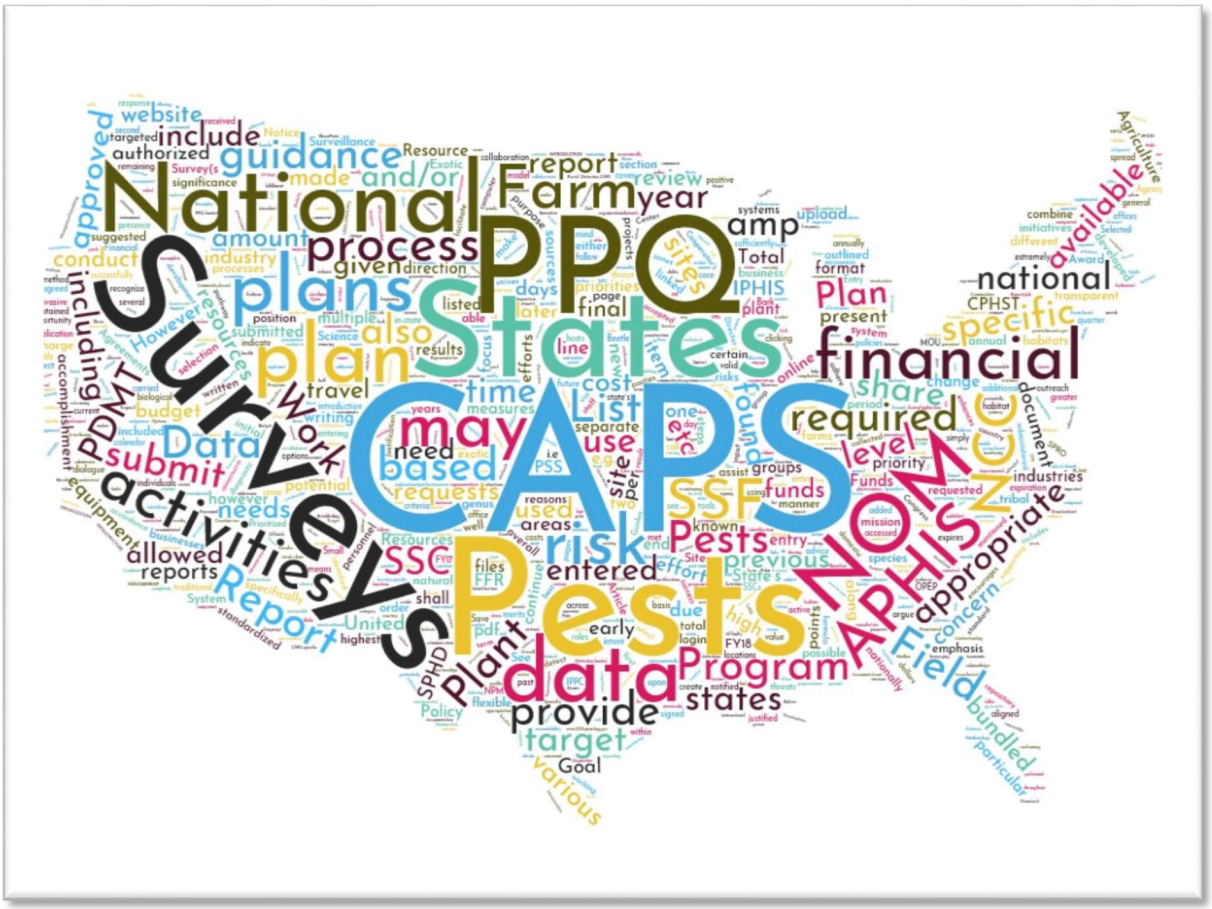


Annual National Cooperative Agricultural Pest Survey (CAPS) Committee (NCC) Meeting

January 29 – 30, 2020

Office of the Illinois State Plant Health Director

Chicago / Des Plaines, Illinois

Supplemental Information


CAPS

Annual National CAPS Committee Meeting
January 29-30, 2020
Office of the Illinois State Plant Health Director
Des Plaines, Illinois
Draft Agenda

Wednesday, January 29, 2020 (8:00 am – 5:00 pm)

- Welcome and Introductions
- Host Welcome and Overview
- Meeting Overview
  - Why we are here and what we need to talk about
- NCC Bylaws review
  - Representation and Terms
  - Roles and Responsibilities
- 2019 NCC Meeting review
  - Action Items – (Review document on CAPS R&C before the meeting)
- Pest Detection Program Review
- CAPS Performance in 2019; Plans for 2020
  - Performance Measures, Metrics, and Funding
  - Key Performance Indicators
- Budget and Funding
  - CAPS and PPA 7721 Goal 1 Survey
- 2020 Pest Surveillance Guidelines
  - Review of the Current Guidelines
    - What files to list with Guidelines, what to keep on Resources?
      - Were the posted files for 2019 sufficient?
  - New Additions and Possible Changes
  - Work Plans
    - Survey Naming Conventions
    - Contractual in Financial Plan
    - Encourage use of Combined Work Plans
    - Combined Work Plan / Separate in SSF
    - Review of 2020

        - Bundled Pests
        - Accountability Report
      - Template – Online version for 2021
      - Timing/Deadlines
    - Funding
      - Infrastructure
        - Indirect rates, are they negotiable?
        - Travel, meetings –attendance at RPBs
        - Electronic data collection
    - Data Management – Need to revisit and emphasize
      - Roles and Responsibilities

- Pollinator Bycatch / FWS Consultation

- Survey Supplies
    - Trap & Lure Orders
    - New products this year
    - Issues, Concerns, Suggestions?

- State CAPS Committee Meetings
    - Facilitation Training for SSCs and PSSs
    - Other information or needs wanted?

- PPA 7721
    - FY20 Update Going into FY21
      - Communication
      - Emergency Programs – Goal?
    - FY20 Goal 1 Survey Work Plans
      - Due Date: 2 months after spending plan announcement
      - SSF and Data Entry Guidance
        - Non-Traditional Cooperators
        - Process for Non-Traditional Cooperators conducting PPA Goal 1 Surveys to fill out the Survey Summary Form
    - Excel Template
      - Template is mandatory
      - Prioritize Surveys
      - Identification support and costs
    - From a Suggestion Review Perspective
      - Submitting suggestions to Goal 1 Survey
        - Best Practices

- Comments back to ADODRs – Feedback Process
- Data Entry Requirements
- Discuss Specific Surveys (that may have larger issues)

➢ CAPS and PPA 7721 Goal 1 Survey
- Discuss Concerns/Issues

➢ Cooperative Agreements
- Any Issues, Concerns, Suggestions

➢ Identification/Diagnostic Issues
- Preliminary Identification Coordinator
- Taxonomic Assistance – current status
- SSF – Discuss format moving forward
- Plant Pathogen Diagnostics
- National Identification Services (NIS)
  - Identification Support
  - Procedure for Submissions for Official Confirmation
  - Results Communication

Thursday, January 30, 2020 (8:00 am – 5:00 pm)

➢ S&T CAPS Support
- CAPS Science Support Team update
- Objective Prioritization of Exotic Pests (OPEP)
  - Mollusk Impact Model
  - Likelihood of Introduction Model
  - OPEP Summaries – PestLens
  - Quarterly Reports / Updates on NCC calls
  - OPEP Impact Assessment Results Excel file – is this used in survey planning?
- Priority Pest List update
  - Summary of changes for 2021
  - What to expect for 2022
- Commodity/Taxon Surveys and Manuals
  - Apple/Pear Manual
  - Tropical Pest Manual
- Survey and pest-specific information
  - Rethinking Commodity/Taxonomic Manuals

- Updated AMPS page
- Survey Builder Tool
- Take-aways from focus group meeting

- Approved Methods for Pest Surveillance update
  - Plant Pathogen Support
- Research/Method Development

➢ Data
- PPQ Direction
- NAPIS Data Fields
  - Cleaning up data fields and definitions
  - Updating ISPM 8: Determination of Pest Status
    - Add fields to qualify pest status?
  - NPB Resolution – Notification information

➢ Purdue Update
- Online Work Plans
- NAPIS Data / SSC Entry
- Survey Planning Page
- SMS availability (to receive text messages)
- Two-factor authentication

➢ USDA Executive Dashboard

➢ Regional Plant Board Meetings
- Feedback
- Plans for this year
- PSS / SSC attendance, travel, budget for in work plans

➢ CAPS Webinar Series
- Guidelines – early May
  - Work plans, expectations
  - Pest list, survey method changes
- OPEP / PestLens – March 2020
  - Impact Assessment Summaries

➢ CAPS Recognition 2020

➢ Additional Topics and Discussion

- Review of Action Items and Responsibility

- Summary, Closing and Last Thoughts

- Tour of Terminal 5, O'Hare International Airport
    - CBP baggage inspection with working dogs

If Time Permits

- Key Performance Indicators – how can we show success?
    - How do you measure success of the CAPS Program?
    - How should PPQ measure success of the CAPS Program?
    - If you had to justify the CAPS program, what performance indicators would you use?

- Survey Summary Form
    - How could we revise the fields to capture more meaningful details on the work that is done?
    - How can we ease the confusion with Site and Location?
    - What information could be drawn for performance indicators/metrics?

National Cooperative Agricultural Pest Survey Committee Bylaws

Purpose of the Bylaws
To establish rules of operation for the National Cooperative Agricultural Pest Survey (CAPS) Committee (NCC).

CAPS Mission
The mission of the Cooperative Agricultural Pest Survey (CAPS) program is to provide a survey profile of exotic plant pests in the United States deemed to be of regulatory significance to the United States Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), Plant Protection and Quarantine (PPQ), State Departments of Agriculture, tribal governments, and other cooperators through early detection and surveillance activities by:

- Confirming the presence or absence of environmentally and/or economically harmful plant pests that impact agriculture or the environment, and that have potential to be of phytosanitary significance; and

- Establishing and maintaining a comprehensive network of cooperators and stakeholders to facilitate our mission and to safeguard our American plant resources.

NCC Purpose
The NCC represents CAPS cooperators at the national and state level and provides guidance for the Pest Detection program.

The NCC duties include:

- Finalizing the annual PPQ National CAPS Guidelines including a list of exotic plant pests for survey priority, and communicating standardized survey methodologies.
- Communicating pest detection objectives, policy, and plans to the stakeholder constituency which the NCC member represents.
- Monitoring the roles and responsibilities of the State CAPS committees, including the duties of the State Plant Health Directors (SPHD), State Plant Regulatory Officials (SPRO), Pest Survey Specialists (PSS), and State Survey Coordinators (SSC) in implementing the CAPS program.
- Facilitating agreement between PPQ and cooperators on the process for developing pest survey lists for consideration at the state and national level, including commodity-based surveys.
- Identifying high-impact outreach efforts on an annual basis, especially to leverage resources and interest in pest detection.
- Evaluating the fairness and transparency in funding and accountability of cooperators' use of CAPS funds.
- Identifying training needs in support of CAPS (survey and regulatory policy and procedures, data management, and communications).

- Acting as an advisory committee for all information technology systems, databases, and websites in support of Pest Detection and CAPS.
- Providing national guidance for policy, procedures, budgets, and performance tracking of CAPS initiatives, including pest detection within specific pest eradication and management programs where overlap occurs with CAPS priority pests.

NCC Membership
The CAPS program relies to a great degree on close cooperation between PPQ and state departments of agriculture. It is appropriate for the NCC members to be appointed accordingly.

NCC Member	Role and Responsibility*
PPQ- National Survey Coordinator (NSC), Plant Health Programs, Policy Management (PM)	National PPQ responsibility to provide leadership, management, and coordination to implement and oversee the CAPS program; chairs and organizes meetings and conference calls, and delivers information in a timely manner.
PPQ- National Operations Manager (NOM) for Pest Detection, Field Operations (FO)	Administration of CAPS in Field Operations, including guidance to States, and assures there is program accountability, fairness and transparency among states nationally; provides frequent and direct advice to the National Policy Manager.
PPQ- Assistant Director, PERAL – CAPS Support, Science & Technology (S&T)	Administration of CAPS Support in PPQ Science & Technology, provides S&T program perspective, strategy, and focus, and insures that CAPS and S&T projects are linked and share common guidance; communicates to states on CAPS scientific issues within S&T's purview; provides frequent and direct advice to the National Policy Manager.
PPQ – Plant Protection Act Section 7721 Program Representative	Provide PPA 7721 program perspective, strategy, and focus, and insures that CAPS and PPA surveys and projects are linked and share common guidance; responsible for communicating NCC and CAPS topics, issues, and guidance with the PPA Management Team, goal leads, and stakeholders.
PPQ- State Plant Health Director (SPHD), Field Operations (FO); two representatives	Provide unique PPQ state-level perspective on specific issues regarding CAPS policy, procedures, and initiatives; responsible for

NCC Member	Role and Responsibility*
	communicating NCC and CAPS topics and issues with the national SPHD constituency.
National Plant Board (NPB)- State Plant Regulatory Official (SPRO), Eastern, Southern, Central, and Western Plant Boards; four representatives	Provide state-level perspective unique to SPROs regarding CAPS policy, procedures, and initiatives; represent their respective Plant Board, and responsible for communicating NCC and CAPS topics and issues.
PPQ- Pest Survey Specialist (PSS), Field Operations (FO); two representatives	Provide unique PPQ field-level perspective on specific issues regarding CAPS policy, procedures, and initiatives, particularly the feasibility of implementation in the field; responsible for communicating NCC and CAPS topics and issues with the national PSS constituency.
State Dept. Ag.- State Survey Coordinator (SSC), Eastern, Southern, Central, and Western Plant Board States; four representatives	Provide state, field-level perspective for states in their respective Plant Board region on specific issues of concern to the states, particularly the feasibility of implementing new survey policy, procedures, or initiatives; responsible for communicating NCC and CAPS topics and issues with their constituency.

*The National CAPS Committee page on the CAPS Resource & Collaboration website contains a comprehensive list of roles and responsibilities of various positions in the CAPS program.

The Pest Detection Management Team (PDMT)
The Pest Detection Management Team (PDMT) consists of individuals occupying the following positions on the NCC. Their participation on the PDMT is contingent on their position as described below. The PDMT will convene frequent discussions as needed.

- National Policy Manager for Pest Detection (NPM), Policy Management
- National Operations Manager for Pest Detection (NOM), Field Operations
- Assistant Director, PERAL – CAPS Support, Science & Technology

NCC Membership Selection

- The National Policy Manager, the National Operations Manager, and the S&T CAPS Support personnel serve on the NCC as long as they remain in their position.

- The PPA 7721 program representative will be chosen by the PPA Management Team (PPAMT) in consultation with the NPM, and approved by the PDMT. They will serve on the NCC as long as they remain in their position with the PPA Program, or that the PPAMT decides to change representation.
    - The NCC approved the addition of this position to the NCC on February 12, 2013, as a permanent member to coincide with the expanded scope of surveys conducted through Farm Bill, and now PPA 7721 funding, and the tight linkage of CAPS survey guidance and methodology in PPA surveys.
- The four National Plant Board representatives will be selected or appointed by their respective Regional Plant Boards and President in consultation with the NPM, and approved by the PDMT. They will serve a three-year term unless renewed.
- The two State Plant Health Directors will be selected and nominated by the SPHDs nationally in consultation with the National Operations Manager for Pest Detection, with support of the Executive Director of Field Operations and the respective Associate Executive Director (AED), and approved by the PDMT. They will serve a three-year term unless renewed.
- The two Pest Survey Specialists will be selected and nominated by the PSSs nationally in consultation with the National Operations Manager for Pest Detection, with support of the SPHD of the individual's State, the Executive Director of Field Operations, and the appropriate Associate Executive Director (AED), and approved by the PDMT. They will serve a three-year term unless renewed.
- The four State Survey Coordinators will be selected and nominated by the SSCs in that Plant Board Region in consultation with the National Operations Manager for Pest Detection, with approval by the individual's supervisor, support of the SPRO of the individual's State, concurrence of the respective Regional Plant Board President, and approved by the PDMT. They will serve a three-year term unless renewed.

The NCC values diversity in member representation, and has determined that the positions mentioned above justify the composition and needs of the CAPS community. Given the diversity of states in terms of geography, size, agriculture, environment, risk, and how they are managed, it is important for the CAPS program to received guidance on topics and issues from these many perspectives. The CAPS program cannot run efficiently without considering the potential effectiveness of program policies in the states. Factors such as regional location (north, south, east, west), size (large, small), and pest risk factors (ports, pathways), among others should be considered by the constituencies when nominating a representative.

The NCC will strive to achieve maximum national diversity and perspective with regard to the geographical location of each member by maintaining the rule that no two members of the NCC can be from the same state. However, it is recognized that, as time goes on, it will not always be possible for each member to be from a different state. In keeping with this reality, and at the same time maintain the diversity of perspective on the NCC, members may be from the same state, but not from the same organization or office. This is the exception, not the rule. For example, a SPHD or PSS and a SPRO or SSC may be from the same state, but not a SPHD and PSS or SPRO and SSC. The priority will always be to strive for the most diverse membership. However, the NCC values maximum participation, and members of the CAPS community who volunteer to participate in the NCC should not be turned away based only on a one-member-per-state rule. It is more important that the core constituencies be represented in the best manner possible.

- The NCC approved the modification of the one-member-per-state rule on March, 20, 2019, at the Annual NCC Meeting in Portland, OR.

The committee aims for continuity and frequent turnover is discouraged; however, adjustments will be allowed to accommodate changes as necessary. NCC members may be re-appointed up to two consecutive terms (not to exceed six years). In an effort to avoid concurrent term expirations, NCC members will serve on a staggered schedule as often as possible. Term years run from January 1 through December 31. The term schedule is posted on the NCC page of the CAPS Resource & Collaboration website. If a member is unable to complete their term, another will be selected based on the process described above to fill the remaining time of that term. The NPM will notify the Executive Director of Field Operations, Regional Plant Board President, PDMT, and others as appropriate before November 1 of the expiration of a member's term, and convey the need to either re-appoint the member or select a new representative to the NCC.

Effective April 1, 2013, the State Plant Health Director and Pest Survey Specialist serving on the NCC for the longer period of time will be primarily responsible for communications within the national constituency. If the term of this individual is renewed for an additional 3 years, then the communication responsibility will switch, and the other individual will assume the responsibility nationally. This will allow a more equitable sharing of responsibilities while maintaining the diversity of input to the NCC. Otherwise, coordination of communication responsibilities will be determined between the two individuals.

Ad Hoc and Invited Participants

Both non-government and government parties will be invited to provide their unique perspectives on specific issues as approved by the NCC. Many of these individuals will be invited to 1) participate in conference calls and meetings throughout the year, or 2) on an intermittent basis depending upon the agenda.

Those participating on a continuing ad hoc basis with participation throughout the year include:

***ad hoc* Member**	**Role and Responsibility**
PPQ S&T CAPS Support Lead and other S&T CAPS support personnel	Provides pest lists, prepare and present relevant scientific analyses, recommend survey methodologies, provide commodity-base pest survey guidelines, prepare risk maps and supporting documentation to inform decisions on pest survey, and to submit proposals for scientific endeavors in support of CAPS; provides frequent and direct advice to the PDMT and NCC.
PPQ Survey Supplies Procurement Program personnel	Manages and coordinates the procurement and distribution of survey supplies used in the CAPS survey program; provides frequent and direct advice and updates to the PDMT and NCC.
PPQ National Identification Services (NIS) Domestic Coordinator	Manages and coordinates the identification and diagnostic capability and capacity of samples generated in the CAPS survey program; provides frequent and direct advice and updates to the PDMT and NCC.
Purdue University, CAPS Information System (CAPSIS) User Services and other personnel	Develops and manages all aspects of the CAPS Information System (CAPSIS) at Purdue University; assists users with CAPSIS; provides frequent and direct advice and updates to the PDMT and NCC.

Those participating on a continual basis do not serve for a specific term, but generally support the NCC and CAPS Program as long as they remain in their current position with CAPS support responsibilities.

Those participating on an intermittent ad hoc basis or invited for specific agenda topics may include:

- USDA U.S. Forest Service personnel
- APHIS Native American Working Group representative
- Native American tribal representatives,
- Other USDA agency representatives
- University cooperators
- Industry organizations and personnel

Invited participants do not serve for a specific term, but only as long as projects or tasks requiring their unique contribution is needed. Once the issue has been addressed or

project(s) completed, the invited participant will no longer be obligated to participate in NCC discussions.

Any government entity (i.e. federal, state, local, and/or tribal government officials) may be invited to participate in discussions with an agency of the Federal government without requiring deliberations to be conducted according to the Federal Advisory Committee Act (FACA). Non-government employees will not be asked to engage in discussions that could be interpreted to provide "consensus advice recommendations or advice" to the federal government. Their role will be to provide information and perspective on specific issues. The views of non-NCC members will be considered along with all other information and views available. Therefore, the NCC will not need to conduct meetings under FACA procedures.

Committee Meetings

An annual NCC meeting will be held during the latter half of January or early February to review and evaluate the CAPS program, prioritize pest surveys, and discuss issues and topics of interest to the CAPS community. Conference calls will be convened monthly, with the agenda, date and time, ad hoc participation, and toll free numbers provided in advance. Minutes to all meetings will be posted on the CAPS Resource & Collaboration web site, and will be available to the CAPS community.

The NCC will strive for consensus. If an impasse is reached, the PDMT may try to resolve the issue via separate discussion with the NPB President, the Executive Directors of Policy Management, Field Operations, and/or Science & Technology, the PPQ Leadership Team, or other individuals or organizations, and then communicate the decision to the NCC. If an immediate decision must be made at the time the NCC is convened, the National Policy Manager will break the impasse by making the final decision, with follow up discussions with the PDMT to review the decision before that decision is communicated out to the NCC and CAPS community.

An important obligation for all NCC members is communication about CAPS activities with their respective constituency. The NCC member must hear their constituents concerns and represent their interests. It is recommended that each representative contact their constituency prior to each monthly NCC conference call or NCC meeting and ask for input on critical issues as necessary. Ideas and issues should be brought to the attention of the NCC for discussion, and meeting minutes, action items, resolutions, and decisions will be communicated back to the CAPS community through the NCC member's constituency. It also is important to communicate upward, and keep PPQ management and the National and Regional Plant Board Directors aware of CAPS policies, topics, issues, and activities.

