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

February 7-8, 2018

National Detector Dog Training Center

Newnan, Georgia

Supplemental Information

Annual National CAPS Committee Meeting
February 7 – 8, 2018
National Detector Dog Training Center
Newnan, Georgia
Agenda

Wednesday, February 7, 2018 (8:00 am – 5:00 pm)

- Welcome, NCC Introductions
  - NCC 10-year anniversary
- State and PPQ Welcome and Overview
- Meeting Overview
  - Why we are here and what we need to talk about
- NCC Bylaws review
  - Representation and Terms
    - Who else needs to be included?
    - More State reps, NPB BOD rep?
- PPQ Vacancies
  - Field Ops PSS and PSS Functions
  - S&T CAPS Support and S&T Realignment
- 2017 NCC Meeting review
  - Action Items
- CAPS Performance in 2017; Plans for 2018
  - Performance Measures, Metrics, and Funding
- Budget and Funding
  - CAPS and Farm Bill Goal 1 Survey
- National Pest Surveillance Summit
  - Update & Planning Status
  - Discussion of Format, Topics, and Presentations
- 2019 Pest Surveillance Guidelines
  - Review of the Current Guidelines
  - New Additions and Possible Changes
  - Work Plans
    - Template

Separate vs. Combined Agreements
Timing/Deadlines
Funding Formula – is it sustainable?
Indirect Rates
Data Management
Results in NAPIS and Accountability Report
Consequences for non-compliance
Mobile Technology / Data Collection
Data Sharing
State CAPS Committee Meetings
Facilitation training for SSCs and PSSs
Mentoring/Shadowing: Peer-to-Peer Toolbox
Reporting

- Cooperative Agreements
  - USDA EzFedGrants – trials, tribulations, suggestions, etc.

- Survey Supplies
  - Trap & Lure Orders
  - Guidance: Lures, etc.

- Farm Bill
  - FY18 Goal 1 Survey – Work Plans Due Date
  - FY18 Update Going into FY19
    - Goal 1 Survey Guidance and Funding
  - Goal 1 Survey Format Debrief

- CAPS and Farm Bill G1 Survey

Thursday, February 8, 2017 (8:00 am – 5:00 pm)

- CPHST CAPS Support
  - Current Status
  - Objective Prioritization of Exotic Pests (OPEP)
    - Status Update / Timelines / Next Steps
    - Pathogen and Mollusk Impact Models
    - Likelihood of Introduction Model
    - Survey Feasibility Model

OPEP Summaries

Changes to the Pest Lists

Criteria, e.g., host damage

Commodity/Taxon Surveys and Manuals

Updates and Needs

Review of manual Introduction sections

Proposed change in online format/presentation of manual Introductions

Approved Methods for Pest Surveillance

Changes for 2018 season

Approved Methods table – comments, suggestions

Host Matrix – comments, suggestions

Research/Method Development Needs

- Pest Risk Mapping

  Update and Future Strategies

- Purdue Update

  NAPIS Data Updates

  Site field (similar to SSF for reporting purposes)

  Live vs dead records

  Interceptions vs environmental detections

  Data entry: Descriptive and Quantification fields

  My Surveys – Download by Survey and/or Pest

  CAPS Resource & Collaboration

  Re-imagining the site

  Survey Summary Form

  Combined SSF

  Change Request Process

  State View of PPQ SSF

  CAPS and Farm Bill Accountability Reports

  Reporting Tools

  Survey Methods Reconciliation

  Trap, Sample, and Visual Surveys

- Identification Services

  Certification of State Identifiers / Screeners

  Access to Carnegie / Mississippi for EWB/BB samples

National Confirmation Protocols / Sample Flow

- CAPS Learning Project – Lisa Keefe, TX A&M
  Review of Guidebook

- CAPS Webinar Series
  Topics, Schedule

- CAPS Program Communication

- CAPS Recognition 2018

- Additional Topics and Discussion

- Review of Action Items and Responsibility

- Summary, Closing and Last Thoughts

NCC 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:

- 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.
- 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.

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 Survey Coordinator.
PPQ- Program Leader for CAPS Support, Center for Plant Health Science and Technology (CPHST), Science & Technology (S&T)	Provide 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.
PPQ – Farm Bill Section 10007 Program Representative	Provide Farm Bill Section 10007 perspective, strategy, and focus, and insures that CAPS and Farm Bill surveys and projects are linked and share common guidance; responsible for communicating NCC and CAPS topics, issues, and guidance with the Farm Bill 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 communicating NCC and CAPS topics and issues with the national SPHD constituency.

NCC Member	Role and Responsibility*
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 current *Cooperative Agricultural Pest Survey (CAPS) National Guidelines*, 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 Survey Coordinator in Policy Management , PDEP
- National Operations Manager for Pest Detection
- CPHST Program leader for CAPS Support in Science & Technology

NCC Membership Selection

- The National Survey Coordinator, the National Operations Manager for Pest Detection, and the CPHST, Program Leader for CAPS Support serve on the NCC as long as they remain in their position.
- The Farm Bill representative will be chosen by the Farm Bill Management Team (FBMT) in consultation with the NSC, and approved by the PDMT. They will serve on the NCC as long as they remain in their position with the Farm Bill Program, or that the FBMT 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 funding, and the tight linkage of CAPS survey guidance and methodology in Farm Bill surveys.

- The four National Plant Board representatives will be appointed by their respective Regional Plant Board President in consultation with the NSC, and approved by the PDMT. They will serve a three-year term unless renewed.
- The two State Plant Health Directors will be 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 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 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. One rule for member selection overrides all others: No two members on the NCC can be from the same state. This insures that the core constituencies of the CAPS community are represented by 12 states on the NCC. Selection of new members will depend on the present representation on the NCC. Other factors that may be considered are regional location (north, south, east, west), size (large, small), and pest risk factors (ports, pathways), among others.

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 a website(s) accessible to the NCC. 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 NSC 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.

Beginning 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.

Invited Participant

Both non-government and government parties will be invited to provide their unique perspectives on specific issues, on an ad hoc basis, as approved by the NCC. Many of these individuals will be invited to participate in conference calls and meetings throughout the year, depending upon the agenda. Some of the invited participants may include university cooperators, PPQ Information Technology (IT) staff, CAPS Information System (CAPSIS) User Services, The Nature Conservancy, National Invasive Species Council (NISC), USDA National Institute of Food and Agriculture (NIFA), US Forest Service, APHIS Native American Working Group representative, Native American tribal representatives, and industry organizations. 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 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 and 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 Survey Coordinator will break the impasse by making the final decision, with follow up discussions with the PDMT to review the decision.

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 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 NSC, 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 Survey Coordinator, 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@aphis.usda.gov

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

Name	Affiliation	Title	Position on committee	Term	2013	2014	2015	2016	2017	2018	2019	2020	
John Bowers	PPQ PHP	National Policy Manager - PD	NCC - Chairperson	Permanent	x	x	x	x	x	x	x	x	
Lisa Jackson	PPQ FO	National Operations Manager - PD	NCC	Permanent	x	x	x	x	x	x	x	x	
Richard Zink	PPQ CPHST	Laboratory Director - CAPS Support	NCC	Permanent	x	x	x	x	x	x	x	x	
Michael Tadle	PPQ FBMT	Farm Bill Section 10007 Program	NCC	Permanent	x	x	x	x	x	x	x	x	Present Year
Eric Ewing	PPQ FO	State Plant Health Director	NCC	3-year	x	x	x	x	x	x	x	x	1st Term
Greg Rentschler	PPQ FO	State Plant Health Director	NCC	3-year	x	x	x	x	x	x	x	x	1st Term
Megan Abraham	State	Central Plant Board - SPRO	NCC	3-year	x	x	x	x	x	x	x	x	1st Term
Kimberly Rice	State	Eastern Plant Board - SPRO	NCC	3-year	x	x	x	x	x	x	x	x	1st term
Tyson Emery	State	Southern Plant Board - SPRO	NCC	3-year	x	x	x	x	x	x	x	x	1st Term
Helmuth Rogg	State	Western Plant Board - SPRO	NCC	3-year	x	x	x	x	x	x	x	x	1st term
Tiffany Mauro	PPQ FO	Pest Survey Specialist	NCC	3-year	x	x	x	x	x	x	x	x	1st Term
Darrell Bays	PPQ FO	Pest Survey Specialist	NCC	3-year	x	x	x	x	x	x	x	x	1st Term (replaced Mark Hitchcox June 2016
Dale Anderson	State	Central Plant Board - SSC	NCC	3-year	x	x	x	x	x	x	x	x	2nd Term
Emilie Inoue	State	Eastern Plant Board - SSC	NCC	3-year	x	x	x	x	x	x	x	x	1st Term (last 2 years of Ruth's term)
Sherry Aultman	State	Southern Plant Board - SSC	NCC	3-year	x	x	x	x	x	x	x	x	2nd term
Ian Foley	State	Western Plant Board - SSC	NCC	3-year	x	x	x	x	x	x	x	x	2nd term

Year terms are from January 1 - December 31
All terms begin January 1, 2008
In order to establish a staggered rotation, some terms initially were less than 3 years

x = permanent member
x = first year in a 3 yr term
x = second year in a 3 year term
x = third year in a 3 year term

Action Items from the 2017 NCC Meeting in McAllen, TX

1. Action item: Lisa: Each year, update the Survey Summary Form with new funding amounts for each state.

Update: Completed. This is on Lisa's radar to do each year in June.

2. OPEP planned to run Brown Marmorated Stink Bug (BMSB) through the model in 2016, but did not report back to CAPS.

Action item: Lisa and Sherry will follow up with OPEP lead.

Update: The insect was run through the model. Lisa shared the results with Sherry:
"We assessed *Halymorpha halys* in our development of the arthropod model. The model predicted 'high impact' and this was consistent with the economics team's assessment of U.S. impacts."
And regarding how organic production is considered in the model:
"We don't really treat organic production any differently than conventional production. Specifically, damage is damage and controls are controls. Integrated pest management techniques are used in both production systems, and we don't score one any higher than the other. So, the important thing for organic producers to do is to report damage and management techniques. For the model, we would discuss organic production in the summary and would try and include any controls in the appropriate model sections."

3. OPEP summaries are not currently available. OPEP is partnering with PestLens and will post summaries on this system. The summaries may be behind a login, and if so, summaries will be uploaded to CAPS site.

Action item: Lisa and Heather will follow up with OPEP.

Update: OPEP summaries will be made available through the PestLens website (https://pestlens.info/). You must login to the PestLens website in order to access the OPEP summaries. Obtain PestLens login credentials by registering on the website. We will not post the OPEP summary pdfs to the CAPS R&C site directly. Instead, links to OPEP summaries will be provided, ensuring that the most current version is available and easily accessible.

4. Action item: Discuss how to improve PPQ, CAPS, and Farm Bill survey planning and submission. Can we capture which pests are found by each survey? How best to improve efficiency across pest surveillance? For example, in Maine, EWB/BB is the only federal survey, and the state does the more expansive surveys, including nursery surveys**.**

Update: PPQ, CAPS, and Farm Bill processes all happen in a relatively short period of time during late summer/early fall. States should be discussing planning for all these surveys during their annual State CAPS Committee or similar meeting. Everyone should know what each other is planning. NAPIS data entry requires Funding Year, Funding Source, and Survey Name. A report should indicate the results from each survey.

5. Action item: Review the CAPS Performance Measures and Pest Detection Metrics. How does your constituency want to see this? How else should the data be presented? Interactive metrics? Charts? Customizable by Survey or State?

Update: Completed, no feedback received.

6. Action item (Lisa): Put together a good table with a standard format that can be used in the template for work plans.

Update: Completed. Included in the work plan template for 2018.

7. Action item (NCC): Let's figure out how to make a good automated work plan template by the time of the guidelines (4/22) and a good accomplishment report template by summer. Ask for feedback from constituency and make suggestions to John/Lisa. Maybe we can start with a pilot program with new templates in one or two states.

Update: An automated or dynamically-generated work plan template is not possible at this time. The variation from state to state would make this difficult, and likely would default to something very similar to the Word template now used. We will, however, keep this in mind for a future action.

8. Action item: How can we get the work plan/Survey Summary Form to have the most current pest list? Maybe route it through the SPHDs? Maybe the PSSs? What time of year is good to submit information to the states? Maybe list those changes during guidelines?

Update: Currently, a Summary of Pest List Changes is published every year with the Guidelines. We will consider a companion document on changes to the approved methods from the prior year. These will appear on both the current year Guidelines page and the Resources page. Additionally, we will look into the feasibility of capturing all emails pertaining to updates in one place on the CAPS R&C site. Also, we will note these changes on the May PSS call. PSSs have responsibility to pass on this info to SSCs.

9. Action item: As a means for helping improvement of work plans, Dan and Heather will audit a few work plans per year and give an advisory for improvement.

Update: On hold due to staffing shortage in S&T.

10. Action item: 2018 guidelines are due to be published on Earth Day (4/22/17). Please review and provide feedback.

Update: Completed; 2018 National Pest Surveillance Guidelines published on the CAPS R&C 4/22/17.

11. Action item: John wants to rearrange the entire survey process. Why are there two different sources funding the same issue and the continuous guessing game for funding? Can we bundle the entire CAPS and Farm Bill processes into one single process? What are states needs and how do they manage their funding from different sources?

