



United States Department of Agriculture  
Animal and Plant Health Inspection Service  
Plant Protection and Quarantine  
Center for Plant Health Science and Technology

THE PLANT PROTECTION  
& QUARANTINE  
STRATEGIC PLAN  
FOR  
THE CENTER FOR PLANT  
HEALTH SCIENCE &  
TECHNOLOGY

FISCAL YEAR 2007-2012





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# Message from the Director



CPHST has changed its organization and range of work considerably during the past five years. These changes have impacted every location and have been driven by several factors: evolving needs for science and technology within PPQ, requirements to improve our efficiency/ effectiveness and transformation of the PPQ workforce. Indeed, we have seen major changes to workforce composition, work planning and the kinds of work we engage. I am now asking CPHST staff to consider their work over the next 4-5 years and adopt the CPHST's Strategic Plan presented here.

The Department and Agency have put considerable effort into strategic planning during the past few years. In June 2006, we saw the USDA Strategic Plan for FY2005-2010. We have seen several iterations to the APHIS and PPQ Strategic Plans. Now, CPHST has developed a Program-oriented Strategic Plan to direct and focus its activities over the next 5 years: 2007-2012.

Meetings about a Strategic Plan for CPHST began last winter and continued through the summer. During August, we held a Strategic Planning meeting in Riverdale. That meeting brought together many CPHST staff, stakeholders and customers to distill the results of earlier meetings and provide the first draft of a plan. Subsequently, we have held several conference calls to refine the concepts and issues into the plan that you see here. During the next several weeks, I will be speaking with all CPHST staff in all facilities to explain the Agency and PPQ Strategic Plans and show where our plans are complementary.

PPQ's Strategic Plan for CPHST is useful to us in several ways. Ideally, our plan shows where CPHST's energy and resources will be expended for the next several years. Also, our plan identifies critical elements of PPQ's Strategic Plan that must be supported by the science and technology services provided by CPHST. Finally, our plan serves as a reference point to measure progress toward achieving our goals. For CPHST staff reading this plan, please take time to see where your work unit fits in the plan and be prepared to contribute your activities toward achieving the goals outlined in the plan.

CPHST takes pride in its capacity to respond to emergency issues and provide solutions to complex technical problems. I hope that all PPQ personnel will see how the strategies outlined in the CPHST plan will enhance their ability to accomplish the PPQ mission.



# Mission, Vision & Values

## PPQ MISSION

**A**PHIS-PPQ safeguards agriculture and natural resources from the risks associated with the entry, establishment, or spread of animal and plant pests and noxious weeds. Fulfillment of its safeguarding role ensures an abundant, high quality, and varied food supply, strengthens the marketability of U.S. agriculture in domestic and international commerce, and contributes to the preservation of the global environment.

## CPHST MISSION

The Center for Plant Health Science and Technology supports PPQ regulatory decisions and operations through methods development work, scientific investigation, analyses and technology.

## CPHST VISION

**The Center for Plant Health Science and Technology...**

### **Contributes to the Technical Excellence of PPQ.**

Our scientific services and products support PPQ programs, strengthen regulatory actions, and enhance policy development. With our partners and customers, we identify emerging issues and anticipate future Program needs. We optimize operational efficiencies by providing tools and support based on a comprehensive understanding of relevant technical issues, biological and scientific facts and political parameters. We use and transfer state-of-the-art technology to build PPQ's capacity and to enhance program delivery. We contribute to knowledge and understanding of regulatory science through our outreach and education activities. As a result of our contributions, PPQ's technical competence is nationally and internationally recognized for excellence.

**Works in Partnership.** We are a full partner in PPQ Program activities and engage our customers through effective communication and collaboration. We conduct our activities in an open, transparent manner to deliver appropriate and timely solutions that are valued by our stakeholders. Our multi-disciplinary teams maximize the value of deliverables and leverage resources through dynamic relationships with partners, customers and stakeholders. We value the power of partnerships and publicly recognize the contributions of all team members.

**Invests in Its People and Technical Resources.** We foster a culture of innovation and service to develop and sustain a motivated workforce. We value and recognize each employee's contributions and achievements. Our employees maintain a high level of competence through technical training and professional development. CPHST employees at all levels actively exchange information to enhance our operations and programs. Our organizational structure is aligned with PPQ to facilitate communication and product delivery. Our facilities are strategically located, properly equipped and adaptable to develop technology and respond to PPQ's changing Program needs. These resources guarantee the necessary scientific and technical rigor required to accomplish the CPHST mission.

