

Sample Preparation and Submission to the Plant Pest Diagnostics Branch Nematology Laboratory



PPDB Meadowview Facility

There are five laboratories at the Plant Pest Diagnostics Center (PPDC).

To avoid delays in identification, please be sure to submit samples to the appropriate lab.

Samples submitted to an incorrect lab will be subject to delays to determine the appropriate lab for sample analysis.



Botany



Entomology



Nematology



Plant Pathology



Seed Science

Sample Preparation Basics

- Don't be stingy, **more is better**. Please send multiple specimens whenever possible.
- Submit large root and soil samples for nematology in double plastic bags. Attach labels or tags to outside of bag. Avoid direct sunlight. If only submitting small amount of roots, place in a nematode vial with a few drops of water.
- Don't cram and jam. Use a jar, bag, or envelope of appropriate size. Use a second container if needed rather than try to fit a sample into one small container.



Sample Preparation Basics

- Never send rotten, liquefied plant parts to any of the 5 labs.



Chopped up pieces of fruit.

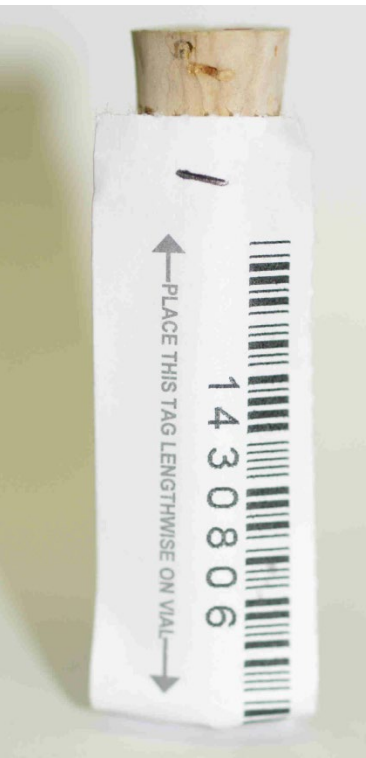


Liquefied mango.

Sample Preparation Basics

- If using a vial, properly affix PDR labels to sample vials such that PDR numbers are clearly visible along the length of the vials and not over the vial and lid.

CORRECT



- PDR # on vial, not on lid
- label lengthwise on vial

INCORRECT



PDR # on lid, not vial



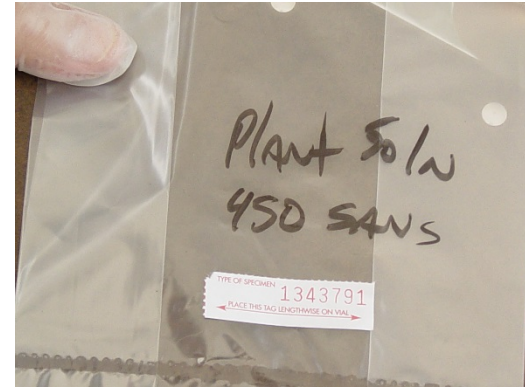
Sticky tape over lid



Label wrapped around vial

Nematode Sample Preparation & Submission

- Put soil and root sample in durable plastic bag. Seal bag. Put other plant tissue sample (stems, leaves, tubers, etc.) in separate plastic bag. Do not use paper or cloth bag.
- Attach PDR label to outside of bag.
- Do not handle sample roughly.
- Keep samples cool & moist immediately after collection. Use an insulated cooler. If storing overnight, then keep sample cool at 50°F.
- Send soil and plant samples for processing ASAP. Send in insulated cooler with frozen cool package wrapped in paper.
- When sampling postal shipments, if sample comprises only a small amount of roots, then place in a vial with few drops of water.



Nematode Sample Preparation and Submission

- Do not wrap roots and/or other plant parts in moistened paper.
- When packaging small amounts of root samples tie knot close to sample to avoid air pocket and probable dehydration.
- Do not send chemically-treated seed samples.
- For processed samples, send nematode suspension preserved in 2.5% formaldehyde in vial.
- Complete PDR slip with all pertinent information.
- Send PDR slip with sample. PDR not received with sample will delay results.

