of worms, thrips, and leafminers*

## Application Rates Organic Apples

PESTS	ENTRUST® SC (fl oz/acre)
Leafminers spotted tentiform western tentiform	4-10
Codling moth Leafrollers oblique-banded pandemis Thrips	6-10

## Restrictions

- Restricted entry interval (REI) – 4 hrs.
- Preharvest interval (PHI) – 7 days
- Minimum treatment interval – 10 days
- Do not apply more than 29 fl oz of Entrust® SC per acre per crop
- Do not apply more than 3 sprays targeted at leafrollers per season
- Do not make more than 4 total applications per calendar year

# Effective Codling Moth Control for Organic Apples

## CYD-X®

BIOLOGICAL INSECTICIDE

**Cyd-X®, Cyd X® HP and Madex® HP** are aqueous suspension concentrate biological insecticides containing a naturally-occurring virus that infects and kills larvae of the codling moth (*Cydia pomonella*). The scientific name for this virus is *Cydia pomonella granulovirus*, or CpGV. It is also known as the codling moth granulosis virus.

Each CpGV particle is naturally microencapsulated within a protein occlusion body (OB) that protects it from degradation. A codling moth larva must ingest OB's in order to become infected with the virus. The highly alkaline environment of the larval digestive tract (where pH can be as high as 10) dissolves the OBs and releases the virus, which penetrates the cells lining the midgut.

**Cyd-X®, Cyd X® HP and Madex® HP** can be applied at lower label rates if codling moth pressure is low, frequent applications are planned, or if applied in combination with other insecticides also targeting codling moth. Otherwise, the higher may be required. Apply at least twice per larval generation if not alternating with another codling moth insecticide.

**Initial Cyd-X®, Cyd X® HP and Madex® HP** sprays against the first larval generation should be applied around 250 degree days after codling moth biofix. Otherwise, apply in the first and second cover sprays. If targeting the second generation start at approx. 1100-1200 DD (4th or 5th cover sprays, depending on weather).

CpGV is highly specific to the codling moth and in the case of Madex HP has the additional specificity to oriental fruit moth.

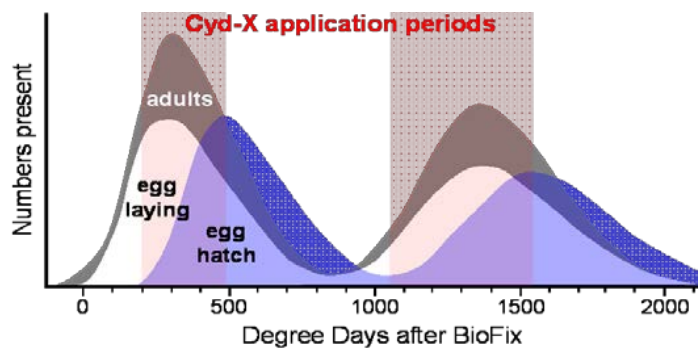
CpGV is noninfectious toward beneficial insects, fish, wildlife, livestock, or humans.

**Cyd-X®, Cyd X® HP and Madex® HP** have proven control, safe on beneficial insects, workers and the food supply.

**Cyd-X®, Cyd X® HP and Madex® HP** have a 4-hour REI, no PHI and are exempt from residue tolerance.

	Rate for Low Codling moth population or Tank mixed with Codling Moth insecticide	Rate for Codling moth population
Cyd-X®	1 - 2 fl oz/acre	2 - 3 fl oz/acre
Cyd-X® HP	0.5 - 1.0 fl oz/acre	1 - 1.5 fl oz/acre
Madex® HP*	0.5 - 1.0 fl oz/acre	1 - 1.5 fl oz/acre

\*Madex HP also has activity against Oriental Fruit Moth



*Cyd-X®, Cyd-X® HP and Madex® HP sprays should be timed so that young larvae will become contaminated with the virus as they search for feeding sites. If using temperature models to predict codling moth development, the initial spray against the first larval generation should be applied around 250 degree days after codling moth biofix. Otherwise, apply in the first and second cover sprays. If targeting the second generation start at approx. 1100-1200 DD (4<sup>th</sup> or 5<sup>th</sup> cover sprays, depending on weather).*