

How To Submit Domestic Specimens To APHIS PPQ For Official Confirmation of a Preliminary Identification

Version 1.15 (August 1, 2018)

(For information or queries pertaining to this document please contact the USDA APHIS Plant Pest and Quarantine (PPQ) Domestic Diagnostic Coordinator (DDC) at PPQ.Domestic.Diagnostic.Coordinator@aphis.usda.gov).

A. WHY FEDERAL CONFIRMATION OF A SUSPECT PEST?

USDA APHIS PPQ National Identification Services (NIS) coordinates the federal confirmation of identifications for samples *which have a preliminary identification from PPO Field Ops, a state, or a competent private entity.*

The main reason for federal coordination is to authorize official action (i.e. expenditure of money) by the federal government. A secondary reason is to authorize new state or county records in the National Agricultural Pest Information System (NAPIS) or in other federally-recognized databases.

B. PRELIMINARY ACTIVITIES PRIOR TO SAMPLE SUBMISSION

1. **Screening & Sorting.** National Specialists do not screen unsorted material. For material (including sticky traps) that need to be screened/sorted, and the submitter works for/fits in one of the following categories, follow the instructions listed:
 - a. **State Department of Agriculture** –sort/screen the specimens on site or if that is not possible contact the CAPS coordinator (John.Bowers@aphis.usda.gov) for guidance.
 - b. **Farm Bill Project** – make arrangements for sorting and preliminary identification in advance; if for some reason this was overlooked, contact the APHIS PPQ National Operations Manager (NOM) for Pest Detection (Lisa.D.Jackson@aphis.usda.gov).
 - c. **APHIS PPQ Field Operations** (with an arrangement with a Domestic or Port Area Identifier) –continue with the current arrangement.
2. **Routine Identifications of Program Pests.** National Specialists do not routinely identify program pests. For a suspect program pest contact the National program manager (NPM) or the NOM for that program before submitting specimens. This website (<https://www.aphis.usda.gov/aphis/ourfocus/planthealth/plant-pest-and-disease-programs/pests-and-diseases>) has a list of program pests and whom to contact for each. Programs covered include Asian Longhorned Beetle, Cotton Pests, Emerald Ash Borer, European Grapevine Moth, Fruit Flies, Gypsy Moth, Imported Fire Ant, Khapra Beetle, Light Brown Apple Moth, Old World Bollworm, Pine Shoot Beetle, Giant African Snails, and a number of diseases. Each program differs and has its own

submission procedures. These procedures may or may not overlap with the instructions given in the current document. For many programs the NIS has only limited or no involvement.

C. HOW TO GET A SUSPECT PEST CONFIRMED?

The instructions outlined in this section are for confirming suspect pests lacking an established program, which already have a preliminary identification

To start the process, contact the PPQ Domestic Diagnostic Coordinator (DDC) at: PPQ.Domestic.Diagnostic.Coordinator@aphis.usda.gov. Please use the capitalization in the email address as it may be necessary in some cases for the email not to bounce. The instructions the DDC provides for submitting specimens will vary depending on what is submitted—a nematode, insect, mite, mollusk, suspect noxious weed specimen, or disease sample. For insects, instructions also will vary based on the type of insect. Instructions also will vary depending on whether the official confirmation is normally morphological or molecular.

1. *What to Submit Physically*

a. **The Specimen(s) and/or DNA Extract(s)**

As there are a wide variety of potential pest organisms that could be shipped, this document does not go into the details of packing and shipping. See [Sample Submission Guidance](#) for more detail. In general, submit fresh specimens, especially of plant material. In special cases for diseases (check first), submit DNA extracts in addition to symptomatic plant tissue.

Insect larvae should be killed in boiling water, allowed to cool, and then placed in 70% ethyl alcohol prior to shipping. Mites, snails, and nematodes should also be shipped in 70% alcohol. Insect adults should be submitted dry in vials. In cases with large specimens, cotton or a similar material should be placed into the vial to prevent damage during shipping.

A Note About Sticky Traps

Entomologists hate dealing with specimens on sticky traps. To avoid submitting sticky traps, for most insects other than moths remove the specimens from the traps as follows:

- 1) Cut the insect out of the trap with scissors, so that it is stuck to a small piece of the trap backing

- 2) Soak the small piece of backing the insect is on in the solvent the sticky material came with, until the insect floats off
- 3) Leave the insect in the solvent until it is completely free of adhesive
- 4) Put the insect in alcohol and send in as normal

This procedure works well for both delicate insects like Swede midge and solidly-built ones like emerald ash borer. What Step #3 is designed to avoid is having a blob of adhesive in the alcohol with legs and wings sticking out. The idea is to get just the insect and nothing else.

