Monitoring for adult Spotted Wing Drosophila (SWD): Traps & Baits

as of 6-5-14

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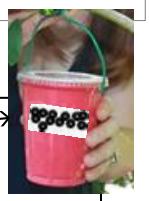
Why use a Monitoring Trap?

- Early detection of SWD
- Correlate trap catch with damage
  (currently unknown; sampling for larvae may be a better indicator)
- Track changing fly pops. over time
- Evaluate treatment efficacy
- Use as a control method
  -Current research is testing 'attract and kill' and mass trapping methods with use of attractive designs and baits

REDSTRIPE 20-Hole

add ~40 holes → to red cup



Some Available Commercial Traps:

- McPhail-style bottom entry with red or yellow color bases with constricted neck

- CAPtiva "Red Zorro" or "Sombrero"
  - large spice container with protective lid

What Features make an Effective Trap?

Visual Cues: Color and Shape

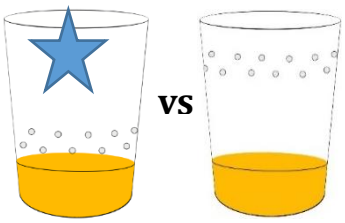
Red / Yellow	Black	White	Clear

More attractive ↔ Less attractive

- *Drosophila* spp. respond to vertical bands

Headspace (volume of space above or below the bait) :

- Low volume between bait and entry/exit holes – allows for greater volatilization
- High volume above the entry/exit holes – Once the flies are in trap they appear to have a harder time getting out
- A lab/field trial showed a Clear 20-hole deli cup trap with low entry/exit holes brought in significantly higher numbers of SWD than the same trap design with high entry/exit holes-perhaps more volatiles released and less escape by SWD



Entry Area

- A relatively large entry area (such as mesh siding or large number of holes) will bring in higher numbers of SWD; too large will allow for high evaporation.

Bait Volume and Surface Area

- Large trap volume, intermediate bait surface area attractive

Some Baits used for attracting SWD:

(add 150 to 500 ml of Bait solution depending on trap type)

Hanging packet Lures (currently produced by Trece and Scentry companies) **with a drowning solution placed in cup** are claimed to last 1-2 months in the field!
**Increased efficacy was shown for the Scentry lures in OR2014.

Bakers Yeast-Sugar Solution

A *Baker's yeast-sugar solution*: two teaspoons active dry baker's yeast (1 packet), 4 teaspoons white sugar and 12 ounces (1 ½ cups) warm water.

Chinkiang Vinegar (CV)
50% CV / 50% water
+ drop of dish soap
$3.00/550ml

Suzukii Trap® Bait

Bioiberica, Spain

Red Merlot Wine & **Apple Cider Vinegar** + drop of dish soap

2 Vinegar : 3 Wine mix ratio