Pest Detection and the Cooperative Agricultural Pest Survey (CAPS): Evolution and Status

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The Beginning

• **1980 - Intersociety Consortium for Plant Protection (ICPP)**
  - Initiative for identifying the plant pest information needs of federal and state agencies and national and international organizations involved in protecting agriculture.

• **1982 - Cooperative National Plant Pest Survey and Detection Program (CNPPPSDP)**
  - Began as a pilot effort in 16 States.
  - Envisioned as a coordinating mechanism for all pest surveys in the U.S.
  - Served as a cooperative program of State survey systems with national coordination provided by USDA-APHIS-PPQ

• **1986 - All 50 states and Puerto Rico were involved**
The Beginning

1987 - Cooperative Agricultural Pest Survey (CAPS) Program
   - The land grant institutions were named by 75-80% of the states to be their lead organization

1990-1991 – APHIS and PPQ Reviews

1992 – National CAPS Meeting in Houston
   - CAPS was redirected to address a reduced set of goals and objectives more realistically suited to the available resources and within the mission of PPQ.
     - Detect exotic pests before they can become well established
     - Facilitate the export of U.S. Agricultural products
     - Collect and manage survey data from PPQ cooperative programs
The Beginning

• 1993
  – Five standing advisory committees were disbanded
  – Replaced by a three-tiered set of state, regional, and national action teams.

• 1996 - Safeguarding Review Study was formed

• 1999 – Safeguarding Review Report
  – APHIS PPQ does not exert a leadership role in coordinating plant pest and disease activities on a national level.
  – The CAPS program has failed to provide a unified national pest detection system.
  – The program is not functioning efficiently due to inadequate funding, lack of federal coordination and oversight, and because the authority to conduct surveys may not necessarily reside with agencies which are responsible for their execution at the regional and state levels.
Chapter 3: Pest Detection and Response Committee Report

- The current processes and Information Systems used to support the survey, inspection, monitoring, risk assessment, detection, and reporting activities carried out under the CAPS program needed to be improved to reduce the risk of invasive plant pests entering the United States and to reduce the response time if an incident occurred.

- Critical need to strengthen the pest detection infrastructure and to develop a more effective system for prioritizing pest detection activities

- 5-6 overarching findings, resulted in

- 7 major recommendations related to Pest Detection and CAPS
Safeguarding Review Recommendations

• **D-1**: Restructure the existing Cooperative Agricultural Pest Survey program to create a Federal and State Cooperative Invasive Plant Pest Survey Program (CIPPS) under the supervision of the National Invasive Plant Pest Coordinator (NIPPC).

• **D-2**: Institute a three-tiered committee system to assist the National Coordinator in identifying and prioritizing plant pest and disease detection and response activities in the United States.
  a. State
  b. Regional
  c. National
Safeguarding Review Recommendations

• D-3: Develop and endorse a conceptual design for the Cooperative Invasive Plant Pest Survey Program (CIPPS) that will:
  a. Establish a nationwide surveillance program to identify potential pest organisms and high risk, sentinel areas for introductions,
  b. Standardize invasive plant pest detection activities at the state, regional, and national levels, and
  c. Support export certification requirements and domestic program duties.

• D-14: Appoint and empower the National Invasive Plant Pest Coordinator (NIPPC) (D-1) to manage, with guidance from the three-tiered committee system (D-2), allocation of invasive plant pest detection funds.
Safeguarding Review Recommendations

• D-24: Assign to the Regional Committees (D-2b) the task of identifying survey needs, coordinating involvement by states, and allocating funds subject to approval of the National Invasive Plant Pest Coordinator.

• D-25: Identify potential invasive plant pests and corresponding sentinel areas at high risk for their entry.

