

# Sample Preparation and Submission to the Plant Pest Diagnostics Branch Plant Pathology Laboratory – Seed Health



# PPDB Meadowview Facility

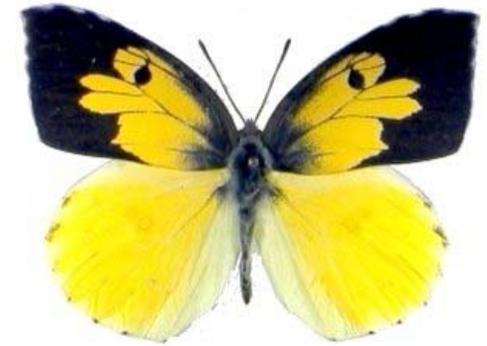
There are five laboratories at the Plant Pest Diagnostics Center (PPDC).

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

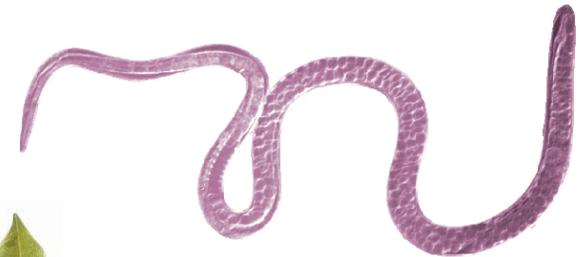
Samples submitted to an incorrect lab will be subject to delays to determine the appropriate lab for sample analysis.



Botany



Entomology



Nematology



Plant Pathology



Seed Science

# Types of Phytosanitary Certification Testing For Seed Moving In Foreign Commerce

- For Seed Health Testing (post harvest) of seed lots for seed borne pathogens please contact the PPDC Plant Pathology Lab.
- For seed lot samples that require the following tests, please contact the Seed Science Laboratory:
  - Foreign Noxious Weed Seed Examination
  - Bulk Examination for Soil Contamination
  - Bulk Examination for Sclerotia Contamination (*Claviceps*, *Sclerotinia*, etc.)
  - Bulk Examinations for *Cuscuta* and *Orobanche* Contamination
- For seed lots that require testing for nematode contamination please contact the PPDC Nematology Lab.
- For preharvest seed field inspection sample testing please contact the PPDC Plant Pathology Lab.

# What is Seed Health Testing?

- In seed health testing we are trying to determine whether or not certain seed borne pathogens are present in the seed lot under test.
- The types of tests conducted may include: seed wash and microscopic examination, agar plating, blotter testing, enzyme linked immuno sorbent assay (ELISA), polymerase chain reaction (PCR), DNA sequencing, or greenhouse grow-out.

# Sampling Seed Lots for Seed Health and Phytosanitary Certification Testing

- For phytosanitary certification service testing, samples must be collected and submitted by county or state inspectors or NSHS accredited seed samplers.
- It is strongly recommended seed lot sampling be done following the Association of American Seed Control Officials (AASCO) or the International Seed Testing Association (ISTA) seed sampling protocols.
- For minimum sample sizes for specific host/pathogen testing combinations, please refer to the Seed Health Testing fee schedule.

# Sample Collection Basics

The CDFA PPDC Plant Pathology Seed Health Testing Laboratory is not responsible for sampling seed lots.

However, the following sampling information should be stated on the sample container:

- County or State Inspector Identification or Accredited Seed Sampler Identification
- Sampling Date



# Sample Collection Basics

For information on seed lot sampling, please contact:

Carl Pfeiffer  
CDFA Seed Services Program  
1220 N Street  
Sacramento, CA  
(916) 403-6715 office  
(530) 949-6934 cell phone  
[Carl.pfeiffer@cdfa.ca.gov](mailto:Carl.pfeiffer@cdfa.ca.gov)

# What Form to Use for Sample Submission

- The following PDR example form will walk you through the relevant fields that should be included when completing a PDR form for a sample submission to the Plant Pathology Lab for Seed Health Testing.
- Properly completed PDR forms are essential to providing you with the accurate and timely service you need.
- If available, please provide a copy of the import permit requirements. Otherwise testing will be based on the information provided on the USDA-APHIS PCIT database.
- Please be sure to provide us with the appropriate contact information for where to send the invoice for services rendered.

