Trap improvements, phagostimulants, and behavioral control

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Objectives

Comparison of baits
Comparison of trap design
Key experiments – why mass trapping fails

Traps, phagostimulants, insecticides

Monitoring trap used in Oregon and British Columbia in 2009-10

Attractant bait:
apple cider vinegar, as "rough" as possible

Cheap plastic cup/lid with holes near rim

Support wires

Fluid changed weekly

(Slide: Courtesy of V. Walton, et al. 2010)

Effective attractants

< 2012	2012			2013
apple cider vinegar	< wine vinegar	+	apple cider vinegar	< whole wheat bread dough
100%	60%	+	40%	12 fl oz water 1 c flour 1 Tbsp ACV 1 Tbsp yeast

Don’t forget surfactant!

Bait type	Relative attraction
Apple cider vinegar	1
Vinegar + Wine	
Landolt, Stökl, Baker synthetic lures	1.5 - 3
Standard yeast bait	7
Whole wheat yeast baits	14
SuzukiiTrap	
Whole wheat + chem blend	20
Raspberry infused vinegar	50

Improvements in trap designs

www.ct.gov/caes

The bottom line for 2013 trapping tests

The red stripe cup trap is best
Color and pattern: subtle differences

Quality of odor attractant is of primary importance
The TWWACV bait is equivalent to SuzukiiTrap bait

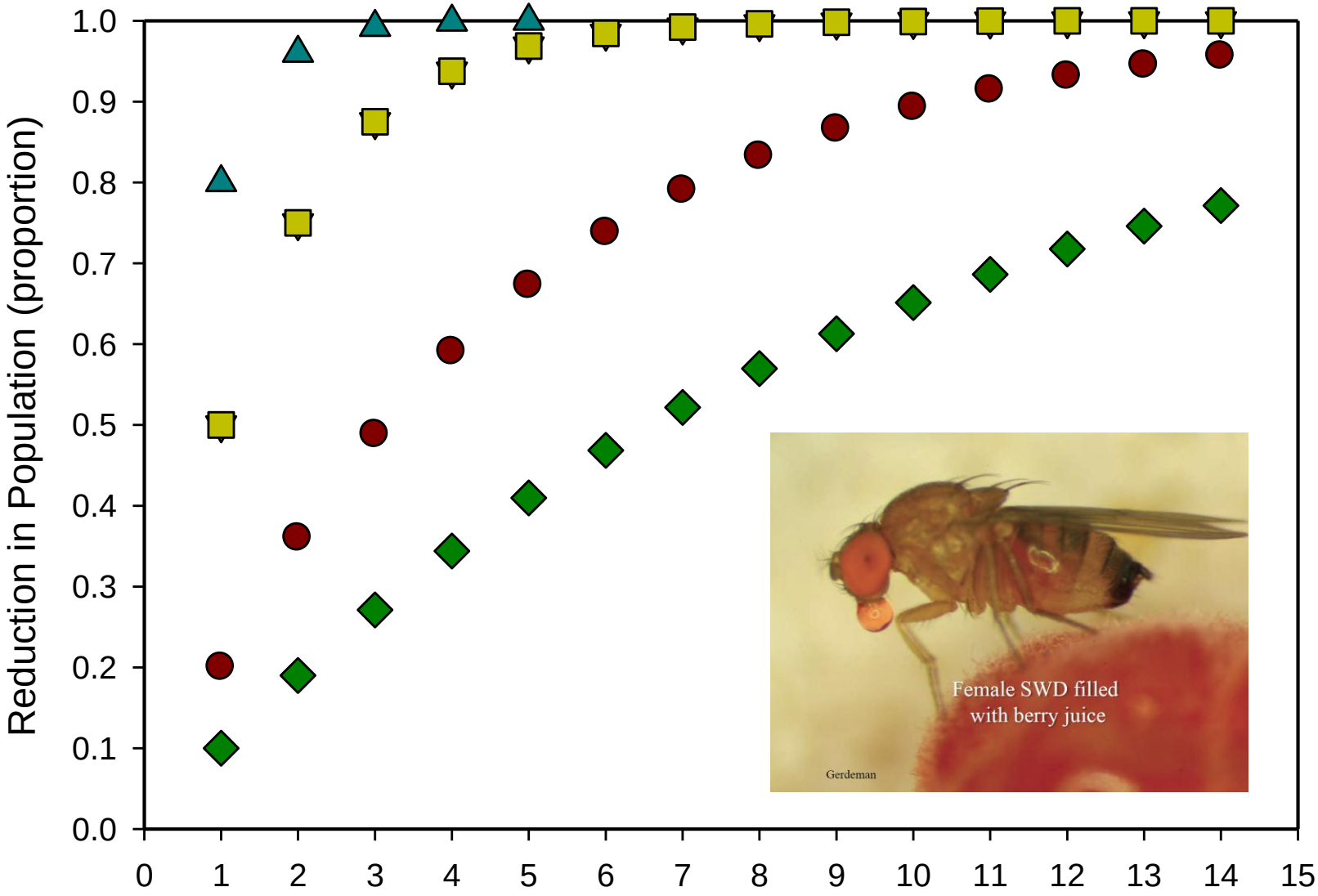
SuzukiiTrap bait:

- catches more females than males
- more selective for SWD
- does not become putrid

For mass trapping to be effective, measuring the population not captured by the traps is essential.

