Time Your Sprays with Precision for Improved Pest-Control

A new ***spray-timing analysis*** tool has been created by the tree fruit experts at WSU. It can be used by growers and industry personnel to analyze spray-timing for: ***Codling moth, Oblique-Banded Leaf Roller, Peach Twig Borer, San Jose Scale and Western Cherry Fruit Fly.*** Enter last season's sprays and get a report of how well you timed your sprays.
Below is an example output from the spray-timing tool, assessing a hypothetical codling moth spray program.

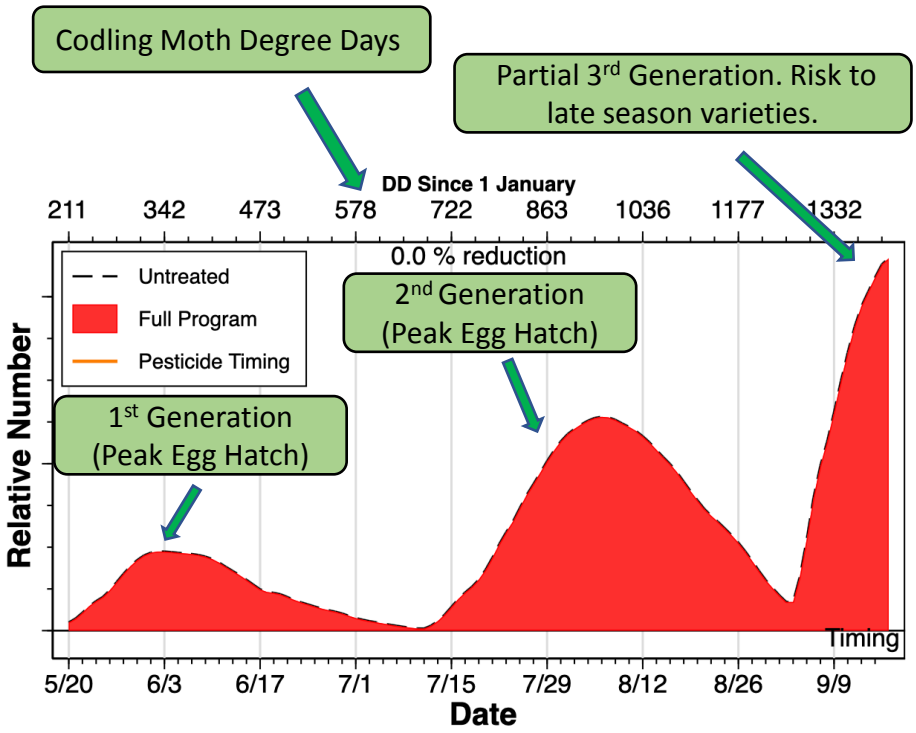
Modeling Pesticide Effects

Example # 1: No Sprays

Model of codling moth egg hatch. ***Pesticides target eggs and newly hatched larvae before they enter fruitlets.***

The red area shows how many eggs would hatch each day if nothing was done to control this pest.

Without control, populations grow rapidly, multiplying with each subsequent generation.



Example #2: 2 Sprays

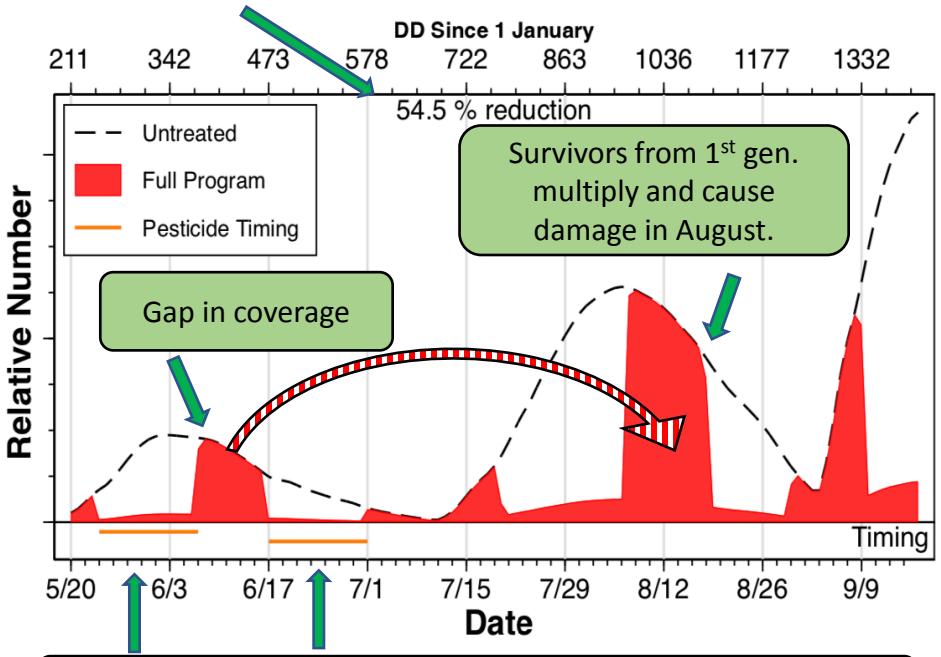
The ***orange bars*** indicate when sprays were applied & how long residues lasted (14 days).

The decrease in red area indicates reduction in pest population.

There is a gap in spray coverage between June 5th when the residue of the first spray deteriorated and June 17th when the second spray was applied.

The 2nd spray would have been better timed if it went on at June 5th. ***Improve control by minimizing gaps in spray coverage during periods of peak egg hatch (300-500 Degree Days).***

Model estimates 54.5% of 1st generation larvae were killed by 2 sprays (this model does not consider the contribution of sterile insect release to pest control). 45% of larvae survived because of the gap in coverage.



