
We are very pleased to announce that the fourth NPDN laboratory, New Mexico State University Plant Diagnostic Clinic (NMSU-PDC), has received STAR-D laboratory accreditation! Our congratulations go to all the members of this laboratory who have worked so diligently to earn this honor, especially Jason French, diagnostician and quality manager, and Natalie Goldberg, laboratory director and department chairman. This accreditation is the result of many hours of their hard work and is an opportunity for continual quality improvement of plant diagnostic services to their customers.

Jason is a trained STAR-D external auditor which has allowed him to examine and learn from other labs’ STAR-D systems. And Natalie has attended the STAR-D sponsored QMS workshop as well as a STAR-D Phase 2 Training which indicates to us that she is as committed to STAR-D accreditation as Jason is. When asked what quality management meant to him Jason responded “It’s is an organizational system for my lab. It adds a whole extra level of organization.”

STAR-D was created to provide an assessment of laboratories within the NPDN system. Accreditation through the STAR-D program signifies that a laboratory has met essential requirements and standards by demonstrating technical competence to perform testing, using reliable methodologies and equipment, and having both qualified staff and appropriate facilities. Accreditation to STAR-D is currently a voluntary process with support of their regional center leadership whereby a laboratory’s quality management system is periodically reviewed in detail to ensure continued technical competence and compliance with the NPDN STAR-D requirements and standard.

The audit team consisted of Ron French of Texas A & M University (lead auditor), Judy O’Mara of Kansas State University, and Sharon Dobesh of Kansas State

Issue Highlights

- Save the date: STAR-D laboratory accreditation training
- New ITP identification tool: Bee Mite ID
- Recaps: primer design workshop at Oklahoma State University and NPDN IT/Diagnostics meeting
- PDIS 2.0—Submitter Module help document
- In Regional News: Plum pox virus, Giant African snail and Sweet orange scab
University. On March 2–3 2015, the laboratory staff members hosted external auditors for an intensive review of their procedures and materials. The NPDN STAR-D Board met in August to review the extensive, very detailed, external audit team report and based on that information provided, granted STAR-D accreditation to the NMSU-PDC as of September 1, 2016. The term of accreditation is for a five year period with required written annual updates.

Certainly the STAR-D external auditors play a critical role in the success of the STAR-D program and we couldn’t have a viable STAR-D system without them. The audit team members dedicate a lot of time to ensure they conduct a very complete and comprehensive external audit. We would like to thank ALL of the STAR-D external auditors for their dedication and commitment ensuring that STAR-D is a quality program!

Future plans for the STAR-D program include the second Document Roundup (DRU2) (November 15–17, 2016). The DRU2 agenda will be focused on document creation, alternating between time for work on specific lab documents and time for group discussion of questions that arise while working on the documents. In addition, we are offering a STAR-D Quality Management System (QMS) training session for NPDN members and collaborators. The training will be in Beltsville, Maryland at the USDA-APHIS-PPQ-Science & Technology Beltsville Laboratory on February 28–March 2, 2017. The following article includes more information and stay tuned for a call for participants in the coming weeks.

Save the date and join us for quality!
Dawn Dailey O’Brien and Karen Snover-Clift, NPDN, Plant Pathology and Plant-Microbe Biology Section, Cornell University

The STAR-D staff are listening to you! Because of comments we received from former participants of the QMS workshops put on by the American Association of Veterinary Laboratory Diagnosticians (AAVLD) who felt the QMS training was a bit too heavily weighted with AAVLD examples instead of STAR-D examples we developed a STAR-D Quality Management System (QMS) training session for NPDN members and collaborators. The training will be using examples from the STAR-D program with instructors for this course being STAR-D staff, USDA-APHIS-PPQ-S&T staff and an NPDN diagnostician. The workshop will be in Beltsville, Maryland at the USDA-APHIS-PPQ-Science & Technology Beltsville laboratory on February 28–March 2, 2017.

For NPDN members and collaborators closely associated with the STAR-D project we have funding to cover the travel, lodging and meal expenses for workshop participants. There is no charge to participants for the meeting registration or for meeting materials. Because of the limited size of the Beltsville lab, we will be limited to 20 participants.

The workshop is meant to be the first course taken of our trainings, but is also a great refresher. The course materials will cover principles and components of QMS including implementation of a quality management system, document control, records, corrective actions, equipment, continual improvement, training, customer feedback, internal audits, and management reviews. Although, QMS is naturally a fun filled topic, we are amping up the fun level even more by incorporating numerous games to bring out your competitive side and lighten the heaviness of the lecture materials. The final interactive section will put the participants in the role of QMS auditors for a mock laboratory audit. The participants will be able to apply QMS principles they’ve learned in the workshop to analyze, document, and resolve various issues that may occur in live laboratory audits.