Financial Support

Travel expenses to the annual NCC meetings will be budgeted for APHIS personnel. Non-APHIS participants may request travel support through the PPQ-National Plant Board Safeguarding cooperative agreement.

Rules of Conduct

The NCC strives for open, frank, constructive dialogue in its deliberations, and will conduct meetings in a manner that provides an opportunity for all members to be heard. The NCC will strive for consensus on all issues. They will foster an environment of trust and confidentiality among its members. They will not personalize issues. If issues are sensitive, they will be identified as such and the NCC will handle them as agreed to by the NCC. If an NCC member has disagreement with a particular issue, they will voice their opinion with the NCC where it will be addressed. If the issue is not resolved to their satisfaction, they may either remove themselves from deliberations on that issue or they may ask to be removed from the NCC. However, the NCC expects the confidentiality of its deliberations to be honored as a professional courtesy even if the member is removed from discussion on an issue or is removed from the NCC. The NPM, with concurrence of the PDMT, President of the National Plant Board, Executive Directors of Policy Management, Field Operations, and/or Science & Technology, may seek to replace NCC members if they fail to meet their obligations.

Maintenance of the Bylaws

Any questions, concerns, or suggestions to improve these Bylaws may be addressed to John Bowers, the National Policy Manager for Pest Detection, located at the following address:

USDA-APHIS-PPQ, Pest Detection & Emergency Programs, 4700 River Road, Unit 26, Riverdale, MD 20737-1236, (301) 851-2087, John.Bowers@usda.gov

National Cooperative Agricultural Pest Survey (CAPS) Committee (NCC) - Term Limits & Rotations

Name	Affiliation	State	Title	Term	2017	2018	2019	2020	2021	2022	
John Bowers	PPQ PHP	National	National Policy Manager - PD	Permanent	x	x	x	x	x	x	
Lisa Jackson	PPQ FO	National	National Operations Manager - PD	Permanent	x	x	x	x	x	x	
Michelle (Shelley) Gray	PPQ S&T	National	S&T PERAL - CAPS Support	Permanent	x	x	x	x	x	x	
Feridoon Mehdizadegan	PPQ FO	National	Plant Protection Act 7721	Permanent	x	x	x	x	x	x	Present Year
Eric Ewing	PPQ FO	West Virginia	State Plant Health Director	3-year		x	x	x			1st Term
Alana Wild	PPQ FO	Nevada / Utah	State Plant Health Director	3-year				x	x	x	1st Term
Megan Abraham	State	Indiana	Central Plant Board - SPRO	3-year				x	x	x	2nd Term
Kimberly Rice	State	Maryland	Eastern Plant Board - SPRO	3-year		x	x	x			1st term
Joy Goforth	State	North Carolina	Southern Plant Board - SPRO	3-year			x	x	x		1st Term
Helmuth Rogg	State	Oregon	Western Plant Board - SPRO	3-year		x	x	x			1st term
Tiffany Mauro	PPQ FO	New Jersey	Pest Survey Specialist	3-year				x	x	x	2nd Term
Chris Pierce	PPQ FO	Missouri	Pest Survey Specialist	3-year			x	x	x		1st Term
Dale Anderson	State	South Dakota	Central Plant Board - SSC	3-year		x	x	x			2nd Term
Emilie Inoue	State	Vermont	Eastern Plant Board - SSC	3-year			x	x	x		2nd Term
Brad Danner	State	Florida	Southern Plant Board - SSC	3-year			x	x	x		1st Term
Darcy Oishi	State	Hawaii	Western Plant Board - SSC	3-year				x	x	x	1st Term

The rotation schedule began January 1, 2008
Annual terms are from January 1 - December 31
Members serve a 3-yr term
A 2nd, 3-yr term is possible with concurrence of the constituency

x 1st year of present term
x 2nd year of present term
x 3rd year of present term

2020 Present Year

Annual National CAPS Committee Meeting

March 20-21, 2019

Customs & Border Protection

Portland, Oregon

Action Items

1. Action Item (John): 1. The draft language presented at the meeting will be edited and reworded to say that the NCC will strive not to have two members from a state, but it may be necessary from time-to-time as an exception and way to allow maximum participation. The draft language will be distributed to the NCC for review before the document is finalized and posted on the CAPS R&C site. **2.** The table(s) listing NCC members and rotation schedule will be updated to include member's State, and a color key added to the rotation schedule.
Completed with the May 6, 2019 revision to the Bylaws, and published on the National CAPS Committee page of the CAPS Resource & Collaboration website.

- NCC Bylaws
- NCC Term Limits and Rotations

2. Action Item (John): 1. Keep PPA representation as permanent and revisit this status next year. **2.** Keep CAPS Support Lead as ad hoc and revisit next year. **3.** List out Ad hoc members' titles out specifically and their responsibilities (examples: Survey Supply Procurement Program, Domestic Diagnostic Coordinator, etc.). The draft language will be distributed to the NCC for review before the document is finalized and posted on the CAPS R&C site.
Completed with the May 6, 2019 revision to the Bylaws, and published on the National CAPS Committee page of the CAPS Resource & Collaboration website.

- NCC Bylaws

3. Action Item (Heather, S&T): Look at Priority Pests that have not been surveyed for over the last five years. Are these pests the same each year? Why do we think the pests have not been surveyed for, lack of survey or identification methods? S&T may need to reach out to the CAPS community for more information.
In Progress. There are at least three pests that have not been surveyed for or are rarely selected as targets. Two of the three are tropical pests. Before removing tropical pests, we will talk with HI, FL, and other states at risk about tropical pests of concern.

4. Action Item (Lisa): The Survey Supply Procurement Program has had increases in Pest Detection over the last five years (from $160,000 in FY2015 to $425,000 in FY2019). The Program has received less funding from Farm Bill (high of $1.16 million in FY2016 to $620,000 in FY19). The NCC would like more details on how these requests are derived.
In progress for the FY2020 budget. Lisa and Paul Ijams are looking at ways to be more efficient with the budgets. They will request an increased amount in the Farm Bill suggestion, look into

using any surplus Pest Detection funding at the end of each year, be mindful of expiration dates when purchasing supplies, and other efficiencies.

5. Action Item (Lisa, Heather): Revisit discussion of ethanol lures during survey season on a call with SCCs. Put together ethanol trap guidance and discuss adding this to 2021 guidelines at 2020 NCC meeting. S&T will consider developing guidance for executing a generic lure survey.
In progress.

6. Action Item (NCC): The NCC and their constituencies should review the 2019 Guidelines page and determine which files are used every year and/or need to be on the Guidelines page for reference, with the result that all other files will be found on the Resources page.
Completed with the publication of the 2020 National Pest Surveillance Guidelines on the CAPS R&C website on May 20, 2019.

- National Pest Surveillance Guidelines - 2020

7. Action Item (Cindy, David): The NCC requested that the date be included within the link to the work and financial plan templates so they would know which version was the most recent (several changes were made and new versions were posted in 2019).
Completed with the publication of the 2020 National Pest Surveillance Guidelines on the CAPS R&C website on May 20, 2019.

- National Pest Surveillance Guidelines - 2020

8. Action Item (John, Lisa): Request that a footer be inserted into the work and financial plans and accountability reports with "Last Updated and the Date."
Completed with the publication of the 2020 National Pest Surveillance Guidelines on the CAPS R&C website on May 20, 2019.

- National Pest Surveillance Guidelines - 2020

9. Action Item (Lisa, Heather, Cindy): A webinar will be developed to focus on changes to the Guidelines, pest lists, Accountability Report, Survey Summary Form, and other topics and issues that should be considered when developing 2020 work plans. Look for an announcement for an early June webinar after the 2020 Guidelines are published.
Completed. The webinar was held on July 10, 2019. The recording of the presentation and slide deck are available on the Webinars page on the CAPS R&C website.

- Webinars

10. Action Item (John. Lisa, David): John and Lisa will discuss possibilities with the staff at Purdue to determine if these or other suggestions are technologically feasible so that the end result is some sort of indication on the Accountability Report that the survey is complete and

data is pending results from an identifier or diagnostician (adding a "Pending" column to the report, for example). Solutions will be discussed on subsequent monthly NCC calls.
This may not be needed. No one has had trouble entering their data so far.

11. Action Item (NCC members): If there are Institutions or PPQ Domestic Identifiers that have a continued problem supplying late identification results, let John and Lisa know. We need to deal with the problem at the source. If the workloads of the institutions or identifiers are too great, we need to better manage the number of samples sent to them.
In progress.

12. Action Item (John, Lisa, NCC): 1. Language will be added to the 2020 Guidelines indicating that it is the responsibility of the ADODR to ensure that data entry from previous surveys is entered before a new work plan is forwarded or agreement developed. **2.** Work plans will not be approved at Field Operations unless data entry is complete and up-to-date, resulting in no funding for the current year unless a cooperator is in compliance. **3.** Draft language will be distributed to the NCC for review, and well as to PPQ management. **4.** Successful updating of the Survey Summary Form and Accountability Report based on the discussion in the previous section will facilitate knowledge of the status of data entry. **5.** NCC members should discuss this topic at the Regional Plant Board meetings.
Completed with the publication of the 2020 National Pest Surveillance Guidelines on the CAPS R&C website on May 20, 2019. National Pest Surveillance Guidelines - 2020

- National Pest Surveillance Guidelines
- Data Entry Roles and Responsibilities

13. Action Item (John, Lisa): John and Lisa will begin to have individual conversations with states that are having difficulty meeting these requirements.
We have not encountered any problems so far (the 2020 CAPS cycle is complete). The new process seems to be working fine. States either enter the data, or if the survey was not conducted or the pest was not surveyed for, the SSF is revised.

14. Action Item (John, Lisa, Cindy): A webinar will be developed to aid the ADODR and ROAR in understanding the Accountability Report and Workflow of the Survey Summary Form, and how the Survey Summary Form interacts with NAPIS data entry to produce the Accountability Report.
Completed. The webinar was held on July 10, 2019. The recording of the presentation and slide deck are available on the Webinars page on the CAPS R&C website.

- Webinars

15. Action Item (Eric, Greg): With the SPHDs, make a request to PPQ Field Operations (maybe to the Data Steward?) to develop a table with a list of all PPQ programs and their corresponding required databases.
Discussions were held and this will not be pursued any further. It is the responsibility of the PPQ National Policy and Operation Managers to decide on the data requirements for their program, and to message the appropriate database for their program to PPQ and cooperators.

16. Action Item (Cindy, David): Create a downloadable Excel file for the Survey Summary Form. The SSC can send this to non-traditional cooperators for PPA surveys.
The Excel file has been created and will be posted soon.

17. Action Item (Cindy, David): Add the 11 targets in the PPA Honey Bee Survey to the SSF to auto populate.
Completed for 2019 PPA Goal 1 Survey on the Survey Planning Pages of the CAPS R&C website.

18. Action Item (NCC): The NCC should canvass their constituency to determine: 1. What identification and/or diagnostic training is wanted/needed; 2. What screening aids are wanted/needed; 3. What are the effects of the identification situation in your state, or how identification issues are affecting survey and financials. John and Lisa will consider developing a survey to collect this information, but the conversations within the constituencies can start now.
ON HOLD until additional staff/resources are in place to assist with preliminary identification, which includes training and screening aids.

19. Action Item (Heather): Heather will write an explainer for the Datasheet Stakeholder Survey and send it to the NCC before Regional Plant Board meetings begin. Plant Board representatives will announce and discuss the upcoming datasheet stakeholder survey at their respective meetings. This will provide community members time to consider their information needs prior to taking the survey.
Completed. Heather sent an explainer to the NCC on April 5, 2019. An announcement was also distributed through the CAPS forum. In an effort to increase participation, the stakeholder survey has been postponed. It will be sent in mid-September, after the close of field season and work plan submission.

20. Action Item (Heather): Heather will work with the PDMT, Beltsville, and NIS to determine whether validation of molecular protocols is required before relevant pathogens are added to the Priority Pest List.
Completed. Heather spoke with Beltsville and the PDMT and all agreed that molecular protocols described in literature may be used as an approved method for screening if reviewed by subject matter experts, and the SMEs agree that it is a reliable method that will provide valid results.

21. Action Item (Heather): Heather will work with Joe Francese (Otis) to develop a guide for fluon-coated traps. The guide will include instruction on proper trap care and storage, telltale signs of degradation, how to manage your stock of traps, and useful tips and tricks for using the fluon-coated traps.
In progress.

22. Action Item (Heather): Heather will work with Lisa to contact identifiers about unexpected species in samples. She will also work with Otis to determine whether lures shipped in netting should be shipped from the manufacturer in Mylar. If so, she will notify the Survey Supply and Procurement Program of the need and ask that the requirement be communicated to the manufacturer.
On the To Do list.

23. Action Item (NCC, CAPS Community): Before an online work plan can be implemented, PPQ and states need to consider their processes for reviewing, editing, and signing work plans before submission. At what point in time or at what stage of the review process would it be best to fill in the online form? Will it work best to fill in the online form initially and have it produce a Word document for review, or initially use a Word template for the review process and fill in the online form as the last step? Should the online form have a work flow for review (similar to the SSF review process) and be editable? Who should have the rights/responsibility for filling in and/or editing the online form? These and other process questions need to be answered to facilitate use in the states.
Completed. John and Lisa had conversations with constituents at Regional Plant Board meetings. Additional discussions with members of the CAPS community will occur as CAPSIS makes progress on the online forms.

24. Action Item (Cindy, David): 1. Add the Wisconsin Tribal Conservation Advisory Council (WTCAC) to the Survey Planning Page and Survey Summary Form as a State-level entry. 2. Add an acronym to the survey name for those occasions when more than one organization within a State has cooperative agreements to conduct surveys. 3. With PPA 7721 surveys, the SSCs will help Cindy and David identify the surveys and organization within their State.
In progress. Lacey Hill-Kastern, the SSC for the WTCAC has been contacted, requesting her assistance in this matter.

25. Action Item (Cindy): Cindy will prepare and deliver a webinar on the proper format for cooperators to share survey information for the Survey Planning page and survey results for entry into NAPIS, to focus on PPQ and cooperators that will be required to share their information with the SSC for entry into the proper forms.
Pending.

26. Action Item (NCC): The NCC should review the Fair Use Statement for NAPIS and contact Cindy with any edits, comments, suggestions, and/or questions.
In progress. The Statement will be implemented in NAPIS with the security upgrade.

27. Action Item (NCC): 1. Each member of the NCC should canvass their constituency to see who would be interested in facilitator/meeting design training, and provide head count to John. 2. NCC members also should talk about this at the Regional Plant Board meetings.
In progress. The Professional Development Center is discussing training need for FY20.

28. Action Item (NCC): 1. The NCC should discuss with their constituency the need for any training that would facilitate their job performance, be it survey, screening, more detailed identification, trap procurement, construction, and/or placement, or administrative and process topics, etc. The NCC should compile a prioritized list of training that could be addressed.
In progress?

2. The NCC also should discuss with their constituency the value of the CAPS Introductory Guidebook and trap videos, and entertain ideas for a future versions. Ideas for a possible cooperator to lead the project also should be discussed.
In progress?

29. Action Item (John): Prepare a short introduction to the NCC for new members with a possible bullet list of their role and responsibilities.
Not yet started. Will be available for new members in late 2019 or early 2020.

30. Action Items (NCC, John, Lisa): 1. John and Lisa will plan to have a national town hall-style conference call with PSSs and SSCs, tentatively scheduled for November-December. The NCC will need to canvass their constituency for topics.
Pending.

31. Action Items (John, Lisa): The PDMT will organize, schedule, and deliver the two standing webinars based around the i) Guidelines and ii) work plan requirements and process.
Completed. A webinar combining both topics was held on July 10, 2019. The recording of the presentation and slide deck are available on the Webinars page on the CAPS R&C website.

- Webinars

32. Action Items (Alison, Heather): Alison and Heather will organize and schedule a webinar on the OPEP model for January-February of 2020.
Pending. This will be scheduled for March or April instead.

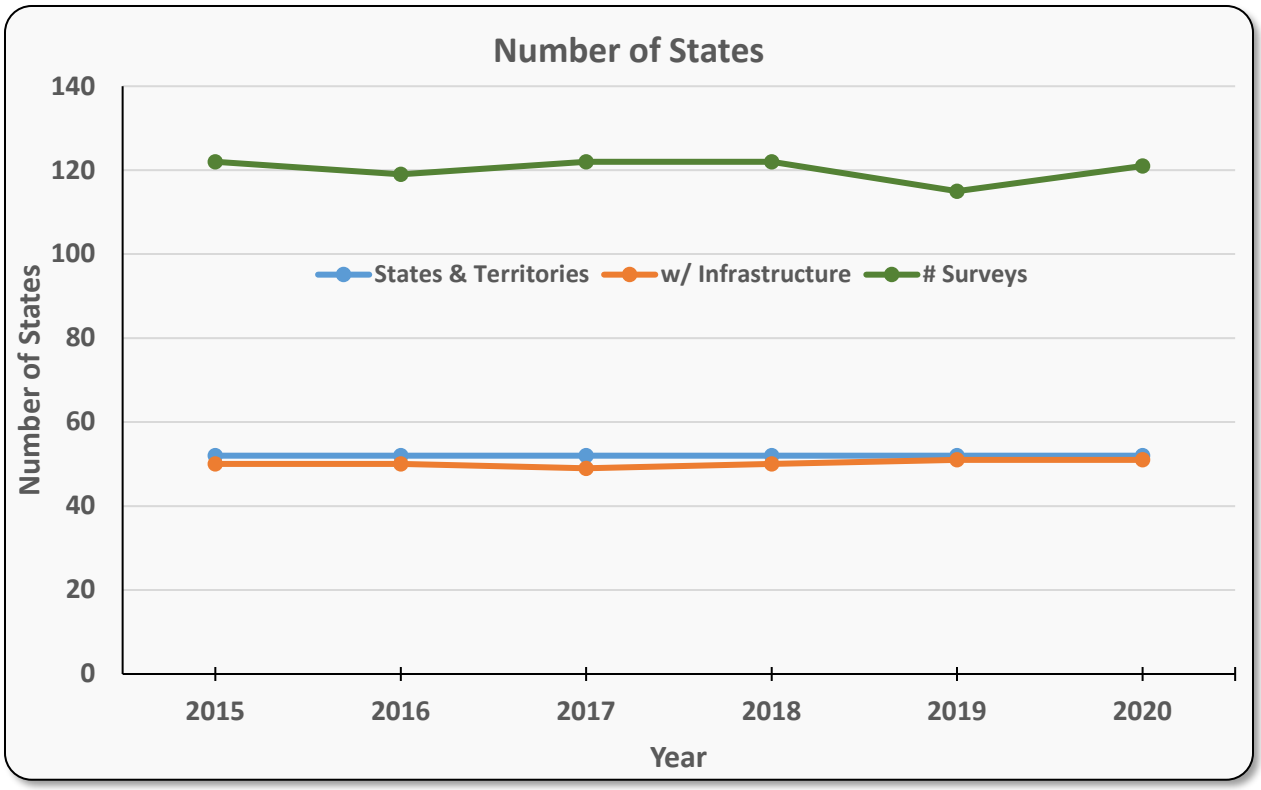
33. Action Item (NCC, John): 1. The NCC will announce to their constituency the extended deadline for CAPS Recognition, and **2.** Discuss and solicit nominations for CAPS Recognition at the Regional Plant Board Meetings. **3.** The guidance documents for CAPS Recognition will be updated to reflect the new timeline with the publication of the 2020 Guidelines.

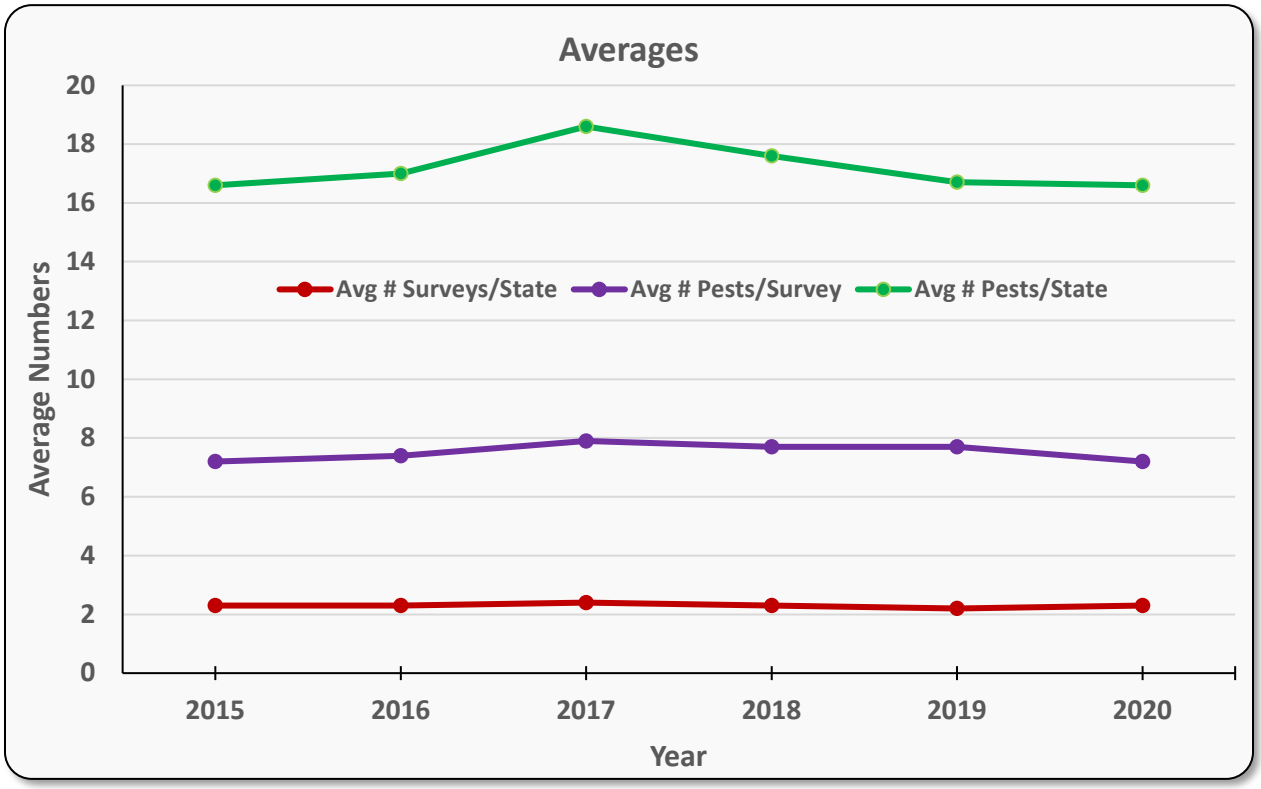
Completed with the announcement of 2019 CAPS Recognition on July 16, 2019.