Enter Your Spray Records

Visit: https://pesticides.decisionaid.systems

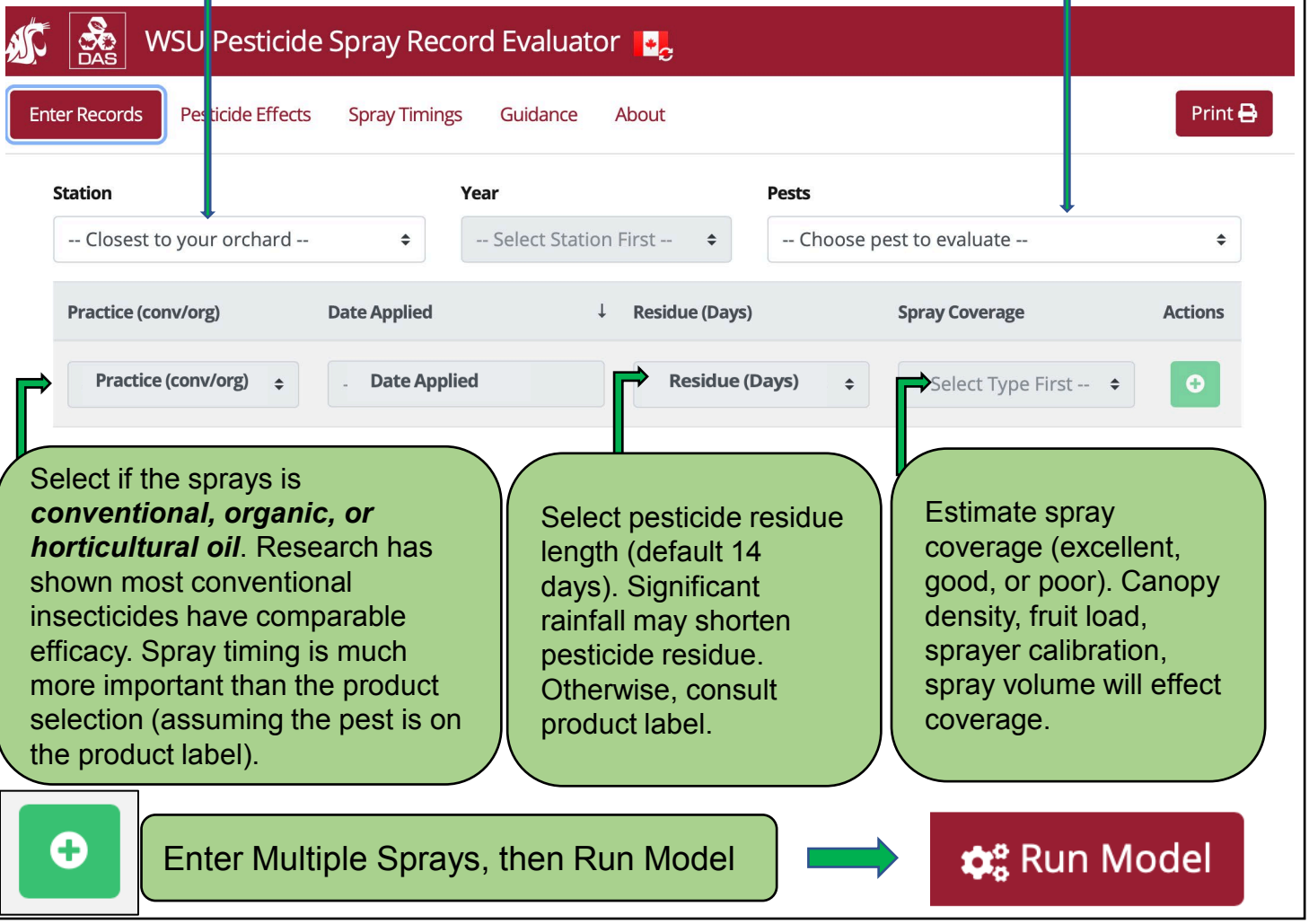
We ***DO NOT*** store your spray records on our servers. Results are temporarily saved *ONLY* on your browser for your convenience while using this tool.

Click on map of BC and get started!

Entering Sprays Records

Pick the weather station closest to ***your orchard***. Sign-up @ https://ca.decisionaid.systems for more details.

Pick the pest of interest : ***Codling moth, Oblique-Banded Leaf Roller, Peach Twig Borer, San Jose Scale and Western Cherry Fruit Fly.*** Sometimes pesticides targeting one pest will control another. Use this tool to help you see how!



Select if the sprays is ***conventional, organic, or horticultural oil***. Research has shown most conventional insecticides have comparable efficacy. Spray timing is much more important than the product selection (assuming the pest is on the product label).

Select pesticide residue length (default 14 days). Significant rainfall may shorten pesticide residue. Otherwise, consult product label.

Estimate spray coverage (excellent, good, or poor). Canopy density, fruit load, sprayer calibration, spray volume will effect coverage.

Enter Multiple Sprays, then Run Model → Run Model

Product, timing and coverage are the ***3 KEYS*** of successful spraying

- Newer pesticides do not have broad spectrum activity. ***Select the right product for the appropriate life stage*** of the target pest. Always consult the product label and/or your local horticulturalist.
- Newer pesticides generally have shorter residual activity. Timing your sprays to coincide with when the pest is most vulnerable is a key to success. Scouting your orchard *and* ***Degree Day-based models (available online with the Decision Aid System) are the best tools available to time sprays.***
- Calibrate your sprayer every season. If in doubt, evaluate with water sensitive papers. ***Poorly calibrated sprays give poor results and waste valuable pesticides.***