Training summary
This laboratory accreditation training will cover various QMS topics such as document control, internal audits, preventive and corrective actions, equipment, continuous improvement and will include a mock laboratory audit.

Date and time: 3 days of training, February 28–March 2, 2017 (Travel days are February 27 and March 3)

Costs: NONE-No registration fee and travel expenses reimbursed for NPDN members and collaborators.
ITP’s newest identification tool is here!  
*Julia Scher, USDA APHIS PPQ S&T ITP*

ITP is pleased to announce the release of its latest identification tool, Bee Mite ID: Bee-associated Mite Genera of the World. Pollinating bees play an essential role in agriculture, and parasitic mites are known to be a factor in recent declines in bee pollinator populations.

Varroa destructor, an introduced mite parasite and disease vector, has decimated colonies of the European honey bee, one of the most important agricultural pollinators in the world. Global trade in alternative pollinators increases the likelihood of moving mites, so there is a potential for more Varroa-style invasions. Biosecurity specialists and beekeepers need a tool to help them identify the mites of greatest concern to help prevent such invasions. Bee Mite ID enables users to identify the mite life stages that may be found on bees or in their nests and to distinguish harmful from non-harmful mites. The tool focuses on mites associated with important pollinators and includes components both specialists and non-specialists can use.

**Bee Mite ID includes:**

- Quick reference guides for common bee pollinators
- Mite and bee morphology illustrations
- Filterable image gallery
- Searchable fact sheets
- Illustrated glossary of terms
- Lucid key that does not require Java
- Instructions on mounting and photographing mites

Bee Mite ID is one of many identification tools and other identification support products produced by the USDA Identification Technology Program (ITP). Please visit [http://idtools.org](http://idtools.org) or email the ITP team in Fort Collins, CO at itp@usda.gov to learn more. 🌟

Quick reference guides for each of the seven major groups of bees used for pollination show mites in both low and high magnification organized by host.

Morphology diagrams show bee body parts, indicating areas where mite hitchhikers may be found.
Primer design workshop
October 4–6, 2016 at Oklahoma State University
Jan Byrne, Department of Plant, Soil and Microbial Sciences, Michigan State University

Dr. Francisco Ochoa Corona, of Oklahoma State University’s National Institute for Microbial Forensics & Food and Agriculture Biosecurity hosted a three-day workshop on primer design. Participants included diagnosticians from land grant diagnostic labs, research programs, and state department of agriculture labs. The workshop took participants from sequence alignment, through generating primers, evaluating primers for specificity and sensitivity, and improving primer efficiency. Web-based-software tools, including Primer3, mFOLD, Primer-BLAST and BLASTn, were used for the workshop. Aspects that are specific to primers for conventional PCR, real-time PCR, and high resolution melt analysis were presented. To conclude the workshop participants had time to work on primer design for pathogens of interest; Dr. Ochoa Corona assisted participants with the process. His dedication to diagnostics, expertise with molecular methods, and accomplished teaching skills helped make this a successful workshop. Funding for the workshop was provided by a Farm Bill grant that allows the NPDN to provide diagnosticians with professional development opportunities. The participants of this workshop included Mary Ann Karp and Tricia Allen, Cornell University; Claudia Nischwitz, Utah State University; Rachel Bomberger, Washington State University; Gail Ruhl and Tom Creswell, Purdue University; Edward Zaworski, Iowa State University; Jennifer Schoener, Nevada Department of Agriculture; Ramesh Pokharel, Maryland Department of Agriculture, Katie Coats, Washington State University; Sean Toporek, University of Wisconsin-Madison; Jan Byrne, Michigan State University; Erin Foley, USDA APHIS PPQ Honolulu Plant Inspection Station; Dipak Sharma Poudyal, Oregon Department of Agriculture; Raiban Kabir Khan, West Virginia University.

The Ninth International Integrated Pest Management (IPM) Symposium
March 19–22, 2018 | Renaissance Baltimore Harborplace Hotel, Baltimore, Maryland USA

The International IPM Symposium is your premier global event for professional development, networking with colleagues and leading scientists, and learning the latest research and strategies for effectively managing pests in agriculture communities, and natural areas. In 2018, we will organize around an important theme, IPM: Improving Health, Environment and Global Sustainability.