12. Action item: There still are a lot of questions that need to be answered. Some of these are italicized in the paragraphs below. The NCC should think this proposal through very carefully and talk with their constituents about it. Both the Pest Detection and Farm Bill Programs want to make sure that whatever changes are made benefit all our cooperators.

13. Action item: David McClure will draft a survey priorities submission form using the Survey Summary Form as a guide.

14. Action item: Develop a draft of Pest Surveillance Guidelines for the states. Who? When? (John, Lisa).

15. Future action item: Let's do a paper exercise. For the states represented at the NCC, what would be your survey list (with target pests) in priority order, and how much would it cost to do the survey? Don't worry about funding source.

Update: The above action items refer to discussions about merging the CAPS, PPQ, and Farm Bill Goal 1 Survey processes together. This is still the goal, but conversations within PPQ have stalled. A redrafting of the proposal will occur during 2018. The new suggestion format introduced for 2018 Farm Bill Goal 1 Survey was the initial attempt to start answering some process questions related to 14 and 15 above.

16. Action item: To the NCC, what are your documented needs from the CPHST CAPS Support Team? We need to understand how to meet the needs.

Update: Heather, Dan, and Lisa continue to collect ad hoc requests from the CAPS community; nothing specific came in from NCC.

17. Action item: Collaborate and document the roles of the CAPS support team. Be sure that the coordination aspect of the role is known. Make sure it does not get misconstrued as roles that can be doled out to others.

Update: The major duties and responsibilities of Lisa's and Melinda's previous positions have been entered as work requests into S&T's project tracking system Salesforce. In the next few weeks, John, Rick, Lisa, and Russ will prioritize the list of work requests. For the high priority tasks, S&T leadership will assign other scientists to accomplish the work until additional staff has been hired onto the CPHST CAPS Support Team. [Lisa will confirm with Russ that this is the approach. This is how we left the CPIA meeting the other day, we still need to have a call with the PDMT to discuss this.]

18. Action item: NCC and constituents: Please review the host matrix and notify CPHST support staff if there are additional hosts that should be represented.

Update: The CPHST CAPS support team did not receive any suggestions of hosts to add. There will be some minor changes to the matrix, and Dan will review them at the NCC meeting.

19. The Otis lab has several new staff that are interested in providing CAPS support. This will require a lot of coordination. We may not be able to tap into this resource while the CAPS support positions are vacant.

Action item: Enter coordinating Otis CAPS support into project tracking system.

Update: This is going well. Heather, Lisa, John Bowers, and John Crowe had a two-day meeting at the Otis Lab in November 2017. They discussed both Otis and Farm Bill research projects that support CAPS and also the Otis lab's role in survey supplies. We are having great collaboration and communication with this group. We are making important strides in the quality control of lures.

20. New Pest Risk Mapping Strategy - Oregon State University (OSU). Sherry works with the geospatial group at Clemson and would like to know how the maps are built.

Action item: Lisa will provide Sherry the whitepaper.

Update: Completed.

21. CAPS Educational and Learning Modules
Action item (NCC): Send nominations for individuals to join steering committee to John.
Update: Completed; steering committee consists of representatives from all four core constituent groups.

22. CAPS Educational and Learning Modules
Action item (NCC): Send suggestions on training needs to John and the Steering Committee.
Update: Completed; John and Lisa will report out at the NCC meeting.

23. Kira Metz's Domestic Identifier position at Texas A&M has been refilled by Xanthe Shirley. Do we know her area of specialty yet?
Action item: Steve will find out Xanthe's specialty and get that to Lisa.
Update: Completed. Xanthe provides general entomology coverage. The majority of her workload is wood borer bark beetles and moths, followed by ants, boll weevil, and Khapra beetle.

24. Action item: Lisa will develop guidance on how states should use the request of taxonomic assistance field on the Survey Summary Form and also the check box on work plans.
Update: Completed. New fields have been added.

25. Access to Carnegie/Mississippi State University for EWB/BB Samples
There is a good identifier in these two places that can identify bark beetles. How can we maximize use of these resources? Lisa, Avi, and Steve need to collaborate and figure out how to get help for everybody.
Action item: Steve and Lisa will meet to discuss how to increase efficiency, and how best to determine who needs help and where will that help come from.
Update: Started, and an ongoing process.

26. Action item: Lisa will determine where there is need in identification support. She will also determine whether Carnegie, MSU, and the other ID centers can accept more samples. This may take some time.
Update: In progress. Lisa requested more funding for Carnegie, but they are also in the process of renegotiating their 5-year contract. She does not yet know what the number of samples we will be allowed for 2018. For MSU, Lisa encouraged MSU to request more funding through Farm Bill. We do not yet know if they received their requested amount. Lisa and Steve will visit MSU in late February 2018. They plan to visit other collaborating institutions as they are able.

27. Action item: We need clear instructions as to when it is appropriate to submit ad hoc samples, who to send them to, and how to submit them. Steve will add more detailed instructions to his contact sheet.
Update: Instructions were sent out, but there is still some confusion. A request has been made to develop flow charts per pest type (insect, plant pathogen, etc.). This will be discussed at the NCC meeting.

28. Action item: David McClure. Take care of the issue that requires repeated entering of the same survey name. Allow it to be replicated.

Update: Will be considered as the three individual Survey Summary Forms are merged.

29. Action item: Communicate to your constituencies that new in state records must be confirmed before entering into NAPIS. Do states always know if it is new in the state?

Update: Ongoing discussions

30. Action item: Form a working group to clarify the Survey Summary Form fields and definitions. Due date: August 1 for the next survey year.

Update: Ongoing; the group clarified field definitions and created new fields. The group may need to reconvene in the spring to evaluate how well people understood the new definitions and entered information for 2018.

31. Action item: Give a webinar on how to use the Lure Calculator for help in lure ordering.

Update: John Crowe gave two webinars in January 2018, one on how to place orders and one on how to approve orders. The Lure Calculator was covered during these webinars.

32. Action item: NCC and constituents. Develop a list of CAPS webinar topics. What topics are not covered in the existing list? Should the webinar be given once, recorded, and then posted to the CAPS site for future use or should it be given multiple times?

Update: Webinars on the pest list assessments and OPEP model, and an overview of the CAPS R&C site have been delivered. These were produced by PDC and recorded. Links to the recording have been posted on the CAPS R&C. We will discuss future webinars at the NCC meeting.

33. Action item (John Crowe) Organize twice yearly call for SSCs and PSSs to communicate important changes to survey methods and survey supplies. One call will be held in February/March before the survey season begins and the other will be held in late October/November when the survey supply ordering period is open.

Update: Calls and webinars completed:
3/2017: Attended Eastern PB SSC call and provided updates.
2/07/2017: Call with NPB regarding communication.
1/10/2018: Webinar offered to SSCs and PSSs on how to place orders.
1/11/2018: Webinar offered to SPHDs and PSSs on how to approve orders.

34. Action item: Draft a plan for the Pest Surveillance Summit and communicate it and the target date to the National Plant Board and Regional Plant Boards so that they can adjust the resolutions they submit each year in support of the National CAPS meeting. Seek confirmation for summit by August 2017 so travel can be included in future work plans.

Update: The National Plant Board circulated a survey about a national meeting, and the NPB BOD presented the results to the PPQ MT in late December 2017. Ann Gibbs and Paula Henstridge were asked to get a group together to continue the conversation. No word yet. It is getting late to have a meeting in 2018 as it appears to be in limbo over concerns within the PPQ MT.

35. Action item: NCC and constituents. Review the SSPP Communication Plan and provide feedback to the SSPP CFWG at SSPP@aphis.usda.gov.

Update: Ongoing. Plan will be finalized and distributed by March 15, 2018.

36. Action item: SSPP CFWG: Revise the SSPP Communication Plan with recommendations from the NCC, including adding a section about the acknowledgement of receipt of an email.

Update: Ongoing. Plan will be finalized and distributed by March 15, 2018.

37. Action item (NCC, especially PPQ employees): Please let your management teams know how critical of a role the warehouse crew plays in the CAPS program. The warehouse is understaffed, and any employee turnover would be disastrous for the entire CAPS program. Please make it clear that more resources are necessary.

Update: Good progress has been made to find additional staff for the warehouse. The staffing situation should improve in the coming months.

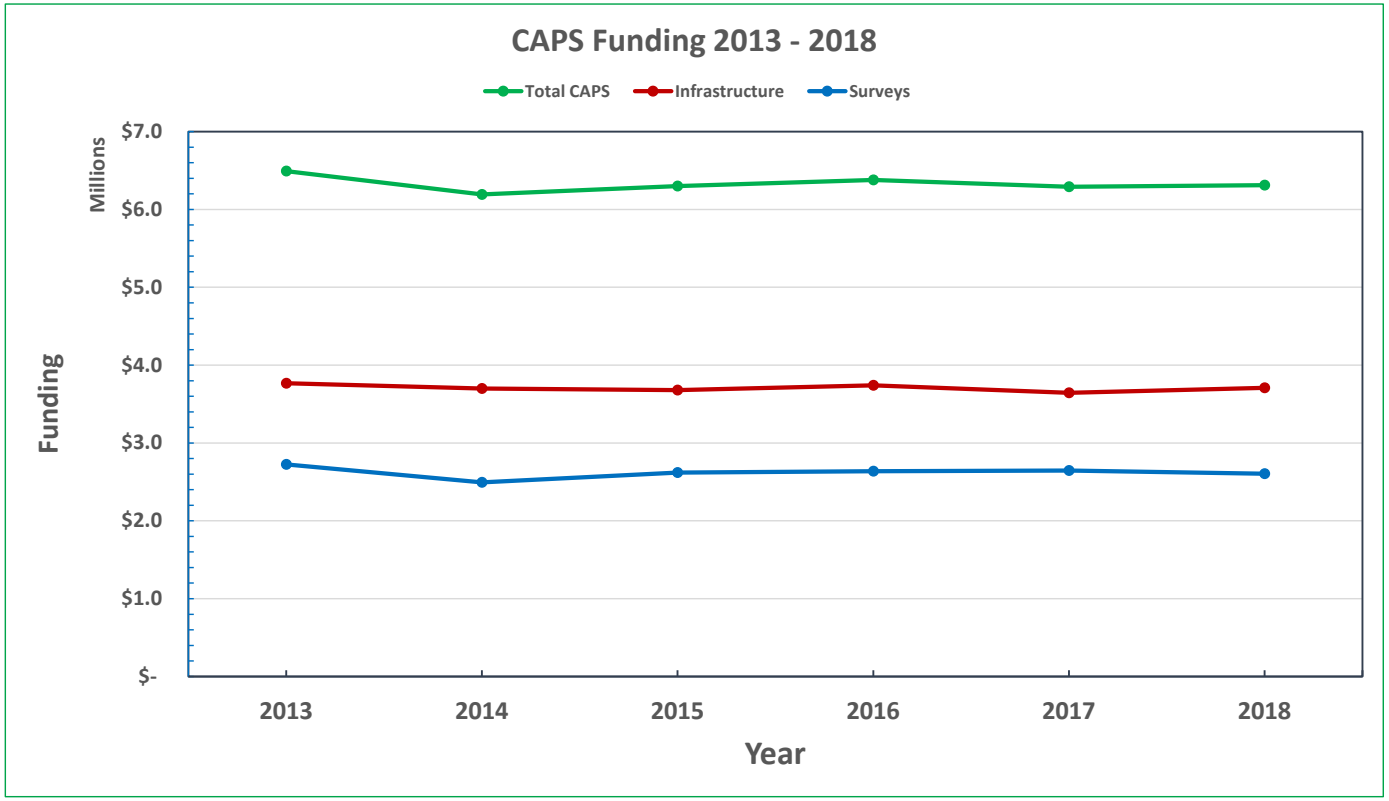
CAPS Surveys Funding

CAPS Surveys and Funding	2014		2015		2016		2017		2018	
Priority Surveys	**# States**	**Funding**	**# States**	**Funding**	**# States**	**Funding**	**# States**	**Funding**	**# States**	**Funding**
Corn Commodity Survey	7	$ 148,884	8	$ 222,888	9	$ 191,755	13	$ 213,366	12	$ 221,545
Cotton Commodity Survey	4	$ 80,439	3	$ 67,827	3	$ 67,666	2	$ 24,839	2	$ 42,997
Cyst Nematode Survey	3	$ 19,586	3	$ 20,988	2	$ 31,074	2	$ 13,461	3	$ 27,174
Exotic Wood Borer/Bark Beetle Survey	19	$ 490,772	20	$ 537,127	21	$ 584,205	21	$ 536,179	21	$ 594,195
Mollusk Survey	4	$ 182,388	3	$ 122,600	4	$ 138,657	6	$ 197,388	6	$ 94,937
Oak Commodity Survey	4	$ 127,350	3	$ 80,589	4	$ 65,722	6	$ 99,844	5	$ 81,026
Pine Commodity Survey	5	$ 117,818	6	$ 144,593	4	$ 109,982	5	$ 113,275	4	$ 147,549
Small Grains Commodity Survey	7	$ 74,000	7	$ 110,406	11	$ 200,365	8	$ 113,575	7	$ 121,991
Soybean Commodity Survey	9	$ 115,491	10	$ 148,419	9	$ 124,417	9	$ 115,881	7	$ 63,297
Tropical Hosts Commodity Survey					2	$ 48,691	3	$ 53,115	3	$ 50,831
Number of Surveys	**62**	**$ 1,356,728**	**63**	**$ 1,455,437**	**69**	**$ 1,562,534**	**75**	**$ 1,480,923**	**70**	**$ 1,445,542**