## CPHST GUIDING PRINCIPLES

The Center contributes to a larger public good: To safeguard America's agriculture and natural resources from risks associated with the entry, establishment or spread of animal and plant pests and noxious weeds. Our support of PPQ's safeguarding role contributes to an abundant, high quality and a varied food supply; Our support strengthens the marketability of U.S. agriculture; Our support contributes to the preservation of the global environment. We are committed to excellence and accountability in fulfilling our mission. Our professional values guide us as individual public servants and as a unit within PPQ:

**WE VALUE SCIENTIFIC RIGOR, TECHNICAL COMPETENCE, AND PROFESSIONAL INTEGRITY. THESE ATTRIBUTES ARE ESSENTIAL TO MAINTAINING THE REPUTATION AND CREDIBILITY OF THE AGENCY AND ITS DECISION-MAKING PROCESS.**

### **Supporting Principles and Examples:**

- We rely on the scientific method and unbiased analytical reasoning, acknowledging that other factors may be considered in regulatory decision making.
- We use internal processes to hold ourselves accountable for consistency and quality in the timely delivery of our scientific and technical products.
- We strive to assign the best personnel to meet the operational and Program needs of PPQ.



- We are committed to the scientific excellence of our personnel. This is achieved through learning contracts that include continuing technical training and professional development.
- We regularly evaluate and recognize the scientific competence of our scientists through Peer Review.
- We are committed to rewarding our employees for their excellence in scientific, technical and administrative achievements.

**WE VALUE THE TIMELY AND RESPONSIVE DELIVERY OF OUR PRODUCTS TO MEET THE EXPECTATIONS OF OUR ACTION-ORIENTED AGENCY.**

**Supporting Principles and Examples:**

- We provide expert support to emergency response programs as rapidly as possible.
- We participate in emergency programs through laboratory support, the deployment of CPHST personnel to the field, and the organization of scientific panels.
- We engage in open dialog and debate to deliver realistic and practical solutions in meeting long-term needs of the Agency.
- We use risk analysis framework to rapidly identify and manage the impact of plant pests and diseases.

**WE VALUE CREATIVE APPROACHES IN THE EXPLORATION OF SCIENTIFIC ISSUES AND DELIVERY OF SOLUTIONS TO MEET AGENCY NEEDS.**

**Supporting Principles and Examples:**



- We pursue new uses for existing technologies and products. Creative solutions include new data management tools for mining and analyses to enhance the value of existing data.
- We encourage unique and innovative approaches to deliver cost-effective solutions.
- We embrace problem-solving science to meet the unique challenges of a regulatory Agency. We evaluate alternative solutions and explore options using scientific intuition, vision and forward thinking.
- We empower visionary and lateral thought by creating a free-thinking environment.

**WE VALUE OUR COMMUNICATION AND COLLABORATION WITH CUSTOMERS AND STAKEHOLDERS.**

**Supporting Principles and Examples:**

- We routinely ask our customers to identify the work that they would like for us to do.
- We solicit the perspectives of stakeholders in formulating scientific solutions to support Agency decision-making.
- We value the professional integrity required to communicate potentially unpopular scientific findings to our customers and stakeholders.
- We communicate complex scientific concepts that form the basis of our recommendations to customers and stakeholders in an open and transparent manner.
- We communicate in a timely and ongoing manner during the execution of our projects to ensure that we continue to meet the needs of the Agency
- We educate the public in regulatory science issues through outreach activities.



## Strategic Plan Framework

The five goals contained here describe CPHST's plan of action. To ensure success, CPHST also developed three key management initiatives that detail its plan to improve communication with customers, allocate and manage CPHST resources more strategically and improve the Workplan development and Project Prioritization process.

Performance measures will track progress in attaining each goal and objective in the plan. Base-line information will be developed in the plan's first year. Later, long-term performance targets can be set. Actionable strategies delineate the activities needed to reach the strategic goals.

CPHST's five strategic goals show commitment to providing exceptional service to customers, quality state-of-the-art science and technology products, and strengthened management to ensure alignment with all PPQ Program needs. The five goals contain 18 objectives that embrace all programs and services within CPHST's area of responsibility.

Through these objectives, CPHST will:

- Enhance PPQ's efforts in pest detection and management by evaluating the relevant offshore pest intelligence. CPHST will develop appropriate survey methods and a robust diagnostic framework for PPQ operations.
- Provide timely scientific and technical support for emergency response and management by aligning CPHST's organizational infrastructure with PPQ operations and emergency response.
- Enhance APHIS' position on trade-related plant health issues by strengthening the PRA infrastructure, methods and work processes and increasing CPHST's capacity for information sharing and building

international partnerships.