Plans for 2018 include mini-symposia featuring international experts addressing hot topics including management solutions for newly introduced pests, as well as sessions for agricultural and food company leaders, and increased opportunities for student participation and recognition. Also new in 2018 will be a coordinated opportunity to visit policymakers on Capitol Hill to educate them on IPM needs and benefits for your sector and clientele.

Participants will also enjoy the very best activities of previous symposia including concurrent sessions, posters, awards, exhibits, and plenty of opportunities to meet with cooperators and potential collaborators. Sessions will address IPM across disciplines, internationally, and in the market place, urban settings, greenhouses and more.

Past participants at this premier international IPM event have included researchers, teachers, Extension educators, independent consultants, the agriculture and food community, IPM practitioners, academics, government scientists and administrators, employees of non-governmental organizations, students, and business professionals from the U.S. and more than 30 countries.
NPDA IT/Diagnostics meeting
Mike Hill, Eileen Luke and Cindy Music, CERIS, Purdue University

The NPDA IT/Diagnostics meeting was hosted for a second year in a row at Purdue University on September 20–22, 2016 with 25 people attending comprising 15 diagnosticians, seven IT staff and three directors. The objective was to reach consensus on how to move forward so that our activities tie into the NPDA mission statement of quick detection, accurate identification and timely communication. The first two days were focused on overall NPDA issues with the third day of group work being dedicated to the LIMS systems.

The meeting started off reviewing the four consensus priorities of faster processing, reporting of information, confidence levels and training as determined from last year’s meeting and what was accomplished during the year. Following last year’s review, we began with asking the question of ‘How do we tell our story and what data is needed?’ Dawn Parks, assistant director of Sponsored Program Development in the College of Agriculture at Purdue, served as the facilitator helping to keep the group on track while providing the flexibility to have open and meaningful discussion on issues that involve IT, policy and diagnostics. The success of the meeting was evident in the draft action items which included such key issues as a way to capture value of the NPDA, making Lab Method a required field, continuing discussions between IT and the diagnosticians on multiple lab methods, developing a method to share lab protocols/standards using documents already created in STAR-D formats, developing a boiler plate template for credit of NPDA data use and data sharing policy matters.

Complete details of the action items, as well as all meeting minutes can be found on the NPDA website. In closing the meeting, it was the consensus of the group to better communicate to the network, via regional conference calls, the work being done through the committees during the year and to have this meeting again next year. For more information please contact Mike Hill (mikehill@purdue.edu), Eileen Luke (lukee@purdue.edu) or Cindy Music (clmusic@purdue.edu).

PDIS 2.0—Submitter Module help document
Judy Dizon, Plant Diagnostic Information System (PDIS), Kansas State University

Adding a New Sample
1. Login to https://www2.pdis.org
2. Select Add New Sample sub-menu from the Submitter Menu.
3. If the submitter has multiple Request Site memberships, select a site from the drop down control then click on the Next button.
4. Under the **Contacts/Submitter** task, add a contact by either:
   a. Selecting from an existing contact in directory. Click on **Browse Contact Directory** tab. Add the contact by clicking on the import icon. You can add multiple contacts at once by selecting the checkbox of each contact then click on the (Import) button found on the upper right corner of the datagrid.

   ![Contact Directory Screenshot](image1)

   **Note:** If the directory has a large number of records, you can filter the list by using any of the filter boxes below each column header.

   ![Filter Boxes](image2)

   b. Create a new contact by clicking on the **Add Contact** link. Fill the form out in the next screen then click on the (Save) button.

   ![Add Contact Screenshot](image3)
5. Proceed to the Lab Form task. Complete all the sample data then click on the (Save) button.

6. A lab specific form will appear. Fill this form out and click on the (Save) button.
7. Proceed to the **Images** task. Click on **Add New Image** link.

8. Fill in the information for the required fields, click on **Browse** button to locate the image file for upload, then click on the (Save) button.

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**Note: Additional Tasks**

- **View Sample Summary**—For any checked-in sample, a Submitter may view details of the sample. The system will generate a PDF file for summary report.

- **Close Current Sample Dashboard**—Click on this task to close the Sample Dashboard page and go to the Sample Queues page.
Sample Queues

1. Select a queue from Sample Queues sub-menu from the Submitter menu.

2. It will show the list of samples (if any) that are grouped according to sample status. Each queue will contain a grid/tabular view of the data.