	2014		2015		2016		2017		2018	
State Bundled Surveys	**# States**	**Funding**	**# States**	**Funding**	**# States**	**Funding**	**# States**	**Funding**	**# States**	**Funding**
Agroforestry Pest Survey										
Citrus Commodity Survey	1	$ 6,099	1	$ 4,600	1	$ 5,568	2	$ 41,441	1	$ 5,200
Exotic Buprestid (Cerceris) Survey					1	$ 2,053	2	$ 18,103	1	$ 16,050
Exotic Phytoplasma Survey									1	$ 18,542
Field Crops Pest Survey	4	$ 114,614	2	$ 42,406	4	$ 80,747	4	$ 101,784	8	$ 181,687
Forest Pest Survey	10	$ 197,905	8	$ 175,041	16	$ 441,861	13	$ 421,298	13	$ 388,199
Fruit Crops Pest Survey	2	$ 43,091	4	$ 27,780	1	$ 3,660				
General Nematode Survey	2	$ 49,430	1	$ 39,885			1	$ 28,713	2	$ 83,551
Legume Pest Survey	1	$ 4,509	1	$ 4,369						
Maple/Oak Survey			3	$ 136,227						
Mixed Berry / Small Fruit Survey					1	$ 13,664				
Mixed Commodity Bundled Survey	3	$ 65,495	3	$ 39,028						
Nursery and Retail Plants Pest Survey	19	$ 518,306	20	$ 483,509	18	$ 441,578	20	$ 452,469	19	$ 387,923
Palm Commodity Survey	1	$ 6,099	1	$ 6,000	1	$ 6,000	1	$ 6,250	1	$ 6,000
Pulse Crops Pest Survey					1	$ 27,065				
Rice Pest Survey	4	$ 44,922	4	$ 40,193	2	$ 33,591	2	$ 32,161	1	$ 25,550
Solanaceous Commodity Survey					2	$ 9,660			1	$ 3,000
Tree Fruit Pest Survey	4	$ 41,105	3	$ 77,252						
Tree Nursery Pest Survey							1	$ 29,345		
Vegetable Crops Pest Survey	2	$ 23,119	5	$ 87,169	1	$ 10,000	3	$ 34,295	3	$ 42,801
Number of Surveys	**54**	**$ 1,137,464**	**56**	**$ 1,163,459**	**49**	**$ 1,075,447**	**49**	**$ 1,165,859**	**51**	**$ 1,158,503**
Total Survey	**116**	**$ 2,494,192**	**119**	**$ 2,618,896**	**118**	**$ 2,637,981**	**124**	**$ 2,646,782**	**121**	**$ 2,604,045**

CAPS Surveys Funding

	2014		2015		2016		2017		2018	
	#	Funding	#	Funding	#	Funding	#	Funding	#	Funding
Surveys	116	$ 2,494,192	119	$ 2,618,896	118	$ 2,637,981	124	$ 2,646,782	121	$ 2,604,045
Infrastructure	50	$ 3,698,999	50	$ 3,680,019	50	$ 3,739,667	49	$ 3,644,608	50	$ 3,708,045
Total CAPS		$ 6,193,191		$ 6,298,915		$ 6,377,648		$ 6,291,390		$ 6,312,090
Pest Detection Appropriation		$ 27,446,000		$ 27,446,000		$ 27,446,000		$ 27,446,000		
Percent of PD Appropriation		22.57%		22.95%		23.24%		22.92%		
Pest Detection Allocation to PPQ		$ 23,097,459		$ 23,484,225		$ 23,359,933		$ 23,615,925		
Percent of PD Allocation		26.81%		26.82%		27.30%		26.64%		
Pest Detection Allocation to FO		$ 18,353,455		$ 18,378,455		$ 18,714,227		$ 18,707,059		
Percent of PD Allocation to FO		33.74%		34.27%		34.08%		33.63%		



Cooperative Agricultural Pest Survey (CAPS)
2018 National Pest Surveillance Guidelines
April 22, 2017

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, state Plant Protection and Quarantine (PPQ) personnel, tribal governments, and collaborators that conduct pest surveillance activities with Pest Detection (and 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 Farm Bill 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 Program Leader for CAPS Support, Center for Plant Health Science and Technology (CPHST) in Science & Technology (S&T). 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 National CAPS Committee will revise the National Survey 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, the States, Center for Plant Health Science and Technology (CPHST), National Identification Services (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 Farm Bill 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 data sheets; 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 offices (Hubs). The annual APHIS Pest Detection "line item" appropriation and Farm Bill Goal 1 Survey allocations are the funding sources for CAPS and PPQ surveys. Funds from the Pest Detection line item and Farm Bill 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 Farm Bill projects is determined by the Farm Bill 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. 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. Hand-held or mobile devices for data management will not be financially supported.

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 FY18, **the maximum possible Infrastructure award for each state is the amount that each state received for FY17.** 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 CPHST 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 CPHST 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 2018.

- 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 <u>not</u> be offered through CAPS for 2018 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 Farm Bill funding. Like-wise, Asian Defoliator and Pathway surveys are more aligned with the language of the Farm Bill, and will not be supported for funding through CAPS.

⁑ States are discouraged from submitting similar work plans or suggestions to both the CAPS and Farm Bill 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. 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, Section 2.3, States also may want to consider a percentage of random 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 FY18 planning, states should use the final FY17 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 year. Further guidance will be made available as more is known about this process and the FY18 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 Infrastructure Work Plan Template and Survey Work Plan Template were revised for 2018 and their use 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.

Work Plan Options: States have flexibility to combine their Pest Detection surveys into one submitted 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 (courtesy of Indiana and updated for 2018) can be found on the 2018 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 2018, there will be fields in the Survey Summary Form for CAPS, Farm Bill, 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 2018 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.

Cooperator Cost Share

Neither the CAPS nor Farm Bill 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 (https://caps.ceris.purdue.edu/webfm_send/2347) that addresses cooperator cost share (CAPS R&C login required).

For 2018 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 transitioning to the ezFedGrants system for the complete administration of cooperative agreements. However, 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 Farm Bill 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) 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.

2) The ADODR will then upload the Infrastructure and Survey(s) .pdf files to the following site (Field Operations Cooperative Agreements Work Plan Management Site) by clicking the "Upload Workplan" button and following the steps. Once completed, Field Operations will be notified that a work plan has been submitted for review.

3) The PPQ National Operations Manager (NOM) will review the work and financial plan for adherence to the National Pest Surveillance Guidelines, and either approve the work and financial plan, or communicate back to the states on suggested changes.

4) 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.

5) 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.

   - Slide presentations can be found on the Resources page of the CAPS Resource & Collaboration website.
     - 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) ADODRs will need to upload the signed accomplishment reports to the Field Operations Cooperative Agreements Work Plan Management Site. Save the files in the .pdf format.

2) The ADODR will then upload the .pdf files to the following site (Field Operations Cooperative Agreements Work Plan Management Site) by clicking the "Upload Accomp Report" button and following the steps. Once completed, 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, Farm Bill, 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 Timeline 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 2018 CAPS and Farm Bill National Priority Surveys will be entered into NAPIS. See Data Management Guidance and Data Entry Guides for Selected Taxonomic Groups for more detail.

The Agency has been capturing data collected by PPQ and some PPQ-funded agreements in the Integrated Plant Health Information System (IPHIS). The emphasis has been on

PPQ domestic program pests with regulatory considerations. Given the complexities and nuances of the CAPS program, IPHIS cannot support the CAPS program at this time. We realize, however, that PPQ is using IPHIS for various administrative and/or programmatic reasons. For PPQ staff that use IPHIS for survey 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. Article 6, 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 2018, as stated above, the Pest Detection-CAPS program requires that NAPIS be the final repository of all survey data.

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 Approved Methods for Pest Surveillance (AMPS) 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.

Survey Work Plan Template

To assist in the development of the program work plan/proposal, we have prepared the following outline as a guide. The work plan/proposal should describe, in detail, the activities to be conducted by the parties to the agreement. Involvement by other parties in the program or project, which is incidental to the agreement, should only be discussed as indicated in III.B.10.

The work plan for a cooperative agreement discusses the roles and responsibilities of the parties to the agreement (those signing) and the interaction between them as well as their resource contributions.

Major topics outlined (I, II, III, IV, V, VI and VII) should be included in each program work plan/proposal. It is not intended to be all inclusive, but to serve as a reference for items which should be discussed in development of the program narrative.

A lead in paragraph should be included to identify the cooperating parties, the agreement number, and the overall purpose of the initiative as illustrated in the next paragraph.

As a reminder the work plans should include input by the ADODR (Authorized Departmental Officer's Designated Representative) and be reviewed and approved by the ADODR before they are submitted to the Field Operations SharePoint site. Work plans must have signatures of the ADODR and ROAR (Recipient Organization's Authorized Representative) and be uploaded to FO SharePoint site **NO LATER THAN August 15th for budgeting purposes. The local deadline may be earlier to give the ADODR time to review and approve.

Note: *Black italicized text are prompting questions or statements and should remain in the final work plan.*

Note: *Red italicized notes or prompts in the text are to be deleted when finalizing a work plan.*

Note: Non-italicized text remains in the work plan.

Survey Work Plan - Fiscal Year _____

Cooperator:				
State:				
Project:				
Project funding source:	CAPS- Pest Detection Survey			
Project Coordinator:				
Agreement Number				
Contact Information:	**Address:**			
	Phone:		**Fax:**	
	Email Address:			

This Work Plan reflects a cooperative relationship between the *(insert name of organization)* (the Cooperator) and the United States Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), Plant Protection and Quarantine (PPQ). It outlines the mission-related goals, objectives, and anticipated accomplishments as well as the approach for conducting a *(insert description of programs, e.g., Small Grains Commodity Survey or Exotic Nematode Survey)* and the related roles and responsibilities of the parties [e.g., APHIS role(s) and Cooperator role(s)] as negotiated.

I) OBJECTIVES AND NEED FOR ASSISTANCE

What relevant need or problem within the cooperator's mission area requires a solution in carrying out a public purpose of support or stimulation authorized by a law of the United States? How does the need or problem align with the mission area and strategic goals of APHIS? This section includes a narrative on how financial assistance will facilitate the cooperator in carrying out a public purpose of support or stimulation authorized by a law of the U.S.

II) RESULTS OR BENEFITS EXPECTED

The Cooperator seeks to conduct a program which is expected to result in:
What results or benefits will be derived from the cooperative effort? Use of bulleted Statements is acceptable.

III) APPROACH

What is the plan of action or approach to the work? For combined survey work plans please include a separate paragraph for each survey detailing survey type, targets, and number of locations?

*Describe the activities to be performed under this work plan. The activities must be within the scope of the Notice of Cooperative Agreement Award and consistent with the terms and conditions therein. Provide a description for **each survey** for which funding is to be expended. The narrative is to include any information or data that will be shared with APHIS. See the example of a combined survey work plan if this work plan is to contain multiple surveys.*

This section should outline roles and responsibilities that are 1) those of the cooperator, and 2), those of APHIS in terms of work to be performed, expected accomplishments by each party, and resources to be contributed by each. If specific program protocols, action plans, or uniform rules or other program guidelines must be followed, mention them in this section wherever they apply.

The following sections will assist in the preparation of a succinct proposal that provides APHIS with the information required to determine the appropriateness of a cooperative agreement. These items are to be included in the work plan as applicable.

Scientific Name	Common Name	Survey Method	Trap	Lure
Survey 1				
Pest 1				
Pest 2				
Pest 3				
"				
"				
Survey 2				
Pest 1				
Pest 2				
Pest 3				
"				
"				
Etc…				

Definitions for table:
***Scientific Name** = name of target species*
***Common Name** = name of target species*
***Survey Method** = For Priority Pests, select an Approved Method (visual, sample, or trap). For pests without an Approved Method, select visual, sample, or trap as appropriate to the pest's biology.*
***Trap** = For Priority Pests, select an approved trap (use exact name from Approved Methods for Pest Surveillance page for this pest, ex. "Multi-funnel Trap, 12 Funnel, Wet"). If pest is not a priority pest, select a trap from the NAPIS Trap Dictionary.*
***Lure** = For Priority Pests, select an approved lure (use exact name from Approved Methods for Pest Surveillance page for this pest, ex. "Helicoverpa armigera Lure"). If pest is not a priority pest, select a lure from the NAPIS Lure Dictionary.*

Survey 1: *Include a short paragraph describing the survey. See the example of a combined survey work plan. Include this paragraph even if this work plan is for one survey.*

Survey 2: *Include a short paragraph describing the survey. See the example of a combined survey work plan.*

Survey 3: *Include a short paragraph describing the survey. See the example of a combined survey work plan.*

A. **The Cooperator Will: (***Tip: If a combined work plan, use bullet points for each survey if there are differences between/among the surveys. See the combined survey example.)*

1. **By function, what work is to be accomplished?**
   Cite program standards, action plans, or other program guidelines as a standard for conducting the particular functions for this program, as applicable.

