

Insecticide/Miticide Decline in PNW Caneberries

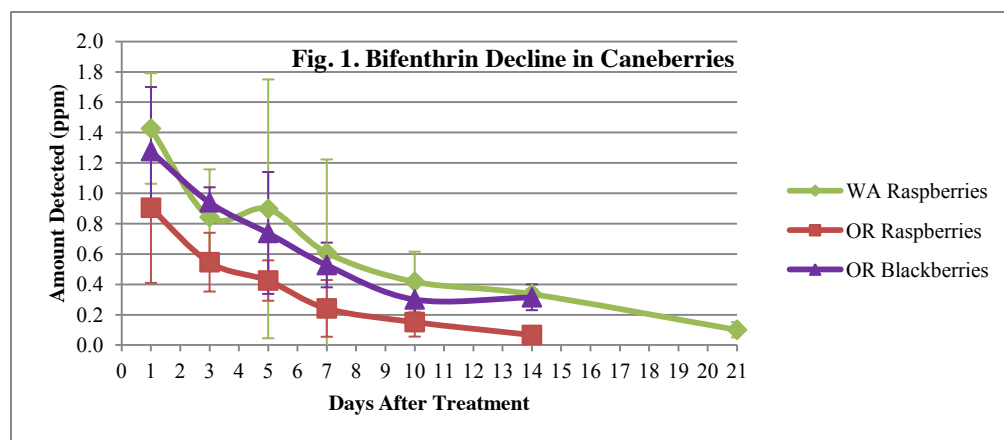
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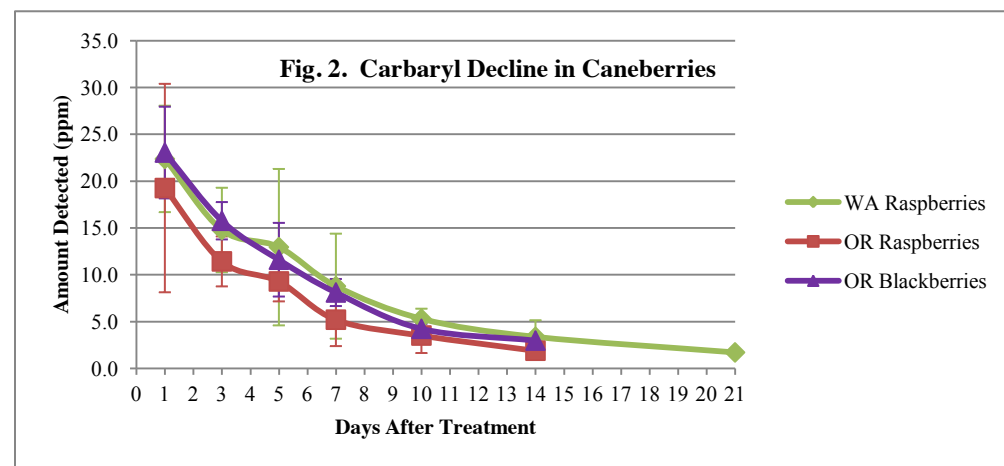
Spotted wing drosophila, *Drosophila suzukii* continues to show preference for all caneberries and weekly insecticide applications necessary to protect berries may put growers at risk for residue violations. This study provides information on insecticide/miticide degradation curves for the PNW region representing a single season. Field sites included: raspberry - Lynden, WA and raspberry and blackberry - Aurora, OR. Washington treatments were replicated 3X with an over-the-row boom and 4X in Oregon using a backpack sprayer. Analyses were performed by Synergistic Pesticide Lab in Portland, OR. Target export countries include Australia (AU), Canada (CA), Japan (JA), Korea (KO) and Taiwan (TA) and MRLs based on www.globalmrl.com database are current as of 11/29/16. (PHI are in parentheses). RR = red raspberry and BB = blackberry

Results

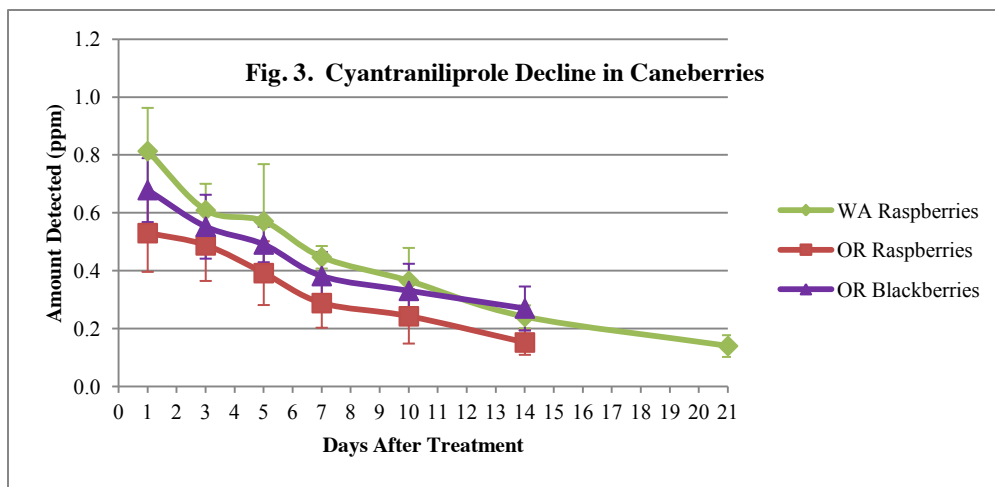
US tolerances for bifenthrin are set at 1 ppm. Bifenthrin meets MRLs for US (3) and all other countries (Fig.1).



