

Codling Moth Control Strategies with New Chemistries

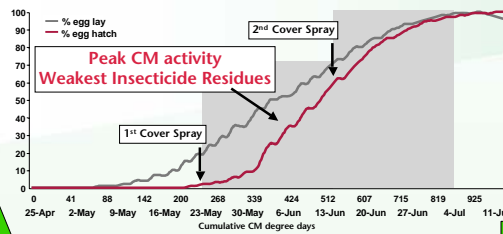
Delaying CM Cover Sprays

- Traditional codling moth control begins with a cover spray 250 degree days (DD) past biofix (first sustained moth capture in a pheromone-baited trap).
- Two or three additional cover sprays (determined by length of product residue) are necessary to protect against one CM generation.
- An ovicide application timed to target the egg-laying period can delay significant egg hatch, which will allow delaying cover sprays until 350DD.
- This shift in timing places the most active residues of the cover spray in the most active interval of the CM egg hatch period.

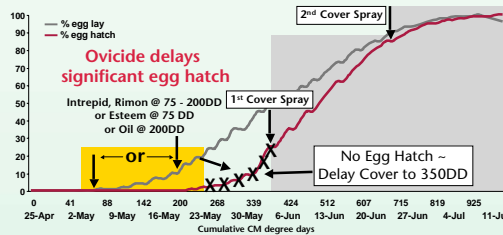
Field Trial Methods

- Replicated two-tree plots sprayed to the point of drip to simulate a full dilute spray.
- Buffer trees used to reduce overspray and drift.
- Applications made with a multiple-tank handgun sprayer.
- Fruit injury evaluations conducted at the end of each CM generation.

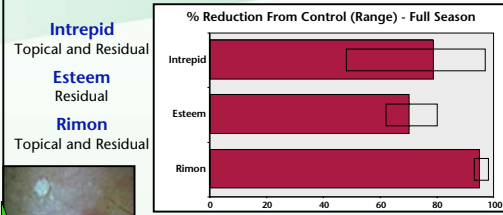
Traditional 250DD Timing



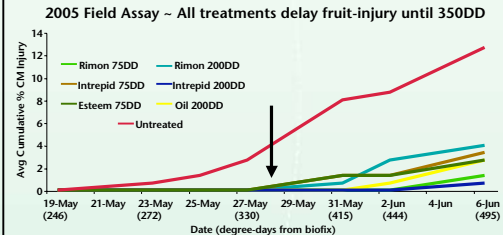
Delayed 350DD Timing



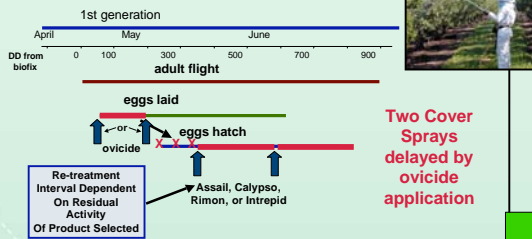
CM Management with Ovicides



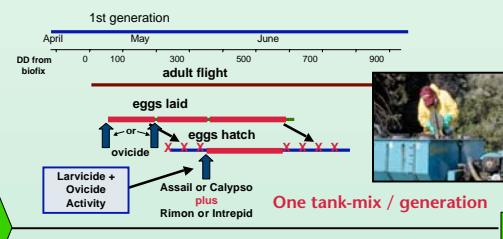
Delay Significant Egg Hatch



Two Cover Sprays - Delayed



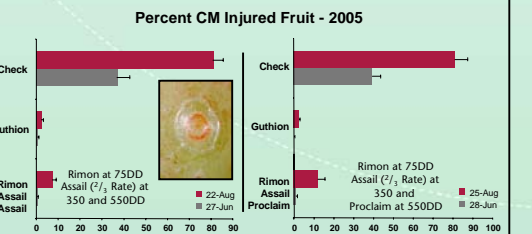
Tank-Mix Modes of Action



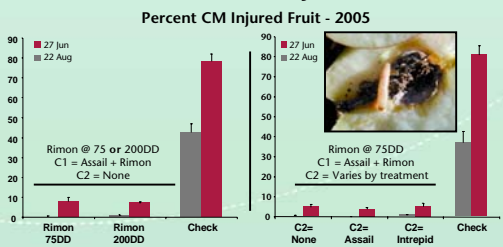
Conclusions

- CM ovicides kill CM eggs that would otherwise hatch. Because these eggs do not hatch, significant larval emergence is delayed.
- A residual ovicide (Esteem, Rimon, or Intrepid) applied at the beginning of the egg-lay period will kill CM eggs that are deposited on top of residues, which will allow delaying subsequent cover sprays.
- A topical ovicide (Intrepid, Rimon, or Oil) applied just prior to egg hatch will kill CM eggs that are covered, which will allow delaying CM cover sprays.
- Delaying CM cover sprays efficiently targets peak CM egg hatch activity periods.
- An ovicide application followed by two cover sprays using an insecticide with 14 d of residual activity can protect against one CM generation.
- An ovicide application followed by a tank-mix of an insecticide with ovicidal activity + an insecticide with larvicidal activity can be used to protect fruit against an entire CM generation.

Ovicide Followed by Two Cover Sprays



Ovicide Followed by Tank-Mix



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