Trap and Bait Evaluation for Scouting of Spotted Wing Drosophila

and

Attract and Kill Possibilities

Colleen Burrows

WSU Whatcom County Extension
Why scout for SWD?

- Understand when SWD is in your field
- Understand when SWD populations are increasing
- Evaluate treatment
How to scout

• Standard clear cup with Apple Cider vinegar
  – First shot
  – Works okay

• Is there something better?
What we tried

• Looked at different traps and baits combo’s
• 3-4 reps in each field
• Set them up at 4 fields
• Set up in early June, monitored until end of July
• Each was put 1 post in from edge of field,
• At least 9 meters between traps
Traps used

10-hole clear cup
Traps used

10-hole clear cup

Side mesh clear cup
Traps used

- 10-hole clear cup
- Side mesh clear cup
- Side mesh red cup
Traps used

- 10-hole clear cup
- Side mesh clear cup
- Side mesh red cup
- Contech commercial
Traps used

10-hole clear cup
Side mesh clear cup
Side mesh red cup
Contech commercial
Captiva commercial
Baits Used

• Standard – Apple Cider Vinegar
• Bread Yeast (14g) + sugar (33g) in 1 liter water
• Torula Yeast (3 pellets) + sugar (33g) in 1 liter water
• Monterey Insect Bait (corn steep liquor)
• Suzukii Trap (Spanish bait)
• Biolure bait sachets
Results- farm 3 (trap only)

![Graph showing average SWD per trap over time from 10-June to 12-August for different traps: 10 hole, captiva, clear mesh, contech, and red cup.]
Results – farm 4 organic bait only

[Graph showing the average SWD per trap over time for different baits, with categories such as Apple Cider Vinegar, Biolure, Bread Yeast, Monterey corn steep, Spanish Bait, and Torula Yeast.]
Results – farm 1 (trap + bait)
Results – farm 2 (trap + bait)
What looks good?

• Mesh sided cup (more surface area)
• Yeast better than ACV
• Some promise in Spain bait
  – No mixing (+)
  – Availability? (-)
Attract and Kill

• What?
  – Apply an attractant with the pesticide

• Why?
  – To bring SWD to the pesticide to increase # killed
  – More important in organics with low residual
What we did – field trial

- Applied treatments to Elliot bushes at WSU Mt. Vernon in September. (1 bush per rep)
- Treatments
  - UTC
  - Entrust only
  - Entrust + Bread Yeast + Sugar
  - Entrust + Blossom Protect + Buffer + Sugar
  - Entrust + PFR
  - Entrust + PFR + Bread Yeast + Sugar
- Treated 2 times
Field trial

• What we measured:
  – Flagged branches and sampled 10 fruit from each plant
    • Before treatment
    • 1 week after
Average infested fruit per rep (out of 10 sampled)
Average infested fruit per rep (out of 10 sampled)

Is this attracting SWD but not killing?
What we did – greenhouse trial

• Set up overturned funnels with baits + Entrust inside (same baits as in field trial)
• All inside a mesh dome
• 3 reps
• Released SWD (at least 100 in each dome)
• Check after 1 week to see number attracted
Average SWD in each bait trap
What’s next?

• Currently repeating greenhouse trial with different design.
• Will this work? Other ideas from growers?
Thank you!

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