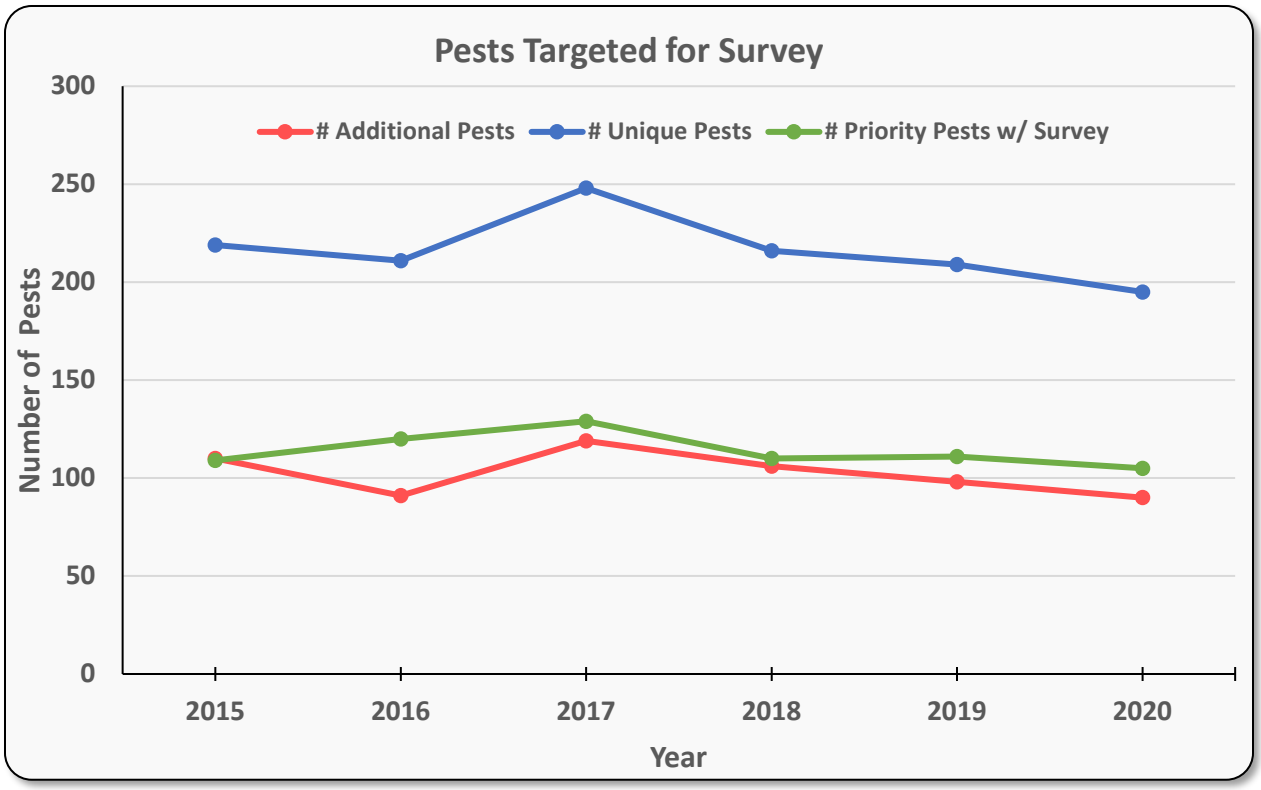
- 2019 CAPS Recognition Award Winners

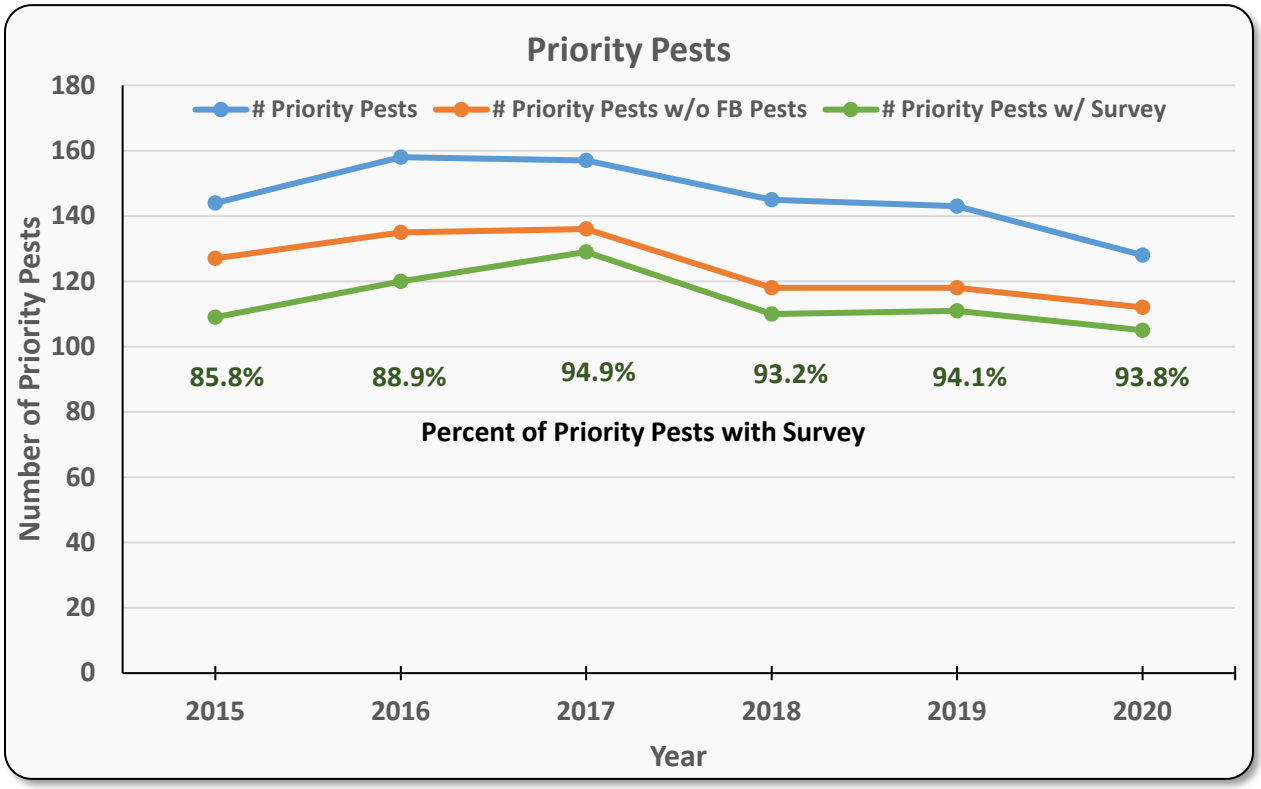
The CAPS Recognition Policy Statement was updated on May 6, 2019, to include the new timeline for 2020 CAPS Recognition, and posted on the CAPS Recognition page of the CAPS R&C website.

- CAPS Recognition page
- CAPS Recognition Policy Statement


Number of States
140
120
100
80
60
40
20
0
Number of States
States & Territories
w/ Infrastructure
Surveys
2015
2016
2017
2018
2019
2020
Year


Averages
20
18
16
14
12
10
8
6
4
2
0
Average Numbers
Avg # Surveys/State
Avg # Pests/Survey
Avg # Pests/State
2015
2016
2017
2018
2019
2020
Year


Pests Targeted for Survey
Additional Pests
Unique Pests
Priority Pests w/ Survey
Number of Pests
300
250
200
150
100
50
0
2015
2016
2017
2018
2019
2020
Year


Priority Pests
Priority Pests
Priority Pests w/o FB Pests
Priority Pests w/ Survey
Number of Priority Pests
180
160
140
120
100
80
60
40
20
0
85.8%
88.9%
94.9%
93.2%
94.1%
93.8%
Percent of Priority Pests with Survey
2015
2016
2017
2018
2019
2020
Year

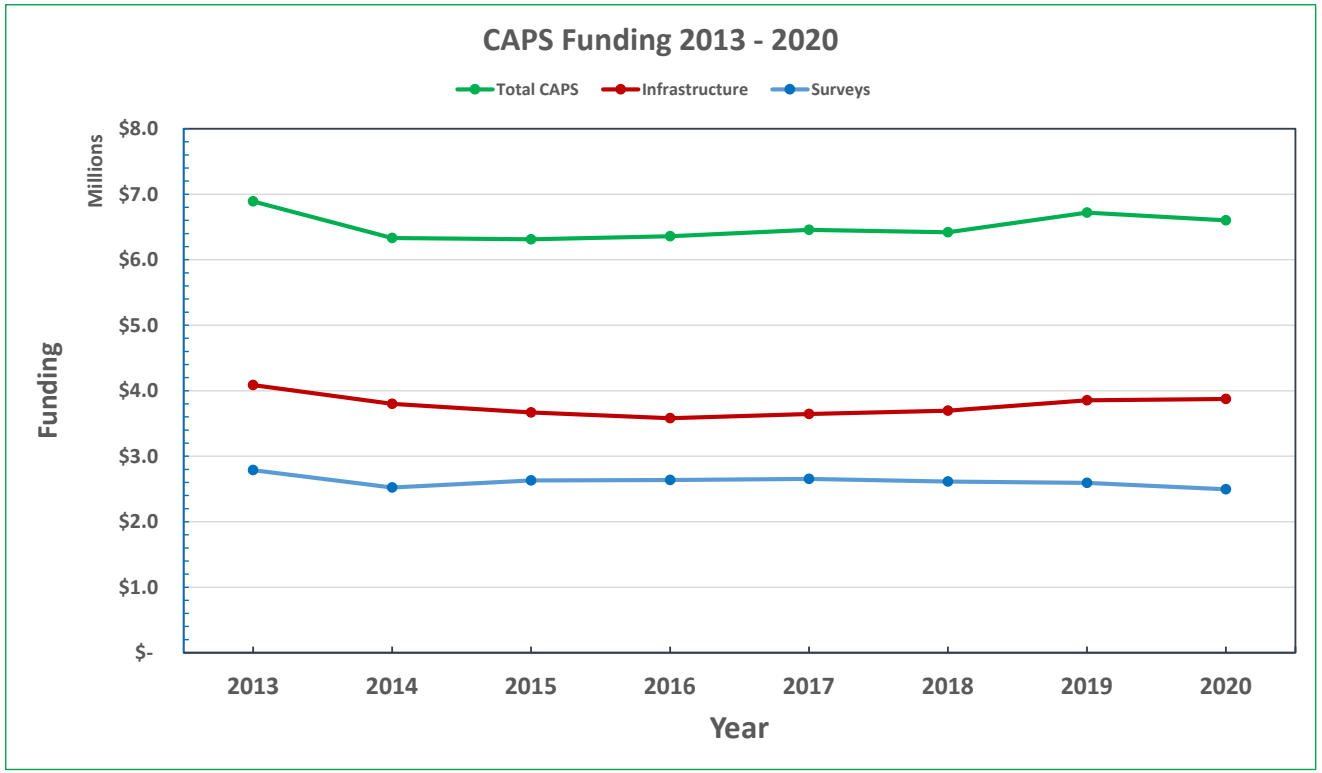
CAPS Surveys: FY16 - FY20

CAPS Surveys and Funding	2016		2017		2018		2019		2020	
Priority Surveys	**# States**	**Funding**	**# States**	**Funding**	**# States**	**Funding**	**# States**	**Funding**	**# States**	**Funding**
Corn Commodity Survey	9	$ 191,755	13	$ 213,366	12	$ 227,961	14	$ 340,131	15	$ 273,556
Cotton Commodity Survey	3	$ 67,666	2	$ 24,839	2	$ 42,997	2	$ 31,006	2	$ 31,006
Cyst Nematode Survey	2	$ 31,074	2	$ 13,461	3	$ 33,737			2	$ 11,666
Exotic Wood Borer/Bark Beetle Survey	21	$ 584,205	21	$ 536,179	20	$ 618,146	15	$ 520,124	15	$ 475,996
Mollusk Survey	4	$ 138,657	6	$ 197,388	6	$ 94,938	6	$ 120,248	4	$ 83,757
Oak Commodity Survey	4	$ 65,722	6	$ 99,844	5	$ 81,026	7	$ 121,979	7	$ 94,729
Palm Commodity Survey	1	$ 6,000	1	$ 6,250	1	$ 6,000	1	$ 6,000	1	$ 2,387
Pine Commodity Survey	4	$ 109,982	5	$ 113,275	4	$ 147,549	3	$ 124,660	3	$ 72,214
Small Grains Commodity Survey	11	$ 200,365	8	$ 113,575	7	$ 121,991	6	$ 112,539	6	$ 106,230
Solanaceous Commodity Survey	2	$ 9,660			1	$ 3,000	1	$ 3,000	1	$ 3,000
Soybean Commodity Survey	9	$ 124,417	9	$ 115,881	7	$ 63,070	5	$ 54,071	7	$ 62,282
Stone Fruit Commodity Survey							1	$ 22,519	1	$ 24,154
Tropical Hosts Commodity Survey	2	$ 48,691	3	$ 53,115	3	$ 50,832	3	$ 54,772	3	$ 65,230
Number of Surveys	**72**	**$ 1,578,194**	**76**	**$ 1,487,173**	**71**	**$ 1,491,247**	**64**	**$ 1,511,049**	**67**	**$ 1,306,207**

	2016		2017		2018		2019		2020	
State Bundled Surveys	**# States**	**Funding**	**# States**	**Funding**	**# States**	**Funding**	**# States**	**Funding**	**# States**	**Funding**
Banana Pathogen Survey									1	$ 42,385
Citrus Commodity Survey	1	$ 5,568	2	$ 41,441	1	$ 5,200	1	$ 5,200	1	$ 2,387
Exotic Buprestid (Cerceris) Survey	1	$ 2,053	2	$ 18,103						
Exotic Phytoplasma Survey					1	$ 18,542	2	$ 23,857	2	$ 23,857
Field Crops Pest Survey	4	$ 80,747	4	$ 101,784	7	$ 137,667	9	$ 156,573	10	$ 176,762
Forest Pest Survey	15	$ 433,861	13	$ 421,298	13	$ 396,224	12	$ 297,354	15	$ 437,722
Fruit Crops Pest Survey	1	$ 3,660							1	$ -
General Nematode Survey			1	$ 28,713	3	$ 83,551	2	$ 13,424		
Greenhouse Crops Pest Survey										
Legume Pest Survey										
Maple/Oak Survey										
Mixed Berry / Small Fruit Survey	1	$ 13,664								
Mixed Commodity Bundled Survey										
Nursery and Retail Plants Pest Survey	18	$ 441,578	20	$ 452,469	19	$ 397,159	17	$ 450,126	16	$ 390,345
Pulse Crops Pest Survey	1	$ 27,065					1	$ 27,296		
Rice Pest Survey	2	$ 33,591	2	$ 32,161	2	$ 30,550	3	$ 64,496	3	$ 46,949
Root Crop Survey										
Tree Fruit Pest Survey										
Tree Nursery Pest Survey			1	$ 29,345					1	$ 29,349
Vegetable Crops Pest Survey	1	$ 10,000	3	$ 34,295	3	$ 42,801	2	$ 34,526	2	$ 30,913
NY Tribes	2	$ 8,000	2	$ 8,000	2	$ 10,000	2	$ 8,000	2	$ 8,000
Number of Surveys	**47**	**$ 1,059,787**	**50**	**$ 1,167,609**	**51**	**$ 1,121,694**	**51**	**$ 1,080,852**	**54**	**$ 1,188,669**
Total Survey	**119**	**$ 2,637,981**	**126**	**$ 2,654,782**	**122**	**$ 2,612,941**	**115**	**$ 2,591,901**	**121**	**$ 2,494,876**
Identification Support	**4**	**$ 141,174**	**4**	**$ 156,098**	**4**	**$ 248,384**	**4**	**$ 232,500**	**4**	**$ 232,500**

CAPS Surveys: FY16 - FY20

	2016		2017		2018		2019		2020	
	#	Funding	#	Funding	#	Funding	#	Funding	#	Funding
Surveys	119	$ 2,637,981	126	$ 2,654,782	122	$ 2,612,941	115	$ 2,591,901		$ 2,494,876
Infrastructure	50	$ 3,580,070	49	$ 3,644,608	50	$ 3,693,843	51	$ 3,854,341		$ 3,873,439
Identification Support	4	$ 141,174	4	$ 156,098	4	$ 248,384	4	$ 232,500		$ 232,500
Total CAPS		**$ 6,359,225**		**$ 6,455,488**		**$ 6,555,168**		**$ 6,678,742**		**$ 6,600,815**
Pest Detection Appropriation		$ 27,446,000		$ 27,446,000		$ 27,446,000		$ 27,446,000		$ 27,446,000
Percent of PD Appropriation		23.17%		23.52%		23.88%		24.33%		24.05%
Pest Detection Allocation to PPQ		$ 23,359,933		$ 23,615,925		$ 23,472,254		$ 23,472,254		$ -
Percent of PD Allocation		27.22%		27.34%		27.93%		28.45%		#DIV/0!
Pest Detection Allocation to FO		$ 18,714,227		$ 18,707,059		$ 18,823,980		$ 18,275,340		$ -
Percent of PD Allocation to FO		33.98%		34.51%		34.82%		36.55%		#DIV/0!



PPA 7721 Goal 1 Survey: FY15-19

National Priority Surveys	FY15 Funding	FY15 Count	FY16 Funding	FY16 Count	FY17 Funding	FY17 Count	FY18 Funding	FY18 Count	FY19 Funding	FY19 Count
Asian Defoliator Survey	$ 1,013,445	7	$ 1,107,902	10	$ 1,165,702	13	$ 1,149,394	11	$ 1,149,323	12
Cyst Nematode Survey	$ 332,387	7	$ 307,762	7	$ 345,188	8	$ 209,700	6	$ 164,060	4
EWB/BB - Forest Pests	$ 481,297	7	$ 679,960	12	$ 435,205	9	$ 499,800	14	$ 567,781	14
Grape Commodity Survey	$ 489,405	13	$ 463,413	15	$ 725,690	17	$ 596,474	13	$ 583,364	14
Nursery and Ornamental Survey	$ 185,000	1	$ 125,000	1	$ 185,000	2	$ 261,000	5	$ 120,000	2
Orchard / Apple / Tree Fruit Survey	$ 476,792	11	$ 539,522	12	$ 460,852	11	$ 327,935	9	$ 395,044	8
Palm Commodity Survey	$ 253,004	4	$ 75,000	2	$ 676,146	10	$ 340,000	6	$ 212,532	5
Pathway Survey for Pests of Multiple Agricultural Systems	$ 261,290	2	$ 222,000	2	$ 135,220	2	$ 331,000	5	$ 361,927	6
Potato Commodity Survey			$ 58,000	1	$ 20,000	1			$ 39,700	1
Small Fruit / Mixed Berry Commodity Survey	$ 154,689	5	$ 202,932	5	$ 134,510	5	$ 135,344	5	$ 93,832	4
Solanaceous / Tomato Commodity Survey	$ 587,772	12	$ 289,697	8	$ 664,777	17	$ 637,134	16	$ 456,555	12
Stone Fruit Commodity Survey	$ 1,052,521	9	$ 676,526	6	$ 542,768	10	$ 732,568	9	$ 721,572	12
Terrestrial Mollusk Survey	$ 45,914	2	$ 18,092	1	$ 18,145	1	$ 213,000	4	$ 138,000	3
Vegetable Crops Pest Survey					$ 10,838	1	$ 48,705	4	$ 133,578	6
Totals	**$ 5,333,516**	**80**	**$ 4,765,806**	**82**	**$ 5,520,041**	**107**	**$ 5,482,054**	**107**	**$ 5,137,268**	**103**
Percent of Total Goal 1 Survey	**34.5%**	**48.8%**	**39.2%**	**48.8%**	**35.0%**	**56.0%**	**31.8%**	**56.6%**	**35.6%**	**55.7%**
Percent of Total PPA 7721	**10.1%**	**18.3%**	**8.9%**	**17.8%**	**10.2%**	**22.2%**	**8.8%**	**20.6%**	**8.1%**	**19.5%**

Pest Program Surveys	FY15 Funding	FY15 Count	FY16 Funding	FY16 Count	FY17 Funding	FY17 Count	FY18 Funding	FY18 Count	FY19 Funding	FY19 Count
Citrus Commodity Survey			$ 494,556	2	$ 482,000	2	$ 887,000	3	$ 462,000	2
Asian Longhorn Beetle Survey									$ 15,000	1
Coconut Rhinoceros Beetle Survey									$ 60,000	1
Exotic Fruit Fly Survey - CA	$ 4,000,000	1	$ 3,000,000	1	$ 6,600,000	1	$ 6,800,000	1	$ 5,000,000	1
Exotic Fruit Fly Survey							$ 1,030,000	2	$ 1,030,000	2
Honey Bee National Survey	$ 490,414	36	$ 484,199	38	$ 610,069	42	$ 507,118	35	$ 488,827	33
Khapra Beetle National Survey	$ 186,779	4	$ 139,635	5			$ 123,822	5	$ 16,822	3
Pale Cyst Nematode / Golden Nematode Survey							$ 75,000	1	$ 123,341	3
Phytophthora ramorum National Survey	$ 492,931	17	$ 378,907	13	$ 237,236	13	$ 322,929	15	$ 283,125	13
Plum Pox Survey			$ 45,000	1			$ 53,000	2		
Ralstonia solanacearum Survey			$ 28,000	1	$ 30,100	1				
Walnut Twig Borer/Thousand Cankers Disease Survey	$ 323,774	9	$ 317,295	14	$ 265,347	12	$ 176,500	10	$ 128,400	8
Totals	**$ 5,493,898**	**67**	**$ 4,887,592**	**75**	**$ 8,224,752**	**71**	**$ 9,975,369**	**74**	**$ 7,607,515**	**67**