<table>
<thead>
<tr>
<th>Sample Number</th>
<th>Host</th>
<th>Sample type</th>
<th>Lab Name</th>
<th>Site</th>
<th>Submitter</th>
<th>Submit Date</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004010561</td>
<td>Adzuki Bean</td>
<td>Plant Disease Clinic</td>
<td>Acme Request Site 1</td>
<td>frame Submitter</td>
<td>05/23/2016</td>
<td>New</td>
<td></td>
</tr>
<tr>
<td>201401358</td>
<td>Acacia</td>
<td>Mushroom/moldi</td>
<td>AgDepartment Lab new 11</td>
<td>User1_Diagnostic</td>
<td>06/23/2016</td>
<td>New</td>
<td></td>
</tr>
<tr>
<td>2004010576</td>
<td>Abyssinian Banana</td>
<td>Soil Analysis</td>
<td>Acme Request Site 1</td>
<td>frame Submitter</td>
<td>05/20/2016</td>
<td>New</td>
<td></td>
</tr>
<tr>
<td>2004010561</td>
<td>Adult Insect</td>
<td>Plant Disease Clinic</td>
<td>Acme Request Site 1</td>
<td>frame Submitter</td>
<td>05/20/2016</td>
<td>New</td>
<td></td>
</tr>
<tr>
<td>2004010574</td>
<td>Soil Analysis</td>
<td>Acme Request Site 1</td>
<td>User1_Diagnostic</td>
<td>06/20/2016</td>
<td>Pending</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2004010575</td>
<td>Mushroom</td>
<td>Mushroom/moldi Pl</td>
<td>Plant Disease Clinic</td>
<td>Acme Request Site 1</td>
<td>frame Submitter</td>
<td>06/17/2016</td>
<td>New</td>
</tr>
</tbody>
</table>

a. Sample Queue Columns:

i. **Sample Number**—Also known as Internal Lab Number
ii. **Host**—Host/Habitat of the sample
iii. **Sample Type**—The type of sample
iv. **Lab Name**—The lab where the sample was sent to
v. **Site**—Location where the sample originated from
vi. **Submitter**—The user who created/submitted the diagnostic sample.

vii. **Submit Date**—Date when the sample was entered into PDIS.

viii. **Status**—The status of the sample.

ix. **Edit**—Represented by icon. Click on this button to edit the particular sample on the queue.

x. **Delete**—Represented by icon. Click on this button to delete the particular sample on the queue (Note: This function is only available in Unsent Queue).

3. Navigate through the sample queues by clicking either on the:
   a. **Navigation Strip Buttons**

   ![Navigation Strip Buttons](image)

   ![Go To Next Tab](image)

   b. **Tabs**

   ![Tab Navigation](image)

   **Diagnostic Samples : Unsent Queue**

   Use this interface to view diagnostics samples

   - Unsent Queue
   - Pending Queue
   - Completed Queue
   - Archived Queue

**Interview Forms**

1. Select **Interview Forms** sub-menu from the **Submitter** menu.

   ![Submitter Menu](image)

   - Home
   - Submitter
   - Help
   - Add New Sample
   - Sample Queues
   - Interview Forms
   - Contact Directory

   **Welcome to PDIS 2.0**

   This interface allows you to view announcements, system messages, and new features relating to PDIS 2.0.

   **Messages**

2. Click on the **(Download PDF)** button.

   ![Download Lab Forms](image)

   **Lab Name**
   - AgDepartment Lab new 11
   - AgDepartment Lab new 11
   - Soil Analysis
   - Plant Disease Clinic

   **Lab Form**
   - AgDeptForm
   - AgForm2
   - Field Crop Samples 1
   - General Disease Sample

   **Download Lab Forms**

   Download a PDF version of a lab form.
**Contact Directory**

1. Select *Contact Directory* sub-menu from the *Submitter* menu.

2. To add a new contact, click on the *Add Contact in Contact Directory* link.

3. Fill in the contact information of the contact then click on the (Save) button.
4. To edit an existing contact information, click on the (Edit) icon. Update the contact information on the next screen then click on the (Save) button.

5. To delete an existing contact from the directory, click on the (Delete) icon.

2017 Sentinel Plant Network workshops

Calling interested diagnosticians! We are planning three Sentinel Plant Network professional development workshops for 2017. If you would like to participate in one of the workshops or are interested in more information please contact Rachel McCarthy at rachel.mccarthy@cornell.edu.

Middle Atlantic gardens——Spring 2017
Northwest gardens and Midwest gardens——Summer of 2017
APHIS establishes a Plum Pox Virus quarantine in the Hudson Valley Area in portions of Orange and Ulster Counties, New York

North American Plant Protection Organization (NAPPO)
Posted: 10/27/2016

Effective immediately, the Animal and Plant Health Inspection Service (APHIS) is establishing a plum pox virus (PPV) quarantine in portions of Orange and Ulster Counties in New York. All PPV host plants, with the exception of fruit without leaves or stems, may not leave the quarantine area.