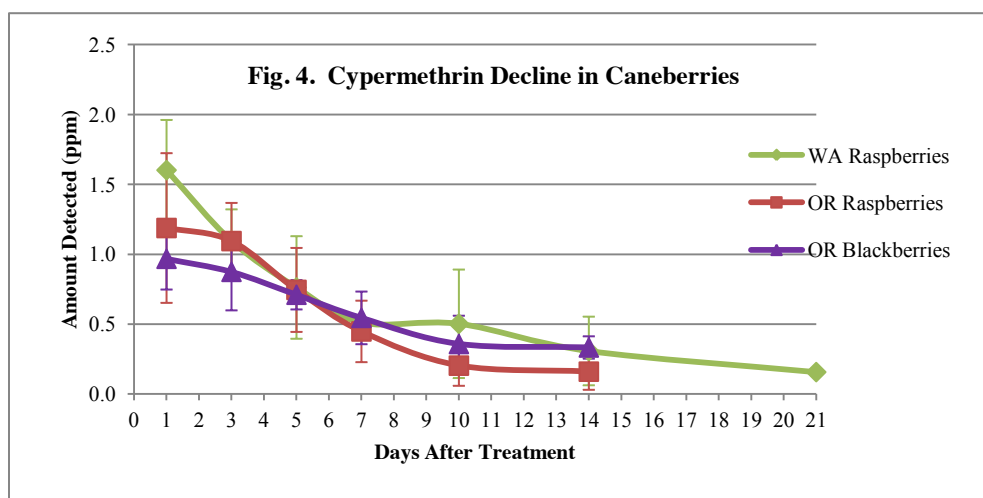
US tolerances for carbaryl are set at 12 ppm. Carbaryl meets MRLs for US (7) and all countries except KO and TA set at 0.5; need to wait 21 days for KO & TA. (Fig. 2)



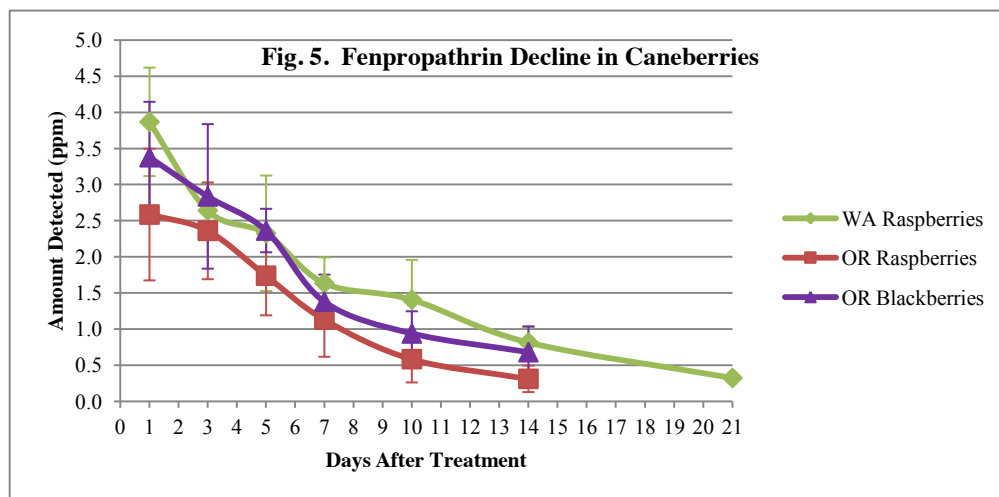
Cyantraniliprole is not registered with no MRLs set. For reference, US tolerances are set at 4.0 ppm for highbush blueberry (3) while caneberry ppm in this study, were < 0.6 at 3-day PHI (Fig. 3).