# Sample Submission to PPDC – PDR Basics

- Enter PDR information electronically into all relevant fields as indicated on the next slide. In particular, please fill out all fields marked in red and green.
- Attach a PDR bar code sticker to the sample container and submit a PDR hard copy with each seed sample.
- Provide any additional information in the submitter's remarks section. This should include the country of destination.
- If you are unsure of the tests that need to be performed, please contact Dr. YunPing Zhang (916-262-1134) prior to submitting the sample.
- 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”



# Plant Pathology Laboratory – Seed Health Testing

STATE OF CALIFORNIA  
DEPARTMENT OF FOOD AND AGRICULTURE  
PLANT HEALTH AND  
PEST PREVENTION SERVICES  
PEST AND DAMAGE RECORD  
65-020 (11/2005)

**PDR NUMBER**

**Date collected**

Lab  ENTO  PLANT PATH  NEMA  
 SEED  BOTANY  VERT

NOR Number:

Number of samples:

Collector

Affiliation F S C E U O Describe other

Quarantine shipper/broker

Name

Address

City State Zip code

State/Country

Phone Fax Latitude Longitude

E-mail

Quarantine origin (where host grown)

City County State/Country Zip code

Carrier (ground/air/maritime)

Business name Flight number

Shipment size (include units) Program 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  Gumming  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

Send report to

Weed or Vertebrate

Acreage: Net Gross

Entomology

Trap number Grid number Last service date Latitude

Trap type Trap density per

Longitude

Total pest count or number per (sweep, leaf, acre, trap, root, stem, etc) Survey method

Count: per

Conditions  Dead  Alive  Unknown

Stages  Egg  Larva  Nymph  Pupa  Adult

Sample

Lot number Nema type (raw, vial, slide):

Host/crop name

Common name Type (plants, fruit, seeds)

Scientific name Quantity Units

Variety Container size and units

Nema field block: commercial foundation increase

**PDR NUMBER**

Determined by: 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 seed grown

**This is a critical field!**  
Please indicate any additional  
information here, such as the  
seed borne pathogen(s) to be  
tested for

If you want to receive the  
test result, this must be  
filled out, including email  
address

**Very important!**  
List the kind of seed, lot  
number, and size and number  
of containers sampled

PDR number (auto-generated)

Date, time, and check  
PLANT PATH lab

"RUSH" if a true Rush

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

# Sending Your Seed Samples to the Plant Pathology Lab



- Seeds are fragile living organisms, so please take care to ensure their safe delivery to the Plant Pathology Laboratory. Exposure to temperature extremes and rough handling will affect test results.
- Ensure the sample containers are properly sealed to avoid leakage of seeds from the sample container during shipment.
- Use plenty of shipping peanuts or bubble wrap around the samples to adequately buffer the samples. We recommend using at least 1 to 2 inches of packing material around all sides of a sample container.
- Seal shipping box securely with packing tape to ensure the parcel remains completely closed in transit.
- Send samples early in the week. Samples sent later in the week may sit at post office over a weekend. We suggest you hold late samples and send them on Monday.

## **Where to Send Seed Health Testing Samples**

Since there are five laboratories at the PPDC, please include the laboratory name in the address so that your package is directed to the correct laboratory.

**CDFA Plant Pest Diagnostics Center**

 **c/o Plant Pathology Laboratory – Seed Health  
3294 Meadowview Rd.  
Sacramento, CA 95832-1448**

# PPDB Designated Lab Contact List

## Plant Pathology Laboratory

Lab Supervisor: Dr. Cheryl Blomquist (916-262-1870)

Dr. YunPing Zhang for Seed Health Testing (916 262-1134)

Note: For noxious weed seed, soil, ergot, and sclerotia testing of seed samples contact the Seed Science Lab and for seed borne nematode testing contact the Nematology Lab

Environmental Program Manager II (Branch Chief)

Dr. Umesh Kodira (916-262-1104)

Environmental Program Manager I (Botany & Entomology)

Dr. Stephen Gaimari (916-262-1131)

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

Deborah Meyer (916-262-1137)