2. **What is the quantitative projection of accomplishments to be achieved?**

   a. *By activity or function, what are the anticipated accomplishments by month, quarter, or other specified intervals?*

   b. *What criteria will be used to evaluate the project? What are the anticipated results and successes?*

3. **What numbers and types of personnel will be needed and what will they be doing?**

4. **What equipment will be needed to perform the work?** *Include major items of equipment with a value of $5,000 or more.*
   a. *What equipment will be provided by the cooperator?*

   b. *What equipment will be requested from APHIS on loan?*

   c. *What equipment will be purchased in whole or in part with APHIS funds?*

   d. *How will the equipment be used?*

   e. *What is the proposed method of disposition of the equipment upon termination of the agreement/project?*

5. **Identify information technology equipment, e.g., computers, and their ancillary components.** *All information technology supplies (e.g., small items of equipment, connectivity through air cards or high speed internet access, GPS units, radios for emergency operations etc.) should be specifically identified.*

6. **What supplies will be needed to perform the work?** I*dentify individual supplies with a cumulative (e.g. 4 microscopes at $1500 each) value of $5,000 or more as a separate item.*
   a. *What supplies will be provided by the Cooperator?*

   b. *What supplies will be requested from APHIS (list supplies)?*

   c. *What supplies will be purchased in whole or in part with APHIS funds?*

   d. *How will the supplies be used?*

e. *What is the proposed method of disposition of the supplies with a cumulative value over $5,000 upon termination of the agreement/project?*

7. **What procurements will be made in support of the funded project and what is the method of procurement (e.g., lease, purchase)?**
   Cooperator procurements shall be in accordance with OMB Circulars A-102 or A110, as applicable.

8. **What are the travel needs for the project?**
   a. *Is there any local travel to daily work sites? Indicate rates and total costs in the Financial Plan.*

   b. *What extended or overnight travel will be performed (number of trips, their purpose, and approximate dates)? Indicate rates and total cost in the Financial Plan.*

9. **Reports**:
   Submit all reports to the APHIS Authorized Department Officer's Designated Representative (ADODR). Reports include:
   a. Narrative accomplishment reports in the frequency and time frame specified in the Notice of Award, Article 4.

   b. Federal Financial Reports, SF-425 in the frequency and time frame specified in the Notice of Award, Article 4.

10. **Are there any <u>other</u> contributing parties who will be working on the project?**
    a. *If so, list other participating institutions/agencies who will work on the project.*

    b. *Describe the nature of their effort.*

B. APHIS Will:

1. **Outline the Agency's (USDA APHIS PPQ) substantial involvement.**
   a. *Include any significant Agency collaboration and participation*
   Examples: input and oversight in the development and execution of the survey to ensure it meets national program goals and APHIS mission needs within the state; work with the cooperator to maximize all applicable protocols and provide technical assistance; participate in the design or direction of activities to develop the regulatory plan; participate in the analysis or storage of data as needed; general oversight; funds as available to assist the cooperator.

   b. *Project oversight and performance management*
   *Responsibility for the management, control, direction or performance of the project is <u>**shared**</u> by the assisting agency and the recipient. Examples: participating or assisting in the design or direction of activities, selection of contractor staff or trainees, collection and/or analysis, reviewing and approving each stage of a project.*

   c. *Provide the equipment requested by the cooperator in 4.b. & c.*

d. *Provide the supplies requested by the cooperator in 6.b. & c.*

IV) GEOGRAPHIC LOCATION OF PROJECT

A. *Is the project statewide or in specific counties? (List the names of ALL counties and tribal areas that apply [denote counties for each separate survey if this is a bundled survey work plan]).*

B. *What type of terrain will be involved in the project? (e.g., cropland, rangeland, woodland)*

C. *Are there any unusual geographic features which may have an impact on the project? List all that apply.*

V) DATA COLLECTION AND MAINTENANCE

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 CAPS (and Farm Bill Goal 1 National Priority) surveys will be entered into NAPIS. Note that not all Farm Bill Goal 1 Surveys are designated as National Priority. Each State is responsible for entering complete, accurate, and timely pest survey data using the approved protocol and methodology.

- First record for the State and/or County will be entered within **48 hours** of confirmation of identification by a qualified identifier.
- All other required records, both positive and negative survey data, must be entered **within two weeks** of confirmation.
- All records are to be entered into the NAPIS database no later than the date that the final Accomplishment Report is due.

VI) TAXONOMIC SUPPORT

Choose A or B.

- *If you do not need additional assistance taxonomic assistance, list the person(s) or institution who will perform the identification/diagnostics, and do not check B.*
- *If you need assistance, check B.*

A. Person(s) or Institution that will screen targets (Name & Contact Information) and level of screening/identification.

OR

B. ☐ Request for taxonomic support.

If you request taxonomic support, the Program managers and PPQ's National Identification Services will use the information you provide in Survey Summary Form to assign your survey samples to the appropriate taxonomic personnel.

VII) SURVEY SUMMARY FORM

A Survey Summary Form must be completed to summarize all CAPS surveys **funded by the Pest Detection line item.**

The Survey Summary Form will be completed online on the CAPS Resource & Collaboration site. *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 Survey Summary Form. States are strongly encouraged to list State contributions to the survey effort on the Survey Summary Form and the Financial Plan whenever possible (note that the figures listed in these two forms must equal each other). This information will assist the Pest Detection Program answer requests and questions from the Agency, Department, and Congress, and prepare future budget requests.* ***Please contact the National Operations Manager for Pest Detection if you have any questions.***

If surveys are combined into one work plan, each individual survey still needs to be entered separately into the Survey Summary Form. This is important for CAPS and Pest Detection reporting purposes, as well as for populating My Surveys in NAPIS and the Accountability Report.

VIII) SIGNATURES

ROAR	**Date**	**ADODR**	**Date**

Detailed Financial Plan Example (submit with Work Plan)

COOPERATOR NAME: _____

TIME PERIOD (Cooperative Agreement Year)**:** _____

Financial Plan must match the SF-424A, Section B, Budget Categories (rounded to the nearest dollar).
All costs in the financial plan, excluding fringe benefits and indirect costs, must be included in the work plan.

ITEM	APHIS FUNDS		COOPERATOR FUNDS (Show even if zero)
PERSONNEL:			
Field Staff: 960 hrs. @ $14.00/hr	$13,400		
Lab Staff: 500 hrs. @ $14.00/hr			$7,000
Subtotal	$13,400		$7,000
FRINGE BENEFITS:			
20% of salary of Field Staff pt employee	$ 2,680		
Subtotal	$ 2,680		
TRAVEL:			
Total of 4,000 miles @ 16 miles/gal.=250 gal X $2.75/gal. =	$ 688		
Per diem 5 days @ $100.00/day =	$ 500		
Subtotal	$ 1,188		
EQUIPMENT			
GPS units			$ 300
Diagnostic Kits			$ 700
Microscopes			$3,600
Subtotal			$4,600
SUPPLIES			
Gloves, batteries, tools, etc. – field use	$ 250		
Misc. chemicals – lab use			$ 300
Subtotal	$ 250		$ 300
CONTRACTUAL			
Subtotal			
OTHER			
Subtotal			
TOTAL DIRECT COSTS			
INDIRECT COSTS	$ 2,412		
TOTAL	$ 19,930		$11,900
Cost Share Information	62.6%		37.4%

2018 Farm Bill Goal 1 Survey

Please enter the following information

✓	**State**	
✓	**Institution**	
✓	**Department**	
✓	**Survey Title**	*See Survey Names tab*
✓	**Requested Funding**	

For 2018, Goal 1 Survey is piloting a revised and abbreviated format for submitting suggestions for Farm Bill funding. The goal is to simplify the suggestion and more directly specify the information needed to properly and efficiently review the scope of the survey without extraneous text. The overall approach is to evaluate whether the scope of the survey matches the financial plan, and vice versa. Refer to the Goal 1 Survey section of the 2018 Farm Bill Implementation Plan for appropriate survey suggestions

Suggestors will log into Metastorm as in previous years, fill out the required Applicant and Cooperator Information, and add a very brief Abstract (one short paragraph).

The remainder of the suggestion is contained in this Excel workbook. Suggestors will enter survey information and parameters on the **Survey Plan** tab, and financial information on the appropriate **Cooperator** tab(s). This workbook

We are testing this revised format with the goal of simplifying the Goal 1 Survey suggestion submission and review processes, and would appreciate your feedback. Please send any comments to the Goal 1 Survey Team via the Farm Bill email address farmbillsection10007@aphis.usda.gov.

2018 Farm Bill Goal 1 Survey – Pilot Suggestion Form

The Survey Plan must support the Financial Plan, and vice versa

Refer to the 2018 Farm Bill Implementation Plan for Goal 1 Survey → Farm Bill Implementation Plan

☐	National Priority Survey		
☐	PPQ Pest Program Survey	☑	*copy and paste this check box*
☐	Cooperator or Other Survey		*to the appropriate cell on the left*

check only one

National Priority Survey
PPQ Pest Programs
2018 CAPS Guidelines

✓ **Survey Parameters** ***(add rows as necessary)*** 0 $ -

✓ ***Survey Name*** *- See Survey Names tab*

Scientific Name	Common Name	Method	Trap	Lure	Host/Habitat
Pest 1	Pest 1	*Trap, Sample, or Visual*	*See Approved Methods*	*See Approved Methods*	*See Hosts & Habitats tab*
Pest 2	Pest 2	"	"	"	"
Pest 3	Pest 3	"	"	"	"
Pest 4	Pest 4	"	"	"	"
etc.	etc.	"	"	"	"

Approved Methods for Pest Surveillance

http://pest.ceris.purdue.edu/services/napisquery/query.php?code=approvedmethods2018

✓ *Please answer all questions as appropriate*

✓ **Who is participating in the survey and what is their role?**

# of People	Role

✓ **What is the scope of the survey?**

# of Locations	# of Sites within Location	# of Visits per Location	Duration of the Survey	Type of Location	Pest Pathway Addressed by this Location	# of Counties for these Locations

Visit: defined as install, monitor, change lure, etc.
Duration: #days; from when to when
Type of Location: business address, property, park, cropland, etc.
Pest Pathway: Yes/No

✓ **Will surveys be conducted for each pest at each location?** *Yes / No*

If **No**, provide a separate table(s) for different pests or a brief explanation that describes the scope of the survey.

text box for scope description, if necesary

✓ **Is this survey conducted along with another survey at the same locations (i.e., piggy-backed on another survey)?** *Yes / No*

If **Yes**, what is the other survey, and are you requesting Farm Bill funding in 2018 for that survey?

Survey Name	Requesting FB Funding?
	Yes / No

✓ **Where does this suggested survey rank in terms of your state/institution priority?** *1, 2, 3...*

Each survey submitted by your institution for 2018 Farm Bill funding should have a different rank order priority

✓ **Per your state/institution, what other surveys are being suggested for 2018 Farm Bill funding?**

Survey Name	Requested Funding

✓ **Has the suggested survey been funded previously?** *Yes / No*

If **Yes**, list the year, funding source, and amount below.

Please upload the most recent Accomplishment Report in Metastorm as well.

Year	Funding Source	Amount Funded

If **Yes**, explain why this survey needs to be funded in successive years?

text box for justification

✓ **Is there any additional information you wish to add?** *Yes / No*

If **Yes**, please use the text box below.

text box for additional information or justification

CAPS INTRODUCTORY GUIDEBOOK

Bowers, John H - APHIS

USDA

Foreword

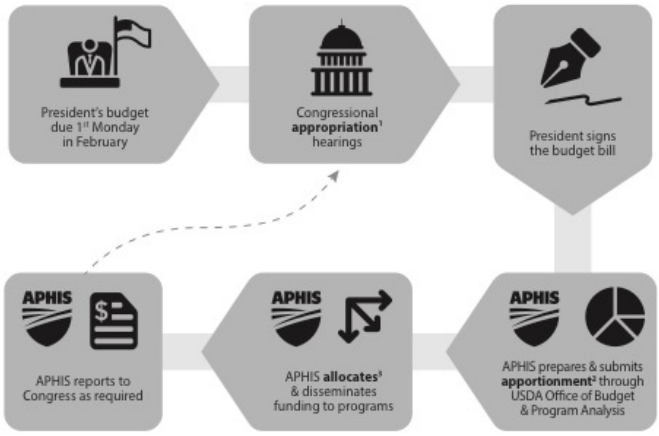
The mission of the CAPS program is to provide a coordinated survey profile of exotic and regulatory significant plant pests detected in every state of the United States through early surveillance activities. These surveillance efforts are funded through the USDA and directly support APHIS safeguarding efforts to protect U.S. agricultural and environmental resources both locally and nationally. Surveys conducted through the CAPS program is a coordinated effort to provide a second line of defense against the entry of harmful plant pests and weeds.

Surveillance activities are accomplished primarily through USDA funding provided by cooperative agreements with state departments of agriculture, universities, and other entities. The main activities undertaken through these funding streams include:

- Conducting pest surveys using scientifically sound pest survey methodology
- Timely reporting of pest survey results through the National Agricultural Pest Information System (NAPIS),
- Ensuring collection of valid and high-quality data, and
- Notification of significant pest detections through established protocols.