PPA 7721 Goal 1 Survey: FY15-19

Other G1S Surveys	FY15		FY16		FY17		FY18		FY19	
Ambrosia beetle										
CAPS Enhancement										
Crazy ants, soybeans, mollusk, termites										
NAPPFAST										
PPV & ambrosia beetle										
Crazy Ant Survey										
Duponchelia Survey										
Enhanced Exotic Pests Surveys - CA										
Exotic Terrestrial Plant Pest Survey Pathway										
Marinas and Canals										
Nut Pest Survey	$ 275,000	3	$ 250,000	3	$ 200,000	3	$ 125,000	2	$ 75,000	2
Pierce's disease/GWSS										
Wyoming Pest Surverys										
Laurel Wilt Survey										
Pacific Northwest Exotic Sawfly Survey										
Biosecurity Program for Early Detection of Honey Bee Pests and Diseases										
Cherry Blossom Moth Survey										
Exotic Psyllids and Liberibacter Species Survey										
Thrips Associated with Peony in Alaska										
Viruses in Imported and Domestically Produced Ornamentals										
Asian Citrus Psyllid Survey - CA										
Gladiolus Rust Survey										
Barberry Detection Survey										
False Codling Moth Survey	$ 100,000	1	$ 75,000	1						
Phytophthora Species Survey										
Asian Giant Hornet and Other Invasive Vespa Species Detection and M	$ 104,760	3								
Bumble bee pathogen and parasite survey	$ 77,654	1			$ 20,000	1				
Firewood Survey	$ 10,000	1								
Invasive Species Survey -CNMI	$ 20,000	1								
Old World Bollworm Survey	$ 389,252	1								
Polyphagous Shot Hole Borer/Fusarium Dieback	$ 225,000	1	$ 175,000	1	$ 175,000	1				
Resources for Early Detection of Parasites Infesting Honey Bees in Texa	$ 40,813	1								
Coffee Pests Survey			$ 200,000	2						
Light Brown Apple Moth Delimitation Survey			$ 65,000	1						
Weed Surveys on the Colville Reservation			$ 15,000	1						
Public Gardens Survey					$ 108,557	1	$ 100,000	1	$ 120,000	1
Spotted Lanternfly Pathway Survey					$ 17,163	1				
Survey of Susceptible Crops for Exotic Phytoplasmas					$ 35,177	1				
Field Crop Pest Survey							$ 23,750	1	$ 102,807	3
Grapevine Virus Survey							$ 29,000	1		
Weed Survey affecting Wild Rice on Tribal Lands							$ 9,972	1		
Bumble Bee Survey-ARS UT									$ 55,085	1
Bumble Bee Pathogen Monitoring-CA									$ 47,081	2
Corn Commodity Survey									$ 15,000	1
Exotic Delphacids and Associated Pathogens Survey									$ 20,000	1
Nursery Stock Virus Survey									$ 20,000	1
Totals	**$ 1,242,479**	**13**	**$ 780,000**	**9**	**$ 555,897**	**8**	**$ 287,722**	**6**	**$ 454,973**	**12**

PPA 7721 Goal 1 Survey: FY15-19

Other G1S Projects	FY15		FY16		FY17		FY18		FY19	
Intergrated Plant Health Information System (IPHIS)	$ 2,530,000	1								
Survey Supply IPHIS Survey Supply Module Nut Pest Survey-Supplies	$ 566,929	1	$ 1,159,500	1	$ 830,000	1	$ 863,000	1	$ 620,000	1
Honey Bee National Survey Sample Analysis Bee Informed Partnership (BIP) Honeybee Survey, coordination	$ 290,951	1	$ 559,948	1	$ 569,765	1	$ 640,950	1	$ 537,338 $ 91,885	1 1
PPV Domestic Diagnostics Support										
Stone Fruit Commodity Survey Taxonomic Support/Sequencing	$ 22,000	1								
PCN Sample Processing										
CAPS Program Support										
Apiary Inspection Disease Detection Canine Training Screening insects for Geosmithia morbida, cause of thousand cankers disease					$ 37,121 $ 11,906	1 2				
Totals	**$ 3,409,880**	**4**	**$ 1,719,448**	**2**	**$ 1,448,792**	**5**	**$ 1,503,950**	**2**	**$ 1,249,223**	**3**
Total Funding and Surveys/Projects for Goal 1 Survey	**$ 15,479,773**	**164**	**$ 12,152,846**	**168**	**$ 15,749,482**	**191**	**$ 17,249,095**	**189**	**$ 14,448,979**	**185**
Total PPA 7721 Funding	**$ 52,995,375**	**437**	**$ 53,250,000**	**460**	**$ 54,112,764**	**481**	**$ 62,244,948**	**519**	**$ 63,702,229**	**527**
Goal 1 Survey Percent of Total PPA 7721	**29.21%**	**37.53%**	**22.82%**	**36.52%**	**29.10%**	**39.71%**	**27.71%**	**36.42%**	**22.68%**	**35.10%**

Cooperative Agricultural Pest Survey (CAPS)
2020 National Pest Surveillance Guidelines
May 20, 2019

INTRODUCTION

The purpose of these guidelines is to provide pest surveillance direction for the Cooperative Agricultural Pest Survey (CAPS) Program. These guidelines are for State Departments of Agriculture, Plant Protection and Quarantine (PPQ), tribal governments, and collaborators that conduct pest surveillance activities with Pest Detection and Plant Protection Act Section 7721 (PPA 7721; formerly Farm Bill) Goal 1Survey - National Priority Surveys funding. These guidelines and the referenced resources provide general and specific direction on Program processes and how pest surveillance activities should be conducted. Questions concerning current or yearly survey activities may be obtained from the National Policy Manager for Pest Detection in Policy Management, National Operations Manager for Pest Detection, or members of the National CAPS Committee (NCC).

MISSION

The mission of the Cooperative Agricultural Pest Survey (CAPS) program is to provide a survey profile of exotic plant pests in the United States deemed to be of Regulatory Significance to the United States Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), Plant Protection and Quarantine (PPQ), State Departments of Agriculture, tribal governments, and other cooperators through early detection and surveillance activities by:

- Confirming the presence or absence of environmentally and/or economically harmful plant pests that impact agriculture, the environment, or our natural resources and that have potential to be of phytosanitary significance; and

- Establishing and maintaining a comprehensive network of cooperators and stakeholders to facilitate our mission and to safeguard our American plant resources.

The CAPS program strives to conform to the International Standards for Phytosanitary Measures (ISPMs) as adopted by The International Plant Protection Convention (IPPC). The IPPC is an international plant health agreement, established in 1952, that aims to protect cultivated and wild plants by preventing the introduction and spread of pests. The United States is a signatory to The Convention.

PROGRAM OVERVIEW & ORGANIZATION

Central to the success of the CAPS program is clarity about the roles and responsibilities of all parties involved in cooperative surveys. This includes surveys conducted by PPQ and State cooperators funded through the Pest Detection line item and PPA 7721 Goal 1 Survey. While the focus of these survey guidelines is primarily directed to PPQ state

offices and state cooperators, it also extends to universities, tribal governments, and, potentially, to industry partners, non-traditional parties (i.e., environmental groups), and other organizations concerned about the threat of introduced invasive pest species.

At both the national and state-levels, an organized effort to engage industry early in the survey-planning process is recommended. This is necessary because the strategy of the CAPS program continues to stress bundled surveys that target multiple pests based on commodities, taxa, environments and habitats, industries and businesses, and the continuum along pest introduction pathways.

The hosts, commodities, industries, and businesses impacted by pests span the country nationally, and it is appropriate to address the risks from an agro-ecosystem perspective. APHIS believes the commodity/ecosystem approach will provide a holistic framework for prevention, preparedness, response, and recovery from invasive pests of regulatory significance. APHIS realizes the value of engaging stakeholders throughout this continuum, especially when communicating about pest risks, jointly setting survey priorities, and leveraging resources across organizational boundaries. It is imperative that the CAPS community communicate the goals and objectives of the CAPS program. Open dialogue at the national and state level with industry and other stakeholders is of vital importance for the success of CAPS. In order to facilitate this dialogue, PPQ has provided a categorization of pest threats in the form of a Prioritized Pest List, Commodity and Taxon-based Pest Lists, Standardized Methodology for Survey, and other Resources.

The CAPS program is managed by the Pest Detection Management Team (PDMT). The PDMT consists of the PPQ National Policy Manager for Pest Detection (NPM) in Policy Management (PM), the PPQ National Operations Manager (NOM) for Pest Detection in Field Operations (FO), and the PPQ Science & Technology (S&T) for CAPS Support. The PDMT has overall responsibility for program policies, operations, and scientific support of the CAPS program. The PDMT is supported by the National CAPS Committee (NCC). The NCC is composed of representatives from each of the core constituencies in the CAPS community. Responsibilities for the PDMT and the NCC also are found in the National CAPS Committee (NCC) Bylaws. The Domestic Diagnostic Coordinator in PPQ National Identification Services (NIS) also supports the Program and CAPS community through various taxonomic services.

The National CAPS Committee will revise the National Pest Surveillance Guidelines when annually reviewing the policy, strategy, and performance of the CAPS program. The NCC also will approve annually a "Priority Pest List." This list will include the Commodity and Taxonomic Survey Pests, as well as Pests of Economic and Environmental Importance (OPEP Prioritized List). The Priority Pest List will be based on input by PPQ S&T, the States, NIS, and commodity organizations. A transparent process for assessing pests for the Priority Pest List has been implemented. States will select from the Priority Pest List to complete the Priority Surveys in CAPS and National Priority Surveys under PPA 7721 Goal 1 Survey.

The State CAPS Committee will determine and recommend survey priorities for pests of State regulatory concern in their state. The State Plant Health Director (SPHD) and State Plant Regulatory Official (SPRO), in consultation with the Pest Survey Specialist (PSS) and State Survey Coordinator (SSC), and considering the recommendations and advice of the State CAPS Committee, are responsible for the selection of pests that are important to their State as per the guidance given in these Guidelines. This collaboration will allow flexibility on a state-by-state basis. PPQ encourages industry-state partnerships for pest survey.

In order to provide this flexibility, performance measures must be in place early in the planning process so that there is cooperator accountability where Federal funds are provided. These performance measures will enable the assessment of accomplishments made toward pest selection and survey objectives outlined in CAPS cooperative agreements. Activities performed by SSCs that result in advancing the overall program's effectiveness will support this assessment process. The Infrastructure Report Template is provided for the SSC to report on activities in support of the Pest Surveillance mission across all programs for which activities were conducted in their state. This also will help justify the continued funding of the SSC position in Infrastructure. The roles and responsibilities of the core constituencies, SPHD, SPRO, PSS, and SSC, can be found here.

The SSC, in collaboration with the PSS, will make use of pest risk information from various sources. Such sources include: pest datasheets; pest-risk assessments; pests categorized through the Objective Prioritization of Exotic Pests process; "risk zones" and other information communicated to the SPHDs by the NOM; pests that need to be surveyed per the PPQ Management Team's endorsement of recommendations of the PPQ New Pest Advisory Group (NPAG); industries' suggestions for coordinated survey/monitoring of pests of mutual concern; changes in patterns of risk or commerce that indicate domestic survey is merited along a risky pest pathway; and select agents that present some threat for potential bioterrorism.

INFRASTRUCTURE & SURVEYS

PPQ intends to allocate funds to each State in a fair and transparent manner. Each State needs to be able to predict the minimal level of Federal funding it will receive from year-to-year in order to plan surveys and acquire/retain a resource base. However, the CAPS program needs to be sufficiently flexible to address national priorities that may have shifted since pests were first being considered for survey due to new pests that may have been found, or specific direction APHIS may have received in the federal funding appropriations.

Funds to support CAPS are generally provided to State Departments of Agriculture and other cooperators through cooperative agreements, which are administered through the PPQ Field Operations office. The annual APHIS Pest Detection "line item" appropriation and PPA 7721 Goal 1 Survey allocations are the funding sources for CAPS and PPQ surveys. Funds from the Pest Detection line item and PPA 7721 Goal 1 Survey

also may be used, in some cases, when pests are found that are new to the United States or are found in new areas of the country. However, The CAPS Program is focused on early detection, and these surveys, if approved, are not intended to intensively delimit the extent of spread of a pest around a specific infestation site.

The funding process for CAPS is linked to justifications from each State for: (I) Infrastructure and (II) Surveys to address National Priority Pests. Pests of state concern should be bundled with National Priority Pests in Bundled Surveys. (The funding process for PPA 7721 projects is determined by the PPA 7721 Program).

Infrastructure

Funds are provided to each state to support the State Survey Coordinator (SSC), specifically to cover expenses related to salary; benefits/fringe; standard support equipment (including but not limited to: desktop computer, laptop computer, cell phone, or other PPQ-recommended equipment); in-state travel (cooperator and/or industry meetings, outreach, etc.); and departmental overhead typical for this position. If a need is demonstrated for data management support, i.e., part-time salary/benefits, it may be appropriate to include these expenses in Infrastructure. A justification must be provided. Outreach should enhance survey and pest detection efforts, and should be linked to an active survey effort in the State in a manner that enhances the CAPS Program.

Out of state travel for the SSC (or other state cooperator) is capped at $3,000, and will be approved only for CAPS-specific meetings that the individual attends in their role as the state CAPS representative (e.g., Regional Plant Board meeting and National CAPS Meeting). It is strongly suggested that travel to the Regional Plant Board Meeting is incorporated into the Financial Plan. Funding may be augmented to the cooperative agreement for travel to a National CAPS Meeting in years when it is held. It is not appropriate to charge to the Pest Detection agreements travel to other meetings not specific to the CAPS program. Similarly, it is not appropriate to charge to Pest Detection PPQ travel to other meetings not specific to the CAPS program. In-state travel to conduct surveys should be addressed in the Survey work plans. Other in-state travel needs should be clearly aligned with supporting CAPS initiatives.

Care also should be taken that equipment requests are needed in the current year and are not being carried over from a previous agreement. Equipment requests should support the SSC only, and SSCs are encouraged to provide PPQ an IT inventory to ensure needs are being met, equipment is replaced in a reasonable time frame, and equipment procured to support CAPS activities remains available to the program.

Personnel expenses for conducting survey activities should be addressed in the Survey work plans. Survey expenses are not allowed in Infrastructure funding.

Infrastructure costs will be addressed during the formulation of the total budget for each State. States should plan on Infrastructure funding based on the previous year or the amount communicated to the State by the NOM. For FY20, **the maximum possible Infrastructure award for each state is the amount that each state received for FY19.**

This funding level may change, however, as the PDMT explores ways to standardize funding utilizing a national perspective. States are encouraged to leverage funding from other programs to cover and reduce Infrastructure costs. The remaining amount of the State's total will be designated to Survey (see the funding section below). A written work plan specifically for Infrastructure must be provided that is separate from Survey as explained in the Work Plan Submission section below.

Priority Surveys

Priority Surveys are those survey initiatives that have been identified by the National CAPS Committee as being of high priority to merit a priority survey effort. **The CAPS program is a national program, and as such, the primary focus is on National Priority Surveys.** The focus of these surveys is on detecting pests in areas where their presence (or absence) is unknown by focusing on the host(s) and/or environment of given pests, or on location-specific criteria, particularly in situations where a state has evidence of risk from prior emergency actions against certain types of facilities or operations.

In response to comments and suggestions from the states and our stakeholders to provide more flexibility for surveys, the NCC has decided to continue to present a 2-prong approach for Priority Surveys. Priority Surveys may consist of 1) traditional commodity-based and similarly-formatted surveys (e.g., Small Grains and Exotic Woodboring & Bark Beetle Surveys) prepared by S&T as presented in past years (designated Designed Surveys), and/or 2) unique bundled surveys developed by the States (designated Bundled Surveys).

1. **Designed Surveys:** Included in this category are the traditional commodity-based surveys and those surveys not necessarily based on commodities, but have been prepared by S&T and have the same format for surveying for multiple pests within an environmental niche, business model, or taxonomic group. The intent of these surveys is to detect pests not known to be present in those areas of the nation where a particular commodity is grown, in a particular environment or habitat, or associated with various business models. The goal of the CAPS program is to conduct national surveys and obtain a national dataset for exotic pests in commodities, habitats, and businesses of national importance. The following are appropriate for conducting a Designed Priority Survey in 2020.

- Commodity-based surveys:** Corn, Cotton, Oak, Pine, Small Grains, Soybean, and Tropical Hosts

- Taxonomic group-based surveys:* Exotic Wood Borer and Bark Beetle (EWB/BB), Cyst Nematodes, and Mollusks

  * Not all pests listed in a commodity- or taxon-based survey need be targeted by an individual State. Target only those pests that are important and make biological, environmental, or economic sense to the State. Selecting a portion

(e.g., 50% or greater) of the pests listed in a commodity survey guide fulfills the requirement of conducting that survey.

- Grape, Palm, Solanaceous, and Stone Fruit Commodity Surveys will not be offered through CAPS for 2020 funding. These and other surveys that are based on Specialty Crop Commodities (e.g., Orchard [Apple, Pear, etc.] and other fruit, vegetable, and specialty crop surveys) should be suggested for PPA 7721 funding. Like-wise, Asian Defoliator and Pathway surveys are more aligned with the language of the PPA, and will not be supported for funding through CAPS.

- States are discouraged from submitting similar work plans or suggestions to both the CAPS and PPA 7721 programs. Projects or surveys not adhering to these Guidelines may not be reviewed or funded in either venue.

2. **Bundled Surveys**: The intent of the Bundled Surveys is to give the States the flexibility to design their own surveys, within certain parameters. **The survey must concentrate on multiple, high priority pests and efficiency of survey.** A State may create a bundled survey that is **based on a common factor**, such as site, habitat, environment, business, etc., that makes biological, environmental, and/or economic sense in that State. The survey must include pests from the Priority Pest List (Commodity and Taxonomic Survey Pests, and/or Pests of Economic and Environmental Importance). Pests of importance to a State not on the Priority Pest List, but in common with the other pests, may be included in the bundled survey. New guidance is offered on pests previously on the Priority Pest List, but for one reason or another have been delisted. See Guidance for Bundling Delisted Priority Pests for more information. States must show justification for the bundled survey. An example of a Bundled Survey is a Nursery Survey with a selection of several pests from the Priority Pest List that are important to the State, with perhaps a pest or two not on the Priority Pest List, but of State importance. The challenge is for the States to decide what works best for the agriculture, environment, or natural resources in their State. The survey effort for pests added by the State (including diagnostics, trapping supplies, etc.) must be less than half of the cost of this particular survey. Surveys for pests that are established, endemic, native, or indigenous in that state for the purpose of management will not be allowed. States that choose to conduct surveys for pests of state regulatory significance should bundle these pests with National Priority Pests in Bundled Surveys. See Examples of Bundled Surveys for other examples.

Pathway Approach to Survey

When planning surveys, the NCC encourages the States to use a pathway approach when deciding on pests and locations to survey. States should plan to survey where the risk is highest. This type of targeted detection survey or risk-based survey enhances the ability of the CAPS Program to identify and target high risk areas, zones, locations, and sites that have the highest potential for exotic pest introductions, and to successfully provide

early detection of these pests. This concept can be combined with any survey using sound analytical tools, known risk sites, past history of pest detections in a State, and other avenues of information. It is understood that risk factors can be examined along a "risk continuum" beginning at offshore sites (points of origin) to points of potential establishment (commodity production areas, natural lands), and numerous risk points in between (wholesale distribution centers, nurseries, intermodal sites, rail yards, etc.). The identification of risk points and development of targeted surveys will maintain the focus of the survey program on our top commodities at risk and the high priority pests as identified through the OPEP prioritization process. This emphasis will create a flexible system allowing states to package additional pests of concern to their specific states. States should devote the majority of survey efforts to sites where the risk is highest. However, in accordance with ISPM No. 6: Surveillance (revised 2018), Section 2.2.5, States also may want to consider complementing surveys by random sampling sites to detect unexpected events. The emphasis should be put on high risk sites, but it may be important also to incorporate sites of somewhat lesser risk into a survey. This is a state-by-state decision based on the perceived risk and resources available in a particular state.

FUNDING & WORK PLANS

Overall Funding Formula

Funding for the CAPS program is provided by Congress through the Pest Detection line item in the Federal Budget. Pest Detection also funds several other initiatives in support of the CAPS program. Due to Presidential and Congressional priorities, as well as the budget cycle, funds available for the next survey year are not known completely at the time these guidelines are published. Therefore, for FY20 planning, states should use the final FY19 budget for their state as a general rule-of-thumb, with the limit on Infrastructure mentioned above. The PDMT will provide further advice as more information becomes available.

The CAPS program needs a transparent, sustainable, and flexible funding model that is adaptable and predictable in a changing political and financial environment, and one that is based on risk, performance, and/or economics. The PDMT will be working in this direction in the coming years. Further guidance will be made available as more is known about this process and the FY20 budget.

The present funding formula is simply:

Infrastructure + Priority Surveys = Total Funds Awarded.

