

Sample Preparation and Submission to the Plant Pest Diagnostics Branch Botany 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

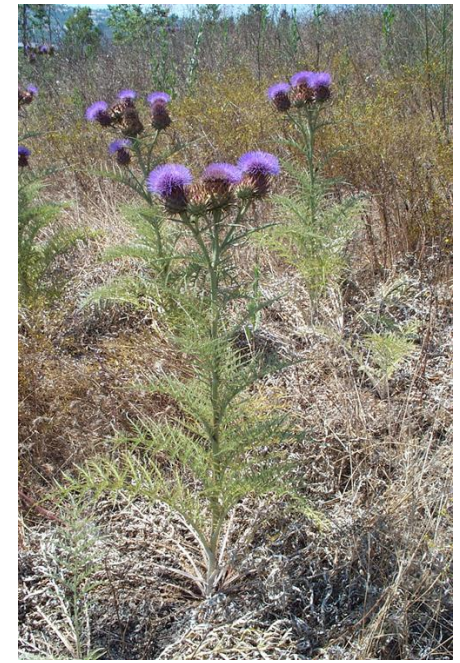
Sample Collection Basics

- Don't be stingy, **more is better**.
Please send multiple specimens whenever possible.
- Send whole plants; do not cut off bits and pieces. Do not place in alcohol or wet paper towels.
- Use care when handling plants, taking care not to break or crush them during collection or processing.
- Be sure to collect as much plant material as possible.



Sample Preparation Basics

- Keep specimens out of direct sunlight, and cool and dry. This will help preserve the sample for lab analysis.
- Don't cram and jam. Use a bag or envelope of the appropriate size. Specimens damaged in transit will be difficult to identify, and delay the identification. Use a second container if needed rather than try to fit a sample into one small container.



Sample Preparation & Submission

- Collect as large and complete a sample as possible (e.g., with roots, stems, leaves, fruits, flowers, etc.).
- Leaves removed from stems are not very useful.
- Flowers alone are not that useful.
- Fruits alone are not that useful.
- Seedlings alone are useless.
- A specific identification may not be possible without sufficient plant material and correct plant parts.



Sample Preparation & Submission

- Place plant material between sheets of folded newspaper.
- Press specimen by placing a weight on it for about one hour.
- Specimen does not need to be dried, just pressed.
- Change newspaper when it becomes moist to prevent sample from getting moldy.
- Do not use staples, tape, or plastic laminate to attach plant specimen to paper or cardboard.



Sample Preparation & Submission

Carefully handle and package the parcel, as dried material must be protected from crushing.

- Place pressed specimen between two pieces of corrugated cardboard (best method).
 - Seal the two pieces of cardboard with packing tape.
 - Place PDR slip in a plastic bag separate from pressed specimen.
 - Address and mail.
 - This method works for aquatic weeds too.
 - Many counties use this method, and it is the preferred method.
- Place pressed specimen, with PDR slip in a separate plastic bag, inside a manila or padded envelope (not best method), or into a flat box (better).

Sample Preparation & Submission

For **RUSH** Samples, it is best that the sample arrives in its original condition. Botanists often cannot identify moldy, crushed, or powdered material

- Fresh material should not be allowed to dry or become moldy.
- For Terrestrial Plants -
 - Place in sealed, clean, dry, plastic bag.
 - Do Not add water, wet paper towels or other water containing materials.
 - Samples are best if refrigerated until sent.
 - Do Not place in sun or near heat source.
- Aquatic Plants
 - Place in sealed, clean, plastic bag.
 - May add some water to bag only if plant material is extremely delicate.
 - If water is used, double bagging will prevent leaks and keep PDR slip dry.
 - Best submitted in a box to prevent damage and/or leaks in transit.



Sample Preparation & Submission

- Handle/Package Carefully
 - Place entire sample in a plastic bag to prevent loss of broken parts.
 - Send bagged sample in crush-proof container (padded envelope or box) to prevent damage in transit.
 - Include a printed copy of the PDR slip inside the shipping box.
 - ❖ Place PDR in a separate plastic bag and place inside specimen bag.
 - ❖ Put PDR number sticker on outside of specimen bag.



Sample Preparation Basics

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



Chopped up pieces of fruit.



Liquefied mango.

Sample Submission to PPDC - PDR Specifics

Completing a PDR for sample submission.

Important Guidelines – Botany

- Include locality information.
- Include growing habit of plant.
- Include habitat data.



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 plant 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.
- 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 Botany Laboratory.
- Properly completed PDR slips are essential to providing you with an accurate and timely identification for the plant, plant pest or disease, or service sample 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.

Botany 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

Lab ENTO PLANT PATH NEMA
 SEED BOTANY VERT

Date collected: _____ Time: _____

NOR Number: _____

Number of samples: _____

Collector: _____
Affiliation: F S C E U O Describe other: _____
Quarantine shipper/broker: _____
Name: _____
Address: _____
City: _____ Zip code: _____
State/Country: _____
Phone: _____ Fax: _____ Latitude: _____ Longitude: _____
E-mail: _____

Location: _____
Owner/receiver: _____
Name: _____
Address/physical description: _____
City: _____ State: _____ Zip code: _____
County: _____
Phone: _____ Fax: _____ Latitude: _____ Longitude: _____
E-mail: _____
Cross street: _____

Quarantine origin (where host grown): _____
City: _____ County: _____ State/Country: _____ Zip code: _____
Shipment size (include units): _____ Program: _____
Carrier (ground/air/maritime): _____ Business name: _____ Flight number: _____
License plate: _____ License state: _____ Tail/ship number: _____

Submitter remarks: _____

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

Determination: _____ Rating: _____

Determined by: _____ Date: _____

PDR number (auto-generated)

Date, time, and check BOTANY lab

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!

“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 the appropriate packing material to adequately buffer the sample.
- Be sure to have the complete address of lab on shipping label.

CDFA - Plant Pest Diagnostics Center
c/o Botany 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

Botany Laboratory

Dr. Genevieve Walden (916-738-6668)

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)