The purpose of this guide is to provide an overview of CAPS operations including: the funding stream, organizational structure, general workflow, and various required tasks necessary to successful operation of a CAPS program. In each section of the guide you will find descriptions of the tasks and even suggestions for best practices in accomplishing those tasks. Thank you for becoming part of the line to defend state and national agriculture and natural resources!

Origin of CAPS Funding

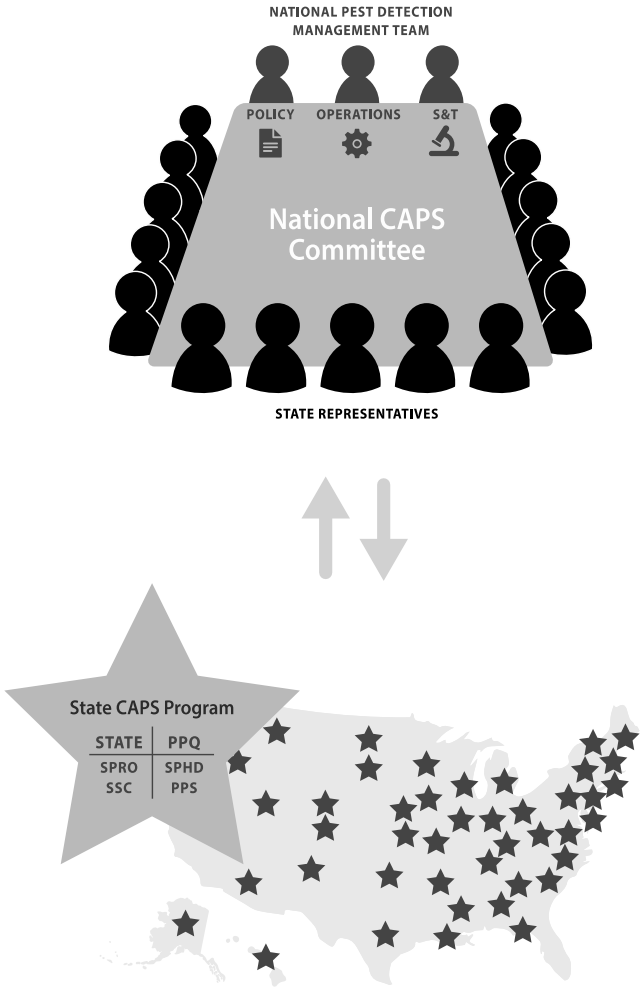


[1] Appropriation – provision of funds from Congress

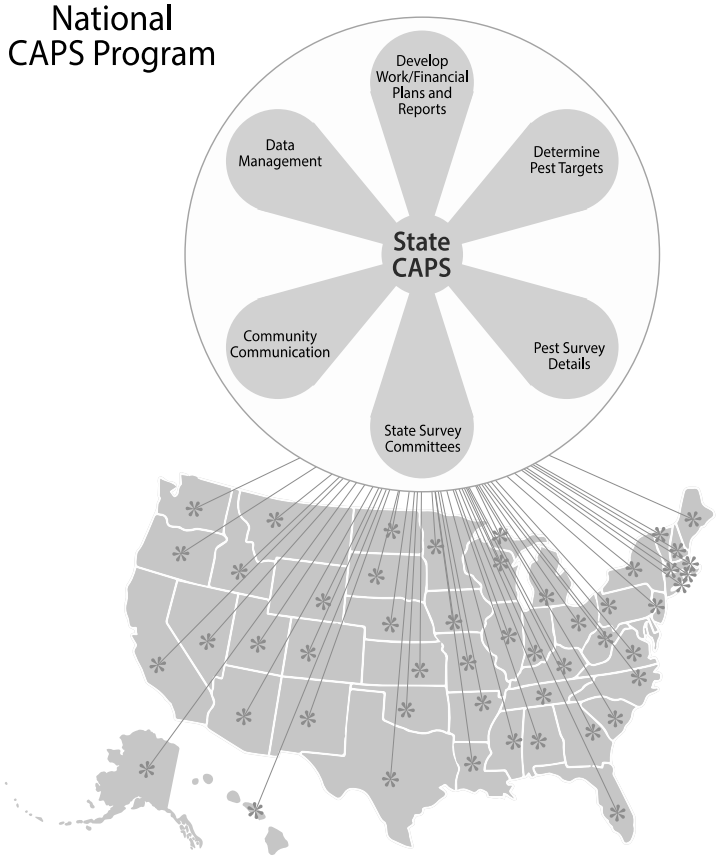
[2] Apportionment – distribution of the Appropriated funds by OMB to a Federal Agency

[3] Allocation – dissemination of the funds to an Agency's Programs

CAPS Communication Network



National
CAPS Program



Determining Pest Targets

What encompasses the determining of pest targets?

CAPS program surveys are a primary line of defense against the establishment of harmful plant pests and weeds that enter the United States. An early detection through these surveys can significantly reduce the economic costs of addressing the pest. However, with so many potential pests spread out over a large geographic region such as the United States, the CAPS program has developed a method for targeting only the most important pests to survey from season to season.

State surveyors begin choosing pest targets in a two-step process.

1. First, they consult the **National CAPS Priority Pest List** (see the end of this section for information on how this list is created). This list contains a wide variety of pests that may cause significant damage if they become established in the United States.
2. Second, they must consider potential target pests with maximum survey effectiveness and efficiency in mind.

All CAPS surveys use a bundled survey approach. In bundled surveys, groups of exotic pests are surveyed for concurrently. Bundling can be commodity-based (pests with the same host plant), taxon-based (similar pest taxa), or pathway-based (pests that follow the same pathway).

How does this exercise support CAPS programs efforts?

- Prioritizing Resources
  No program has unlimited means for surveying every potential pest. Determining pest targets early on helps state surveyors choose the highest risk pests locally; thus, prioritizing resources used for local survey needs.
- Seasonal Planning
  Pest targets must be determined before any planning can be done for annual CAPS program activities. Work and financial plans are created around the target pest list for the state.
- State/Local Evaluation
  Determining pest targets provides opportunity for states to evaluate their current pest risks, and report any new pest threats that could be added to the National CAPS priority list.

Who leads efforts for determining pest targets?

The research for, and creation of, state pest target lists is directed primarily by the State Survey Coordinator (SSC) on a yearly basis with assistance from other CAPS stakeholders in the state (SPHD, PSS, SPRO, etc.) as needed.

General Steps for Determining Pest Targets

The following steps should be taken when determining your survey targets. These steps do not necessarily need to be performed in a specific order. However, all of the following should be considered and performed for best survey planning results.

- Identify important commodities and local environmental flora in the state. **The National Agricultural Statistics Service** (NASS) database or local extension publications may be useful resources for this step. The PSS has access to this information.
- Identify CAPS pests that impact important local plant hosts for the state. The **National CAPS Priority Pest List** and the Host Matrix on the CAPS Resource and Collaboration Website are a good starting point for information. To maximize resources, surveys must be bundled and should include as many priority pests as possible. Assistance in maximizing use of the pest list can be found by contacting the CPHST CAPS Support Team.
- Identify pests with regulatory or trade significance that may affect the state. Utilize the SPHD or PSS to help with this. These pests are high survey priorities.
- Identify any CAPS pests with a demonstrated pathway of entry to the state. Pests which have been intercepted at U.S. ports of entry are important survey targets, especially pests which have been intercepted in the state or bordering states. Records of shipments or interceptions of host material also show potential pathways (**Note:** Pest interception records are not always public. The PSS can provide more information).
- Create a rough draft of potential pests for survey.
- Determine current distribution and potential survivability of pests in the climate zones of the state by reviewing the CPHST datasheets. Pests which have been found in nearby states should be of particular interest. The NAPIS database is a good source of U.S. pest distribution information.
- Whenever possible, identify pests of significance to the state that may be added to an already planned survey. Consult local resources for information on these pests. While this is not required, the inclusion of locally important pests increases interest from landowners to participate in surveys, and it can act as a bridge for outreach about national CAPS pests. Sources of information on important pests to the state include local university experts, industry experts, or extension publications.
- Consider the resources needed for completing the survey and taxonomic assistance required for pest identification. Review CPHST datasheets and document the approved methods for each potential CAPS survey target.
    - Find out what assistance is needed. Reach out to the National Operations Manager, Pest Detection or the Domestic Diagnostic Coordinator, PPQ-NIS for support.

- Check the approved methods for pests of interest and determine if the approved trap and lure attracts multiple CAPS pests. This is most common in pests on the Exotic Wood Borer/Bark Beetle (EWB/BB) survey list (**Example:** The *Ips* lure is the approved method for *Ips sexdentatus*, *Ips typographus*, and *Orthotomicus erosus*). If a trap attracts multiple pests, all attracted pests should be included in the survey and listed in the work plan and the Survey Summary Form.
- Create a list of possible surveys based on all information gathered and choose the final survey targets. If the state cannot survey for every important pest in the same year, consider rotating surveys.

Example of a CAPS Programs State List

The following is an example of a pest list for a grape-commodity-based survey. This list contains a good mix of arthropods and pathogens, and it combines a visual survey (phytoplasmas, rotbrenner) with trap and lure surveys (arthropods) and contains an additional pest of local interest (grapevine phylloxera).

Scientific Name	Common Name	Method	Trap	Lure	Host/Habitat
Autoographa gamma	Silver Y moth	*Trapping*	*Bucket*	*Autographa gamma*	*grape*
Candidatus Phytoplasma australiense 16SrXII-B	Australian grapevine yellows	*Visual*	*n/a*	*n/a*	*grape*
Candidatus Phytoplasma solani 16SrXII-A	Bois noir/stolbur	*Visual*	*n/a*	*n/a*	*grape*
Candidatus Phytoplasma vitis 16-SrV-C	Flavescence doree	*Visual*	*n/a*	*n/a*	*grape*
Cryptoblabes gnidiella	Christmas berry webworm	*Trapping*	*Bucket*	*Cryptoblabes gnidiella*	*grape*
Daktulosphaira vitifoliae	Grapevine Phylloxera	*Root sampling*	*n/a*	*n/a*	*grape*
Epiphyas postvittana	Light brown apple moth	*Trapping*	*Large Plastic Delta-White*	*Epiphyas postvittana*	*grape*
Eupoecilia ambiguella	European grape berry moth	*Trapping*	*Wing-plastic*	*Eupoecilia ambiguella*	*grape*
Lobesia brotana	European grapevine moth	*Trapping*	*Paper delta trap*	*Lobesia botrana*	*grape*
Pseudopezicula tracheiphila	Rotbrenner	*Visual*	*n/a*	*n/a*	*grape*
Spodoptera littoralis	Egyptian cottonworm	*Trapping*	*Bucket*	*Spodoptera littoralis*	*grape*
Spodoptera litura	Cotton cutworm	*Trapping*	*Bucket*	*Spodoptera litura*	*grape*

How is the National CAPS Priority Pest List determined and maintained?

Leading the Efforts

The CPHST CAPS Support Team develops and maintains the **National CAPS Priority Pest List**. Both pest lists and approved survey methods are updated annually and published on the CAPS Resource and Collaboration website. Information is gathered throughout the year, and pests are consistently being evaluated for CAPS. Any stakeholder in the CAPS program can also suggest potential new CAPS pests.

The Prioritized Pest List for the CAPS program is developed using a three-step pest prioritization process:
1) Pre-assessment questionnaire,
2) Pest prioritization model, and
3) Post-assessment questionnaire.

1) Pre-assessment questionnaire
The pre-assessment questionnaire is used to assess potential new CAPS pests before the pests are run through the extensive prioritization model.

2) Pest prioritization model
The model thoroughly evaluates the potential CAPS pest using a set of evidence-based questions and determines the pest's likely impact in the United States.

3) Post-assessment questionnaire
The post-assessment questionnaire evaluates the feasibility of available survey and diagnostic/identification methods of pests that pass through the pre-assessment and the prioritization model.

Pests which pass through these three steps are added to the CAPS priority pest list.

CAPS pests are then grouped into categories and grouped by commodity (same hosts e.g. grape, solanaceous, stone fruit), taxon (similar pest taxa; e.g., cyst nematodes, bark beetles), or pathway (pests that follow the same pathway; e.g., Asian defoliators).

The final product/outcome of this process is the **National CAPS Priority Pest List**, a searchable list of all plant pest concerns and targets that is placed on the CAPS website. Here is an example:

Priority Pest List for 2018
Commodity and Taxonomic Surveys

Surveys available through the Farm Bill have been added to this document. Click on the name of the survey manual to go directly to that pest list. Changes to the pests lists for 2018 are documented in the Summary of Pest List Changes.

Surveys Available through CAPS

Corn

Cotton

Cyst Nematodes

Exotic Wood Borer/ Bark Beetle

Mollusk

Oak

Pine

Small Grains

Soybean

Tropical Hosts

Surveys Available through Farm Bill

Asian Defoliator

Grape

Palm

Solanaceous Hosts

Stone Fruit

Grape

Scientific Name	Common Name	Eco. & Environ.*
Autographa gamma	Silver Y moth	No
'*Candidatus* Phytoplasma australiense' 16SrXII-B	Australian grapevine yellows	Yes
'*Candidatus* Phytoplasma solani' 16SrXII-A	Bois noir/stolbur	Yes
'*Candidatus* Phytoplasma vitis' 16SrV-C	Flavescence dorée	Yes
Cryptoblabes gnidiella	Christmas berry webworm	Yes
Epiphyas postvittana	Light brown apple moth	No
Eupoecilia ambiguella	European grape berry moth	No
Heteronychus arator	Black maize beetle	No
Lobesia botrana	European grapevine moth	No
Lycorma delicatula	Spotted lanternfly	No
Pseudopezicula tracheiphila	Rotbrenner	Yes
Spodoptera littoralis	Egyptian cottonworm	No
Spodoptera litura	Cotton cutworm	Yes
Thaumatotibia leucotreta	False codling moth	Yes

*Eco. & Environ. denotes that the pest is on the 2018 Pests of Economic and Environmental Importance Prioritized Pest List.