- Optimize the acquisition and distribution of relevant scientific and technical information through enhanced analysis and interpretation of science-based data to support PPQ regulatory and operational decision-making. Enhance PPQ's capacity to anticipate and respond to emerging scientific, technical and regulatory issues by strengthening CPHST's network of partnerships with national and international collaborators.

Maintaining scientific excellence in all CPHST activities is critical to ensuring PPQ has the best scientific information and current technology necessary to make sound science-based regulatory and operational decisions and effectively responding to real threats.





# Strategic Goal 1

## Enhance PPQ's Efforts in Pest Detection and Management



**A** heightened concern exists regarding the threat of accidental and intentional exotic pest and pathogen introductions that could negatively impact U.S. agriculture and natural resources. To protect our plant resources, PPQ provides technology and a supporting infrastructure to state departments of agriculture, industry, ports-of-entry and international institutions. CPHST provides PPQ the scientific support to improve and develop pest detection and management tools and diagnostics techniques. CPHST supports PPQ's efforts to better identify and target offshore pest threats, develop diagnostic tools, and transfer technology. Collaborating with International Services and Foreign Agricultural Services allows CPHST to anticipate and support current and emerging scientific, technical and regulatory issues to reduce risks at the origin. CPHST must provide PPQ with scientific support, timely and accurate survey protocols and diagnostic methods to detect exotic pests as early as possible. CPHST works toward a proactive strategy for pest detection to increase pest interceptions using technology and data to accurately and consistently provide detection methods. CPHST strives to enhance the capacity to launch emergency response programs by providing practical and scientifically sound tools to PPQ.

This goal directly supports PPQ Strategic Goal 2: Maintain a U.S. safeguarding continuum to protect U.S. plant resources from unintentional introductions.

### **Strategic Result: Increased Ability to Exclude or Detect Plant Pests Earlier and Thereby Minimize Adverse Economic and Ecological Consequences**

#### **Objective 1.1 Enhance the Understanding of Potential Threats**

Understanding potential pest threats in foreign commerce allows for proper pretreatment in the country of origin, increased interceptions and safeguarding success offshore. Obtaining offshore pest intelligence quickly facilitates the timely assessment of risks and development of response recommendations.

CPHST will develop survey techniques that are practical and usable for domestic and foreign field

surveys. These surveys determine and assess pathways for potential pest introductions. The Offshore Pest Information System (OPIS) allows users to communicate in an organized manner about offshore animal and plant health events and issues. CPHST supports OPIS with the Global Pest and Disease Database (GPDD) to ensure the end-users have the knowledge necessary to combat offshore plant pests and diseases. This enables APHIS to confront foreign threats of our agricultural and environmental resources on an ongoing basis. CPHST will partner with foreign and domestic plant health organizations to ensure the GPDD contains the most current and complete information available.

CPHST will access and evaluate information repositories and available data. With access to data repositories, PPQ can prioritize, analyze, and act on offshore pests of significant risk to U.S. plant resources. This will also leverage development and validation of mitigation methods offshore to reduce the likelihood of pests following introduction pathways and strengthen PPQ's preparedness to respond when pests arrive. Collaboration, cooperation and participation between CPHST and domestic and foreign plant health communities engage information transfer and project cooperation and participation. CPHST will continue to enhance offshore intelligence tools to provide accurate and scientifically sound data to properly mitigate and safeguard American plant resources while maintaining stable and open global markets.

**Key Outcome:** Effective Pest Exclusion and Mitigation Pest Introductions

#### **Performance Measure 1.1.1**

Number of CPHST offshore survey and detection projects which result in valid survey activities and valid survey data flow to decision makers

#### **Actionable Strategies**

##### **Future actions will include:**

- Develop survey and detection techniques, spatial technology and pest identification tools to



## Strategic Goal 1

- conduct surveillance for potential domestic high-risk pests; delimit pest incursions; and determine potential offshore pest threats;
- Determine and assess pest introduction pathways for current and potential pest incursions and potential pathways;
  - Conduct risk analysis to understand the biology of potential high risk pests;
  - Participate, cooperate, and collaborate with foreign and domestic plant health organizations to develop and validate offshore mitigation methods to reduce potential pest pathways to the United States;
  - Continue electronic bio-surveillance using open-source information;
  - Share tools and technologies with Canada, Australia, and New Zealand, Quadrilateral Scientific Collaboration in Plant Biosecurity (Quads), and other countries for mutual benefit;
  - Participate with the PPQ-National Plant Board (NPB) group to improve the CAPS program's development of pest lists to ensure offshore intelligence is incorporated in pest lists.