• D-26: Establish and periodically revise Exotic Pest Detection Guidelines, including trapping methodology, for potential invasive exotic pests.
  – Detection guidelines are necessary for all species identified as potential invasive plant pests (see D-25) which pose an eminent threat of entry into the United States.
Implementation Groups

- **2000 – Implementation Action Plan Committee Reports**
  - Pest Detection and Response Group
  - Recommended actions

- **2003 - CAPS Program Guidebook (August 11, 2003)**
  - CAPS restructuring to provide **increased national leadership**
  - Eastern and Western Regional CAPS Guidelines
  - Begin to formally implement recommendations of Safeguarding Review with **four main goals**
    - Early detection
    - Pest information database
    - Timely and accurate pest data
    - Enhance communication
Internal CAPS Review

• 2003 - Internal CAPS Review (November 6-7, 2003)
  – The National CAPS Committee identified the need for an internal review to assess the present status of the CAPS program and to develop a plan for future changes
  – a working group of stakeholders assembled to review the accomplishments and plan for the future functionality and performance of the CAPS program including the National Agriculture Pest Information System (NAPIS) database
  – The outcome of the meeting was a list of 224 items on how to optimize the CAPS Program
NPB CAPS Advisory Group

- 2006 - The National Plant Board (NPB) CAPS Advisory Group
  - Worked with PPQ to evaluate shortcomings of the CAPS program. Roles and responsibilities, mission, and pest lists were among several issues that were addressed collaboratively, resulting in new guidelines.
  - Three priority issues identified
    - CAPS Mission/Functions
    - Pest Lists and Survey Methodology
    - Field Communication / Roles and Responsibilities at state level
2008 National Survey Guidelines

• 2007 - The CAPS Program Guidebook was completely revised and updated for 2008 surveys (not updated since 2003)
  – Provided a new mission statement
  – Eliminated Regional CAPS Committees
    • National CAPS Committee (NCC) with national guidance
    • State CAPS Committees
  – Clarification of roles and responsibilities
    • National Survey Coordinator
    • Eastern and Western Regional CAPS Coordinators
    • SPHD, SPRO, PSS, SSC
  – Changes and clarification: national priority pests list, national/state surveys, funding formulas, data management, outreach, etc.
  – Foundation of the CAPS program today.
2008 Guidelines

• October 7, 2007 - NCC Bylaws adopted
  – To establish rules of operation for the National Cooperative Agricultural Pest Survey (CAPS) Committee (NCC).
  – Duties of the Committee
  – Membership, Rotations, and Roles & Responsibilities of members

  – In Section 10201, Plant Pest and Disease Management and Disaster Prevention, the Secretary is directed to make available Commodity Credit Corporation (CCC) funds for early detection and rapid response of pest threats.
2008 National CAPS Conference

- December 2008 – National CAPS Conference, Phoenix, AZ.
  - Addressed the future and vision of the CAPS program
  - Involved the CAPS community to provide direction for the future of the program
  - Discussed implications and implementation of Section 10201 of the 2008 Farm Bill
  - Opportunity to provide input on the direction of the CAPS program, network with counterparts from other States, and participate in group discussions, hands-on workshops, and training.
  - Origin of bundled, multi-pest surveys (required with 2010 Guidelines).
National Survey Guidelines

• Continued building on the initiatives of the CAPS program & results from the 2008 and 2010 National CAPS Conferences
• Incremental improvements rolled out in the annual Guidelines
  – 2009 Guidelines (April 19, 2008), Approved Survey Methodology for negative data for EWB/BB, justification rules in NAPIS, Appendix J-3 (Excel file)
  – 2010 Guidelines (April 10, 2009), Priority Pest List replaces Pests of National Concern, and is composed of Commodity Pests and AHP Prioritized Pest List (ranked list of pests)
  – 2011 Guidelines (April 20, 2010), Approved Survey Methodology for negative data for all Priority Pests
  – 2012 Guidelines (April 18, 2011), AHP Prioritized Pest List becomes Pests of Environmental and Economic Concern (non-ranked), standardized reporting templates required
National Survey Guidelines

- **2013 Guidelines** (May 7, 2012), New Infrastructure guidance, surveys split between CAPS and Farm Bill, State discretionary survey eliminated, online Survey Summary Form required
- **2014 Guidelines** (May 8, 2013), Reflected new PPQ organizational structure (responsibilities of the NOM and S&T CAPS Support), work plan submission through SPHD to PPQ SharePoint site
- **2016 Guidelines** (April 22, 2015), New Pest Assessment and Prioritization Process, updated work plan templates, ability to combine surveys into one work and financial plan
- **2017 Guidelines** (April 22, 2016), Objective Prioritization of Exotic Pests (OPEP) model replaced the AHP prioritization model, All Commodity Survey Manuals converted to web pages, pest data sheets as stand-alone documents for ease of updating and management
# Commodity Survey Manuals