Appendix A: Resources for CAPS-related information

Resource	Location	Uses
CAPS Approved Methods	http://pest.ceris.purdue.edu/services/napisquery/query.php?code=approvedmethods2018	Approved Methods for Surveillance of CAPS pests, CPHST datasheets
CAPS Guidelines	http://caps.ceris.purdue.edu/survey-guidelines	CAPS survey guidelines
CAPS Host Matrix	http://pest.ceris.purdue.edu/services/napisquery/query.php?code=phmatrix	Information on important hosts and the pests that threaten them
CAPS Pest Lists	http://caps.ceris.purdue.edu/pest-lists	Current CAPS pest lists
CAPS Resource and Collaboration Website	http://caps.ceris.purdue.edu/	The most up to date source for CAPS information
NAPIS*	https://napis.ceris.purdue.edu/	Survey results and pest distribution information
NASS	www.nass.usda.gov	Agricultural data

*A login is required for access to NAPIS. It is the same as your login to the CAPS Resource and Collaboration website.

Appendix B: Contact list for CAPS support

Contact	Role	Email
John Bowers	National CAPS Coordinator	john.bowers@aphis.usda.gov
Steve Bullington	National Diagnostics Coordinator	stephen.w.buiilngton@aphis.usda.gov
Lisa Jackson	National Operations Manager, Pest Detection	lisa.d.jackson@aphis.usda.gov
Dan Mackesy	CPHST CAPS Support team (pathogens, mollusks, nematodes, weeds)	daniel.z.mackesy@aphis.usda.gov
Heather Moylett	CPHST CAPS Support Team (Arthropods)	heather.moylett@aphis.usda.gov

Work/Financial Plans and Reports

What are work/financial plans and reports?

Work and Financial plans are the official documents prepared and submitted at the beginning of every new funding cycle. These plans provide a detailed breakdown of specific objectives, as well as budget allocations for completing the state CAPS objectives within a defined timeline. To confirm the work plan is being followed as agreed upon, official reports must also be submitted by specified dates that usually occur semi-annually and sometimes quarterly.

How does creating the Work/Financial plans and submitting narrative and financial reports support CAPS programs efforts?

Work/Financial plans provide an official, concrete record for survey work to be undertaken during the fiscal year. Reports are a legal requirement for the funds provided toward doing the work as outlined in the plan. The following lists provide more detail on how these efforts specifically support the CAPS program.

Work Plan

- The official framework for all state plans funded by CAPS.
- Provides a detailed breakdown of specific state CAPS objectives to be completed within a defined period of time.
- A critical communication tool used to inform others (CAPS employees, volunteers and stakeholders) of what will be done and when.
- Ensures consistency across the nation by defining the exact CAPS work each state is attempting to complete.
- Confirms all aspects of program operations have been considered and planned for. (e.g individual roles, required supplies and equipment, budget, timelines and reporting deadlines)
- Necessary tool for monitoring and evaluation ensuring that goals are being met and work plan processes are followed as agreed upon.

Financial Plan

- An official record of the amount of money allocated to CAPS operations, and details *how* those funds will be spent.
- Creates accountability and transparency for federally funded work plans.
- Allows both state and federal agencies to predict funding needs each quarter.

Reports

Accomplishment Reports (semi-annual, annual)

- Delivers consolidated, factual and up-to-date information about progress of implementing the work plans to CAPS program managers and other stake holders.
- Provides accountability and transparency for outcomes of the CAPS program.
- Offers justification for continued funding.
- Opportunity to highlight achievements and compare accomplishments both quantitatively and qualitatively with objectives proposed in the work plan.

Financial Reports (SF425 and SF270)

- Provides accountability and transparency that funds are being utilized as described in the detailed financial plan.
- Indicates whether allocated funds were completely spent.
- Allows for states to be reimbursed at regular intervals.

Who leads efforts for developing work plans, financial plans and reports?

State Survey Coordinator (SSC)*

*The SSC leads this effort, but she/he must ask for input and feedback from the SPRO, SPHD and the state assigned PSS. If the state has a robust business office, the SSC may assign portions of the financial planning and reporting to them. Do **NOT** attempt creating work and financial plans without assistance from these entities.

General Responsibilities

The State Survey Coordinator generally performs the following tasks:

Work/Financial Plans

- Prepare and submit CAPS work plans to SPHD.
- Create and submit detailed financial plans*.
    - Depending on resources available, assigning portions of this budget work to administrative personnel is encouraged. (**Note, work and financial plans are developed together but submitted as separate documents. Reporting for these two aspects is also separate.*)

Reports

- Prepare and submit semi-annual and final accomplishment work plan reports to the ROAR and SPHD.
- Complete and submit financial reports to an authorized representative of the state agency. (Note, financial reporting may be delegated by the SCC to the state administrative offices.)

These tasks will need to be completed on a regular and recurring basis from year to year. Although the specific due dates change year to year for submitting paperwork, the timing in relation to the year is roughly the same. The following is a general timeline of when you should plan for completing many of these tasks, plans and reports.

Year 1: Planning for following year's survey season/agreement.	**April:** National Pest Surveillance Guidelines are published on the CAPS Resource & collaboration website.
	Late August: Work and financial plans for next year due to Field Operations August 15. SPHDs upload the work and financial plans into SharePoint. The Survey Summary Form must be completed before the plans will be reviewed.
	September 1 – October 15: The Field Operations National Operations Manager (NOM) reviews work and financial plans for alignment with CAPS mission, policies, and priorities. The NOM requests any revisions of plans to the SPHD. The NOM reviews work and financial plans and sends the SPHD an email notification once the plan has been unofficially approved.
	October 18: Final revisions to work and financial plans due to Field Operations.
	Late September - November: The Survey Supply Ordering System in IPHIS is open for ordering next year's survey supplies.
	Early December: The NOM officially approves work and financial plans in SharePoint. The PPQ Agreements Staff begins entering the agreements into ezFedGrants.
	Late December to early January: The cooperator completes application in ezFedGrants (1-month deadline on applications). *This does not apply to states with Pre-Awards. Cooperative agreements are signed and finalized; work begins.
Year 2: Year in which surveys occur/timeframe of agreement.	Survey activities conducted.
	March: All survey data for the previous season to be entered in NAPIS database before March 31 (or no more

Year 3: Data entry and completion of all reporting activities.	than 90 days after the conclusion of the cooperative agreement).
	March: ADODRs review CAPS Accountability Report for data entry requirements.
	March 31: Annual Accomplishment Report due to Field Operations.
	March 31: SF425 Federal Financial Report (annual financial status report) due.
	March 31: SF270 Request for Advance or Reimbursement (final request for funds) due.

Work Plan Templates for CAPS Programs

To help you begin, templates for these important documents are found at the official CAPS website. http://caps.ceris.purdue.edu/home Templates are currently listed with Resources under the Survey option in the navigation bar. Examples of completed reports can also be found in this section of the website.

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Pest Survey Details

What are pest surveys?

Pest surveys are the foundation for early detection of invasive pests. Effective pest surveillance results in quicker, thus more successful responses to pest threats. Conducting a pest survey means, in a nutshell, looking for a pest where the pest is likely to be. To this end, CAPS surveys generally fall into one of two types:

1) Pathway surveys: a likely mechanism of introduction is known or assumed. These surveys typically are associated with a particular commodity (e.g., tile) or within a transportation corridor, and the emphasis is placed along the pathway from point/port of origination to final destination.
2) Detection surveys: no particular pathway for pest entry has been identified. These surveys usually take place near hosts where the target pest(s) is most likely to be found, and can be the endpoint along a pathway.

All pest surveys require both logistical planning and budgeting for supplies and resources required to conduct the survey. Survey planning is performed during the development of work and financial plans at the beginning of every fiscal year. Once plans have been approved and funds have been transferred, then operations for survey can begin.

How do pest surveys support CAPS programs efforts?

The primary purpose of the CAPS program is to operate pest surveys with the goal of achieving early pest detection. In fact, every element of CAPS is designed to support collection of comprehensive pest data and observations to reveal pest threats. Accurate survey information is vital to making important regulatory decisions at both the state and national level.

Who leads efforts for determining pest survey details?

State Survey Coordinator (SSC)
Pest Survey Specialist (PSS)

The SSC and PSS work together, combining their areas of expertise and networks to conduct comprehensive and effective pest surveys.

The PPQ State Plant Health Director (SPHD) and State Plant Regulatory Officer (SPRO) assist in determining suitable pest survey targets and effort, through their approval of CAPS work plans.

General Expectations and Responsibilities

There are four main areas to consider when planning and conducting surveys:

1. Prioritizing target pests
2. Site selection
3. Identifying collection methods
4. Logistical Coordination

1. Prioritizing Target Pests

This is covered in more detail in the first section of this guidebook, and is an important step as it forms the base for what follows below. A survey cannot be performed until the target pests have been identified.

2. Site selection

First you must select sites to monitor based on the pest targets list, and the type of survey best suited for your current situation: pathway, or general.

Pathway Surveys

1. Identify and locate relevant hubs or industries that are likely pest pathways.
    a. Begin by using port pest interception information and PPQ Emergency Action Notification (EAN) data to identify locations for survey activity.
    b. EAN data can also be used to select target industries such as marble and stone importers for mollusk surveys, sawmills for surveying exotic bark beetles, or organic soybeans imports with surveys for Federal noxious weeds.
2. Select sites directly on pathway-related properties for traps and/or conducting survey observations.
    a. Gaining permission to conduct surveillance on these properties provides an opportunity to add more valuable survey data.
    b. If the selected pathway-related property is dangerous, or otherwise difficult to access, another good option for survey work is to choose likely pest habitat in the near vicinity (e.g. parks or wildland).

Detection Surveys

States vary on the actual methodologies used to determine survey sites. However, the following are common steps for determining survey sites when a specific mode of pest introduction is unknown, pests spread through non-point-

specific means (e.g. movement of hay bales from farm to farm), or by natural dispersal.

1. Determine likely areas to intercept the target pest. This is done by considering host prevalence by host acreage or host density.
    a. For agricultural crops, the USDA National Agricultural Statistics Survey, through state-based Field Offices, provides acreage information for many crops on a county basis (www.nass.usda.gov). A good source of host information in a forest setting is the U.S. Forest Service Forest Inventory and Analysis (FIA) Program (https://www.fia.fs.fed.us).
2. Distribute sites throughout the identified host area(s) to provide good coverage, and efficiency as resources allow. Do **not** leave large geographic areas within the target host areas without coverage.
3. Check distribution and possible sites by placing points on a map, with either ESRI's ArcGIS "Create Random Points" function or the USDA-supported Visual Sample Plan software providing random placement.
    a. Surveys may also be conducted by assuring a minimum distance between observations, without pre-placement of target sites.
4. Check that all selected sites are accessible for trap placement. This includes ensuring permission from private property owners, checking the safety of the area, and/or verifying the area is physically accessible to personnel.

3. Identifying collection methods

There are many ways to collect surveillance data, and the pests you are targeting will always dictate your collection methods. Once your state has finalized a list of target pests, you should consult the Approved Methods for Pest Surveillance (AMPS) located on the CAPS website. These guidelines provide all of the details on approved collection methods from the best traps to sample storage requirements. These details are available for most pests of concern in the U.S. If you cannot find the pest you need, please contact PPQ CAPS Support.

Survey supplies for the pests on the CAPS Priority Pest List are available at no cost to the states through PPQ's Survey Supply Procurement Program (SSPP). Once the specific traps and sample collection supplies have been identified, a survey supply order can be made through the Integrated Plant Health Information System (IPHIS) Survey Supply Ordering Module. States will receive notification when the ordering system is open to submit survey supply orders. Additional information can be found on the Survey Supplies page on the CAPS website. The volume of required supplies to order will be determined by the number of sampling sites you selected. When the supplies arrive, it is a good idea to check the contents against the packing list and make sure all needed supplies are on hand and properly stored until needed (e.g., putting lures in a freezer). It also will be necessary to train any new surveyors the proper way to prepare

traps and demonstrate any other relevant collecting techniques required for the current survey.

4. Logistical Coordination

For these survey activities to succeed, the SSC and PSS must provide clear communication and effective coordination. Effective coordination and communication creates a robust and successful pest survey program by eliminating misunderstandings that lead to data gaps, or duplication of efforts.

Here are a few tips for beginning:

1. Build and maintain relationships with a network of state contacts. These contacts must include: government agriculture employees, University and Extension personnel, Federal and State forest service personnel, and a variety of stakeholders, producers, shippers, and educators.
    a. Network relationships are critical to finding acceptable sites for maximum pest surveillance effectiveness. These relationships also help persuade landowners and volunteers to assist with trap placement and monitoring.