### Objective 1.2 Make Technically Accurate Diagnostic Tools Widely Available on a Timely Basis

Diagnostic tools are critical to pest detection, management and technical support for policy decisions. CPHST, in partnership with staff and state cooperators, provides the framework for lab accreditation/certification and proficiency testing programs. CPHST is committed to developing, validating and deploying diagnostic methods and techniques that are practical, robust and easy to use. CPHST will develop, adapt and validate molecular and other diagnostic tools and methods to detect and identify quarantine plant pests and pathogens.

CPHST leverages partnerships with academic institutions, state and federal agencies, industry, and international partners to share data, transfer technology, and ensure PPQ is provided with the most current and robust diagnostic tools. These relationships allow CPHST to find and provide practical tools that field surveyors can use easily. CPHST will provide training to National Plant Diagnostic Network (NPDN), state departments of agriculture (SDA), and PPQ diagnosticians and identifiers in detection and identification protocols for high consequence pests and pathogens, including select agents. CPHST strives to build capacity and expertise to validate biochemical and molecular

detection and identification methods. CPHST will continue to strengthen diagnostic methods and tools to provide scientifically sound, accurate and standard technologies.

**Key Outcome:** Improved Capabilities for PPQ to Exclude Invasive Plant Pests and Respond Rapidly to Introduced Plant Pests

### Performance Measure 1.2.1

Number of tools developed, deployed, and utilized effectively in the field to support PPQ pest exclusion and response activities

### Actionable Strategies

#### Future actions will include:

- Strengthen partnerships with academic institutions, state, federal, international entities, and industries to ensure diagnostic methods are accurate and current;
- Ensure diagnostic methods provided to PPQ programs are practical, robust, and easy to use;
- Develop, validate and deploy new diagnostic techniques that can rapidly detect and/or identify plant pests including select agents;
- Increase PPQ capacity to deploy mobile diagnostics;
- Test diagnostic methods used in the pests' countries of origin to improve methods validation; Engage external experts to aid CPHST in the development and validation of biochemical/molecular detection and identification methods;
- Develop expertise and infrastructure within CPHST to develop, validate and deploy "gold standard" protocols and surveys for select agents and high consequence pests and pathogens;
- Develop infrastructure to provide technical advice and support to facilitate the technology transfer of CPHST methods involving standardized surveys and operational diagnostics standard operating procedures (SOPs); work instructions; and on-site hands-on training for PPQ, SDA, and NPDN labs in the use of survey, detection and identification protocols for high consequence plant pests and pathogens;
- Enhance the technology transfer process to ensure transparency and effective use of the provided tools;



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- Improve the CPHST Lab Accreditation Program, including development, deployment and evaluation of the proficiency testing program to increase the national capacity to conduct CPHST validated protocols.
- Work with the Plant Germplasm Quarantine Program and its cooperators to identify methods to be validated to screen germplasm for targeted pests; work cooperatively with programs to transfer these methods into operations.

### Objective 1.3 Make Appropriate and Technically Sound Survey Methods Widely Available on a Timely Basis

CPHST provides PPQ with survey methods and techniques that are practical and feasible for the end-user. The users include PPQ field staff located domestically and internationally, who typically encompass different requirements and survey applications. Survey methods and techniques must be developed with PPQ operations that anticipate plant pest threats and promote activity to better safeguard U.S. agriculture and natural resources. Survey methods provide the surveyor with early detection and rapid response tools which could protect U.S. plant resources from long-term and expensive eradication programs. International surveying provides accurate data to develop treatment protocols and/or trading restrictions and guidelines. CPHST will integrate applied research projects and high leverage activities to promote the development of survey methods.