In contrast, Lepidoptera should be left on the sticky cards on which they were collected, to preserve their wings and wing pattern. Indicate the position of each suspect on the trap with a loop of thread or string, or a paper pointer. Each trap or card should be placed in its own separate zip-lock bag, with the sticky surface separated from the bag. Include the appropriate name of the sticky solvent on the IBP record.

For moths, for four suspects/traps or less, go ahead and submit your specimens. However, if there are 5-25 suspects/traps, pick the best several to submit. Remember, NIS is providing a confirmation service, not a screening service. If in doubt about what to do, phone or email the DDC for guidance.

Whether sending vials, traps, or DNA samples, there should be one set of records (391s for plant pathology; IBP records for entomology and acarology) for each collection—that is, for each combination of locality, date, collector, etc. Samples should always be clearly labelled so they can be correlated with the corresponding 391 or IBP record. A collection number is the best way to do this.

Ship vials in a well-padded box. Use a courier service. Be aware that some courier services may have restrictions on shipping alcohol by air. PPQ employees may contact the Safety Coordinator for details.

For further information on how to ship, contact the PPQ Domestic Diagnostic Coordinator at PPQ.Domestic.Diagnostic.Coordinator@aphis.usda.gov.

b. The PPQ Form 391 and/or IBP Record

PPQ Form 391—The [PPQ Form 391](#) is a fillable PDF formatted form. It can be downloaded from the [PPQ Forms webpage](#). Complete the form, print it out, and then include the print out with the physical specimens to be submitted for official confirmation. Include one form for each set of collection data. ***For arthropods that are to be submitted for confirmation, do NOT use PPQ Form 391. Instead, include a print out of the IBP record. Ignoring this warning and sending a scanned 391 instead of an IBP record for an arthropod may result in a delayed or lost sample.***

When sending multiple printed forms, whether they be of 391s or IBP records, be sure that each paper form is tightly correlated with the specimens that go with it. Do **NOT** send a stack of forms with multiple containers, where there is no way to correlate which form goes with which container.

IBP Record— An IBP (“Inland Beyond Port”) record is a digital APHIS Agricultural Quarantine Activity System (AQAS) entry. The portion of AQAS used for keeping track of identifications is known as “Pest ID.” IBP records in Pest ID must be created by the appropriate APHIS PPQ personnel. The confirmatory report will include an IBP record for each positive disease sample tested molecularly, and for any record, positive or negative, belonging to other groups where the identification is morphological.

For arthropod specimens submitted for confirmation to our entomologists, the **SUBMITTER** must create the IBP record **before** the specimens are mailed. Include a print out of this IBP record with the specimens. Also attach an electronic PDF of the record in the cover email (see the email section below for details).

How to Get an IBP Record Created Without Having Access to PEST ID

The State Plant Regulatory Official (SPRO) may request the State Plant Health Director (SPHD) to get a local Area Identifier or Pest Survey Specialist to create an IBP record in Pest ID, to provide an electronic PDF that can be printed. If this is not possible, contact the PPQ Domestic Diagnostic Coordinator at PPQ.Domestic.Diagnostic.Coordinator@aphis.usda.gov. He will make the record and send a PDF file. Print this file. ***Do NOT submit the specimens without including a print out of this PDF.***

Since the IBP record includes about the same information as the PPQ Form 391, it is easiest to fill out the Form 391, and then use it to convey the information to either the local Area Identifier, Pest Survey Specialist, or Domestic Diagnostic Coordinator to use in creating the electronic IBP record.

For arthropod submissions, two of the fields of the IBP record **MUST** be filled out as follows: “***Priority***” **must be set to “Urgent”** and “***Forward to***” **must be set to “SEL.”** Otherwise, the specimen is very likely to be misplaced or lost.

2. What to Submit by Email and To Whom

When mailing or shipping the physical specimens, also notify the PPQ Domestic Diagnostic Coordinator (DDC) by email at PPQ.Domestic.Diagnostic.Coordinator@aphis.usda.gov. In the email, include an explanation of what is in the package, as well as a PDF file of the completed PPQ Form 391 and/or the IBP record created from the information on the Form 391. Also include the tracking number.

Be sure to include an explanation of **WHY** the specimens should be identified. Our National Specialists are busy people and like to know that their efforts are not being wasted. Suitable entries include but are not limited to: “If confirmed this species will be a new state record for Wisconsin;” “A confirmation by a recognized authority is required for us to confiscate the material on which this was found;” “If confirmed this will be a new record for the continental United States.” Ideally, remarks like these should be both in the cover email, and in the remarks on the PPQ Form 391/IBP record, in case the latter are separated from the cover email when the specimens are being processed.

Both the emails and addresses below are up-to-date as of the date listed on the first page of this document. With the exception of material being sent to Dr. Barr, there is no need to enquire further.

In addition to the DDC, copy (cc) the following people as appropriate.