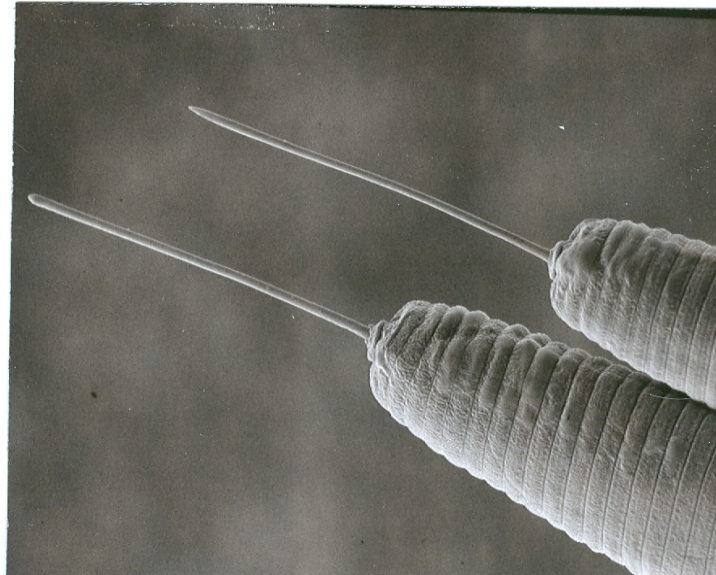


Sample Preparation & Submission

Completing a PDR for sample submission.

Important Guidelines – Nematology

- Name of host sampled: scientific name, variety.
- Correct configuration:
 - [1 sample many hosts = 1 PDR many hosts; 1 host many samples]
- Target nematode species for phytosanitary certification samples.



Sample Submission to PPDC – PDR Basics

- Enter PDR information electronically into all relevant fields.
- Submit a PDR hard copy with specimen(s) as part of the “sample”.
- List all host plant data whenever possible on the PDR.
- List the origin of the specimens. This is particularly helpful for samples originating outside of California.
- List the suspect pest species, if known, to identify in the “suspect” field on the PDR.
- Always indicate the Program Code (e.g., QPHYT)
- Provide any additional information that you think is important in the remarks section. This may include what part of the plant is affected, the type of symptoms seen, distribution or occurrence, and when plant began showing symptoms.
- For Service Samples, **ALWAYS** indicate “Service Sample (99)” for the Activity Code.
- For Service Samples, **ALWAYS** fill in the Billing Address in the fields for “Quarantine shipper/broker”



Sample Submission to PPDC - PDR Specifics

- The following PDR example form will walk you through the relevant fields that should be included when completing a PDR slip for a sample submission to the PPDC Nematology Laboratory.
- Properly completed PDR slips are essential to providing you with an accurate and timely identification for the plant pest or disease you are submitting.
- Provide as much relevant information as possible. The more information that is provided the higher the likelihood of a specific identification. The less information the less likelihood of receiving a specific identification.
- Please be sure to provide us with the appropriate contact information for how you want to receive the identification.
- If you are submitting a service sample, please provide us with the correct billing information in the “Quarantine shipper/broker” fields for invoicing purposes.

Nematology Laboratory

STATE OF CALIFORNIA
DEPARTMENT OF FOOD AND AGRICULTURE
PLANT HEALTH AND
PEST PREVENTION SERVICES

PEST AND DAMAGE RECORD
65-020 (11/2005)

PDR NUMBER [PDR number (auto-generated)]

Date collected [Date, time, and check NEMA lab]

Lab: ENTO PLANT PATH NEMA
 SEED BOTANY VERT

NOR Number: [“RUSH” if a true Rush]

Number of samples: [Indicate number of samples]

Collector: [Collector and affiliation]

Affiliation: F S C E U O Describe other

Quarantine shipper/broker: [This is a critical field! SERVICE SAMPLES MUST indicate the BILLING ADDRESS in these fields]

Name: [Name]
Address: [Address]
City: [City] Zip code: [Zip code]
State/Country: [State/Country]
Phone: [Phone] Fax: [Fax] Latitude: [Latitude]
E-mail: [E-mail] Longitude: [Longitude]

Quarantine origin (where host grown): [Quarantine destination]

City: [City] County: [County] State/Country: [State/Country] Zip code: [Zip code]

Shipment size (include units): [Shipment size, if applicable]