A state may plan up to, but not over the Total funding amount. Infrastructure funding cannot be greater than the previous year, or as directed by the NOM, but can be less by shifting appropriate funding to Survey. The remaining dollars of a state's Total dollar amount are for Survey(s). It is important to only charge to Infrastructure those items that are in accordance to the guidance given in this document, or from guidance given by the NPM and NOM after the publication of this document. As mentioned above, personnel

expenses for conducting survey activities should be addressed in the Survey work plans. Survey expenses are not allowed in Infrastructure funding. An example of this formula is as follows:

State	Infrastructure	Priority Survey	Total
XX	$75,000	$30,500	$105,500
	Designed Survey 1	$20,000	
	Bundled Survey 2	$10,500	
	Total	$30,500	

With the change in the Survey Guidelines to include Bundled Surveys, the challenge to the States is to be creative in the planning of surveys and target pests. Pests of State concern should be incorporated into the Priority Surveys. States will use up to 100% of their survey dollars with Priority Surveys in which pests of State concern have been included.

Work Plan Submission

Each state will submit work plans, including detailed financial plans, for the Infrastructure project and each Survey they plan to conduct (see the options for Survey work plans below). The use of the Infrastructure Work Plan Template and Survey Work Plan Template is required. The combined total funding requested should not exceed the guidance given by the NOM. The Survey Summary Form must be completed online on the CAPS Resource & Collaboration site (a CAPS R&C login will be required). The online Survey Summary Form must be completed when the work plans are submitted to the SPHD's office. No work plans will be reviewed or approved without a completed online Survey Summary Form. Once the state submits the completed information, the state PPQ office will be required to acknowledge review before it will be reviewed by the NOM. Do not submit an electronic copy of the Summary Form with the work plans. The State's data will be available to Field Operations online. States will not be able to access other state's information.

Contractual items listed in the Financial Form must detailed and described in an additional Financial Form. It is necessary for the program to know and evaluate costs associated with the Contractual item. A separate Contractual Financial Form is provided in the file to list Contractual costs.

Work Plan Options: States have flexibility to combine their Pest Detection surveys into one submitted Survey work and financial plan, or to submit separate work plans for each survey. Funding will be tracked based on each work plan whether written as a combined or individual survey. Individual states will determine which options work best for them based on their state financial and accounting policies, systems, and processes. This guidance is only for Pest Detection funding, and only for Survey. A separate work and

financial plan for Infrastructure is required. There is no change in the guidance for entering survey and target pest information into the Survey Summary Form. Surveys, target pests, and funding per individual survey need to be entered as in previous years even if a state decides to combine their surveys into one work plan. This will greatly aid in reporting of program performance measures. An Example of a Combined Survey Work Plan can be found on the 2020 Guidelines and Resources pages of the CAPS Resource & Collaboration website.

> Note on Terminology: The term 'Bundled' is used to target multiple pests in a survey. The term 'Combine' is used to incorporate two or more surveys into one work and financial plan.

Survey Summary Form: Continuing in 2020, there will be fields in the Survey Summary Form for CAPS, PPA 7721, and PPQ Pest Detection surveys where States will be asked to indicate the specific hosts, commodities, environments, or habitats in which they plan to conduct surveys. This information is not always apparent from the survey name. APHIS and PPQ are conducting industry sector meetings to hear the topics, issues, and concerns that are important to the various commodity industries. In preparation for these meetings, being able to provide survey information on a commodity basis would be extremely helpful. Please keep this in mind when preparing 2020 work plans. This request is specific to the Survey Summary Form only but should be included in the work plan as well. This is not a new data entry requirement. See Guidance for Selecting Survey Names.

Cooperator Cost Share

Neither the CAPS nor PPA 7721 Programs require cooperator cost share to be entered into a cooperative agreement. If, however, a cooperator chooses to enter a cost share amount on the financial forms, then they must adhere to guidance governing that cost share, and the amount should match the SF-425 at the end of the agreement. See the addendum to the March 6, 2014 NCC conference call that addresses cooperator cost share (CAPS R&C login required). (http://download.ceris.purdue.edu/file/2347)

For 2020 work and financial plans, only cooperator cost share reported on the financial forms should be entered into the Survey Summary Form in much the same manner that surveys and target pests described in the work plan should be listed on the Survey Summary Form. If no cooperator share is entered in the financial forms, then no cooperator share need be entered into the Survey Summary Form. We are making this change for transparency and to make sure we are accurately reporting on cooperator cost share when this information is requested. This information will assist the Pest Detection Program answer requests and questions from the Agency, Department, and Congress, and prepare future budget requests.

ADMINISTRATIVE REQUIREMENTS

All cooperative agreements are administered through PPQ Field Operations, and are the means by which funds are provided to each State and cooperator. APHIS is using the ezFedGrants system for the complete administration of cooperative agreements. The CAPS Program will use the same initial submission process as in previous years outside of and before the ezFedGrants system comes into play, i.e., States will submit work and financial plans to the SPHD, who will upload them to the FO SharePoint site for review by the NOM. Once work plans are signed by the ROAR and ADODR, the ADODR will need to follow the steps below. Pest Detection and PPA 7721 work and financial plans are processed similarly, but separate due to the different funding sources. The Survey Summary Form should be passed along at the same time as the work and financial plans.

1) Before submitting a new work and financial plan, the ADODR should check the Accountability Report on the CAPS Resource & Collaboration website to ensure data from previous years surveys have been entered into the appropriate database (NAPIS). If the data has not been entered, the ADODR should communicate this deficiency to the cooperator. Once the missing data is entered, or an acceptable justification is provided, submission of new work and financial plans may proceed. New work plans will not be processed until data entry requirements are met.

   For example: For review of a 2020 work plan (PD and PPA 7721), the ADODR should check and determine that all 2018 and earlier data from the cooperator has been entered into NAPIS. Surveys for 2019 are in progress, and all the 2019 data is not expected to be available when 2020 work plans are due. However, 2018 and earlier data should be available and properly entered into NAPIS.

2) Save the Infrastructure and Survey(s) files in the .pdf format separately. Do not combine work plans or work plans funded by a different line item.

3) The ADODR will then upload the Infrastructure and Survey(s) .pdf files to the Field Operations Cooperative Agreements Work Plan Management Site by clicking Upload under the Work Plans section and following the steps. Once completed, Field Operations will be notified that a work plan has been submitted for review. The ADODR should also notify the appropriate National Operations Manager(s) by email.

4) The PPQ National Operations Manager (NOM) will review the work and financial plan for adherence to the National Pest Surveillance Guidelines, review the Accountability Reports to confirm data entry requirements have been met, and either approve the work and financial plan, or communicate back to the states on suggested changes.

5) Once a work and financial plan have been approved, the NOM will notify the agreements specialist that it is approved, and the process to develop a cooperative agreement can begin.

6) ezFedGrants will be used to process all cooperative agreements. The ezFedGrants External Portal Homepage can be accessed by entering 'grants.fms.usda.gov' into your browser. Cooperators will respond to an opportunity established by the PPQ agreements staff. This information will be communicated to the cooperator and enable the cooperator to find the opportunity in ezFedGrants.

   The following aids are available on the Resources page of the CAPS Resource & Collaboration website.

   - User Guides
     - External User Guide (a useful, detailed resource)
     - Internal Program Manager User Guide

   - Slide presentations
     - ezFedGrants Access
     - Application Management
     - Submitting Claims and Reports

   - Job Aids are located at: https://www.nfc.usda.gov/FSS/ClientServices/ezFedGrants/index.php

Note that a synopsis of all grants and agreements provided to a cooperator by the Federal government, including APHIS, are now posted on the Internet (www.USAspending.gov). This was a requirement of the Federal Funding Accountability and Transparency Act of 2006 (FFATA). Likewise, APHIS is required to report accomplishments via "performance measures" in CAPS. Cooperators will be provided guidance on the means to adhere to this level of transparency.

As required by OMB Circular A102 and 7 CFR 3016, and as outlined in Article 4 of the Notice of Cooperative Agreement Award between the Cooperator and USDA-APHIS-PPQ, the Cooperator's designated representative shall submit to APHIS' authorized representative a properly certified semiannual **Federal Financial Report** (FFR) SF-425, no later than 30 days after the end of the second quarter and a final FFR no later than 90 days after the Agreement expires or terminates. Any requests for an extension of time to submit the FFR must be justified and made in writing to APHIS' authorized representative before expiration of the initial 30 or 90 days period allowed for submitting the report. Extensions of time to submit the FFR are subject to the discretion of APHIS' authorized representative and, if allowed, shall be provided by the authorized representative in writing.

Also, as per Article 4 in the Notice of Cooperative Agreement Award, the Cooperator's designated representative shall certify and submit to APHIS' Authorized Representative a

semiannual **Accomplishment Report** on activities outlined in the Work and Financial Plans. The reports will be used by APHIS to verify compliance with provisions of this Agreement. They are due no later than 30 days after the end of the second quarter and a final report is due no later than 90 days after the Agreement expires or terminates. Any requests for an extension of time to submit the report must be justified and made in writing to APHIS' authorized representative before expiration of the initial 30 or 90 day period allowed for submitting the report.

The use of the standardized Infrastructure Report Template and Survey Report Template are required for all agreements as tools for reporting accomplishments. These standardized templates are a result of NCC working group discussions. The NCC accepted the templates and has required their use.

1) The cooperator will need to upload the signed accomplishment reports to the ezFedGrants External Portal Homepage

2) The ADODR will be notified that an accomplishment report has been submitted and will review it through the ezFedGrants system. Once approved by the ADODR, Field Operations will be notified that an accomplishment report has been submitted for review.

3) Both the ADODR and NOM should refer to the CAPS Accountability Report on the CAPS R&C website before signing off on the final Accomplishment Report. The Accountability Report matches the information in the Survey Summary Form with data entered into the National Agricultural Pest Information System (NAPIS), and is an indicator of the fulfillment of the cooperative agreement.

The CAPS program recognizes the value of supporting the SSC position through Infrastructure funding. Without this support, CAPS, PPA 7721, and other program surveys and projects, including outreach, in the states would not be possible. These activities, however, are not being captured and documented sufficiently to argue in support of continued Infrastructure funding in the face of the apparent numerical inequality between Infrastructure and Survey funding. In an attempt to capture the various activities funded under the Infrastructure component, a new reporting section with suggested metrics was added to the Infrastructure Report Template in the 2014 Guidelines. This reporting feature is required for all Infrastructure agreements. It is only through the efforts of the states to report on the various activities carried out in the states under Infrastructure that the CAPS program can document and successfully argue the merits of continued Infrastructure funding.

While the CAPS program is designed to follow the calendar year, an extension of the Cooperative Agreement may be granted if requested by the cooperator, and is supported by the NOM, ADODR, APHIS cooperative agreement officer, and approved by the Executive Director of Field Operations. Extensions requests must provide an explanation/justification for the program delay and will only be granted due to programmatic reasons /extenuating circumstances (*e.g.,* weather delays, problems in

hiring of personnel, etc.) and should not be used simply to extend the agreement. Reporting frequency of the accomplishment and financial reports, either quarterly or semiannual, will continue as noted in the Notice of Award.

The SPHD, or their designee, as ADODR of the cooperative agreement, shall submit to Field Operations the State's semi-annual and year end reports no later than the 30 or 90 day period allowed for submitting the reports, and include a written summary evaluation. The evaluation should include input from the PSS, and address each funded project in the cooperative agreement. The evaluation depends upon the work plan and must address the funding criteria previously agreed to by the State and the SPHD, and the performance of the State in carrying out the cooperative agreement. The CAPS Accountability Report, a work plan monitoring tool, is available to assist in the review of the State's performance. It can be accessed through the CAPS Resource & Collaboration web site. A CAPS login is required.

The overall annual process involved in conducting effective CAPS activities is lengthy. It includes identifying pest threats; ranking pest risks; engaging scientists and stakeholders to determine the merits of survey to determine a pests status in the United States; allocating funds for surveys at the State level and for special projects; conducting surveys; analyzing the data collected; writing periodic/annual reports; and evaluating the accomplishment of survey and CAPS program annual objectives. The CAPS Program Cycle is provided showing significant milestones including administrative deadlines.

The link to the GPO National Archives and Records Administration website where the CFRs can be reviewed is: http://www.access.gpo.gov/nara/cfr/cfr-table-search.html

DATA MANAGEMENT

The National Agricultural Pest Information System (NAPIS) is the final repository for all Pest Detection and Cooperative Agricultural Pest Survey (CAPS) survey results. As such, all data generated from all 2020 CAPS, PPA 7721 National Priority, and PPQ Pest Detection surveys will be entered into NAPIS. See the documents below for more detail.

- Data Entry Roles and Responsibilities 
- Data Management Guidance
- Data Entry Guides for Selected Taxonomic Groups

The Agency has been capturing data collected by Plant Protection & Quarantine (PPQ) and some PPQ-funded agreements in the Integrated Plant Health Information System (IPHIS). The emphasis has been on PPQ emergency and domestic program pests with regulatory considerations. Given the complexities, nuances of the CAPS program, and the integrated CAPS Information Systems develop at Purdue University, IPHIS cannot support the CAPS program. We realize, however, that PPQ is using IPHIS for various administrative, survey management, and/or programmatic reasons. For PPQ staff that use IPHIS for data management of Pest Detection-funded surveys, PPQ will continue to share Pest Detection survey data with the States as defined and agreed upon in the data sharing and responsibilities article in the General Memorandum of Understanding (MOU) and the

cooperative agreements between PPQ and the States. The Article entitled Data Sharing and Responsibilities, appears in both the General MOU and in each cooperative agreement.

Data management requirements and functions continue to undergo development. Improvements are being made in both IPHIS and NAPIS to support the regulatory and CAPS communities, respectively. These two systems were conceived and developed with two very different purposes in mind. At the present time, both systems are not connected or linked in any way. This likely will be the case for the foreseeable future. Regardless, the PDMT is committed to ensuring that program and cooperator needs are met. The CAPS community will be kept informed, via the NCC and other venues, as to progress regarding data management needs. For 2020, as stated above, PPQ Pest Detection, CAPS, and PPA 7721 National Priority surveys require that NAPIS be the final repository of survey data. See Data Entry Roles and Responsibilities for guidance on entering survey information into the SSF and survey results into NAPIS.

The NAPIS database can be accessed at: https://napis.ceris.purdue.edu/
A system login is required. Contact napis@purdue.edu for assistance.

Negative Data

The documentation of negative data is extremely important and valuable. Negative data from national surveys support trade and exports and benefits American agriculture. The CAPS program strives to insure that all negative data is valid and results from active survey efforts. The CAPS program has developed guidelines to assist in data entry of valid negative data. The file Approved Methodology for Negative Data helps enables one to determine the appropriate pests that can be considered negative for a survey effort based on the survey methodology, trap/lure combination, etc. Data entry will be checked and validated against the approved survey method for each pest on the Priority Pest List. **Data not conforming to the approved method will not be accepted into the database.**

Additional guidance for data entry is given in Data Entry Guides for Selected Taxonomic Groups for selected target pests at the genus and species level. Because of incomplete taxonomy, diagnostic difficulty, lack of survey methodology, or other reasons, some target pests are listed only at the genus level. In certain instances only, it may be appropriate to enter negative data at the genus level. All positive records should be at the species level.

PPQ is striving to assure:

- Survey data and diagnostic results are entered as close to real time as possible, including both positive and negative results;
- Data elements (format, content) are standardized nationally;
- Data will be uploaded into NAPIS as appropriate and made available per existing protocols in the CAPS program;
- Data management processes and information will be provided nationally.

CAPS RECOGNITION

The National Cooperative Agricultural Pest (CAPS) Program wishes to recognize outstanding activities and achievements by members of the CAPS community, including State Survey Coordinators, Pest Survey Specialists, State Plant Regulatory Officials, and State Plant Health Directors. Individuals or groups (which may include additional cooperators) also will be considered. The purpose of the CAPS Recognition program is to recognize individuals or groups for specific achievements and accomplishments resulting from work done in support of Pest Detection activities in the previous calendar year. A call for nominations will be sent out by the NCC during the first week of January. Nominations will be reviewed by the NCC. The CAPS Recognition Nomination Form should be used to nominate worthy individuals or groups.

RESOURCES

The Appendices in previous versions of the Guidelines have been removed in favor of stand-alone documents. The former Appendices have become a standard part of the CAPS and Pest Detection Program and are not specifically tied to the Guidelines. However, these documents are referenced in the Guidelines and can be obtained by following the various links in the Guidelines document, or by navigating to the Guidelines page on the CAPS R&C website. While documents specific to a survey year are found on the Guidelines pages, the most up-to-date documents are always on the Resources page of the CAPS R&C website.

For 2020, a number of files usually found on the Guidelines page have been moved to The National CAPS Committee, CAPS Recognition, and Taxonomic Services pages. Other files can be found on the Resources page. These files will usually not be updated with the publication of the Guidelines, but on an as needed basis. This will reduce the number of files on the Guideline page, and reduce the work required to update the Guidelines annually while still maintaining the information needed to develop work plans and conduct surveys.

National Pest Surveillance Guidelines - 2020

- 2020
  - Guidelines Letter
  - National Pest Surveillance Guidelines

Resources

- Pest Lists
  - Priority Pest List - Commodity
  - Priority Pest List - Economic and Environmental
  - Additional Pests of Concern List
  - Priority Pest Lists (Combined Excel File)
  - Pest Assessment and Prioritization Process
  - Objective Prioritization of Exotic Pests (OPEP model) (Excel File)
  - Introduction to Host Matrix
  - Host Matrix (Excel File)
  - Host Matrix (Online)
  - Summary of Pest List Changes

- Work Plans
  - Infrastructure Work Plan Template
    [updated 2019-05-13]
  - Survey Work Plan Template
    [updated 2019-05-13]
  - Financial Plan Template
    [updated 2020-01-08]
  - Infrastructure and Survey Guidelines
  - Example of a Combined Survey Work Plan
  - Guidance for Selecting Survey Names
  - Guidance for Bundling Delisted Priority Pests NEW
  - Bundling Former Priority Pests NEW

- Accomplishment Reports
  - Infrastructure Report Template
    [updated 2019-05-13]
  - Survey Report Template
    [updated 2019-05-13]

- Survey Information
  - Approved Methodology for Negative Data
  - Survey Summary Form
  - Survey Summary Form Change Request
  - Examples of Bundled Surveys
  - Survey Supplies Best Practices

- Data Management
  - Data Entry Roles and Responsibilities NEW
  - Data Management Guidance
  - Data Entry Guides for Selected Taxonomic Groups

Guidance for Selecting Survey Names

Survey names are used for convenience of bundling common pests within a host, commodity, or habitat, providing a short description of the survey, and keeping track of comparable surveys being conducted over a time period. Additionally, APHIS conducts commodity sector meetings with industry groups (Grape, Grains, Nursery, Seeds, Apple, Berry, Citrus, Forest Products, etc.), and CAPS survey information has regularly been requested in order to brief APHIS and PPQ management ahead of the meeting(s). To facilitate the retrieval of information in the Survey Summary Form, some simple guidance on choosing an appropriate survey name is offered. Naming surveys using the following guidance will help pull the correct information for reports and other requests for information. Matching the survey name in the Survey Summary Form and the work plan is appreciated as well.

- If surveys will be conducted in multiple crops not already listed under a Designed Commodity Survey, choose a survey name that reflects or covers most of the crops, not just one. Often, survey names for these surveys are more encompassing and not specific for any one crop, commodity, or habitat. For example, if surveys will be conducted in soybeans and corn, choose Field Crops Pests, not Corn or Soybeans. Designate soybeans and corn in the Host/Habitat field. Similarly, if the survey will be conducted in conifer and deciduous habitats, or hardwoods and softwoods, choose Forest Pests, and specify the different types in the Host/Habitat field. Another example is for a survey that will be conducted in apple, cherry, peach, and other tree fruits. This is not strictly a Stone Fruit survey, but includes other tree fruits as well. A good choice for a survey name is Orchard Pest Survey or Tree Fruits Pest Survey. Do not try to fit a survey under an existing Designed Commodity Survey when another, more encompassing name is a better fit.

- If surveys will be conducted in one crop, especially when that crop is not listed in a commodity survey, then choose that crop as a survey name. Do not try to fit it into a commodity survey when the survey crop is not listed in the commodity manual. For example, if the survey crop is rice, choose Rice Pest Survey, not Small Grains. The Host/Habitat field also should designate rice.

- If surveys will be conducted exclusively in crops that fall under an existing Designed Commodity survey, then use the commodity survey as the survey name. For example, if the survey will be conducted in tomato, eggplant, potato, and pepper, then Solanaceous is the appropriate survey name. Designate the appropriate commodities in the Host/Habitat field. However, if the survey will be conducted solely in one commodity of an existing multiple commodity survey, then it may be appropriate to follow the guidance above and choose the single crop or commodity as the survey name. Following the example, if the survey will be conducted solely in tomatoes, then it may be appropriate to use Tomato Pest Survey and designate tomato in the Host/Habitat field.

Guidance for Bundling Pests that are Removed from the Priority Pest List

Each year, S&T CAPS Support evaluates and updates the Priority Pest List for CAPS and Plant Protection Act 7721 Goal 1 early detection surveys. The Objective Prioritization of Exotic Pests (OPEP) Impact Assessment model and the Survey and Identification/Diagnostic Feasibility Assessment (Feasibility Assessment; formerly called Post-assessment) are used to objectively review the potential impacts of a pest and the feasibility of survey and identification, respectively. Over the past few years, S&T has used this process to evaluate the pests added to the Priority Pest List prior to the development of the Impact Assessment model and the Feasibility Assessment. If a current Priority Pest is predicted to cause low impacts or lacks effective survey and/or identification/diagnostic methods, it will be removed from the Priority Pest List. In addition, if a pest is federally deregulated or established in the contiguous United States, it will also be removed from the Priority Pest List. The following is guidance on whether or not these pests are suitable for bundling into CAPS and Plant Protection Act 7721 Goal 1 surveys.

1. Federally deregulated pests

- If effective survey and identification/diagnostic methods are available, the pest may be bundled.
- If the pest does not have an effective survey or identification/diagnostic method, then the pest **should not** be bundled.

2. Pests without effective survey or identification/diagnostic methods

- If the pest was removed from the Priority Pest List because it does not have an effective survey or identification/diagnostic method, then the pest **should not** be bundled.