**Key Outcome:** Improved Capabilities for Early Detection

#### Performance Measure 1.3.1

Number of CPHST deliverables provided in response to PPQ's requests (CPHST project or *Ad Hoc* request) for effective utilization in plant pest survey and detection

#### Actionable Strategies

##### Future actions will include:

- Develop new and evaluate current domestic and offshore survey techniques;
- Test survey techniques offshore, when possible;
- Share survey tools and techniques with offshore counterparts to effectively monitor pest populations in the country of origin (*Note: This strategy also supports the Trade PRA work*);

- Determine survey protocol data elements to ensure the survey methods are scientifically sound, data are collected consistently to achieve greater survey effectiveness, and data management is consistent with the Agency data initiative;
- Re-evaluate existing survey protocols to adapt new survey technology and tools;
- Coordinate with PPQ operations to ensure survey techniques are practical, feasible, and user friendly;
- Provide advanced data analysis techniques, including GIS spatial analysis, modeling, and other techniques, to assist operations managers better anticipate, target and understand emerging pest threats;
- Develop and implement internal CPHST processes and helpful mechanisms to ensure survey methods are delivered to and used by PPQ operational staff in a consistent manner, such as providing on-site training in the field, manuals, SOPs, and work instructions;
- Increase CPHST involvement in CAPS program to:
  - Work with the National CAPS committee to develop and implement a standard format for CAPS proposals to be included in the cooperative agreements;
  - Promote CPHST's capacity to provide scientific knowledge and technical expertise in survey design to states developing CAPS survey proposals
  - Provide assistance to the states to execute their proposed CAPS survey, when requested;
  - Work with the CAPS committee to ensure data is collected and compiled in a consistent manner;
  - Provide guidance in the selection of diagnostic methods used on survey finds.

### Objective 1.4 Provide New Technologies for Existing and New Programs

CPHST must stay abreast of cutting-edge technology developments by maintaining partnerships with industry, academia, state and federal agencies, international entities, and PPQ program personnel. CPHST, in cooperation with PPQ programs, will evaluate program needs and scan for potentially useful and applicable technologies to address the identified needs. CPHST must acquire enhanced understanding of spatial dynamics to benefit emergency programs,



## Strategic Goal 1

domestic operations, risk analysis and offshore risk management. CPHST must find and evaluate nontraditional plant pest detection technologies for applicability to existing and new PPQ programs. CPHST will request and rely on feedback from PPQ operational staff to determine necessary improvements on current pest management techniques. CPHST's attention to and coordination of spatial technology will leverage program delivery in a cost-effective manner. These activities will improve PPQ's ability to anticipate plant pest threats and promote offshore activities to better safeguard the nation.

**Key Outcome:** PPQ's Scientific Leadership and Program Credibility Is Maintained with International Plant Protection Organizations (NAPPO, Quads, IPPC)

### Performance Measure 1.4.1

Field acceptance and effective use of advanced and/or non-traditional plant pest technologies, such as remote sensing technologies, provided to existing and/or new PPQ programs

### Actionable Strategies

#### Future actions will include:

- In cooperation with PPQ programs, evaluate and mutually agree on issues and problems that require new or improved technologies;
- Strengthen partnerships with academia, state and federal agencies, international entities, industry and program personnel to identify potential cutting edge technologies;
- Identify, evaluate, adapt and implement new and non-traditional technologies potentially applicable to PPQ programs (*i.e.*, offshore, domestic and emergency);
- Conduct periodic reviews with PPQ program operations staff to evaluate, refine or improve pest management techniques or find new opportunities to deploy new pest management tools.





## Strategic Goal 2

### Provide Timely Scientific and Technical Support Required for Emergency Response and Management



CPHST must develop and maintain a high level of expertise to support PPQ's preparedness in the areas of science, technical support, and technology transfer for rapid response efforts. CPHST infrastructure must be capable to supply deliverables required for PPQ prevention, preparedness and response-and-recovery components for effective emergency management. CPHST will structure human, fiscal and physical resources to appropriately respond to emergencies while minimizing adverse impacts on ongoing CPHST activities.

This goal supports PPQ Strategic Goal 2: Maintain a U.S. Safeguarding continuum to protect U.S. plant resources from unintentional introductions.

#### Strategic Result: PPQ's Emergency Response to Plant Health Emergencies Is Timely and Effective

##### Objective 2.1 Refine CPHST Infrastructure to Respond to Plant Health Emergencies

CPHST must provide technical and scientific support to ensure that PPQ implements science-based prevention strategies and delivers technically sound response for plant health emergencies. Consequently, CPHST organizational infrastructure must be aligned with PPQ's emergency response needs. CPHST must be able to shift priorities and resources in accordance with emergency management initiatives. Protocols should be developed that ensure CPHST's involvement in emergency programs is timely and appropriate. CPHST must develop a system that quickly identifies and assigns appropriate staff to plant health emergencies by assessing knowledge, skills and experience. This system would also identify skill resource gaps that must be filled.

