**2024 PPCDL Workshop descriptions**

**Phytophthora 101 Workshop**

The Phytophthora 101 Workshop is a 3-day workshop that has lectures and hands-on components. The lectures include a review of *Phytophthora ramorum*, DNA extraction, the real-time PCR protocols using *P. ramorum* (ITS and Elicitin) and *Phytophthora kernoviae* (ITS1 and ITS2)as the targets, and interpretation of results. Each day will consist of a combination of lecture, lab activities, and discussion of participant results, troubleshooting, and good lab practices to obtain optimal results.

The Phytophthora 101 Workshop is one of the most requested workshops we offer. The workshops often fill the available spaces very quickly and we often have a waitlist.

**Seed Pathogen Testing Workshop on CGMMV, ToBRFV, Popsi**

The Seed Pathogen Testing Workshop is a 2-day workshop that has lectures and hands-on components. The lectures include seedborne diseases of cucurbits and solanaceous crops and the detection of their pathogens with focus on viruses and pospiviroids, and the principles of seed nucleic acid extraction. The hands-on portion of the training will focus on CGMMV diagnostics and cover sample preparation, ELISA and PCR procedures and interpretation of results. There will be demonstrations of manual (using simple tools) and robotic (using a KingFisher) high throughput seed nucleic extraction processes.

**Bioinformatics of High Throughput Sequencing Workshop-Module HTS**

The Bioinformatics Module HTS workshop is taught over 3 days and has both lecture and hands-on activities. The lectures will cover a range of high throughput sequencing technologies, analysis tools, applications in plant pathogen diagnostics and data analysis pipelines. The hands-on portion allows participants to analyze example datasets using various open-source sequence analysis software publicly available on the Galaxy server for genome assembly and detection of plant pathogens.

In recent years, this workshop has been presented using a virtual delivery format. Participants must have access to a computer. Presentation slides are text heavy, therefore, phones and tablets are not recommended. Participants must have access to the Galaxy server for activities. No cost versions of Galaxy should be available.

**New for 2024! Citrus Health Workshop**

This 3-day in-person workshop will cover three harmful citrus diseases; Citrus Center, Huanglongbing (HLB) aka Citrus Greening and Citrus Black Spot (CBS). Lectures will provide background, disease characteristics and an overview of diagnostic testing at the USDA-APHIS-PPQ S&T Plant Confirmatory Diagnostics Laboratory (PPCDL) for each disease. The hands-on laboratory component will focus on sample preparation, screening diagnostics and interpretation of results.

**NEW for 2024! ELISA Proficiency Preparation workshop**

This 2-day in-person workshop is the first type of workshop developed to support our new methods-based proficiency testing program. It will cover every step of the ELISA testing procedures using commercially available kits. It will discuss processing of various sample types, sample flow, GLP, results interpretation, equipment and suggestion for high-throughput workflow. It will be a combination of lectures, discussions and hands-on training.

**NEW for 2024! Production and Validation of Diagnostic Assay Controls**

This training will discuss the need and benefit of using validated assay controls,  type of the controls and their production, followed by validation schemes to evaluate homogeneity and stability, and how to maintain and document traceability. It will be approximately 2 hrs. including Q and A. Thanks!

**NEW for 2024! Sample Submission for Confirmatory Diagnostic Testing**

This virtual workshop will describe how to submit suspect samples, including Select Agents, for regulatory confirmatory diagnostic testing at the PPCDL. The presentation will focus on answering questions about the steps of the diagnostic process, sample quality, shipping procedures, and who needs to be contacted at various steps. Questions covered include: What determines if a sample needs confirmatory diagnostic testing? How to start the process of submission? Who needs to be informed or contacted? How are results reported and to whom? What materials need to be included in the shipment? Where is the suspect sample sent? How does one learn if steps are changed? Participants will also have ample time to ask their own questions.