

**DEVELOPING REDUCED PESTICIDE PROGRAMS FOR *DROSOPHILA SUZUKII* MANAGEMENT  
IN BERRY CROPS**

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Since the detection of *Drosophila suzukii*, blanket applications of broad-spectrum pesticides are made between 2 and 8 times per season to protect susceptible berry crops from infestation. As a consequence, growers are faced with the challenges of managing harvests around pesticide preharvest and restricted entry intervals, increased secondary pest outbreaks that are likely caused by a reduction in natural enemies from repeated pesticide applications, increased production costs, fruit knockdown from sprayers traveling down rows, as well as greater risks to environmental and human health.

Reduced pesticide application strategies may mitigate some of these challenges. Field studies were conducted in 2012 to determine (1) if reduced spray programs manage *D. suzukii* as well as conventional blanket sprays, and (2) the economics of the reduced spray programs.

Two to three alternate row middle and blanket applications on 49 ha of 'Saanich' raspberries were made with an airblast sprayer at 702 L of water ha<sup>-1</sup> when fruit was susceptible. The experiment was performed at a single location and arranged in a RCBD with 3 replicates. *D. suzukii* adults and larvae were monitored weekly during harvest by clear-cup ACV traps and the salt extraction, respectively. Four to five border spray applications with a cannon sprayer and blanket applications with a trellis sprayer were made at 468 L of water ha<sup>-1</sup> on 24 ha of 'Liberty' blueberries when fruit was susceptible. The experiment was performed at a single location and arranged in a RCBD with 3 replicates. *D. suzukii* were monitored as described above. Fruit knockdown of 12 plants per treatment from spray equipment was quantified after each spray application.

No statistical differences were found in adult and larval numbers from alternate row middle and blanket application treatments in raspberries. Similarly, no statistical difference was found in adult numbers from border and blanket applications. Four larvae were found on the last day of harvest in one replicate of the border spray treatment. Fruit knockdown were statistically similar, however, border sprays may save growers an estimated \$320 per hectare. Reduced pesticide strategies such as alternate row middle and border sprays show promise as a replacement to blanket sprays for *D. suzukii* management while reducing spray area, application time and production costs. Studies are planned in 2013 to repeat these trials at additional locations to verify results over years before adoption of either technique is recommended to growers.