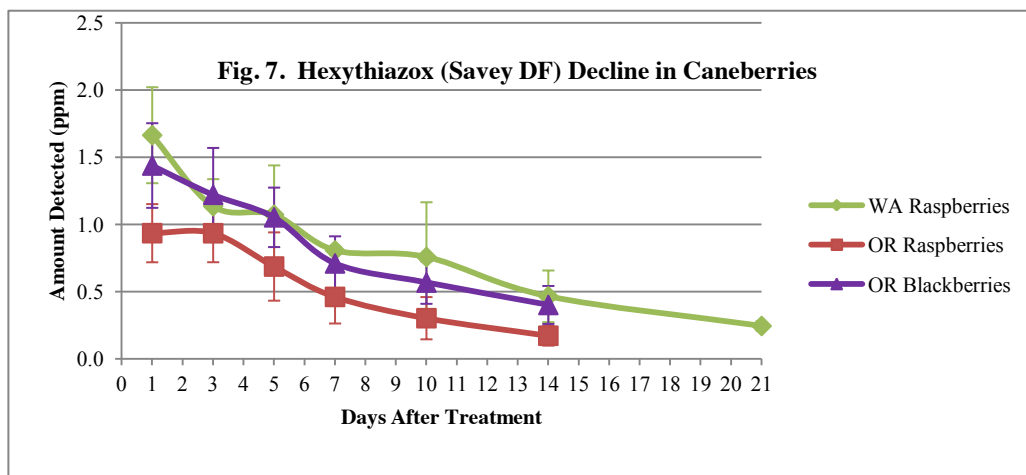
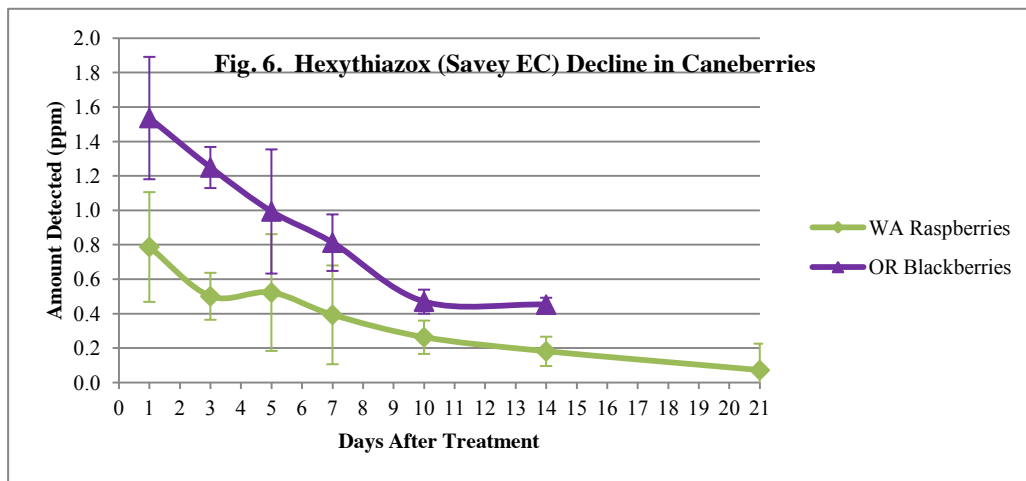
US tolerances for cypermethrin and zeta-cypermethrin, analytically indistinguishable, are set at 0.8 ppm. Cypermethrin is OK for TA but excessive residues were detected for US (1) & other countries requiring waiting 5 days (Fig. 4). These results will be reviewed.



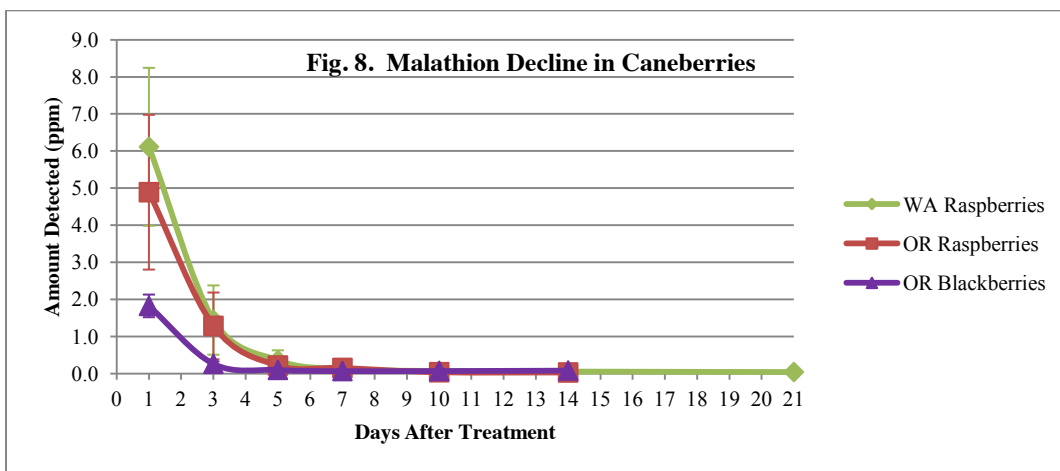
US tolerances for fenpropathrin are set at 12 ppm. Fenpropathrin meets MRLs for the US (3) and all countries except AU (0 ppm) and KO (0.5 ppm); wait 18 days for KO (Fig. 5).



