

Biological Control

An Evaluation of Cyd-X® in Pennsylvania Orchards for Codling Moth Control

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Abstract: Large block trials were conducted in Pennsylvania apple orchards during 2004 to evaluate the biological activity of the granulovirus, Cyd-X® (Certis), against the codling moth (CM), *Cydia pomonella*. In addition, laboratory bioassays were conducted to evaluate the biological activity of this granulovirus against the oriental fruit moth (OFM), *Grapholita molesta*. In the large block studies the following treatments were evaluated: 1) conventional insecticides, 2) Cyd-X – 1st brood CM only, conventional insecticides – 2nd brood, 3) Cyd-X – both broods of CM, and 4) Cyd-X – both broods plus Isomate CM/OFM TT (CBC America). All Cyd-X applications, except the initial application during 1st brood of CM, were applied with the alternate row middle system of spraying. The combination of Cyd-X plus Isomate CM/OFM TT was the most effective treatment in reducing CM fruit injury at harvest (0.3%) followed in order by the conventional insecticide (0.5%), Cyd-X – 1st brood only, conventional insecticide – 2nd brood (1.6%), and the Cyd-X – both brood treatment (5.0%). Even though the number of fruit injured by CM was higher on those treatments receiving Cyd-X alone for either brood, a large percentage of the injured fruit exhibited only “stings” or shallow entries (<6.25 mm). The amount of rainfall recorded during the course of the study was over 41 cm (above normal). In the laboratory diet surface bioassays using neonate CM and OFM, Cyd-X was found to be equally active against both CM and OFM.