For Insects/Mites to NIS/SEL

cc: mary.j.burns@aphis.usda.gov
andrew.carmichael@aphis.usda.gov
IDService@ars.usda.gov

For Gypsy Moth

cc: PPQ.CPHST.Otis.Gypsy.Moth.Diagnostics@aphis.usda.gov

***For Fruit Flies and Select Other Insects for Molecular Identification
(ask the DDC first)***

cc. norman.b.barr@aphis.usda.gov

For Snails & Slugs

cc. PPQNISNTMalacology@aphis.usda.gov

For Nematodes

cc. zafar.handoo@ars.usda.gov

For Weeds

cc. PPQNISNTBotany@aphis.usda.gov

For Fungi

cc. PPQNISNTMycology@aphis.usda.gov

For Molecular Diagnostics of Diseases

cc. aphis-ppqcphstbeltsvillesamplediagnostics@we.aphis.gov
aaron.h.kennedy@aphis.usda.gov

3. Where to Mail the Specimen(s)

For Scale Insects, Psyllids, Thrips, and Mites (Morphological)

MAIL TO:

Communication & Taxonomic Services Unit (CTSU)
USDA-ARS-Systematic Entom. Lab
Building 005, Room 137, BARC-West
10300 Baltimore Avenue
Beltsville, MD 20705

(Use UPS or FedEx; NEVER USPS)

For Gypsy Moth (Molecular)

MAIL TO:
CPHST Otis Laboratory
Dr. Yunke Wu
Molecular Diagnostics Group
USDA, APHIS, PPQ
1398 West Truck Road
Buzzards Bay, MA 02542

For Other Insects (Morphological)

MAIL TO:
Location Leader
URGENT
National Museum of Natural History
Systematic Entomology Lab, USDA
c/o National Museum of Natural History
NHB 168 10th & Constitution Ave., NW
Washington, DC 20004

***For Fruit Flies and Select Other Insects for Molecular Identification
(ask the DDC first)***

MAIL TO:
Dr. Norman Barr
USDA-APHIS-PPQ, CPHST
Moore Air Base Bldg., S-6414
22675 N. Moorefield Rd.
Edinburg, TX 78541

For Snails and Slugs (Morphological)

MAIL TO:
Dr. Francisco Borrero/Dr. David Robinson
Malacology Identification Specialist
URGENT
USDA-APHIS-PPQ
Academy of Natural Sciences
1900 Benjamin Franklin Parkway
Philadelphia, PA 19103

For Nematodes (Morphological)

MAIL TO:

Dr. Zafar Handoo
URGENT
USDA-ARS Nematology Laboratory
Bldg. 010A, Room 111, BARC-West
10300 Baltimore Ave.
Beltsville, MD 20705-2350

For Weeds (Morphological)

MAIL TO:

David Bitzel/Mark Thurmond
URGENT
USDA-APHIS-PPQ-NIS
Bldg. 308, Room 319, BARC-East
10300 Baltimore Ave.
Beltsville, MD 20705

For Fungi (Morphological and Molecular)

MAIL TO:

Dr. John McKemy/Dr. Megan Romberg/Dr. Aaron Kennedy
URGENT, USDA-APHIS-PPQ
Bldg. 010A, Rm. 327, BARC-West
10300 Baltimore Ave.
Beltsville, MD 20705-2350

For Other Diseases (Molecular)

MAIL TO:

Sample Diagnostics
URGENT
USDA-APHIS-PPQ-CPHST
B-580, BARC-East
Powder Mill Road
Beltsville, MD 20705-2350

D. HOW WILL THE SUBMITTER BE NOTIFIED OF THE RESULTS?

The PPQ Domestic Diagnostic Coordinator (DDC) receives the final identification from Pest ID, a National Specialist, or a recognized laboratory. If the organism has been categorized, that is, if its status as a pest (i.e., quarantine or not) has been established, the DDC then relays the identification to the PPQ Pest Detection and Emergency Programs (PDEP) staff. The PDEP staff will simultaneously notify the SPHD and SPRO of the state concerned by an email according to the posted [Pest Identification Notification to States](#) protocol. Alternately, if the submitted organism is a “New Pest” (i.e., its quarantine status has yet to be determined) the DDC will send the submitter a direct email notification that the pest has been submitted to the National Identification Services (NIS) Coordination and Policy staff for categorization. The notice will only specify that the organism has been submitted for categorization; it will not specify the name of the organism involved. When the categorization is completed, the DDC will notify PDEP and they will send a notification in the normal fashion (i.e., with the species name and quarantine status).

All notifications of confirmed identifications will include a PDF file of the IBP record, whereas negative determinations of diseases generally will not. Submitted arthropods usually will be returned if requested. Do NOT contact the specialist who made the identification for information; contact the PPQ Domestic Diagnostic Coordinator instead.