2. Aim for thorough coverage of the state. Pest survey sites should be selected based on local data and information about where the pest risk is highest, but you should also consider other statewide needs and potential trapping sites. Selected survey sites must be coordinated in a way that achieves the most coverage for the finite resources available to reach pest data collection goals.

    Tips for coordinating pest survey sites

    At the beginning of every new pest surveillance cycle, those involved with CAPS pest survey coordination should answer the following questions:

Who?	The State Survey Coordinator or Pest Survey Specialist *This person should be identified and everyone aware of who is leading this year's coordination efforts. Sometimes it is best to utilize the most senior person available regardless to role in the CAPS program. Coordination is key as the SSC and PSS likely will be leading the effort in their respective organizations.*
What?	Clearly identify data and information that must be collected and what platforms it will be shared on. The Approved Methods available in each year's CAPS Guidelines found on the CAPS website should provide guidance in this, as will the requirements of the data repository (NAPIS).

	If you do not clarify all essential information before going out in the field, personnel will not know to collect it and you will have gaps in your data. Also, make sure your collaborators have access to the platform, and know how to use it correctly.
When?	The dates when traps for all planned surveys will be deployed and collected throughout the season. *Determine locations and coordinate this **before** you deploy traps for the season.*
Where?	The methods of communication you will employ to handle coordinating pest surveillance activities with various groups. *Communication can occur in whatever way is most effective and comfortable for you and your stakeholders. Information can be exchanged through: social media, document sharing platforms (e.g. Google docs), email, phone calls, in person meetings, or any other effective method for your situation.*
Why?	Rationale for why those sites were selected. This includes not only how the pest and host biology factors influenced decision-making, but also human factors where stakeholders allow placement and monitoring of traps. *Remember! Coordination includes discussing information that was used to decide where traps need to be placed. Trap placement is determined by the pest biology, host location, relationship to the property owner, access to the area, and the potential pathway into the state.*

Example of a Pest Survey

Wisconsin Plant Pest Survey

2017 SURVEY: PHYTOPHTHORA ROOT ROT ON SOYBEAN

Wisconsin Department of Agriculture, Trade and Consumer Protection • Plant Industry Bureau • Madison

objective

Assess the prevalence of Oomycete-caused root rot on soybean seedlings. Collect samples for testing for Phytophthora and Pythium spp.

- Determine the percent of surveyed fields that are infected with Oomycetes.
- Estimate the extent of affected plants in sampled fields.
- Make collections of plants for pathogen testing in the lab.

time frame

Survey fields Late May to late June. Early vegetative stages.

protocol

- Take an overview of the field for areas of stunting and discoloration.
- If areas of stunting are found, check for signs of obvious flooding.
- Survey for the characteristic "shepherd's crook" symptom of Phytophthora infection, or living plants with stem discoloration at or near the soil line. Often, symptoms will appear in plants around the obvious ponded area. Since Phytophthora infection is also favored by compacted soil, headlands and field access areas are also likely to show symptoms.
- If symptomatic plants are encountered, collect whole plant samples. If no symptomatic plants are evident, collect plants from four sites separated by 30 or more paces, favoring low-lying and wet areas.
- **DIG up plants , DO NOT PULL. Collect 5 plants at each of 4 sites around the suspect area.**
- Bag plants in plastic (ziploc if possible) to prevent drying out. Label with Observation ID number, County and growth stage.
- Avoid sampling dead plants in the center of flooded areas; preferentially collect plants that are still living.
- Keep plants on ice until delivered to the laboratory.
- Track sample information on spreadsheet.
- Estimate percent of field in the area with symptoms.

survey sites

- Locate a soybean field: Drive to the target point on the GPS, or as near as the road will allow. If a soybean field is visible from that point, sample that field. If no soybean field is visible, enter the next target waypoint in the GPS and begin driving, following the GPS turn-by-turn instructions (set for "shortest distance"). Stop and survey the first accessible soybean field encountered. If no suitable field is found by the second waypoint, the first field is an omit.
- SAMPLE 55 fields randomly. Map attached.

symptoms

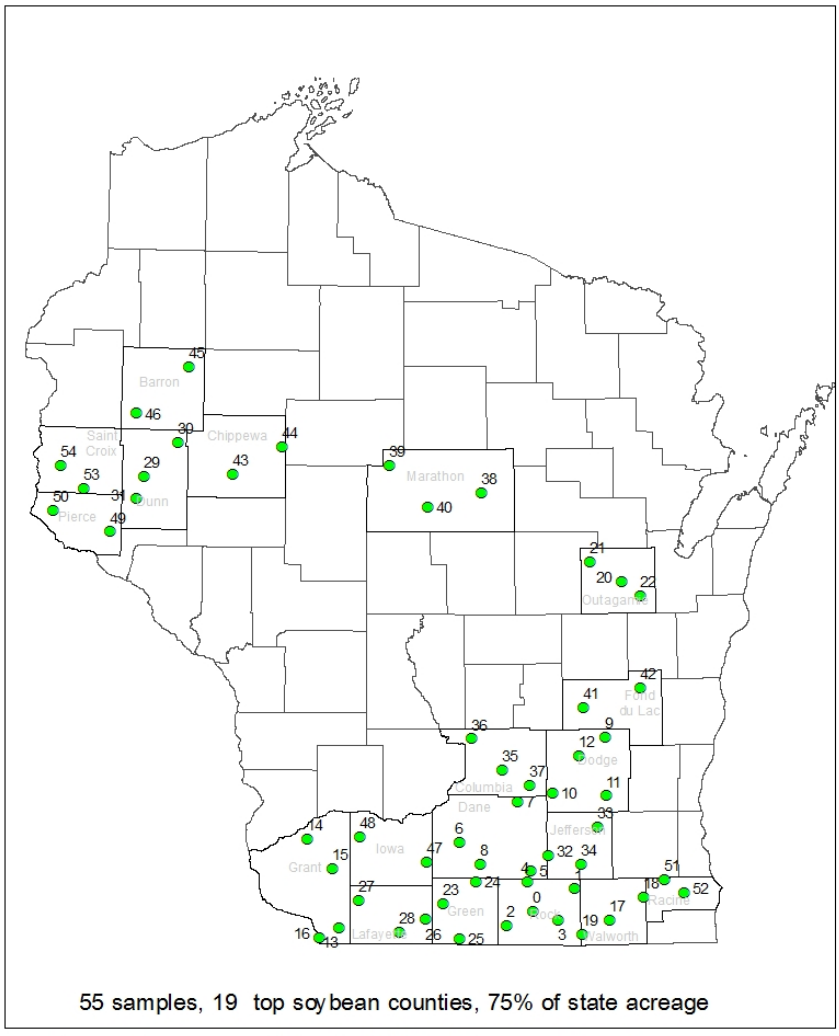
Symptoms of Phytophthora generally appear shortly after emergence. There are some early-season symptoms which are characteristic of infection by Phytophthora. Stem discoloration reaching up from the soil line is one (photo 1). A "shepherd's crook" at the top of the dead stem (photo 2) is another. Dead plants will generally keep their leaves (photo 3). Symptoms of P. sansomeana are classic root rot, generally without discoloration or shepherd's crook.

Photo 1

Photo 2

Photo

2017 Soybean Root Rot Targets



55 samples, 19 top soybean counties, 75% of state acreage

Wisconsin Department of Agriculture, Trade and Consumer Protection 12/28/2016

Data Management

What data needs to be managed, and what does management look like?

All information collected from Pest Detection and CAPS surveys must be carefully managed from initial recording, to reporting, and finally storage. The final storage place for all of this data is the National Agricultural Pest Information System (NAPIS). The results, including both positive and negative records, from CAPS and Farm Bill Goal 1 Survey must be entered into NAPIS ***as soon as identification or diagnostic results are available*** so that the national records are timely and up-to-date. The NAPIS database summarizes survey data at the county level for insects, pathogens, weeds, mollusks, and biological control organisms across all 50 states and three territories emphasizing exotic pests that may impact U.S. agricultural exports or harm agricultural production and/or natural resources.

Negative data from national surveys supports trade and exports, and benefits American agriculture; therefore, the documentation of negative data is extremely important and valuable. The CAPS program strives to ensure 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 Approved Methods for Pest Surveillance (AMPS) 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. All positive records should be at the species level.

Why are data management practices so important to the CAPS program?

Gathering valid survey data is the entire mission of the CAPS program. Regulatory and trade decisions, as well as mitigation actions, are dictated by interpreting the most current data. Therefore, it is critical to the mission of CAPS for data to be accurate, current, and easy to find. The only way to accomplish this is to keep data collection and reporting organized throughout the entire survey process. The state program can assist individuals responsible for data collection by implementing best practices for handling data that are carried out consistently by all CAPS personnel in the state. If the data is not kept organized from the beginning, delays in reporting and mistakes are more likely to occur. These delays in detecting pests due to poor data management could result in disastrous costs to U.S. agriculture production, natural resources, and/or interstate and international trade.

Who leads the data management policies and procedures?

It is ultimately the State Survey Coordinator's (SSC) responsibility to ensure data is correctly and promptly entered into NAPIS by the appointed deadlines for each

survey effort. This may involve personally entering data; however, it could also mean training and supervising others to enter the data. Ultimately, only the SSC, or their designee, has data entry rights. Training and help with data entry, as well as other IT facets of the CAPS Program, are available from the CAPS Information Services staff at Purdue University (napis@purdue.edu).

The State Plant Regulatory Official usually is responsible for supervising these efforts. He or she should be prepared to answer any questions, assist with complications that arise, and manage personnel workload so that data entry is completed in a timely manner. However, a best practice may be to share the data with both the SPRO and PSS, and ask that they also review the data to verify that valid data will be entered into NAPIS. Just be sure to make the practice consistent for everyone in the state from year to year.

Expectations and helpful tips for managing data

Available Training

- Take advantage of one on one training provided by the CAPS Information Services group at Purdue University. Upon request, the Purdue group offers training to help on-board new SSCs or for any other situation that may require additional instruction. Requests for training can be sent to napis@purdue.edu.

Deadlines

- Be familiar with work plans and signed notice of awards (NOAs) from the cooperative agreement regarding specific expectations and timelines associated with your surveys.
    - All pest survey results (positive and negative) **must be entered into NAPIS by the end of the agreement period** (usually 90 days after the agreement ends when the Accomplishment Report is due).
- If the survey collects the first ever recorded detection of a federally regulated pest for the nation or state, this data must be entered into NAPIS within 48 hours of confirmation.

Required Information

- The minimum information **required** for NAPIS data entry include:
    - **Observation Number**
    - **Observation Date**
    - **Data Source**
    - **State County**
    - **Site**
    - **Funding Year**
    - **Funding Source**
    - **Survey Name**
    - **Pest**

    - **Pest Status**
    - **Survey Method**
- Other fields may be required based on the information entered in these fields.
- As of January 2015, all records require funding information and survey name to support the Accountability Report.
- Further information may be found under 'Data Definitions' in the NAPIS database.
- Additional data that may be important to capture in the field for the state records include:
    - GPS coordinates (for local use only, not necessary for NAPIS data entry)
    - Trap type (required with General Trapping Procedure)
    - Lure Used (required with General Trapping Procedure)
    - Dates of specific activities (e.g. lure change, sample collection)
    - Contact information of land owner if available
    - Individual sample identification numbers
    - General notes

Quality Control

- States can refer to their Accountability Reports (found on the CAPS Resource and Collaboration Site) to make sure all required data has been entered at the end of the agreement period. The Accountability Report provides a quick summary of NAPIS data entered for each state.
- States are responsible for deciding how they keep track of data collected ***before*** entering final results into NAPIS. Keep in mind, clean data cannot be entered into NAPIS if it was not clean and clear while handling the data during collection. It is a good idea to periodically review the data handling procedures in place for your state program to ensure high-quality data.

State Survey Committees

What is a State Survey Committee?

The State Survey Committee is an official forum for members to recommend, and identify state survey priorities for pests of concern. Committee members are comprised of both CAPS personnel and stakeholders with a vested interest in state surveillance of invasive species. Although not an exhaustive list, here are some stakeholders often included:

- ✓ State and Federal Forest Service,
- ✓ Wildlife management,
- ✓ University extension,
- ✓ Industry representatives (horticulture, lumber, etc.),
- ✓ Corps of Engineers,
- ✓ State and Municipal Parks
- ✓ Producers.

In addition to assigning pest survey priorities, this forum also provides an opportunity to communicate critical information. Participating committee members can reliably receive updates on new pest threats as well as reports on results of completed and on-going surveys.

How does this committee support CAPS programs?

- The State Survey Committee provides an official avenue for the voices of all stakeholders potentially impacted by invasive pests to be heard. Successfully including these voices in survey decision-making fosters beneficial collaborations to gather more complete information and implement efficient and robust surveys.
- Advice from the State Survey Committee is a necessary source of information for selecting target pests for survey. 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), consider recommendations and advice of the State CAPS Committee, along with CAPS guidelines to finalize selection of pests most important to the state.
- Official meetings help committee members align the state goals and plans so that everyone is on the same page as to what surveys are taking place. These meetings are also an efficient method for providing new information, and informing members of upcoming outreach events.
- Well organized and inclusive committees ultimately result in better protection for all stakeholders potentially impacted by invasive pests.

