



2023 Spotted Wing Drosophila (SWD) Monitoring

Scentry Biologicals SWD drowning jar trap and lure

Natasha Field, Technician, CCE ENYCHP, temporarily coordinating the monitoring network.

nf2567@cornell.edu , 570-417-0414

Janet Van Zoeren, IPM Specialist, CCE LOFP will be temporarily coordinating the SWD Monitoring

Blog jev67@cornell.edu , 585-798-4265 ext 136, cell 585-797-8368

In 2023, the NY SWD monitoring network will use the commercially available Scentry Biologicals, Inc. traps and lures. Two will be set on the edge of the crop. Research has shown these to compare favorably with the whole wheat dough lures and other commercially available lures.

We will ship traps and lures to cooperators with the Scentry instructions. Our instructions are meant to augment those provided by Scentry and include information on reporting trap catch data to the network.

Trap Materials

- Scentry Biologicals Inc.
 - Screw cap lid with hanger wire
 - Plastic screw cap container, red with 4 black, perforated circles.
 - SWD lure (*plastic bag with gel inside*)
- 2-3 ft of plastic-coated wire (*twist tie wire on a spool with cutter is convenient*)

Water Drowning Solution recipe

- 1²/₃ cup (400 ml) water per trap
- drop unscented dish detergent (*unscented detergent may be hard to find, read ingredients*)

Other Materials

- no-see-um fabric mesh pieces (6x6") – to filter flies out of drowning solution
- funnel, 6 inch diam (15.24 cm)
- dump container(s) for filtering drowning solution into
- paper towels
- squirt bottle or small artist brush – to remove flies caught in trap container
- stakes for hanging traps OR simply hang in the plant canopy or on trellis post (*hang in shade*)
- flagging tape – to mark the plants the trap are in and the row
- sandwich bags
- sharpies
- cooler

- freeze packs
- dissecting microscope

Preparing and setting the trap

1. In addition to using the hanger on the lid, if more sturdy hanging is desired, make a circular ring hanger for the trap out of the wire. This can prevent the trap from swinging in strong winds or airblast sprayers. Leave sufficient length of wire to attach the circular hanger on a branch or pole.
2. Hang the SWD lure on the wire hanger under the lid.
3. Pull the hanger up and insert the wire end through the second hole in the lid until it snaps into place.
4. Add drowning solution (water with a drop of unscented detergent) to the trap. A volume of $1\frac{2}{3}$ cup (400 ml) is recommended. Screw the lid, hanger and lure onto the trap container.
5. Label the trap with a code number for your records. (Record the trap GPS coordinates, if needed.) Record the date the trap and lure were set out in the field.
6. Hang the trap on a branch, post or stake using the lid hanger. Place traps in the plant canopy so they are shaded. About 2 ft off the ground is a good height, depending on the height of the canopy. Mark the location with flagging tape.



Hanger made from twist tie spool wire.



Attaching the lure bag to the lid hanger.



Hang traps in the shade of the plant canopy.
Mark location with flagging tape.

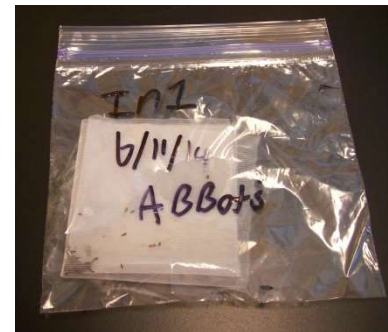
7. Collect trapped insects and change the drowning solution weekly. Lures last 4-6 weeks.

Collecting the insects weekly

1. Remove the trap from the wire hanger and bring it to the collection point (field vehicle). Take off the lid with hanging lure and set aside. Label a plastic bag with trap number, farm name, and date.
2. Fold a 6x6 inch piece of mesh fabric or coffee filter into quarters and place in the funnel. Wet it with the squirt bottle so it sticks to the funnel. To pour the trap liquid out, avoid the black perforated openings. Pour the liquid through the center point of the mesh in the funnel so it drains into a waste container and the flies are collected on the mesh.
3. To collect insects that stick to the sides of the trap and lure, use a squirt bottle with apple cider vinegar or an artist brush. If shipping specimens for ID, rinse them with the apple cider vinegar to help preserve them. Allow to drain.
4. Place the mesh containing the collected insects into the plastic bag labeled with trap number, farm name, and date. Place in a cooler, if out in the field.
5. Wipe out the trap with a paper towel, to keep it clean. Refill the drowning solution, as described above and re-hang it.
6. Refrigerate collected specimens until you can count the SWD under a microscope or until they are shipped for ID.



Collect insects by pouring the drowning solution through the piece of mesh fabric.



Place mesh fabric filter in a labeled plastic bag and into the cooler.

Identifying the SWD

1. Tap the insects off the mesh into a shallow dish and then rinse the remaining off with a squirt bottle. Float the insects in a shallow film of water in the dish allows them to be examined easily with a microscope or hand lens and then moved aside. Enumerate the male and female SWD as you examine each collected insect.
2. If shipping the insects to a lab for ID, send them so they won't sit in the Post Office over a weekend. Fold the mesh in quarters, keeping the insects mostly in the point of the folded mesh. Ship express.

Cornell Cooperative Extension collaborators – Reporting Results

1. Report all monitoring data to Ag Pest Monitor, <https://agpestmonitor.org/>. The Scentry traps are reported in the “**County Name # out**” trap sites. The SWD distribution map generates from your entered data.

Zero data is important. The map will show gray for counties that are trapping and have found no SWD. This is very helpful to growers.

The SWD distribution map displays on Cornell Fruit Resources, on NYS IPM, and on the SWD blog.

Your Ag Pest Monitor trapping sites will be set up and ready for your data entry. If you need help with data entry, contact Natasha Field, nf257@cornell.edu.

2. When SWD is caught in a trap, report your findings to Natasha Field and Janet Van Zoeren at nf257@cornell.edu and jev67@cornell.edu. Include the following information:

- (1) number of females
- (2) number of males
- (3) date trap checked
- (4) site name
- (5) crop

Information will be reported on the SWD blog at blogs.cornell.edu/swd1/. There are currently 369 subscribers to the blog (April 2021) and most are berry growers in NY.

File and work originally created by Juliet Carroll, Fruit IPM Coordinator, NYS IPM Program
jec3@cornell.edu

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