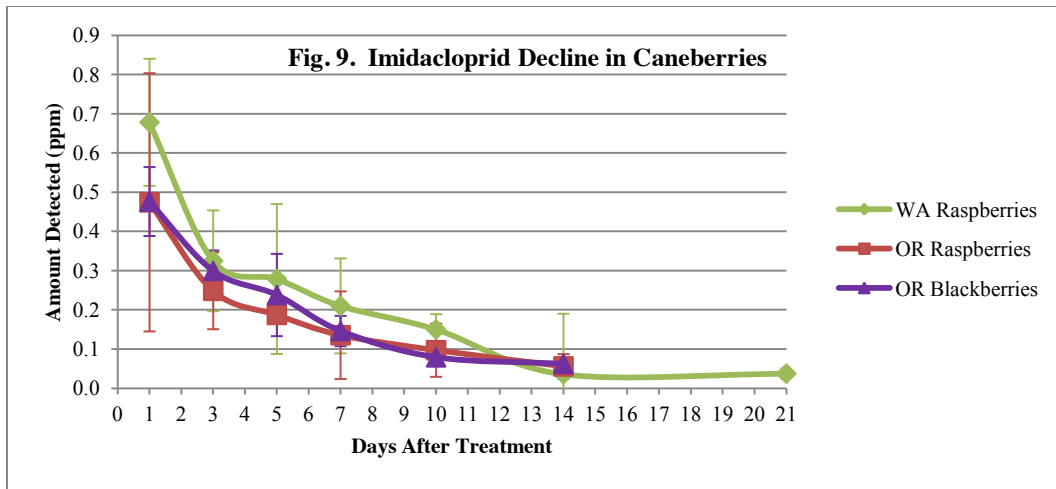
US tolerances for hexythiazox are set at 1 ppm. Hexythiazox MRLs were OK for CA but excessive residues were detected for US (3) and all other countries (Figs. 6 & 7). This will be reviewed in the coming 3-year study. Decline rates for both formulations did not vary.



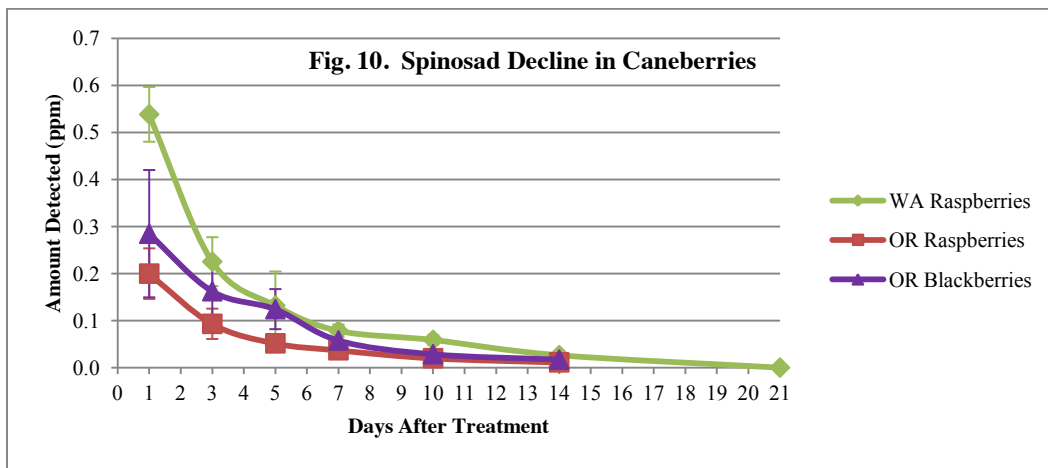
US tolerances for malathion are set at 8 ppm: Malathion meets US (1) and MRLs for all countries except KO (0.5 ppm) wait 5 days & TA (0.01 ppm) wait 21 days (Fig. 8).



US tolerances for imidacloprid are set at 2.5 ppm. Imidacloprid meets US (3) and MRLs for all countries except blackberry in KO (0.3 ppm); need to wait 4 days instead of 3 (Fig. 9).



US tolerances for spinosad are set at 1 ppm. Spinosad meets MRLs for the US (1) and all countries (Fig. 10).



US tolerances for spinetoram are set at 0.8 ppm. Spinetoram meets MRLs for the US (1) and all countries except KO (0.05 ppm) wait 10+ days & TA (0.5 ppm RR, 0.01 ppm BB) wait 14 days (Fig. 11).