Who leads efforts to organize the committee and provide timely updates of survey efforts?

The State Survey Coordinator should drive and finalize selection of committee members. However, given the need for a diverse network of stakeholders, the SPHD, SPRO and PSS should provide guidance on identifying potential members they think would benefit the committee and state CAPS program. Selected stakeholders should reflect the unique needs of each state; however, PPQ always encourages industry-state partnerships for pest survey.

Expectations and Suggestions for operating a State Survey Committee

- Minimum one meeting a year must be held. Once a year in April, or May, allows for pest suggestions on new surveys for August submission and also an opportunity to review survey results for the current year.
    - There are benefits to having two meetings a year. A meeting twice a year allows separating the solicitation of pest suggestions for new surveys from reporting survey results. In March or April, the meeting would focus on providing suggestions for surveys for next year through to the August submission (through email). A winter meeting can then focus on reporting results of the current year survey and if there is time, gather information on other pests of concern or pest suggestions for next year.
- Consider topics, discussions and results from recent committee meetings. Is there anything from past meetings that should be followed up with more information or dialogue?
- Clearly identify the goals for the meeting. What knowledge and skills should the attendees to walk away with? For example, attendees may need to be updated on new information. Does new information need to be disseminated at the meeting, or could dissemination be done through email? If it can be done ahead of time, then there is more time to spend on questions, or practice exercises related to the information. Are there procedures that require training better done in person such as building and placing traps, or correct sample documentation and recording? Do survey volunteers need to be recruited, or does the state need to gain access to specific sites? Is it important to discover local community pest concerns? If so, save some time for a discussion forum, or other avenue to solicit this information. Let the goals dictate the agenda.
- Have an agenda ready and sent out to participants before the annual or semi-annual meeting. This allows for committee members to prepare better questions and comments for the meeting. It is also a good planning tool to ensure nothing important has been left out of the meeting.
- Treat every member with respect and listen to their views and concerns before dismissing them or moving on. The CAPS program is meant to serve as many stakeholders with pest threat concerns as possible.

Example agendas for a successful annual meeting

2017 CAPS Committee Meeting Agenda
June 7th, 2017
10:00 a.m. to Noon
Plant Board, 123 Invasive Rd, Commodity, US 12345
Commissioner Conference Room

Welcome……..
Introductions…….
Planned Upcoming Surveys: Come with your questions prepared
- Sudden Oak Death Survey (2016, 2017)…….
- Citrus Commodity Survey (2016 / 2017)…….
- Citrus Tree removal Program…….
- Honey Bee Survey……
- Pine Commodity Survey (2016, 2017)……..
- Plant Board Update……

Other Pest Detection Activities (Plant Board)……..
Current Status Reports:
- Pest Detection Report (Forestry)…….
- Pest Detection Report (USFS)……..
- Pest Detection Report (NRCS)……
- Pest Detection Report (Extension)……..
- Pest Detection Report (Extension)……
- Pest Detection Report [Roseau Cane Scale] (Extension)……
- Pest Detection Report (PPQ)……
- Pest Detection Report (PPQ)……
- Pest Detection Report (PPQ)……

New Pest Threats:
- Apple Snail Update from Surveyor……

Open Discussion…….
Closing remarks…….

State Cooperative Agricultural Pest Survey Committee Meeting
July 26, 2017 at 10:00am
Plant Board, 123 Invasive Rd, Commodity, US 12345

Meeting Agenda

Welcome: State Survey Coordinator

Introductions: Roundtable introductions

CAPS program overview: SSC

- Review of 2016 accomplishments (CAPS and Farm Bill)
- 2017 ongoing activities (CAPS and Farm Bill)

Discussion: Committee participation

- Comments on past and ongoing survey work
- Pest of concern to State (commodity or pathway)
- Proposals for 2018 survey program (CAPS and Farm Bill)

Other invasive species news or topics of concern

- Noxious Weeds (Benghal Dayflower, Cogongrass, Itchgrass, TSA, Water Spinach)
- EAB and TCD (other insects of concern?)
- Channeled Apple Snail
- Plant Pathogens (Citrus Greening, Laurel Wilt, Oak Wilt)
- Tawny Crazy Ant

Adjourn by 12:30 pm

Community Communications

Who are the community members CAPS should communicate with, and what does this look like?

Preventing the establishment of new exotic plant pests is a common goal in every state. This is often accomplished through early detection activities which involves targeted and/or ongoing surveys. A well-informed local pest surveillance community plays an important role in the success of early pest detection efforts and safeguarding state agriculture. Any community members with a stake in protecting plant health should be included. For example, producers, sellers, forestry service, parks and recreation, industry representatives, importers, and even the public may all need to be included for various initiatives. The audiences to target will depend on the current goals for attaining support, engagement, and participation for the CAPS program. Some common ways to bring these audiences in and build a community are through communication activities such as; outreach workshops, targeted emails and/or phone calls with industry representatives, meetings with government officials, and networking at conferences and trade shows. However, this is not a mandatory list of activities because every communication effort should be tailored to the unique needs and goals of each state program.

How do communication activities support CAPS programs?

Early pest detection leads to quick and timely responses which are crucial to effectively mitigating invasive pest threats. Pest detection and response efforts are improved by utilizing outreach as a mechanism to improve existing survey initiatives, and strengthening the network of state-wide cooperators. In other words, targeted communication can improve CAPS programs because such efforts often enlist more resources without necessarily expanding budget and personnel. Any member of the public interested in excluding invasive pests could provide assistance in many forms if only they are made aware of the current circumstances and needs. Thus, successful communication efforts better enable CAPS programs to:

1. identify exotic pest threats,
2. determine and implement the most effective means of preventing, detecting, and responding to new exotic pests, and
3. report risks and needs to land management personnel, relevant industries, and the public.

Here are some ways the CAPS program directly benefits from community partners.

- Public support for CAPS in the form of time, resources, surveillance assistance, tax allocation, access to property for trapping, and compliance with instituted mitigation measures.
- Readily available industry partner resources to gather current information on potential pest pathways for their goods.
- More precise coordination across federal, state, and local government entities for resources

Who leads efforts to keep stakeholders and the community informed?

The SSC is in the unique position to lead efforts in building community connections. However, given the diversity of goals for the CAPS program and audience needs, all CAPS personnel in the state should provide input and volunteer assistance in whatever way best serves the communication efforts.

Expectations and suggestions for community communications

Outreach is encouraged and generally supported through program infrastructure as a means to assist the State Survey Coordinator (SSC) in obtaining support, engagement and participation from key stakeholders where pests of significant concern to the state are involved. It is understood that outreach activities inherently occur during routine survey planning and preparations, attendance at industry and stakeholder meetings, and various training and seminar events.

Yet, additional activities can be planned, and budgeted for if necessary. Qualification for additional outreach funding is contingent on direct support of existing survey initiatives within the state. Funding through Farm Bill Goal 5 Outreach & Education also may be an option worth considering, especially for larger projects.

Both inherent and budgeted communication efforts must be carefully thought out because each state is comprised of various stakeholders with different pest interests, goals and needs. Therefore, no single method for communicating, educating and recruiting partners will suffice. First, determine the CAPS program goals for reaching out to the community, and identify the target stakeholder audiences to help reach those goals. In other words, what do you hope to accomplish by communicating with each target audience? Then, begin planning communication methods and outreach activities to reach these various target audiences based on these goals.

Although not a comprehensive list, here are some examples of common goals, target audiences and methods for accomplishing the CAPS communication goals for likely audiences:

Goal	Target Audience	Methods
Gaining public support, engagement, and participation	- K-12 students - College undergraduates - Interested people not directly affiliated with growers or industry	- FFA workshops - Presentations at County and State fairs - Targeted websites and social media - Classroom presentations at school
Increasing industry support, engagement, and participation	- Growers - Producers - Sellers - Other parties involved in the production and sale of plant based products or other goods along surveyed pathways	- Booths at trade shows - Consulting appointments with greenhouses, orchards, gardening centers and other producers - Target email blasts
Fostering communication and coordination of related federal, state, and local government agencies	- Federal and State legislature representatives - Forestry - Parks and recreation - Fish and Wildlife - Amateur nature societies	- Networking through contacts - Target email blasts
Networking with key government, community, industry personnel	- Any stakeholder that assists, or could assist, with CAPS program efforts	- Offer Survey/Pest based training via webinar during slow parts of the year - Web based resources
Identifying potential volunteers to assist with various surveillance activities	- Growers - Public - Select schools and universities	- In-person presentations to schools - Outreach workshops for students - Demonstrations at fair booths - Create incentive/achievement level activities to identify potential survey leaders
Utilizing the public to report pest sightings	- Public at large	- Local and State media news spots - Social media campaigns - YouTube videos - Specific websites

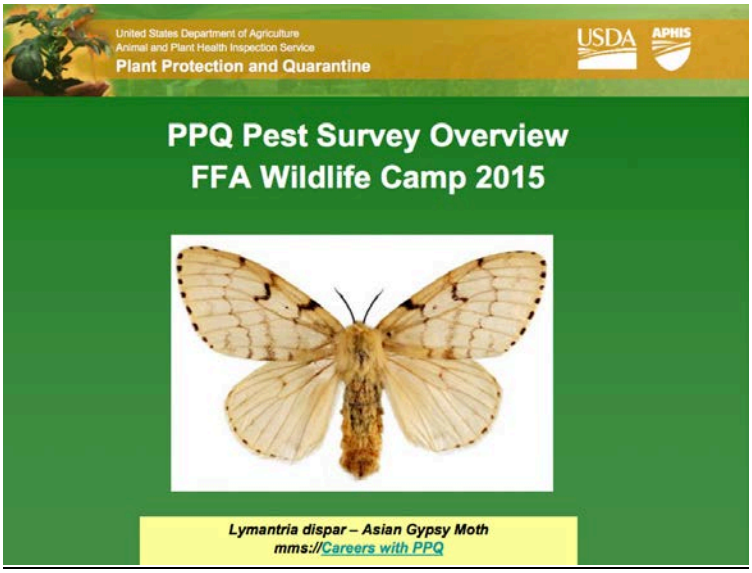
Samples of communication activities

To help better visualize different methods and ignite ideas for your community outreach efforts, we have provided a few real-world examples.

Educational outreach activity

FFA Camp Activities – Wildlife Camp

This camp was designed for high school students to explore careers in plant health protection. The following are a list of materials and activities included in the camp experience.



Activities

a) PowerPoint presentation = Overview of Trapping
b) Break into 2 Groups – #1 EAB
   #2 EWBB & Gypsy Moth
c) Demonstrate Trap Service

   TEAM #1 – retrieve traps - Two backpacks or supply packs
   i) Pole, filters, funnels, tweezers, trash bags, gloves, GPS, trap card, ziplock bag
   ii) Find traps – give mobile #

   TEAM #2 – Sweep Nets – Acetone, cotton balls
   i. Screen Samples using keys

ii. Do Insect Pinning Demo
iii. Visual Survey with GPS and Binoculars
iv. Baseball Diamond – Bio-surveillance
v. Walk to Lake to talk about Invasive Weeds

Activities Supply List

- EWBB Traps
- EAB Traps – Purple & Green
- Gypsy Moth Traps
- Bucket Traps
- Light Trap
- Car Battery – Power Inverter
- Sweep Nets
- Microscopes – GSB & RDU
- Insect Mounting Supplies
- GPS Units
- Table
- Chairs
- Insect Keys – Tree Key
- Binoculars
- Trap Pole

National public awareness campaign

Mass public campaigns often require large budgets, marketing personnel and other resources that may not be available to a state program. However, the state can take advantage of USDA information and branding by driving public traffic to the appropriate websites and handing out the resources freely available on those websites.

For example, this "Don't move firewood" campaign has free messaging resources that can be downloaded and distributed.
https://www.dontmovefirewood.org/dont-move-firewood-it-bugs-me-story-cool-bumper-sticker-html/

State coordinated outreach
Farm Bill Goal 5 Funding: A Goal 5 Success Story: The Junior Invasive Inspectors Program
Cooperator: Clemson University – Department of Plant Industry
Funding Years: FY12 – FY17

The Junior Invasive Inspectors Program is a citizen science initiative that equips middle school youth, and their adult leaders, with the knowledge and supplies to

conduct visual surveys for regulated invasive forest pests. In 2012, the program used the first round of Farm Bill funding to assemble and distribute 65 survey backpacks with all necessary equipment for participants to use in the field. With additional years of Farm Bill funding, Clemson staff further developed the program by writing a curriculum covering: invasion biology, tree identification and insect identification. This instruction is paired with distribution of spiral-bound identification cards for recording target pests and specific hosts. The curriculum provides the knowledge foundation participants need to successfully conduct a visual forest pest survey. Participants then go home to observe and report the GPS coordinates and health status of the surveyed host trees in the program's dedicated online database. A tiered award system rewards returning participants for multiple reports, culminating in their very own survey backpack.

Over 2000 Junior Invasive Inspectors from 20 South Carolina counties have conducted visual forest pest surveys with this program. Public schools began to show considerable interest in the program after an invasion biology component was added to the new state middle school science standards. Clemson staff also provided train-the-trainer workshops for teachers and 4H leaders who were interested in utilizing the Junior Invasive Inspector Program.

2018 NCC Meeting
Newnan, Georgia

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