This is the population that puts surrounding fruit at risk.


HOMER'S
ALL-PURPOSE
BUCKET



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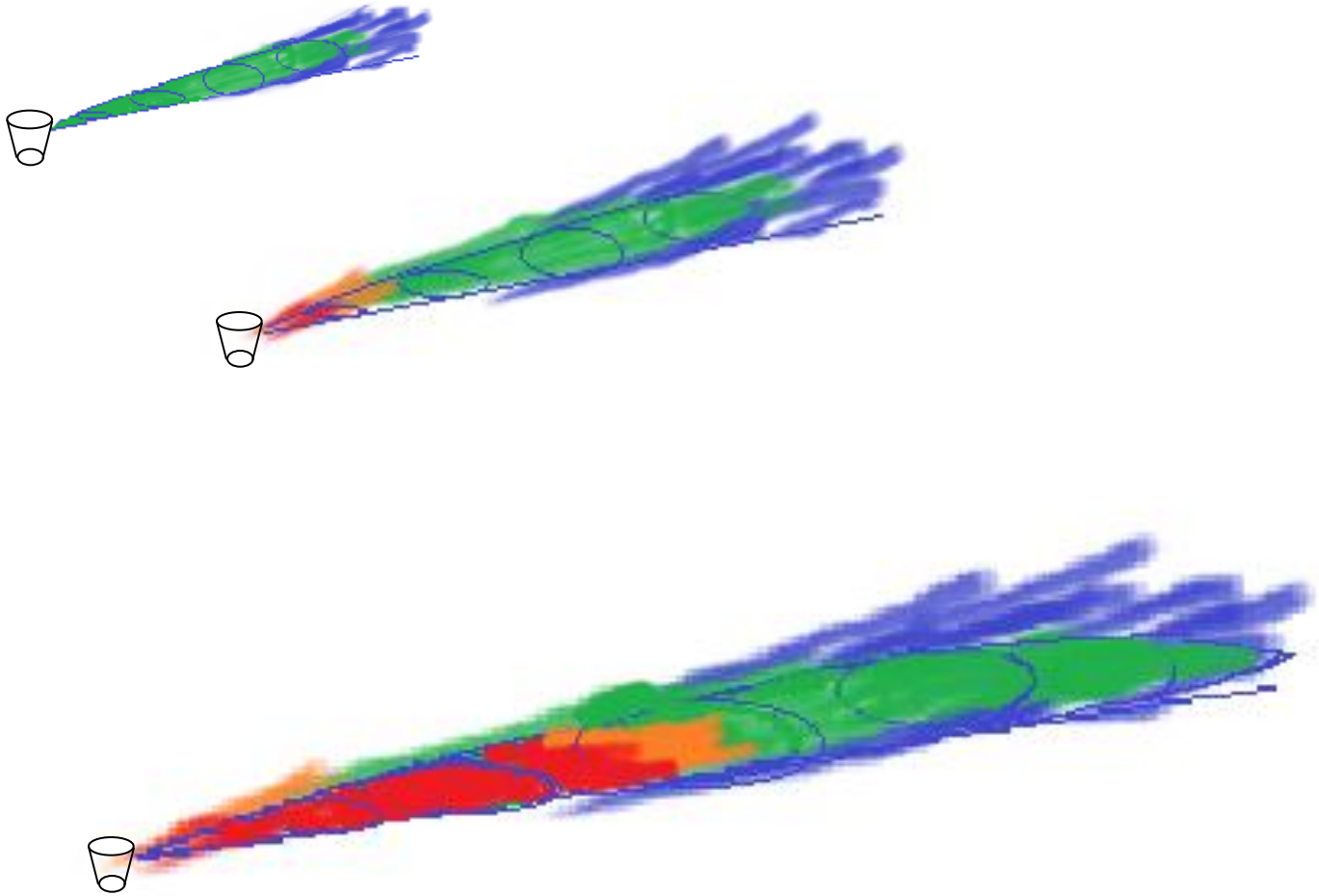

Modified from Wilson and Bossert 1963

Phagostimulant (sugar) added to insecticides sprayed near traps will enhance spray effectiveness and broaden the active ingredient options.

Insecticides are needed to make mass trapping (in a broad sense) work.

Traps are needed to make insecticide programs work: monitoring, resistance avoidance