

Understanding Area-Wide Management of Codling Moth

Since 1992 the Sterile Insect Release (SIR) Program has released sterile codling moths (CM) annually in every apple and pear block in the Salmon Arm area and Okanagan and Similkameen valleys with the objective to reduce CM populations to levels that do not pose a threat to pome fruit crops. As a result, this area-wide pest management approach has dramatically reduced CM populations throughout the program area resulting in the reduced need for cover sprays.

This achievement was not possible without:

- the cooperation of host tree owners to control unacceptable CM populations;
- an extensive CM monitoring service to track and report CM prevalence; and
- an effective enforcement service to ensure no unacceptable CM populations were left uncontrolled.

Area-wide pest management involves the mandatory application of Integrated Pest Management (IPM) within a geographically defined area against a pest (e.g. codling moth) in all commercial host tree plantings. Mandatory area-wide application of IPM is essential for the effective use of both sterile insect release and mating disruption control practices.

Area-wide pest management breaks down if high populations of CM whether in commercial or non-commercial plantings, are allowed to develop or go uncontrolled and threaten nearby commercial blocks. Both mating disruption and sterile moth release may require application of other control practices when CM populations exceed set limits. The enforcement services component of the area-wide management program ensures that one or more control practices (e.g. banding, fruit stripping, sprays, or tree removal) are applied against high populations of CM.

Another essential component of a successful area-wide pest management program is monitoring CM populations. The codling moth area-wide management program provides an area-wide pheromone trapping service to monitor and report CM population levels in all commercial blocks throughout the growing season. Growers can use this information to decide if and when to apply supplemental controls to make sure CM does not threaten their own as well as neighbouring fruit crops.

At present the CM area-wide management program uses sterile moth release as the area-wide control platform to keep CM numbers from reaching action thresholds and thereby saving most growers time and money controlling CM. These low population levels have also created an opportunity to evaluate another CM management tool on an area-wide basis – mating disruption.

In 2011, Zone 1 will continue to receive sterile moths; Zones 2 and 3 will not receive sterile release but instead will receive mating disruption as part of an expanded pilot project. Growers in Zones 2 and 3 will receive detailed information on how mating disruption works, what mating disruption product will be used, and where and when it will be applied and by whom. Growers in Zone 1 will receive information on the sterile moth release plans. All growers will learn what they can do to make mating disruption and sterile moth release effective area-wide pest management tools for keeping CM populations below action thresholds. In addition, growers will be informed about a new type of CM trap lure that attracts both female and male moths.

The information will be distributed in newsletters, at grower meetings, seminars and field days, Growers Supplies, and posted on the BCMA, BCFG, SIR and OTFC web sites. Please contact SIR at 1-800-363-6684 or through the SIR website at www.oksir.org.

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