Program: [Program]

Carrier (ground/air/sea): [Carrier]
Business name: [Business name] Flight number: [Flight number]

License plate: [License plate] License state: [License state] Tail/ship number: [Tail/ship number]

Submitter remarks: [This is a critical field! Please indicate any additional information here]

Suspect: [If particular suspect, or a particular test is necessary, indicate here]

Send report to: [If you want to receive the identification, this must be filled out properly]

Weed or Vertebrate: [Weed or Vertebrate]

Entomology: [Entomology]

Sample: [Sample]

Host/crop name: [Host/crop name]

Scientific name: [Scientific name] Quantity: [Quantity] Units: [Units]

Variety: [Variety] Container size and units: [Container size and units]

Nema field block: commercial foundation increase

PDR NUMBER

General or Plant Pathology

Number of plants acres involved:

Number Percent of plants affected:

Plant distribution: Limited Scattered Widespread Eradicated

Plant parts affected:

Bark Bulbs or corms Leaves, upper surface
 Blossoms Fruit or nuts Petiole Stem
 Branches, large Growing tips Rootlets Trunk
 Branches, terminal Large roots Seeds Tubers
 Buds Leaves, lower surface

Plant symptoms:

Limited General

Canker Gumming Malformation Slow decline
 Die back Internal discoloration Marginal burn Stunting
 Fruit rot Leaf fall Root rot Sudden collapse
 Fruit spot Leaf motting Rough bark Wilting
 Galls Leaf spot Shot hole Yellowing

Determination: [Determination] Rating: [Rating]

Determined by: [Determined by] Date: [Date]

County code (for sample)

Activity code (for sample).
SERVICE SAMPLES MUST USE CODE 99

Situation code (for sample)

All relevant information for sample origin

Destination country

Where product grown

Shipment size, if applicable.

This is a critical field! Please indicate any additional information here

If particular suspect, or a particular test is necessary, indicate here

If you want to receive the identification, this must be filled out properly

Host information – VERY important!

PDR number (auto-generated)

Date, time, and check NEMA lab

“RUSH” if a true Rush

Indicate number of samples

Collector and affiliation

This is a critical field! SERVICE SAMPLES MUST indicate the BILLING ADDRESS in these fields

INDICATE PROPER PROGRAM CODE
- For example, if a QPHYT sample is not properly indicated, it would be treated as a non-phyto sample

Leave this BLANK

Sample Submission to PPDC - Sending a Parcel

- Use plenty of shipping peanuts (not shredded paper) or other packing material around the sample to adequately buffer the vial/container. Use at least 1-2” of packing material around all sides of sample container.

- Be sure to have the complete address of lab on shipping label.

CDFA - Plant Pest Diagnostics Center

c/o Nematology Laboratory

3294 Meadowview Rd.

Sacramento, CA 95832



- Seal shipping box securely with packing tape to ensure the parcel remains completely closed in transit.
- Always use a box to send samples through the mail. Glass vials in envelopes tend to be crushed along with the sample inside them.
- Send samples early in the week. Samples sent later may sit at post office over a weekend. Hold late samples and send on Monday.

*** Assume a parcel will have a rough ride to the lab and package the sample to survive drops and bumps along the way.

Sample Submission Checklist

1. Sample collected and prepared using specific lab guidelines for each of the 5 different laboratories.
2. PDR completed with all relevant and necessary information (host, origin, etc.), and submitted along with corresponding sample.
3. Sample packaged according to safe shipment guidelines. All sample vials or bags clearly labelled with corresponding PDR numbers.
4. Sample addressed and sent to appropriate PPDB lab.
5. If any problems arise, inform appropriate on-site supervisor or call one of the designated lab contacts.



PPDB Designated Lab Contact List

Nematology Laboratory

Dr. Ke Dong (916-738-6694)

Dr. Sergei Subbotin (916-738-6696)

René Luna (916-738-6695)

Environmental Program Manager II (Branch Chief)

Dr. Umesh Kodira (916-738-6664)

Environmental Program Manager I (Botany & Entomology)

Dr. Stephen Gaimari (916-738-6671)

Environmental Program Manager I (Nematology, Plant Pathology & Seed Science)

Dr. Cheryl Blomquist (916-738-6707)