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Date</th>
<th>Commodity</th>
<th>Date</th>
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<tbody>
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<td>Citrus</td>
<td>July 2005</td>
<td>Stone Fruit</td>
<td>August 2011</td>
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<td>EWB/BB</td>
<td>March 2006</td>
<td>Cotton</td>
<td>November 2011</td>
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<td>Oak</td>
<td>September 2006</td>
<td>Asian Defoliators</td>
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<td>Soybean</td>
<td>April 2007</td>
<td>Cyst Nematodes</td>
<td>June 2014</td>
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<td>Grape</td>
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<td>Small Grains</td>
<td>December 2007</td>
<td>Palm</td>
<td>September 2013</td>
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<td>Pine</td>
<td>July 2008</td>
<td>Solanaceous Hosts</td>
<td>April 2014</td>
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<tr>
<td>Corn</td>
<td>February 2010</td>
<td>Tropical Hosts</td>
<td>January 2016</td>
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|                    |            | Apple/Pear/Orchard | 2019???

All converted from pdf files to web pages by 2017
# CAPS Information Services (CAPSIS)

<table>
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<tr>
<th>Service</th>
<th>Implementation</th>
<th>Updated</th>
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<tr>
<td>NAPIS Maps</td>
<td>2000</td>
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<td>Pest Tracker</td>
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<td>2008</td>
<td>2016</td>
<td>2018 CAPS and Farm Bill Reports</td>
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<td>Annually</td>
<td>2019 Approved Methods for Pest Surveillance</td>
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<td>Survey Summary Form</td>
<td>2012</td>
<td>2018</td>
<td>2018 Survey Planning</td>
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National CAPS Committee (NCC)

Members

Documents
- Policies
  - Bylaws
  - Term Limits and Rotations
  - CAPS Timeline
  - Comparison of Duties
  - Roles and Responsibilities
  - Outreach

NCC Annual Meetings
- 2018 Newman
  - 2017 NCC Action Items
  - 2018 Agenda
  - 2018 Meeting Minutes
  - CAPS Guidebook - Draft
  - NCC Meeting Approval
  - NCC Meeting Justification
  - NCC Supplemental Info - Booklet
  - ppt1 - Approved Methods Update
  - ppt1 - CAPS Information Service
  - ppt1 - CPHST Intro/OPEP Update
  - ppt1 - Host Criteria
  - ppt1 - Measures and Metrics
  - ppt1 - Pest List / Host Matrix
  - ppt1 - Survey Manual Intro
  - State Justification Letter
  - Travel Information
  - Visitor Logistics NDDTC

Conference Call Minutes
- 2018
  - August 2, 2018
  - July 12, 2018
  - June 7, 2018
  - May 3, 2018
  - March 29, 2018
  - March 1, 2018
  - February 1, 2018
  - January 4, 2018

- 2017 McAllen
  - 2016 Phoenix
  - 2015 Sacramento
  - 2014 Gainesville
  - 2013 Austin
  - 2012 CPHST Ft. Collins
  - 2012 Miami
  - 2011 Raleigh
  - 2010 Newman
  - 2009 Raleigh

CAPS National Meetings
- 2010 Kansas City
- 2008 Phoenix
Cooperative Agricultural Pest Survey (CAPS)

Natl. Policy Manager

Natl. Operations Manager

S&T CAPS Support

National CAPS Committee
SPHD, SPRO, PSS, SSC Representation

State CAPS Committee
State
PPQ

State CAPS Committee
State
PPQ

State CAPS Committee
State
PPQ

State CAPS Committee
State
PPQ

State CAPS Committee
State
PPQ

Pest Detection Management Team
- It is all about People! -
What’s Next for 2019 and Beyond?

• New/Updated CAPS Resource & Collaboration website
  – Updated navigation with a modern, professional look
• Online Infrastructure and Survey Work and Financial Plans
  – Integrated with the Survey Summary Form
• New CAPS Reporting Story Map
  – Performance Measures and Metrics
  – An Annual Report-like format that will always be current
• Apple/Pear/Orchard Commodity Survey
• What to do with Farm Bill Goal 1 Survey?
• What do you want?
CAPS Resource and Collaboration Site
caps.ceris.purdue.edu