**Key Outcome:** CPHST Organizational Structure Is Aligned with PPQ Operational Needs

##### Performance Measure 2.1.1

CPHST and NSPL program structure is aligned with PPQ Emergency, Domestic, and Regional Programs to ensure timely and appropriate response to PPQ emergencies

##### Actionable Strategies

###### Future actions will include:

- In partnership with PPQ programs, identify core functions that CPHST will provide in support of PPQ prevention, preparedness, and response-and-recovery initiatives;
- Obtain PPQ Executive Team approval to align current CPHST resources to effectively support PPQ operational plant health emergency requirements;
- Develop a competency model that identifies basic knowledge, skills and abilities needed in CPHST to provide technical support required for PPQ plant health emergency initiatives;
- Conduct training to ensure CPHST staff understands Technical Working Group functions under a unified command;
- Redirect resources to support the infrastructure and fill knowledge gaps;
- Write a recruiting plan to fill technical, scientific and operational gaps in CPHST.

##### Objective 2.2 Establish a CPHST Plant Health Emergency Planning and Preparedness Process

Protocols are necessary to respond effectively to plant health emergencies. CPHST should define how projects will be handled in the event of unplanned requests to support short- and long-term high-priority projects that require scientific and technical resources most appropriate to the emerging situation "on the ground." Coordinating emergency planning and preparedness with PPQ programs provides a framework for timely and effective response and recovery activities.



## Strategic Goal 2

**Key Outcome:** PPQ's Needs for Sound Science and Technology in Support of Plant Health Emergencies Are Addressed By CPHST

### Performance Measure 2.2.1

Number of CPHST deliverables (CPHST projects, *Ad Hoc* projects, Science Panels) provided to and utilized by PPQ emergency responses or programs

### Actionable Strategies

#### Future actions will include:

- Work with National and Regional Program Managers to identify and develop core competencies that ensure CPHST delivers timely technical solutions in support of plant health emergency planning, preparedness and response-and- recovery;
- Establish a communication protocol within CPHST to activate support for plant health emergencies;
- Develop a collaborative process for Emergency Domestic Programs (EDP) and CPHST to create emergency response guidelines and pest-specific action plans based upon PPQ Executive Team direction that defines CPHST's roles and responsibilities for this function;
- Enhance the CPHST process to reprioritize projects in support of plant health emergency (Also see Management Initiative 3);
- Refine and communicate the process CPHST uses to identify and prioritize projects; ensure qualified staffs are involved in the decision-making process and follow through occurs on funded priority projects;
- Develop and implement a process and mechanism (such as a survey) to solicit feedback from customers on CPHST response to emergencies and publish the rating.

### Objective 2.3 Ensure CPHST Resources and Tools Meet PPQ's Emergency Response Needs

CPHST resources and tools must be accessible to collect, analyze and respond to plant health and all-hazard emergencies. CPHST must effectively communicate and deploy the appropriate tools to support PPQ in emergencies. CPHST must establish

partnerships with external collaborators to coordinate Technical Working Groups that analyze scientific information and data in support of emergency response. These activities improve PPQ's ability to coordinate effective pest emergency response programs rapidly and minimize the severity of introductions.

**Key Outcome:** PPQ Is Better Equipped to Respond to Plant Health and All-hazard Emergencies

### Performance Measure 2.3.1

Number of new or improved CPHST developed technologies effectively integrated into PPQ operational programs

### Actionable Strategies

#### Future actions will include:

- Imbed CPHST scientists beyond the Science Advisory Panel capacity on an ongoing basis to learn from and consult with PPQ operations in plant health and all-hazard emergencies. Once technologies are effectively transferred to operational program components, the CPHST scientist assumes a consultative role only;
- Develop a process to redirect the appropriate resources to meet the technical requirements for the plant health and all-hazard emergency response;
- Finalize the Science Panel SOP in consultation with PPQ National and Regional Program Managers;
- Create and maintain an external list of collaborators grouped the same as the CPHST scientist skill inventory, noting the skills only available externally;
- Form PPQ-wide cross-functional technical groups based on staff expertise to focus on, discuss broad issues of concern, such as forest pests, insect rearing, or identified or predicted emerging challenges;
- Ensure all CPHST employees participate in Incident Command System (ICS) training.