  The pests predicted to cause high impact are a priority for research and methods development. Once effective methods are available, the pest will return to the Priority Pest List.

3. Current Priority Pests predicted to cause low or impact

- These organisms were added to the Priority Pest List before the Impact Assessment was adopted for prioritizing pests. The pests have been evaluated by the Impact Assessment are predicted to cause low impact.
- It is strongly encouraged that low impact pests not be bundled into surveys. If this were a new pest suggestion, the pest would not be added to the list.
- If a pest in this category is bundled into a survey, the National Operations Manager for Pest Detection will reach out to the cooperator to ensure there are specific reasons why this pest should be bundled (trade concerns, etc.).

The Summary of Pest List Changes document is included in the National Pest Surveillance Guidelines each year. The summary provides information about the status of priority pests in 2020 and states whether they are appropriate for bundling. For pests removed prior to 2020, see Bundling Former Priority Pests. This information is also distributed to the National CAPS Committee and Pest Survey Specialists via monthly calls. When preparing work plans, please

refer to Summary of Pest List Changes document. If pests that are identified as “not approved for bundling” are included in work plans, the National Operations Manager for Pest Detection will ask for their removal during the work plan review process.

Questions should be directed to Lisa Jackson (lisa.d.jackson@usda.gov) or Heather Moylett (heather.moylett@usda.gov).

Data Entry – Roles and Responsibilities

This following outlines the role and responsibility of the State Plant Health Director (SPHD), State Plant Regulatory Official (SPRO), Pest Survey Specialist (PSS), and State Survey Coordinator (SSC) in the entering of information and survey results in the Survey Summary Form (SSF) and the National Agricultural Pest Information System (NAPIS), respectively. This guidance arose out of discussions at CAPS breakout sessions at the 2018 Regional Plant Board meetings, and agreed at the 2019 National CAPS Committee (NCC) meeting in Portland, Oregon. This guidance attempts to add clarity to the responsibility of preparing and entering information across programs, and addresses what needs to be done, who does what, and what goes where.

CAPS:	Cooperative Agricultural Pest Survey
PPQ:	USDA, Animal & Plant Health Inspection Service, Plant Protection & Quarantine
PPA 7721:	Plant Protection Act Section 7721, Plant Pest and Disease Management and Disaster Prevention Program

Data: Where Does It Go and Who Is Responsible

1. *CAPS Data*
The data is collected by the SSC and/or other State survey staff under a Pest Detection cooperative agreement between the State and PPQ. It is the SSC's responsibility to enter survey information into the SSF, and prepare and upload survey results into NAPIS.

2. *PPQ Pest Detection Data*
The data is collected by the PSS or other PPQ staff with hours charged to Pest Detection. It is the PSS's responsibility to enter survey information into the SSF, and prepare survey results in the correct format and share with or send to the SSC for upload into NAPIS.

3. *PPA 7721 Goal 1 Survey (Farm Bill)*; Traditional CAPS Cooperator*
The data is collected by the SSC and/or other State survey staff under a PPA 7721 (Farm Bill) cooperative agreement between the State and PPQ. It is the SSC's responsibility to enter survey information into the SSF, and prepare and upload survey results into NAPIS.

**For National Priority Surveys, as denoted in the PPA 7721 Implementation Plan.*

4. *PPA Goal 1 Survey (Farm Bill)*; Non-Traditional Cooperator (see process below)*
The data is collected by individuals, organizations, or institutions, other than those that traditionally participate in the CAPS program, under a PPA 7721 (Farm Bill) cooperative agreement between the individual, organization, or institution and PPQ. The cooperator will prepare survey information and survey results in the correct format, and share with or send to the

SSC for entry into the SSF and upload into NAPIS, respectively. The SPHD/SPRO/PSS should aid the SSC in identifying and reaching out to these cooperators in their State. The SSC should provide the cooperator with survey templates before the survey season begins.

5. *Other PPQ Pest Program Agreements and PPA Non-National Priority Surveys*
The data is collected by the SSC and/or other State survey staff under a PPQ Pest Program or PPA 7721 cooperative agreement (not Pest Detection or PPA National Priority Survey) between the State and PPQ, e.g., Gypsy Moth, EAB, ALB, etc. Survey information is not entered into the SSF. Survey results should be entered into the database required in the agreement. The data should be entered by the SSC or whoever is listed in the agreement. In some instances, local PPQ staff may assist in data entry if there is agreement by the SPRO, SPHD, PSS, and SSC. The data also may be entered into NAPIS if the SPRO, SPHD, PSS, and SSC determine that this is appropriate.

If the state CAPS committee or a PPQ agreement determines that the SSC will need to enter data into IPHIS, IPHIS training may be needed. The SSC should first approach their PSS or SPHD for assistance to help locate IPHIS training.

6. *Other PPQ Pest Programs (by PPQ Staff)*
The survey work is performed by PPQ staff for other PPQ Pest Programs. Survey information is not entered into the SSF. Survey results should be entered into the database required by the Program. The data also may be entered into NAPIS, if the SPRO, SPHD, PSS, and SSC determine that it is appropriate. If NAPIS data entry is desired, the PSS should prepare the data in the correct format, and share with or send to the SSC for upload into NAPIS.

Type of Survey	**Required database**	**Who enters data**
CAPS	NAPIS	SSC
PPQ Pest Detection	NAPIS	PSS prepares for the SSC
PPA Goal 1 Survey (Farm Bill)*; traditional CAPS cooperator	NAPIS	SSC
PPA Goal 1 Survey (Farm Bill)*; non-traditional cooperator	NAPIS	Other cooperator prepares data for SSC
Other PPQ agreements	As stated in agreement. NAPIS is optional.	SPRO, SPHD, PSS, and SSC to determine
Other PPQ programs (survey work performed by PPQ staff).	Per Program guidance. NAPIS is optional.	SPRO, SPHD, PSS, and SSC to determine

Process for Non-Traditional Cooperators Conducting PPA 7721 Goal 1 Surveys: Survey Summary Form and NAPIS Data Entry

- The ADODR will email the non-traditional cooperator and the SSC when the PPA 7721 Spending Plan is announced, effectively matching them up to work together and identifying their responsibilities.
- The SSC will send the cooperator an Excel version of the SSF for them to complete.
- The cooperator will fill out the Excel form and send back to the SSC.
- The SSC will enter this into the PPA 7721 SSF.
- The SSC will send the cooperator an Excel spreadsheet for the cooperator to prepare survey results, e.g., My Survey spreadsheet.
- The cooperator will prepare survey results and send to the SSC to enter into NAPIS.
- The SSC will enter the prepared data into NAPIS.

If the SPHD, SPRO, PSS, and/or SSC needs clarification or aid in identifying cooperators for PPA 7721 surveys, please contact John Bowers (john.bowers@usda.gov), Feridoon Mehdizadegan (feridoon.mehdizadegan@usda.gov), or Lisa Jackson (lisa.d.jackson@usda.gov).

INTERNATIONAL STANDARDS FOR
PHYTOSANITARY MEASURES

ISPM 6
Surveillance

Produced by the Secretariat of the
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1995 Sent for consultation.

1996-05 CEPM-3 revised draft text for adoption.

1997-11 29th FAO Conference adopted the standard.

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2016-05 SC revised and approved draft for first consultation.

2016-07 First consultation.

2017-05 SC-7 revised and approved draft for second consultation.

2017-07 Second consultation.

2017-10 Steward revised draft based on consultation comments.

2017-11 SC revised in meeting and approved draft for adoption by CPM.

2018-04 CPM-13 adopted the standard.

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Adoption

This standard was adopted by the Thirteenth Session of the Commission on Phytosanitary Measures in April 2018.

INTRODUCTION

Scope

This standard describes the requirements for surveillance, including the components of a national surveillance system.

References

The present standard refers to ISPMs. ISPMs are available on the International Phytosanitary Portal (IPP) at https://www.ippc.int/core-activities/standards-setting/ispms.

Definitions

Definitions of phytosanitary terms used in this standard can be found in ISPM 5 (*Glossary of phytosanitary terms*).

Outline of Requirements

Surveillance is one of the core activities of national plant protection organizations (NPPOs). It provides NPPOs with a technical basis for many phytosanitary measures; for example, phytosanitary import requirements, pest free areas, pest reporting and eradication, and pest status in an area.

National surveillance systems relate to both general surveillance and specific surveillance. A national surveillance system comprises surveillance programmes and the infrastructure required to implement them. Surveillance protocols describe the methodology of surveillance, whether general or specific. Supporting elements to consider for a national surveillance system include phytosanitary legislation and policies, prioritization, planning, resources, documentation, training, auditing, communication and stakeholder engagement, pest diagnostics, information management systems and pest reporting.

BACKGROUND

Surveillance is essential in plant protection. Article IV of the IPPC prescribes general provisions for the organizational arrangements for national plant protection and specifically states that the responsibilities of an official national plant protection organization shall include "the surveillance of growing plants, including both areas under cultivation (*inter alia* fields, plantations, nurseries, gardens, greenhouses and laboratories) and wild flora, and of plants and plant products in storage or in transportation, particularly with the object of reporting the occurrence, outbreak and spread of pests, and of controlling those pests, including the reporting referred to under Article VIII paragraph 1(a)". According to the same article the "designation, maintenance and surveillance of pest free areas and areas of low pest prevalence" are a responsibility of NPPOs. In addition, Article VII.2(j) specifies that "contracting parties shall, to the best of their ability, conduct surveillance for pests and develop and maintain adequate information on pest status".

Surveillance underpins several activities, including:

- the early detection of pests new to an area
- the compilation of host pest lists, commodity pest lists and pest distribution records (e.g. to support pest risk analysis and phytosanitary certification)
- the establishment and maintenance of pest free areas, pest free places of production, pest free production sites or areas of low pest prevalence
- the determination of pest status in an area

- pest reporting to other countries
- measuring changes in the characteristics of a pest population or pest incidence (e.g. for areas of low pest prevalence or for research)
- delimiting a pest population in an area
- eradication and pest management.

IMPACTS ON BIODIVERSITY AND THE ENVIRONMENT

This standard may contribute to the protection of biodiversity and the environment by helping countries develop systems to provide reliable and well-structured information on the presence, absence or distribution of pests in an area and information about hosts or commodities as pathways. These pests could include organisms relevant to biodiversity (e.g. invasive alien species).

REQUIREMENTS

1. Components of a National Surveillance System

A national surveillance system should be an integral part of a country's plant health system.

A national surveillance system may be structured into programmes (e.g. for specific pest species or groups of pests) and should include the supporting infrastructure required to implement them (Figure 1 and section 3).

Surveillance programmes may include the following types of surveillance:

- General surveillance: a process whereby information on pests of concern in an area is gathered from various sources. Sources may include national or local government bodies, research institutions, universities, museums, scientific societies (including those of independent specialists), producers, consultants, the general public, scientific and trade journals, unpublished data, and the websites of other NPPOs or international organizations (e.g. the IPPC, regional plant protection organizations, the Convention on Biological Diversity).
- Specific surveillance: a process whereby information on pests of concern in an area is obtained by the NPPO over a defined period. NPPOs actively gather specific pest-related data. Specific surveillance includes surveys that are conducted to determine the characteristics of a pest population or to determine which species are present or absent in an area.

NPPOs should develop surveillance protocols describing how to conduct general and specific surveillance.

Elements to be considered when an NPPO develops a national surveillance system are illustrated in Figure 1.

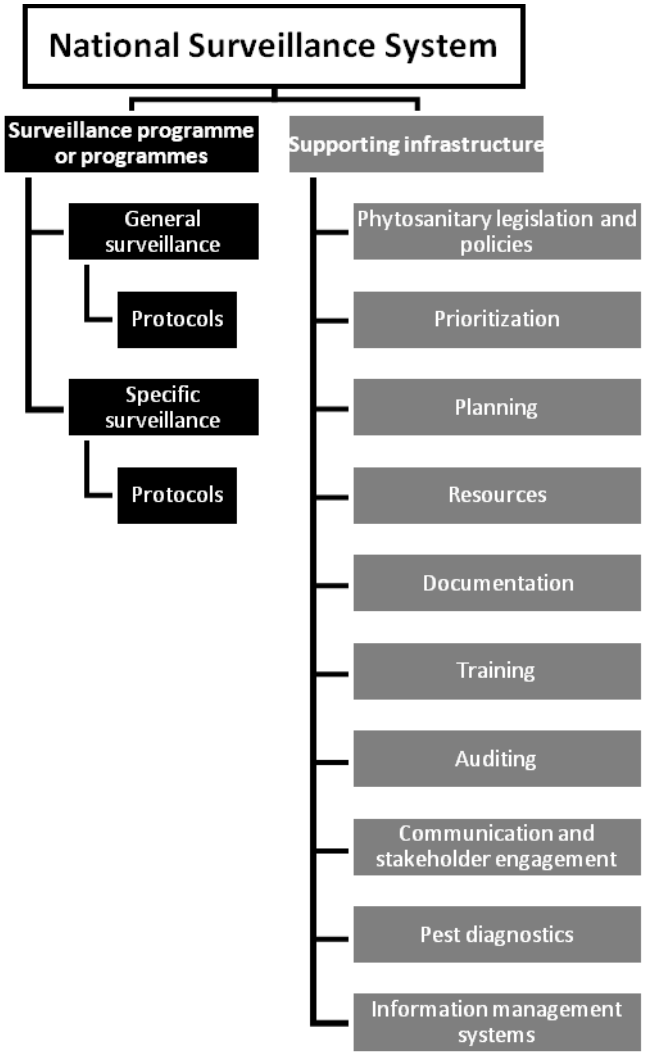

Figure 1. A model national surveillance system, comprising surveillance programmes (general and specific) and supporting infrastructure.

2. Designing Surveillance Programmes

Surveillance programmes should, as appropriate, be long term and regular with well-developed methodology, so that results may be compared and analysed. Surveillance programmes may include elements of general and specific surveillance (Figure 1). The methodology of surveillance should be described in surveillance protocols. The protocols developed by NPPOs should aim to achieve the purpose of the surveillance programme.

Surveillance protocols should provide clear instructions for carrying out a surveillance activity in a consistent manner that can be used by various operational personnel at different locations. Methods used in the surveillance protocols may be distinguished by, for example, the means by which data are collected, where the surveillance is carried out, the aim of the surveillance or whether the methods are focused on the pest, host or pathway.

Surveillance methods should be based on international or regional guidelines where they exist or be developed by the NPPO. Surveillance managers and officers should be aware of current methodologies associated with specific groups of pests and should ensure that the methods are used appropriately to deliver reliable surveillance outcomes.

NPPOs may need to develop or adopt new methods for new or emerging pests. In all cases, surveillance methods should be based on relevant scientific, geographical and statistical information, and be operationally feasible.

2.1 General surveillance

2.1.1 Approaches to general surveillance

NPPOs may use a range of approaches to general surveillance with varying degrees of involvement by the NPPO – from reports received by the NPPO to increasingly structured and targeted programmes run entirely by the NPPO. Examples of general surveillance approaches are listed below:

- receipt of reports from the general public (i.e. initiated by the public)
- scanning of sources of pest information
- general encouragement of public reporting through official channels (e.g. via a free call phone number in response to publicity about plant health or educating on the advantages of reporting pests)
- encouragement of public reporting on specific pests – this is useful where the target species is known and public awareness is already high (e.g. through the use of public awareness materials) and during known periods of high pest incidence (e.g. breeding seasons)
- encouragement of reporting by groups involved with specific crops (e.g. producers, community groups)
- involvement of specific groups in plant health activities organized by the NPPO to obtain surveillance data (e.g. scientific societies, plant health clinics, agricultural extension services)
- cooperation with other governmental services (e.g. forestry or environmental services)
- cooperation with institutions that carry out research
- general surveillance carried out by NPPO staff.

NPPOs should take into account the following factors when developing approaches to general surveillance:

- costs and resource requirements are usually lower with less involvement of the NPPO
- good results are more readily achieved for easily noticed and recognizable pests (e.g. beetles and caterpillars) or symptoms
- detection of hidden pests (e.g. wood-boring beetles, or pathogens that are symptomless in some hosts) is usually less effective
- surveillance may not need to be restricted to a defined period
- the proportion of useful reports received is usually lower for less-structured or less-targeted programmes
- the usefulness of the information (e.g. pest diagnosis, monitoring methodologies) may depend on how current it is
- systems may be needed to manage large numbers of reports from general surveillance, in order to identify those which are relevant
- the validity of the data may need to be verified
- increasing the sensitivity and specificity of a general surveillance programme may result in higher costs.

When conducting general surveillance, NPPOs should evaluate the reliability of the information, which depends on the source of the information (e.g. reports from the general public versus entomologists). Guidance on evaluating the reliability of a pest record is provided in ISPM 8 (*Determination of pest status in an area*).

2.1.2 Elements of general surveillance

NPPOs should recognize that general surveillance can be an effective supplement to specific surveillance. For example, general surveillance can provide the context for undertaking specific surveillance to accurately determine the pest status in an area or site. The NPPO may also decide that the result of general surveillance is sufficient to determine the pest status.

The elements of general surveillance may include:

- mechanisms to facilitate reporting:
  - legislative obligations (for the general public, growers or specific agencies)
  - cooperative agreements (between NPPOs and, for example, stakeholders or scientific societies)
  - the use of contact personnel to enhance communication channels to and from NPPOs
  - public education and awareness raising initiatives
- tools for collecting reports from the public:
  - publicly accessible free call phone numbers
  - systems for free delivery of samples
  - smartphone and mobile device applications (apps)
  - social media channels and email
- systems or processes to enhance the quality of reporting:
  - a filtering process at the point of initial contact
  - the ability to send and receive images for initial identification
  - publicity material to allow submitters to self-filter (e.g. leaflets and websites with pest information and photos)
  - training for submitters
- means to consolidate, analyse and communicate the information gathered:
  - integrated national, regional or global databases and alert systems for emerging pests
  - spatial modelling tools embedded in web-based systems (e.g. geographical information systems)
  - mathematical and simulation models of data collected (e.g. Bayesian networks).

NPPOs may encourage reporting by ensuring timely feedback (e.g. identification of specimens submitted) to those providing reports.

2.2 Specific surveillance

Three types of surveys may be utilized by NPPOs depending on the objectives of the specific surveillance programme:

- detection survey: conducted in an area to determine if pests are present (or absent)
- delimiting survey: conducted to establish the boundaries of an area considered to be infested by or free from a pest
- monitoring survey: ongoing survey to verify the characteristics of a pest population.

These surveys may be developed for pests in relation to one or more areas, sites, hosts, pathways or commodities and should include the collection of pest presence and absence records.

The result of every observation or sample taken should be recorded, including when the pest was not found. Data on pest absence collected during surveys can be used by NPPOs to support a country's pest status and pest free areas, as well as its trade and market access.

The most important factor for the validity of pest absence data is the design of the specific surveillance programme. Elements that should be considered in the design of specific surveillance programmes are presented in sections 2.2.1 to 2.2.9.

2.2.1 Purpose

The purpose of the surveillance should include background on the phytosanitary objectives and the reasons why the information is required (e.g. early detection, assurance for a pest free area, pest free production site or area of low pest prevalence, commodity pest list).

2.2.2 Scope

The scope describes the extent of the area to be covered by the surveillance, both geographically and in terms of the production system (whole or parts) or uncultivated area.

2.2.3 Target

The target of the surveillance should be described. The target may be a single or multiple pests, hosts, pathways or commodities, or a combination of any of these.

2.2.4 Timing

Timing may include the start and end of the survey and the frequency of visits by field personnel. These may be determined by, for example, the life cycle of the pest, the phenology of the pest's hosts or the scheduling of pest management programmes.

2.2.5 Area or site selection

Area or site selection may be determined by:

- any previously reported presence, distribution and resulting pest status of the pest
- the previously reported absence of a pest
- the undetermined pest status of an area
- the biology of the pest
- the suitability of the climate and other ecological conditions in the area for the pest
- the geographical distribution of host plants and production areas
- the degree of isolation of an area
- pest management programmes (at commercial and non-commercial sites)
- the points of consolidation, handling or storage of the harvested commodity
- proximity to:
    - points of entry (for pathways, including people)
    - sites where imported commodities are marketed, stored, processed or used as planting material
    - tourist activities.

To achieve effective use of resources, surveillance for absent or recently intercepted pests (e.g. in a consignment) may best be concentrated on those places that are at higher risk of the primary spread of the pest.

If the objective of surveillance is to delimit an outbreak, the area selection should be focused on the immediate surroundings of the known infested area and to sites of the same habitat type that, according to exercises of trace-forward and trace-back, may also have become infested. Surveillance that is focused on specific areas or sites within a larger area may be complemented by random sampling of sites in the whole area. For surveillance of pests that are widely distributed, a more systematic selection of sites over the whole area to be surveyed is more appropriate.

2.2.6 Statistical design

NPPOs should define the population units (in the statistical sense) to be surveyed; that is, the population as a collection of similar units of concern. Defining the statistical population may be based on pest biology, a pathway or an entity upon which phytosanitary measures may be applied. The population unit may be of various types, for example:

- a geographical unit, comprising the area covered with a trapping grid
- a field planted with a host crop
- an individual host plant in an unmanaged or uncultivated area
- a storage facility.

It is often not feasible to survey all units of an entire population. Therefore, NPPOs may decide to perform the surveillance on a sample taken from the population. The five most common sampling methods, which may be applied alone or in combination, are:

- simple random sampling
- systematic sampling
- stratified sampling
- cluster sampling
- targeted sampling.

Statistical sampling methods described in ISPM 31 (*Methodologies for sampling of consignments*) or other appropriate methods should be used as appropriate. They are often used when the data captured are of a binary nature (presence/absence). The statistical analysis of the data should be based on an appropriate method and may require expert advice.

NPPOs are encouraged to state the level of confidence and the minimum level of detection of the pest survey.

2.2.7 Data collection

NPPOs should determine the data elements to be captured during surveillance and how these data will be transferred to the information management system (e.g. by the use of forms and electronic devices).

