Azinphos-methyl alternatives for apple growers against codling moth

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Azinphos-methyl (AZM) has been the most used insecticide in apple production in the United States since the late 1960s, primarily as a control for the codling moth, but a decision by the EPA to phase out AZM by 2012 signals the end of this product's use by tree fruit growers.

In recent years, many new insecticides have been registered to replace AZM. These new insecticides have unique modes of action, but growers will need to change their traditional management practices to achieve the level of control they were accustomed to with AZM, according to a new open-access article in the *Journal of* Integrated Pest Management.

In "Incorporating Organophosphate Alternative Insecticides into Codling Moth Management," scientists from Washington State University write about field trials conducted from 2004 to 2008 which explored new application timings and strategies that incorporated insecticides with different modes of action and targeted life stages.

The researchers found that the new insecticides could not provide fruit protection that was superior to the protection provided with AZM. However, strategies were developed that in many cases allowed equivalent control levels to those of the codling moth program based on AZM.

The most successful strategies employed insecticides that targeted both eggs (ovicides) and larvae (larvicides). An insect growth regulator applied at the start of the oviposition period, followed by two larvicide

applications that targeted the peak egg-hatch period, provided fruit protection equivalent to the protection given by AZM applied twice.

More information: *Journal of Integrated Pest Management* entsoc.org/Pubs/Periodicals/jipm

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