

WSDA Plant Services Procedures for Arthropod Specimen Collection, Handling, Identification and Record Keeping

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WSDA, Plant Protection Division asks that you follow this procedure guideline for handling specimens detected during the inspection process:

1. a. Plant diseases (mold, fungi, bacteria etc.) - shall be submitted to the WSDA Plant Pathologist.
1. b. Arthropods (insects, mites, spiders etc.) shall be submitted with a WSDA Pest & Disease (P&D) Sample Form. This form is now available on the website in a fill-able format. Go to 2 below.
2. a. **Specimens of Suspect Cherry Fruit Fly for the Cherry Inspection Program** shall be submitted in vials of 70% **ethyl alcohol**. Isopropyl alcohol will not work! The vials shall contain a paper label written only in pencil (ink dissolves in alcohol). The label shall have the collector name, warehouse (or other facility designation), sample number, lot number and date. **Important!** See below for instructions on special handling of live *Drosophila* larvae.
2. b. **Other specimens** (including specimens for the **USDA Export Programs**) shall be accompanied by a WSDA Pest & Disease Sample Form and handled as described in 3 below.
3. a. **Live** (including diapausing pupae or cocoons) shall be submitted **in labeled, crush-proof vials or plastic containers** (examples below). Specimens found attached or within fruit shall be left intact and carefully packaged to ensure containment and survival of specimen (keep cool, out of direct sunlight) for possible rearing to adult stage.

Suggested Containers



come in various sizes, dependent on fruit sample size



or other suitable brand substitute – no flimsy clamshells or plastic bags with ventilation holes!

3. b. If the specimen is dead, check your export work plan, you may not need to submit it. Other dead specimens shall be submitted according to 4 below.

Procedures for Arthropod Specimen Collection, Handling, Identification and Record-Keeping (continued)

4. a. Soft-bodied specimens (mites, spiders, larvae, moths, butterflies, flies, gnats and aphids) shall be submitted as in 2.a. above.

4. b. Hard-bodied specimens shall be packaged in dry vials or other containers that prevent crushing.

Many larvae are difficult or impossible to identify in the early instars and rearing may be necessary for identification to the species level. This is especially true for the Oriental Fruit Moth larval identifications. If you are not sure whether the specimen is dead, treat it as a live specimen. The entomologist can make the live/dead determination in the lab. Please note on the P&D if the specimen appeared to be alive (movement etc.) when it was submitted.

We realize that sometimes specimens do not make it through the packinghouse processes in very good shape and we will do our best to make identifications. Most samples are coming into our lab in good shape in proper containers, with labels etc.

However, samples have arrived in regular commercial plastic bags or clamshells with ventilation holes. **Such samples shall not be accepted because of the possibility of false negatives.** If such bags are used, insects can escape and proper identification is compromised. Packing Houses shall be required to use crush resistant plastic escape resistant containers. We have seen several samples where either the proper procedures are not being followed or were not known. Please send this memo out every year to all field offices to remind them of the proper procedures.

Currently, characteristics for positively identifying *Drosophila suzukii* (SWD) larvae are not known. Lab rearing to the adult stage may be an option for certain protocols. If specific *Drosophila* species identification is required, then live *Drosophila* larval specimens will be required.

Instructions on special handling of live *Drosophila* larvae

WSDA is again cooperating with Dr. Betsy Beers in studies of Spotted Wing *Drosophila* (SWD) this year. This special handling of live *Drosophila* larvae is requested from all districts. All live *Drosophila* larvae found during the cherry crush process should be placed in a labeled container with a small piece of cherry, kept cool and submitted as soon as possible to the WSDA Yakima Entomology lab or to the WSDA East Wenatchee F&V office. For better service please call ahead to advise us of estimated arrival. We will attempt to rear these specimens out to determine incidence of SWD in our inspection program samples.

Thank you for adhering to these requirements. We understand that your job is very difficult and we appreciate your efforts to provide us with the best possible samples for lab identification. Working together, we can better help our agriculture industries to meet the strict and ever changing phytosanitary export requirements.