2.2.8 Biosecurity and sanitation

When developing surveillance protocols, NPPOs should consider procedures to ensure that spread of pests is not facilitated during a survey.

NPPO officers, or other personnel authorized to undertake surveillance, should follow any biosecurity procedures that are in place at facilities, places of production or sites being surveyed.

2.2.9 Samples

The surveillance protocol should include a description of when and how samples are to be taken, collected, handled and prepared in order to ensure specimen integrity and preservation and timely delivery to the laboratory for diagnostic processing. Each sample should be given a unique identifier code (e.g. label, number or bar code) to enable tracking and follow-up from the point of collection in the field, through the stages of processing and identification, to storage in a formal reference collection, if applicable.

3. Supporting Infrastructure

3.1 Phytosanitary legislation and policies

A national surveillance system should be supported by phytosanitary legislation and policies that ensure that authority, responsibilities and financial resources are assigned to the appropriate administrative levels.

Contracting parties should include the following provisions in their phytosanitary legislation or in official procedures:

- the legal power, process and protection for NPPO officers or other authorized personnel to undertake surveillance activities, including entering premises or land to inspect plants, plant products or other articles that may be capable of harbouring pests, or to collect samples for testing
- the establishment and maintenance of facilities for diagnostics or appropriate access to up-to-date diagnostic services to ensure that pests are properly identified
- mandatory domestic reporting (e.g. by research institutions, diagnostic laboratories, non-governmental organizations, industry, growers, local government or scientific groups) to the NPPO on detection or suspected presence of:
  - targeted pests
  - pests new to an area, host or pathway.

Surveillance policies should cover responsibilities related to administration, finance and governance within the NPPO, including funding for surveillance activities, procedures for surveillance deliverables and training and qualification of personnel.

3.2 Prioritization

Priorities for surveillance may vary from country to country depending on the needs for surveillance information.

Factors to consider when prioritizing surveillance programmes may include:

- impact of pests on crops and biodiversity
- existing national, bilateral, regional or international phytosanitary obligations and arrangements
- implementation of pest management programmes
- emerging pests at the local, national, regional or international level and potential benefits of their early detection
- whether surveillance is cost-effective
- the availability of the resources and methods required to implement a surveillance programme
- the quality and reliability of the expected surveillance results, given the required resource expenditure
- national lists of priority pests prepared using pest risk ranking methods or similar analytical techniques
- trade and market access
- food security
- findings of a pest in a consignment originating from an area where the pest was not known to be present (e.g. notification from trading partner or detection during export certification).

3.3 Planning

Once priorities for surveillance have been established, NPPOs should develop plans for the implementation of surveillance programmes, taking into account phytosanitary legislation and policies.

3.4 Resources

Surveillance should be adequately resourced with appropriate human, financial and physical resources. Diagnostic services resources are an essential part of a national surveillance system.

Human resources may include personnel in administration, operations, technical functions, management and logistics. NPPOs should ensure that personnel are appropriately trained and qualified.

Financial resources may be required for surveillance logistics and staff travel (e.g. transport costs, accommodation and meals), equipment purchase and maintenance, staff training, specimen processing

and diagnosis, maintenance of an information management system, facility maintenance and emergency response expenses for unplanned surveillance activities.

Physical resources may include field equipment (including personal protective equipment), vehicles, appropriate storage facilities and consumables used for carrying out surveys and monitoring, reference materials and other documentation, computers, georeferencing devices and other equipment for data input and storage, software for information management systems, staff uniforms (or valid identification) and materials for raising public awareness.

3.5 Documentation

NPPOs should develop administrative procedures for maintaining official documentation, undertaking surveillance (including technical instructions in the form of surveillance protocols), and managing or having access to specimen collections. Documentation is essential for promoting consistency, improving interpretation and reliability of results, and facilitating audit and verification of activities under a national surveillance system.

3.6 Training

Training, assessment and regular review of personnel involved in surveillance activities are integral components of a national surveillance system. NPPOs should develop and implement procedures to ensure that the competencies of staff are maintained.

Personnel involved in surveillance activities should be adequately trained in plant health and related fields (including relevant pests, their biology, hosts and symptoms of infestation) and data management. Personnel should also be trained in biosecurity, sampling methods, handling of samples, preservation and transportation of samples for identification, and record keeping associated with samples.

Training materials should be developed and updated regularly to ensure that the competencies of personnel are developed and maintained. Training and reference materials should be readily available to all personnel involved in surveillance activities.

3.7 Auditing

NPPOs should conduct regular audits of their general and specific surveillance, including activities conducted by authorized entities, to ensure that activities are carried out in accordance with relevant surveillance protocols.

3.8 Communication and stakeholder engagement

NPPOs are encouraged to engage through effective and timely communication with stakeholders and relevant experts on the design, planning, implementation and review of national surveillance systems, as well as on priorities for surveillance and on expected outcomes. Arrangements may include:

- internal communication within the NPPO (e.g. meetings, briefings, newsletters)
- external communication by the NPPO (e.g. official reporting, industry notices)
- formal stakeholder engagement (e.g. forums, newsletters, awareness raising and training initiatives)
- formal and informal national surveillance networks that develop and implement surveillance programmes, and their channels to communicate information to and from the NPPO.

3.9 Pest diagnostics

Diagnostic services are fundamental to the success of a national surveillance system. NPPOs should ensure that appropriate diagnostic services are accessible. Some diagnostic protocols are available as annexes to ISPM 27 (*Diagnostic protocols for regulated pests*).

Characteristics of the diagnostic services include the following:

- they have expertise in disciplines relevant to pest (and host) identification

- they have adequate facilities and equipment
- they have access to specialists for verification where necessary
- they have facilities for record keeping
- they have facilities for processing and storing of reference specimens
- they use standard operating procedures, where appropriate and available.

3.10 Information management systems

Information management systems should be used as a repository or centralized database for all results obtained.

Information management systems should be designed for the collection, consolidation, management, validation and reporting of surveillance data and information for analysis, including records of presence and absence of pests.

It is critical that surveillance data and information are collected in a uniform manner to ensure their integrity from collection to reporting. NPPOs should develop and implement minimum data sets, for use across all surveillance programmes in accordance with section 4 of this standard. These data sets should form the basis of a surveillance information management system. Information management systems should ensure traceability of samples taken during surveillance activities. Data verification procedures should also be an integral element of information management systems.

Information management systems should allow easy retrieval of data and information to meet national and international surveillance-related reporting requirements.

4. Pest Records

NPPOs should determine how long pest records are required to be retained, taking into account that they may be needed to support declarations of pest status. For example, fruit fly absence pest records may be needed to support pest free areas for fruit flies in accordance with ISPM 26 (*Establishment of pest free areas for fruit flies (Tephritidae)*). Reference to the survey methodology used should be included in the pest records.

Pest records from specific surveillance should include, as a minimum, the following information:

- scientific name and taxonomic position of the pest
- scientific name and taxonomic position of the host
- locality (e.g. location code, address, geographical coordinates)
- date of survey and name of surveyor
- identification date, method of identification and name of identifier.

When relevant and available, the above information should be included in pest records from general surveillance.

Pest records should also include, to the extent possible, the following information, especially if the presence of a quarantine pest is suspected:

- codes for pest and host scientific names (e.g. EPPO codes)
- verification date, method of verification and name of verifier
- references (e.g. diagnostic protocol used)
- phytosanitary measures taken.

Additional information may be useful; for example, the nature of the pest and host relationship, pest incidence, the growth stage and the origin of the host plant affected, whether the host plant is grown only in greenhouses in the area, the plant part affected or the means of sample collection (e.g. attractant trap, soil sample, sweep net).

The NPPO should act as the national repository for pest records.

5. Analysis and Reporting

Tools such as spatial mapping (geographical information system), modelling and statistical analysis software can be used to manage surveillance data and to facilitate their presentation and reporting.

The information to be reported will depend on the type of surveillance conducted. In all cases, reports should provide data on the target (pest, host, pathway or commodity of concern), the area covered, the number of observations or samples taken, the results obtained and, if appropriate, the statistical reliability.

The means by which data are consolidated, analysed and reported may also be used to predict the probable behaviour of pests or vectors, including the probability of establishment and spread, in order to support decision-making on pest management and further surveillance.

6. Transparency

NPPOs should, on request, provide information on methods used to conduct surveillance and on pest status and distribution.

Appendix 5: DRAFT ISPM: Revision of ISPM 8: *Determination of pest status in an area* (2009-005)

Status box

This is not an official part of the standard and it will be modified by the IPPC Secretariat after adoption.	
Date of this document	2019-12-09
Document category	Draft revision of ISPM
Current document stage	*To* CPM-15 (2020) for adoption
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Adoption

[To be inserted following adoption]

INTRODUCTION

Scope

[263] This standard describes the use of pest records and other information to determine pest status in an area. Pest status categories are defined and a description of the use of pest status for pest reporting is provided.

[264] This standard also provides guidance on the possible sources of uncertainty associated with information used to determine pest status.

References

[265] The present standard refers to ISPMs. ISPMs are available on the International Phytosanitary Portal (IPP) at https://www.ippc.int/core-activities/standards-setting/ispms.

IPPC. 1997. *International Plant Protection Convention*. Rome, IPPC Secretariat, FAO.

Definitions

[266] Definitions of phytosanitary terms used in this standard can be found in ISPM 5 (*Glossary of phytosanitary terms*).

Outline of Requirements

[267] National plant protection organizations (NPPOs) use pest status for various activities, such as pest risk analysis, the establishment of and compliance with phytosanitary regulations, the establishment of lists of regulated pests, and the establishment and maintenance of pest free areas, areas of low pest prevalence, pest free places of production and pest free production sites.

[268] Pest status is determined exclusively by the NPPO responsible for the area concerned and is categorized under “presence” or “absence”.

[269] The quality of the reported information and the reliability and uncertainty of the data are important considerations to be taken into account by the NPPO when determining pest status in an area.

BACKGROUND

[270] Pest records and other information are used by NPPOs to determine the presence or absence of a pest in an area. The NPPOs of importing and exporting countries need information concerning the status of pests for pest risk analysis, the establishment of and compliance with phytosanitary regulations, the establishment and maintenance of pest free areas, areas of low pest prevalence, pest free places of production and pest free production sites, and other activities.

[271] The purpose of this standard is to provide guidance on the determination of the pest status in an area using, in particular, information from surveillance and pest records as described in ISPM 6 (*Surveillance*). Pest status is a part of the content of pest reports as described in ISPM 17 (*Pest reporting*).

IMPACTS ON BIODIVERSITY AND THE ENVIRONMENT

[272] This standard may contribute to the protection of biodiversity and the environment by helping countries to determine the status of pests whose introduction and spread may have an environmental impact.

Determining and describing pest status in a consistent manner may help countries identify risks associated with such pests and apply phytosanitary measures to protect biodiversity and the environment.

REQUIREMENTS

1. Purpose of Pest Status Determination

[273] Determination of pest status in an area is a vital component of various activities undertaken to implement the IPPC and covered by the principles described in ISPM 1 (*Phytosanitary principles for the protection of plants and the application of phytosanitary measures in international trade*) and elaborated in other ISPMs.

[274] NPPOs may use pest status information when undertaking activities such as:

- pest risk analysis
- considering market access requests
- planning national, regional or international pest surveillance and management programmes
- establishing and complying with phytosanitary regulations
- establishing and maintaining lists of pests present in an area
- establishing and updating lists of regulated pests
- establishing and maintaining pest free areas, areas of low pest prevalence, pest free places of production and pest free production sites
- exchanging information as outlined in the IPPC.

2. NPPO Responsibilities

[275] Contracting parties have obligations under the IPPC (Article VIII.1 (a)) to report "the occurrence, outbreak or spread of pests". Pest status should be determined exclusively by the NPPO responsible for the area concerned.

[276] The NPPO should:

- base its determination of pest status on the most reliable and timely information available
- maintain pest records and supporting evidence, taking into account that they may be needed to support the determination of pest status
- re-evaluate pest status if appropriate.

3. Information Used to Determine Pest Status

[277] Information from pest records or other sources should be used as a basis for determining the appropriate pest status among the categories described in section 4.

[278] The information that should be included in pest records is described in ISPM 6.

[279] Information is available from many sources and has varying levels of reliability. Old information is less likely to be reliable about the current status of a pest than recent information because of changes in pest distribution, taxonomy and detection methods.

[280] Highly reliable and current sources should be used to determine pest status. However, when such sources are not available, lower reliability sources may be used. This may increase uncertainty but can also help to identify information gaps which can be addressed through surveillance (see ISPM 6) and pest diagnostics (see ISPM 27 (*Diagnostic protocols for regulated pests*)).

[281] Sometimes it may be difficult or not possible to determine pest status because of uncertainty associated with the available information. Sources of uncertainty may include:

- limited information on pest biology

- taxonomic revisions or ambiguity
- contradictory or outdated information
- difficulties with or unreliability of survey methodologies
- difficulties with or unreliability of diagnostic methodologies
- insufficient information on pest–host associations
- unknown aetiology
- detection of signs or observation of symptoms without finding the pest
- insufficient information on the pest distribution in an area
- unreliability of the information sources.

[282] When an NPPO is not able to determine pest status, the NPPO should indicate that this is the case.

4. Describing Pest Status in an Area

[283] The NPPO should decide upon the most appropriate description of the pest status in an area, based on information from various sources including results from surveillance (see ISPM 6).

[284] Pests under quarantine for diagnostic or research purposes (e.g. in a laboratory), or pest interceptions on imported consignments under detention, do not affect the pest status in an area.

[285] Similarly, detection of a pest in an area, confirmed by surveillance not to represent a population, may not affect the pest status in the area. Determination of pest status in an area requires evidence and expert judgement on the current distribution of a pest in the area. This judgement should be based on a synthesis of available information from various sources, also taking into account historical pest records, where available.

[286] Pest status should be determined for an area identified and specified by the NPPO. When pest status is determined, the area concerned and the date should be indicated. Information on pest free areas, pest free places of production or pest free production sites may be added to the report (see ISPM 4 (*Requirements for the establishment of pest free areas*) and ISPM 10 (*Requirements for the establishment of pest free places of production and pest free production sites*)). Pest status should be described according to the categories identified below.

4.1 Presence

[287] If a pest is present and reliable information is available, the pest status should be further characterized using the categories provided in Table 1.

Table 1. Pest status – Present

Pest status	Pest status description
Present: widely distributed	The pest is present throughout the area, where conditions are suitable.
Present: not widely distributed and not under official control	The pest is present in a part or parts of the area and is not under “official control” in accordance with Supplement 1 (Guidelines on the interpretation and application of the concepts of “official control” and “not widely distributed”) to ISPM 5 (*Glossary of phytosanitary terms*).
Present: not widely distributed and under official control	The pest is present in a part or parts of the area and is subject to “official control” in accordance with Supplement 1 (Guidelines on the interpretation and application of the concepts of “official control” and “not widely distributed”) to ISPM 5 (*Glossary of phytosanitary terms*). The purpose of the official control should be stated alongside the pest status determination.

Pest status	Pest status description
Present: at low prevalence	The pest is present in the area but its prevalence is low in accordance with ISPM 22 (*Requirements for the establishment of areas of low pest prevalence*).
Present: except in specified pest free areas	The pest is present in the area except in parts of the area which are free from the pest in accordance with ISPM 4 (*Requirements for the establishment of pest free areas*). These parts should be described alongside the pest status determination.
Present: transient	The pest is present but the evidence supports the conclusion that the pest is not expected to establish because conditions (e.g. hosts, climate) are not suitable for establishment or appropriate phytosanitary measures have been applied.

[288] In some cases, it may be necessary to provide additional information about pest presence, for instance:

- the extent of a localized outbreak
- official control measures applied
- the pest has only been reported under specific conditions, such as:
  - on specific hosts
  - in enclosed structures (e.g. in a greenhouse)
  - in botanical gardens
  - in the environment but not on a plant host (e.g. in soil or water)
  - in urban areas
  - at certain times of the year.

4.2 Absence

[289] If a pest is absent and reliable information is available, the pest status should be further categorized using the categories provided in Table 2.

Table 2. Pest status – Absent

Pest status	Pest status description
Absent: pest not recorded	Surveillance supports the conclusion that the pest is absent and has not been recorded (see ISPM 6 (*Surveillance*)).
Absent: the entire country is pest free	The entire country is established and maintained as a pest free area in accordance with ISPM 4 (*Requirements for the establishment of pest free areas*).
Absent: pest records invalid	Pest records indicate the presence of a pest, but the conclusion is reached that the records are invalid or no longer valid, such as in the following cases: - changes in taxonomy have occurred - misidentification has occurred - the record or records have not been confirmed - there are errors in the record or records - changes in national borders have occurred.
Absent: pest no longer present	Pest records indicate that the pest was present in the past, but surveillance indicates that the pest is no longer present (see ISPM 6 (*Surveillance*)). The reason or reasons may include: - climate or other natural limitation to pest perpetuation - changes in cultivated host species or cultivars - changes in production practices.

Pest status	Pest status description
Absent: pest eradicated	Pest records indicate that the pest was present in the past. Documented pest eradication measures were implemented and were successful (see ISPM 9 (*Guidelines for pest eradication programmes*)). Surveillance confirms continued absence (see ISPM 6 (*Surveillance*)).

[290] Lack of information due to inadequate or insufficient surveillance activities does not constitute a basis for determining pest absence.

5. Exchange of Pest Status Information between NPPOs

[291] Information pertaining to pest status in an area contributes to pest reports (see ISPM 17). It is the responsibility of an NPPO to provide pest records and other supporting evidence on pest status upon request from another NPPO.

[292] There may be some cases where a pest status declared by an NPPO is questioned by another NPPO (e.g. when there are repeated interceptions by importing countries or contradictory pest records). In such cases, bilateral contacts between NPPOs should be made to clarify the situation, and if needed the pest status should be revised by the NPPO responsible for the area concerned.

[293] NPPOs should:

- use the categories of pest status set out in this standard when exchanging pest status information, to promote harmonization and transparency
- in a timely manner, inform other NPPOs and their regional plant protection organization, where appropriate, of relevant changes in pest status according to ISPM 17.

NAPIS Data Definitions

Open configuration options

Observation Number*		User-assigned alphanumeric value must be unique in combination with observation year, pest code and ID of the current user.
Observation Date*		Observation date or date when survey was complete, in YYYYMMDD format. For historical data values of 01 may be used for month and day.
Data Source*		The agency that supplied the data.
State County*		FIPS code for the county where the observation was made.
Site*		The crop or host plant or site surveyed. When unknown the Crop Situation is required.
Crop Life Stage		Life stage of the crop at the time of survey.
Crop Situation		The situational context of the survey.
Latitude	NOTE A	Observation location latitude coordinate using degree or decimal format.
Longitude	NOTE A	Observation location longitude coordinate using degree or decimal format.
Funding Year	NOTE D	The year of the agreement that supported this survey.
Funding Source	NOTE D	The source of funding that supported this survey.
Survey Name	NOTE D	The bundle or commodity name that includes this survey.
Pest*		Pest or biocontrol agent observed.
Pest Life Stage		Predominant life stage observed. If multiple life stages are observed, record in the Notes field.
Pest Status*	NOTE B	Records up to four pest status parameters.
Survey Method*		Survey process description.
Trap		The trap used in the survey procedure.
Lure		The lure used in the survey procedure.

Quantification		Raw count, percentage or average pest organisms observed. Interpreted with Descriptor Units.
Descriptor Units		Defines Quantification, Total Units Checked, and Positive Units.
Total Units Checked		The number of units (as defined in Descriptor Units) that were checked.
Positive Units		The number of units (as defined in Descriptor Units) that were positive for the pest.
Observation Duration		Days from the beginning of the survey to the observation date.
Diagnostic Lab		The facility where the pest identification was performed.
Confirmation Method		The diagnostic method employed for pest identification.
Confirmation Date		Date when pest identification was returned.
Biocontrol Target	NOTE C	Host of the beneficial organism recorded in the 'Pest' field.
Sample ID		P. ramorum-only identifier equal to the NPDN/state/federal number. Required for lab sample records.
Zip Code		P. ramorum-only code required if latitude and longitude are not present.
Notes		Additional information in free text.
Sample Description		Standardized description of sample composition.

* Required field

NOTE A: Latitude / Longitude

Latitude and longitude can be entered in either decimal degree or degree, minute, second format. Data entry software recognizes the format based on the presence of a decimal in the value. If there is no decimal the entry is evaluated as degree, minute, second format . Data entry validation:

- rejects records containing location coordinates outside of the state-county for the record.
- The range of values allowed in the minutes or seconds fields is 00 - 59. Values of sixty (60) or greater are invalid.

NOTE B: Pest Status

The Pest Status code is used to describe the known status of a pest at the time of survey. The status can be used to describe the conditions at a specific location or for an entire County. The Pest Status code is made up of two basic parts.

- The first character (+ or -) describes the basic presence or absence of the pest.
- The suffix (1, 2, 3, A, B, C or D) further describes the pest population.

Code	Description
+	Positive (Present)
-	Negative (Absent/Not Present In Sample)
1	New or Reintroduced in the US
2	New or Reintroduced in the State
3	New or Reintroduced in the County
A	Known to be Established
B	Found, Not Known to be Established
C	Being Eradicated
D	Eradicated
I	Interception

Absence/Negative results (-) is used to indicate that the survey resulted in the **ABSENCE** or **NEGATIVE** findings for the target pest/pathogen. The minus sign, in most cases, is used by itself. Modifiers A and B should not be used with an **ABSENCE** or **NEGATIVE** find.

Declaration of Eradication (-D) indicates the pest/pathogen is considered to have been officially declared **eradicated**. The pest has been eliminated or exterminated from the area. Used following an active eradication effort (+C, +BC) or when pest populations did not establish and the population **died out** and can no longer be found. Further, when using this code you need to enter the appropriate a Survey Method code of 80000 (Eradicated).
In addition the following fields are to be left BLANK for eradication records:

- **Quantification, Descriptor Units, Total Units, Positive Units, Observation Duration**

Presence/Positive results (+) is used to indicate that the survey resulted in the **PRESENCE** or **POSITIVE** findings for the target pest/pathogen. In most cases, this code must be used in combination with one or two additional modifiers.