## Strategic Goal 3

### Enhance CPHST Support for APHIS Trade-related Plant Health Issues



**T**rade continues to increase with its associated risks that challenge PPQ's mission to both safeguard agriculture and resources from the risks associated with the entry, establishment, or spread of animal and plant pests and noxious weeds and strengthen the marketability of U.S. agriculture in domestic and international commerce. CPHST plays a critical role in identifying the risks associated with trade. CPHST must have the capacity to respond to strategic and urgent trade issues. In PPQ's effort to safeguard U.S. plant resources, CPHST must meet the increasing demand for import/export pest risk analyses (PRAs), commodity treatments, quarantine technologies, diagnostics and surveillance. Also, other science-based aspects must be considered in order to adapt and respond to shifting priorities and continue to improve partnerships and communications with partners and stakeholders, particularly PHP and IS.

This goal directly supports PPQ Strategic Goal 4: Sanitary and Phytosanitary Trade Issues Management.

#### **Strategic Result: Enhanced Science-based Decision Support for Safe Trade**

##### **Objective 3.1 Ensure Quality PRAs are Produced**

PRAs are an integral component of import and export activities with our trading partners. Risk analyses help PPQ to predict and mitigate plant health risks as the U.S. negotiates trade; PRAs are part of bilateral agreements for market access or maintain/ expand current markets. Timely and scientifically sound risk analyses are essential to support risk-based decisions for import, export, resolving trade barriers and guiding domestic programs and offshore pest information gathering and pest mitigation and reduction activities.

**Key Outcome:** The Best Possible Scientific Support and Justification Decisions, Positions and Regulations Associated Have Been Provided

#### **Performance Measure 3.1.1**

CPHST's PRAs meet the Agency's requirements and deadlines established by the Agency's prioritization process and deadlines established by high level officials in USDA

#### **Actionable Strategies**

##### **Future actions will include:**

- Fill vacancies with qualified staff possessing requisite technical, scientific and operational expertise and knowledge of pests, crops and programs to strengthen the PRA infrastructure;
- Establish protocols for clarifying and better understanding the requestor's PRA requirements before work on the PRA begins. (This action item also is addressed in Management Initiative 3 in this plan);
- Continue to improve PRA work processes (*e.g.*, guidelines, peer review process, consistency with international standards, etc.) and methodologies;
- Consider and factor in feedback from PIM staff, industry and trading partners on completed PRAs as appropriate to improve future PRAs and the process;
- Participate and promote PRA harmonization initiatives (*e.g.*, propose international standards for phytosanitary measures) with collaborators (*e.g.*, IPPC and NAPPO) to promote a common understanding and reduce the potential for unjustified trade barriers;
- Ensure CPHST processes are consistent with international standards and demonstrate leadership in recommending new or improved PRA processes;
- Continue the annual PRA process review and document proposed changes to the process as part of the ISO process;
- Continue the processes for CPHST PRA peer reviews and obtain feedback from external technical experts;
- Ensure NPB recommendations for the PRA process are considered when implementing changes.



## Strategic Goal 3

### Objective 3.2 Ensure Timely Delivery of CPHST PRAs to Meet PHP Staff Needs

CPHST will continue to work with PHP to meet PPQ's needs by organizing staff and work according to reasonable and agreed priorities and timelines.

**Key Outcome:** Priority Needs Are Met

#### Performance Measure 3.2.1

Eighty percent of priority PRA deadlines, established by clients, are met

#### Actionable Strategies

##### Future actions will include:

- Follow protocols established by the Administrator's Office to work collaboratively with Commodity Import Analysis & Operations (CIAO) and Phytosanitary Issues Management (PIM) staffs to identify priority PRAs and establish timeframes for completion;
- Take the appropriate steps to ensure that all PRA's are delivered within agreed timelines.
- Continue to participate in development and implementation of the APHIS-wide Regulatory Project Management System;
- Improve the CPHST call-for-work process;
- Expand and improve the *Ad Hoc* project system by including attachments and communication of assignments.

### Objective 3.3 Enhance the Collection and Management of Information Needed for PRAs

Developing and improving international relationships helps to maintain a high level of information flow for timely and relevant technical exchange and scientific studies. The movement of information must be circular to create a constant exchange of ideas, data, technology and emerging issues. Data can be transferred in many forms, including personal contacts and linked databases that contain PRAs. Databases that can be shared are particularly valuable in cultivating international relationships and information exchange. CPHST will promote information exchange networks to share databases, technological safeguarding methods and systems including treatments, surveys, and risk analysis methods. Organizing workshops, participating in Quad

initiatives and hosting international visitors are opportunities to educate offshore counterparts of new and robust technology and open a forum for sharing information.