In September 2015, a single PPV-D infected plum tree located in a commercial orchard of mixed fruit trees was detected by the New York State Department of Agriculture and Markets (NYSDAM) during a Farm Bill-funded survey of commercial stone fruit orchards in the Hudson Valley region of New York. Worldwide there are nine known strains of PPV. All known occurrences of PPV in the United States have been identified as strain D, which is not transmitted by seed, is less efficiently spread by aphids, and is the slower-spread form of plum pox virus.

Following the positive identification of PPV by APHIS and the D strain of PPV by USDA Agricultural Research Service in September 2015, APHIS and NYSDAM began PPV surveys in the Hudson Valley, Niagara, and Adirondack regions of New York. To date, no additional trees have tested positive for PPV. The area where the positive tree was located was last surveyed for PPV in 2009 and there were no positive detections at that time.

This is an excerpt from the official report. To view the full, report visit http://www.pestalert.org.

Lissachatina fulica, formerly Achatina fulica (Giant African Snail) — APHIS establishes additional regulated area in Florida

North American Plant Protection Organization (NAPPO)
Posted: 10/14/2016

The Animal and Plant Health Inspection Service (APHIS) is notifying stakeholders of a new regulated area (referred to as Zone AA) for giant African snail (GAS) in Miami-Dade County, Florida. Program personnel have recently detected GAS in areas that were outside of the existing regulated areas in Miami.

In September 2011, APHIS confirmed the detection of GAS, Lissachatina fulica, in a residential area of Miami, Florida. GAS is one of the most damaging snails in the world because it is known to eat at least 500 different plant species.
APHIS establishes quarantined areas in California for Sweet Orange Scab (SOS) and revises the conditions for movement of regulated fruit and nursery stock under the SOS quarantine

North American Plant Protection Organization (NAPPO)

Posted: 10/14/2016

Effective immediately, the Animal and Plant Health Inspection Service (APHIS) has revised the Federal Order for *Elsinoë australis*, the fungal causal agent of Sweet orange scab (SOS), to:

- Add quarantined areas in California,
- Modifies two conditions for the movement of *Citrus* spp. and *Fortunella* spp. to commercial citrus-producing states, and
- Add an additional option for the movement of nursery stock from regulated areas.

Specifically, the Federal Order adds portions of four counties in California to the list of areas regulated for SOS: Imperial, Los Angeles, San Bernardino, and Riverside. In Imperial County, the regulated areas will include 2,162 acres of citrus in Calipatria and 140 acres of citrus in Winterhaven. The Riverside County regulated area will include one nursery and 1,370 acres of citrus in Blythe. In Los Angeles County, the Pomona regulated area will encompass 13 nurseries and in neighboring San Bernardino County, the Pomona regulated area will include one nursery as well as 37 acres of citrus.

In addition, the Federal Order modifies two safeguarding measures that must be met to allow the interstate movement of fruit from SOS-regulated areas to commercial citrus-producing states. These additions will increase fruit marketing and processing opportunities, while effectively protecting non-infested citrus-producing areas from SOS. Finally, we have added options for handling and movement of nursery stock without the need for fungicide applications.

*Elsinoë australis* was first detected in the United States in July 2010 and is presently known to occur in Arizona, Florida, Louisiana, Mississippi, Texas, and portions of California.

This is an excerpt of the official report. To view the full report which includes links to the Federal Order and other supporting documents visit [http://www.pestalert.org](http://www.pestalert.org).
UPCOMING EVENTS

Meetings

August 5–9, 2017
2017 APS Annual Meeting
San Antonio, Texas

August 12–17, 2017
National Plant Board 2017 Annual Meeting
Savannah, Georgia

November 5–8, 2017
Entomology 2017
Denver, Colorado

March 19–22, 2018
Ninth International Integrated Pest Management (IPM) Symposium
Baltimore, Maryland

CONTRIBUTE

Share Tips and News with Your Colleagues
Recently write an article for a trade journal? Do you have a tip, announcement, regional news or network update you would like to include in the NPDN News? Email Rachel McCarthy at rachel.mccarthy@cornell.edu

PHOTO OF THE MONTH

Witches’ broom produced by effects of an eriophyid mite (Aceria celtis) and/or an associated powdery mildew producing fungus (Sphaerotheca phytophthora).

© Whitney Cranshaw, Colorado State University, Bugwood.org

www.bugwood.org

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