Known to be Established (+A): indicates that the pest is/was naturalized in an area. It exhibits(ed) a permanent, self-maintaining population. Established pests are able to successfully survive and reproduce from one growing season to the next. A "migratory" pest may be considered established when it reoccurs in most years in a given area, especially those areas in its "normal migratory pathway". Therefore, pests do not have to overwinter in an area to be established there. An established pest is/was one that can/could reliably (but not necessarily) be found in a given area in most years. Endemic pests are in this category. A point to remember is

that "established" must be considered with respect to a particular political boundary (i.e. country, state, county). A pest may be established in the US, but not necessarily established within every state or county.

Found, Not Known to be Established (+B) refers to a find that does not meet the definition of an established pest. If the issue of establishment is in doubt, a declaration by the appropriate pest regulatory authority must be sought, issued, and accepted. 'Interception', 'exotic' 'incidental', and regulatory incident' are descriptors which have been used to relate to pests not known/declared to be established. It is important to be aware of the frames of reference set by geographic and functional perspectives. Agencies with nationwide responsibilities may consider a pest not to be established even though they are widespread through much of the nation, but not in the declaring state. Likewise, a regulatory agency may have a different perspective than a purely scientific biological institution. Knowing whether or not a pest is established is one of the major benefits of performing pest surveys. By doing so, a baseline for occurrence can be established, and deviations from the baseline can be definitively determined.

Being Eradicated (+C) means that an active program is in progress to eliminate or exterminate a pest from an area. No time frames for project completion are implied. However, when the pest is eradicated and/or the project has been completed, appropriate records should be submitted to update the database (See pest status code "–D").

"New" or "Reintroduced" records are indicated by a **new** U.S, State, or County record (+1, +2 or +3). You must attach the suffix "A" or "B" to these records to indicate whether or not the pest is established. Because this will be the first occurrence of this pest being reported, it will be doubtful whether enough background is known to determine whether it is established or not. Therefore you should report all "new" records as "Not Established" (B).

- +1B: Indicates New or Reintroduced in the **U.S.** and is not known to be established.
- +2B: Indicates New or Reintroduced in the **State** and is not known to be established.
- +3B: Indicates New or Reintroduced in the **County** and is not known to be established.

These records should be entered within 48 hours after final confirmation.

Common pest status code combinations

Status Code	**Definition**
-	Survey confirms ABSENCE/NEGATIVE finding for the target pest/pathogen.
-D	The pest/pathogen is considered to have been officially declared eradicated, or pest populations did not establish and can no longer be found.
+1B	New or Reintroduced in the U.S. and is not known to be established.
+2B	New or Reintroduced in the STATE and is not known to be established.
+3A	New or Reintroduced in the COUNTY and is **known** to be established.

+3B	New or Reintroduced in the COUNTY and is not known to be established.
+A	Pest was found and is known to be established.
+B	Pest was found and is not known to be established.
+AC	Pest is known to be established and is under an official eradication program.
+(1/2/3)BC	Pest is not known to be established and is under an official eradication program. Include numeric tag if this is a New or Reintroduced in (US/State/County) observation.
+I	Pest has been intercepted.

NOTE C: Biocontrol Target

This field records the Biocontrol Target for the beneficial organism recorded in the Pest field. The fields of the record (i.e. Quantification) contain information for the organism in the Pest field recorded as a beneficial/biocontrol agent. The user should enter one record containing the information for the beneficial organism in the Pest field and a second record containing the information about the Biocontrol Target. Biocontrol release records should not be entered in the database unless the targeted host has previously been surveyed and records entered.

NOTE D: Funding Fields

As of January 2015 all records require funding information. Template for CAPS or Farm Bill funded surveys are pre-populated with the funding field, pest and survey method values. For state-funded, other, and public finds, please see the suggestions below.

If this was a **state-funded** survey you might use something like:

Funding Year – eg. 2015

Funding Source – State (4)

Survey Name – State-Funded Survey (75) or choose from the Survey Name dictionary

If a find was **other-funded** and/or brought to your attention by an alert citizen, you might use:

Funding Year – eg. 2015

Funding Source – Other (6)

Survey Name – No Survey (57) or choose from the Survey Name dictionary

Domestic Core Survey Data Team

Draft **Final Report**

June 2018

Dave Kowalski, Rich Johnson and Sherrena Harrison

Summary

Working with PPQ Cross Functional Working Groups (Appendix 1) and State Plant Health Directors (Appendix 2), along with extensive reviews of systems used to manage domestic survey data (Appendix 3), the Domestic Core Survey Data Team has defined core data for PPQ domestic surveys (Appendix 4). These core data are organized within a relational hierarchy that follows the workflows associated with domestic survey's data collection and management. The hierarchy covers the categories of Metadata, Geographic site, Geographic sub-site, Activity and Sample.

Metadata provides details associated with a survey's data, documenting the name and type of survey program, taxonomic name of the target pests, the survey situation and the office and state conducting the survey. Geographic, Activity and Sample categories comprise data collected during field operations, documenting the "where," "when" and "what" associated with daily program operations. Geographic site and sub-site data relate to the attributes of a property where PPQ conducts activities, Activity data document the work performed on-site, and Sample data relate to the status and results of any collected specimens.

Background

In FY17, Plant Protection and Quarantine's Cross-Functional Management Group formed the Domestic Cross-Functional Management Group (Domestic CFMG). The purpose of the group is to coordinate communication among domestic managers in order to increase the cohesion and effectiveness of PPQ's domestic programs. One of the Domestic CFMG's working groups focused on domestic survey efforts relating to data collection needs and analysis, and reviewed the information management processes of collected data. In support of their work the working group formed the Domestic Core Survey Data Team, comprised of a data steward, national program manager and information technology project manager, with the task of identifying core survey data.

The Team's goal was to identify core survey data by defining the minimum data associated with domestic field surveys that provide quality data for mapping, management and program evaluation. Core survey data include data name, definition, values, and guidance on how to organize the data (how the data fields relate to each other). Based on this foundation, standards for domestic systems development and program documentation can be developed across all programs.

Core data elements represent a set of predetermined and standardized data used across PPQ Core Functional Areas. Defined correctly, core survey data allows PPQ to obtain information that supports emergency response, detection, delimitation and eradication management activities. Core survey data also addresses those data used to make daily operational decisions, from data common across all programs to specific data unique to making program-specific decisions.

Core survey data does not include additional information collected for purposes of making administrative decisions, nor does it include additional information needed to document and validate approved survey methods.

The Team worked with Cross Functional Working Groups to define the initial set of data required by each program. Concurrently, the Team reviewed the data gathered in multiple PPQ and cooperator systems used to gather and manage domestic survey data. From these two sources a draft list of common core data elements were developed and presented to a group of State Plant Health Directors for validation.

Results

Core survey data are segmented into five hierarchical and relational categories: Metadata, Geographic site, Geographic sub-site, Activity and Sample. Metadata, *figure 1*, provides details associated with survey data. This category records the name and type of survey program, taxonomic name of the target pest(s), the survey situation (detection, delimitation, etc.), and the office and state conducting the survey. In addition, metadata can document when the survey method is approved for negative determination, an important piece of information for many surveys including CAPS. In general, metadata are documented prior to survey season and not part of field data collection, although office names should be linked to specific activities when multiple offices are involved in a field survey.

Category	Hierarchy	Data Field	Description
Metadata	I	SURVEY_NAME	Name of survey program
		SURVEY_TYPE	Type of survey program (Trap, Visual, Sweep, Sample)
		TAXONOMIC_NAME	Pest or host taxonomic name; link to full taxa details or a pest complex such as EWB/BB
		SURVEY_SITUATION	Situation of the specific field work being conduted
		STATE	State name or code
		OFFICE_NAME	Office owning the survey activity; links to activities

Figure 1- Metadata core data

The Geographic, Activity and Sample core survey data categories comprise data collected during field operations. The trapper or surveyor documents where and when they conducted a field activity and what they did (e.g. “place a trap,” “look for disease symptoms,” “collect a sample”). This information is recorded so field personnel and supervisors can summarize past efforts and plan for future work.

Geographic site and Geographic sub-site, *figure 2*, data relate to the attributes of a property, farm field or other place where PPQ conducts activities. Given the nature of field surveys, this spatially-aware data set may be hierarchical depending upon the survey program and environment. For instance, when placing a detection trap in a rural environment the coordinates may be the only easily attainable geospatial information. For another program or survey environments, such as residential, the program may need to define the residence as a site and relate individual trees residence. This hierarchical structure offers reporting and operational benefits and provides further value if the site becomes regulated and requires additional PPQ activities associated with inspections and treatments.

Geographic data include a descriptive name for a site, type of site (following NAPIS and/or IPHIS values), optional grid and/or address information, spatial information recorded in point (coordinates) or polygon (shape) geographic data, and one to many points within the site called sub-sites. Custom attributes may be linked to the site and/or sub-site depending on program needs.

Category	Hierarchy	Data Field	Description
Geographic	II	SITE_NAME	Represents a property, could be generated from ID values, or manually entered.
		SITE_TYPE	Type of property (NAPIS Crop Situation)
		ADDRESS	Location address; office optional
		CITY	Location city; office optional
		STATE_CODE	Location state; office optional
		ZIP_CODE	Location zip code; office optional
		COUNTY_NAME	Location county
		GRID	Grid information (National Grid preferred, state grid optional)
		GEOGRAPHY	Geographic/geometric data of the site (point or polygon)
		SITE_COMMENTS	Site notes/comments
Geographic	III	SUBSITE_NAME	Descriptive name of the site for the occurance of a field activity (e.g. trap number)
		LATITUDE	WGS84 compatible value to six significant digits
		LONGITUDE	WGS84 compatible value to six significant digits
		PROGRAM_SITE_DATA	Program custom attributes for the site (e.g. "trap height")
		SUBSITE_COMMENTS	Subsite notes/comments; office optional

Figure 2- Geographic core data

Activity data, *figure 3*, documents the work performed at the sub-site(s) within a site. These data record date, type of activity performed (trapping, sampling or visual), and name of the trapper or survey team. Depending upon the program and or office needs, the name of the host, trap and lure may be documented, as can custom attributes.

Category	Hierarchy	Data Field	Description
Activity	IV	ACTIVITY_DATE	Date of activity; NAPIS typically records trapping period (Observation Duration)
		ACTIVITY_ACTION	Service activity; eTRAP/Roam use combination of fields or tables to define action
		NAME_TEAM	Name of trapper, surveyor or field team
		PROGRAM_ACTIVITY_DATA	Program custom attributes for the activity (e.g. "left flyer with homeowner")
		ACTIVITY_COMMENTS	Activity notes/comments; office optional

Figure 3- Activity core data

Sample data, *figure 4*, documents the status and results of collected specimens. These data include sample identification number, sample type (insect, plant, etc.), and status. Using SAMPLE_NAME, links to identification data can provide additional details such as number of specimens collected, life stage and units (per NAPIS descriptors). Unlike geographic and activity data these data are rarely documented in the field but later provided by approved identifiers and laboratories.

Category	Hierarchy	Data Field	Description
Sample	V	SAMPLE_NAME	Identification tag on sample collected during activity for diagnostic routing
		SAMPLE_TYPE	Type of sample
		SPECIMEN_STATUS	Sample results from identifiers/NIS

Figure 4- Sample core data

The final characterization of core data addresses the nuances associated with individual programs and operations. Appendix 4 lists core data grouped into three areas of consideration ~

- Common core data: foundational data that are required to be collected by all programs and stored for multiple uses that go beyond the end of a program's field season
- Program core data: based on foundational data, program core data includes additional data identified by a program that are require to be captured by PPQ and cooperators (detailed in cooperative agreements) and are stored for multiple uses that go beyond the end of a program's field season
- Operational data: along with program core data, these data may be requested by field operations as necessary to efficiently execute operations and therefore need to be collected using mobile technologies; these additional data fields do not require storage past the end of a program's field season

Next Steps

The Team's task was to identify domestic core survey data. From this comes the next steps of communicating and deploying these standards to appropriate groups, including

BISSM

- Data standards when developing the Domestic Pest Management Framework and other future domestic data systems
- Data element definitions in a system's System Of Record Notification
- Defining long-term storage needs

Domestic Roundtable Communications Team

- Program documentation standards for data
- Data standards for cooperative agreements

Appendix 1 – Cross Functional Working Groups

- Coconut Rhinoceros Beetle
- Grasshopper/Mormon Cricket
- Gypsy Moth
- Biocontrol programs
- Black Stem Rust
- European Grapevine Moth
- Imported Fire Ant
- Japanese Beetle
- Khapra Beetle
- Light Brown Apple Moth
- Fruit Fly
- Karnal Bunt
- Plum Pox Virus
- *Globodera* (PCN/GN)
- Emerald Ash Borer
- Citrus Health Response Program
- Cotton

Appendix 2 - State Plant Health Directors

- Greg Rentschler
- Patrick McPherren
- Carl Lightfoot
- Craig Kellogg

Appendix 3 – Domestic systems reviewed

- Integrated Plant Health Information System (IPHIS): multiple pest and disease programs
- eTRAP: fruit fly program
- Esri geodatabases: gypsy moth, biocontrol, IFA, European cherry fruit fly, mollusk, nursery, port environs
- Roam geodatabase: Asian longhorned beetle
- National Agricultural Pest Information System (NAPIS): multiple pest and disease programs

Appendix 4 – Core data for PPQ domestic surveys

Category	Hierarchy	Data Field	Common Core Data (Foundational Data)	Program Core Data (Cooperative Agreements)	Operational Data (Field Data Collection)	Description
Metadata	I	SURVEY_NAME	*	*	*	Name of survey program
		SURVEY_TYPE	*	*	*	Type of survey program (Trap, Visual, Sweep, Sample)
		TAXONOMIC_NAME	*	*	*	Pest or host taxonomic name; link to full taxa details or a pest complex such as EWB/BB
		SURVEY_SITUATION	*	*	*	Situation of the specific field work being conducted
		STATE	*	*	*	State name or code
		OFFICE_NAME	*	*	*	Office owning the survey activity; links to activities
Geographic	II	SITE_NAME	*	*	*	Represents a property, could be generated from ID values, or manually entered.
		SITE_TYPE	*	*	*	Type of property (NAPIS Crop Situation)
		ADDRESS			*	Location address; office optional
		CITY			*	Location city; office optional
		STATE_CODE			*	Location state; office optional
		ZIP_CODE			*	Location zip code; office optional
		COUNTY_NAME	*	*	*	Location county
		GRID	*	*	*	Grid information (National Grid preferred, state grid optional)
		GEOGRAPHY	*	*	*	Geographic/geometric data of the site (point or polygon)
		SITE_COMMENTS	*	*	*	Site notes/comments

Appendix 4 – Core data for PPQ domestic surveys (*continued*)

Category	Hierarchy	Data Field	Common Core Data (Foundational Data)	Program Core Data (Cooperative Agreements)	Operational Data (Field Data Collection)	Description
Geographic	III	SUBSITE_NAME	*	*	*	Descriptive name of the site for the occurrence of a field activity (e.g. trap number)
		LATITUDE	*	*	*	WGS84 compatible value to six significant digits
		LONGITUDE	*	*	*	WGS84 compatible value to six significant digits
		PROGRAM_SITE_DATA		*	*	Program custom attributes for the site (e.g. "trap height")
		SUBSITE_COMMENTS			*	Subsite notes/comments; office optional
Activity	IV	ACTIVITY_DATE	*	*	*	Date of activity; NAPIS typically records trapping period (Observation Duration)
		ACTIVITY_ACTION	*	*	*	Service activity; eTRAP/Roam use combination of fields or tables to define action
		NAME_TEAM	*	*	*	Name of trapper, surveyor or field team
		PROGRAM_ACTIVITY_DATA		*	*	Program custom attributes for the activity (e.g. "left flyer with homeowner")
		ACTIVITY_COMMENTS			*	Activity notes/comments; office optional
Sample	V	SAMPLE_NAME	*	*	*	Identification tag on sample collected during activity for diagnostic routing
		SAMPLE_TYPE	*	*	*	Type of sample
		SPECIMEN_STATUS	*	*		Sample results from identifiers/NIS

Cooperative Agricultural Pest Survey
Pollinator Bycatch Guidance for 2020 Surveys

From time-to-time, cooperators report bumble bees and pollinator bycatch in Cooperative Agricultural Pest Survey (CAPS) early detection surveys. The tricolored bucket trap (green lid, yellow funnel, and white bucket) is used in combination with species-specific lures to detect eight exotic lepidopteran pests, including *Autographa gamma* (silver Y moth), *Helicoverpa armigera* (Old World bollworm), *Spodoptera littoralis* (Egyptian cottonworm), and *Spodoptera litura* (cotton cutworm). Each pest species represents a threat to U.S. agriculture, including small grains, soybeans, corn, tomato, and cotton. Early detection surveys are necessary to prevent the introduction and potential spread of these pest species.

Guidance for the 2020 Survey Season

Trap Guidance

Until scientific evidence is available that supports using a different trap, the tricolored bucket trap is the only color combination approved for use in CAPS surveys using plastic bucket traps. Previous guidance stated that green traps (green lid, funnel, and bucket) would be available on a case-by-case basis. At this time, green traps are no longer offered as an alternative due to lack of efficacy.

General Guidance

If pollinator bycatch is a concern at a survey site:

- Do not place bucket traps in locations with active honey bee hives and/or bumble bee colonies. Be especially mindful of agricultural areas where honey bees or bumble bees are used to pollinate crops,
- Do not place bucket traps in locations where people/entities are actively managing the land to encourage wild, native pollinator communities (e.g. community gardens, organic farms & gardens), and
- Discontinue surveys at locations where you observe bycatch that is higher than normal in your experience.

Note: Many variables influence pollinator movement within cropping systems and the environment. It is not a guarantee that following this guidance will prevent or reduce pollinator bycatch.

Specific Guidance to Avoid *Bombus affinis* (Rusty Patch Bumble Bee)

Bombus affinis has been listed by the U. S. Fish & Wildlife Service (FWS) as Endangered under the Endangered Species Act. Endangered species are animals and plants that are in danger of becoming extinct. *Bombus affinis* once occupied grasslands and tallgrass prairies of the Upper Midwest and Northeast, but most grasslands and prairies have been lost, degraded, or fragmented by conversion to other uses. Bumble bees need areas that provide nectar and pollen from

flowers, nesting sites (underground and abandoned rodent cavities or clumps of grasses), and overwintering sites for hibernating queens (undisturbed soil) (FWS Fact Sheet).

Historically, *B. affinis* was broadly distributed across the eastern United States and Upper Midwest, from Maine in the U.S. and southern Quebec and Ontario in Canada, south to the northeast corner of Georgia, reaching west to the eastern edges of North and South Dakota. Its range included 28 states, the District of Columbia and 2 provinces in Canada. Since 2000, this bumble bee has been reported from only 13 states and 1 Canadian province: Illinois, Indiana, Iowa, Maine, Maryland, Massachusetts, Minnesota, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, Wisconsin – and Ontario, Canada (FWS Fact Sheet).

Bombus affinis has declined by 87 percent in the last 20 years. The species is likely to be present in only 0.1% of its historical range. There are many potential reasons for the decline of *B. affinis*, including habitat loss, intensive farming, disease, pesticide use and climate change. With the odds seemingly stacked against *B. affinis*, there is a role for everyone in conserving this beneficial pollinator. Your actions will also help a host of bees, butterflies and birds that share resources with the rusty patched bumble bee (FWS RPBB Home page). The CAPS program aims to do its part.

For CAPS surveys, traps should not be placed in areas where *B. affinis* has been observed. The U. S. Fish and Wildlife Service provides a map of where *B. affinis* may be present. They update the map as they receive new observations. Please check the map throughout the trapping season in case areas have changed.

https://www.fws.gov/midwest/endangered/insects/rpbb/rpbbmap.html.

- The red areas on the map represent High Potential Zones where *B. affinis* is likely to be present. Do not place traps in these areas.

- The yellow areas of the map represent Primary Dispersal Zones that surround High Potential Zones. *Bombus affinis* may not be present in these areas, however, avoid placing traps in these areas.

- The blue areas of the map represent Uncertain Zones. These are areas with older detection records (2000-2006), and may not represent an up-to-date situation. However, it is best to avoid placing traps in these areas as well.

- The grey areas of the map represent the historical range of B. affinis. Bombus Affinis has not been observed or collected since before the year 2000. Trapping may occur in these areas.

The CAPS program is pursuing Section 7 consultation with the U. S. Fish & Wildlife Services. A successful outcome is the issuance of an incidental take permit that may allow trapping in the restricted areas. For now, however, surveys in 2020 should follow the above guidance and refer to the *B. affinis* map to avoid any possible interaction or bycatch of *B affinis*.

See the following U. S. Fish & Wildlife Service links for more information on *B. affinis*.

FWS RPBB Home Page
https://www.fws.gov/midwest/endangered/insects/rpbb/index.html

FWS RPBB Fact Sheet
https://www.fws.gov/midwest/endangered/insects/rpbb/factsheetrpbb.html

Specific Guidance to Avoid *Bombus franklini* (Franklin's Bumble Bee)

Bombus franklini is proposed to be listed on the Endangered Species List, and may very well be in the near future. Historically, *B. franklini* occupied portions of Douglas, Jackson and Josephine Counties in southern Oregon, as well as Trinity and Siskiyou Counties in northern California. Since the late 1990s, *B. franklini* observations have declined significantly, and none have been observed since 2006, despite an expanded and focused survey effort. See the Species Status Assessment for more detailed information.

For CAPS surveys, avoid placing traps in the Oregon and California counties listed above. As this bumble bee has a very restricted natural and historical range, avoiding survey with plastic bucket traps in these counties will avoid any interaction with or bycatch of *B. franklini*.

See the following U. S. Fish & Wildlife Service link for more information on *B. franklini*.
https://ecos.fws.gov/ecp0/profile/speciesProfile?sId=7022

2020 NCC Meeting
Chicago, Illinois

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