**Key Outcome:** Improved Global Information Exchange and Greater Dialogue on Scientific and Technical Issues, Increasing International Phytosanitary Competence for the U.S. and Trading Partners

#### Performance Measure 3.3.1

Number of accurate and complete pest lists included in PRAs produced by PPQ and trading partners increases. The quality of Pest Risk Analyses produced by CPHST and our trading partners improve as demonstrated by the inclusion of more accurate and complete pest lists

#### Actionable Strategies

##### Future actions will include:

- Plan and organize workshops to support U.S. trade needs; offer expertise and support to international visitors; share tools and technologies with offshore counterparts (*e.g.* Quad initiatives);
- Develop Memoranda of Understanding (MOU) and Memoranda of Cooperation (MOC) with foreign governments and Regional Plant Protection Organizations (RPPOs) to coordinate efforts, leverage resources and share information;
- Share databases, technology and PRAs with industry, states and stakeholders to increase the trading capacity of partners and obtain useful data in return;
- Build linkages and network with IS such that CPHST can appropriately react to emergency and ongoing trade issues that require technical input;
- Continue to participate in harmonization initiatives, such as standard setting committees or work groups with NAPPO and IPPC;
- Support trade capacity development in other countries (*e.g.*, Africa, Caribbean) by teaching and demonstrating how the U.S. practices and implements standards set forth in the IPPC; developing countries will be able build capacity for global international trade and foreign imports to the U. S. Pending Executive Team decision regarding current Centers of Excellence support;





## Strategic Goal 3

- Develop a predictive model for economic impacts on biosecurity.

### Objective 3.4 Enhance Information Exchange in the International Arena

Pest Risk Analyses must constitute documents of sufficient scientific competency to accurately and correctly explain interpretation of data and withstand legal challenge. The PRA Analyst must identify, collect, review and synthesize large quantities of data from diverse sources. Improved access to appropriate information and supporting documents for PRAs will enhance overall efficiency of the Agency.

**Key Outcome:** Improved Regulatory Efficiency of the Agency

#### Performance Measure 3.4.1

Number of complaints from industry regarding PRA issues reduces

#### Actionable Strategies

##### Future actions will include:

- Identify gaps in scientific information available and information needed to conduct PRAs;
- Identify sources and ways to obtain information needed to fill gaps;
- Continue use of the ISO process to manage CPHST knowledge-base;
- Develop a system to archive and manage information that currently exists, including completed PRAs to enhance retrieval of information when needed;
- Integrate databases (*e.g.*, CPHST Portal, GPDD, Workbench, and “www.regulation.gov”) to better manage CPHST’s information;
- Ensure transparency by publicizing databases and websites of technical resources to end users, PPQ groups and trading partners to enhance capacity building to conduct risk analyses;
- Ensure reference articles in PRAs are included in electronic format for public access (upon request) as a way to enhance transparency of the PRA process.

### Objective 3.5 Improve Treatment Methods

CPHST supports PPQ’s treatment requirements by: improving quarantine treatments; developing methyl bromide alternatives and detection technologies; maintaining databases for monitoring fumigant usage and treatment tracking. Effective treatments are often used to remove potential trade barriers. In cooperation with PPQ (PDC, PHP), CPHST provides expertise in development of training modules, provides guidance on treatment manual changes, trains the trainer for conducting certifications of domestic and international treatment facilities; and conducts quality assurance audits of treatments and treatment facilities.

**Key Outcome:** Fewer Failures in Treatment Methods and Treatments Are More Economically and Environmentally Acceptable

#### Performance Measure 3.5.1


Number of commodity treatments failing to meet application specifications

#### Actionable Strategies

##### Future actions will include:

- Pending the outcome of negotiations with PHP, conduct quality assurance audits of treatments and treatment facilities in the role that is mutually agreed to by the Regions, QPAS and TQAU;
- Certify facilities that implement new technologies or processes;
- Develop technical parameters for facility certifications, treatment procedures, and reviews;
- Identify new treatments and required changes to existing treatments for inclusion in the Treatment Manual;
- Establish a procedure with ARS to regularly identify and research new treatment methods and to ensure high-priority work in engaged and completed.





## Strategic Goal 4

### Provide Current Relevant Scientific and Technical Information to PPQ Decision Makers



PPQ Program Managers need information and tools that anticipate, assess, eradicate/ manage plant pests, diseases and noxious weeds. CPHST must collect and analyze scientific information, evaluate new technology and make relevant information easily accessible to PPQ and external stakeholders.

This goal directly supports PPQ Strategic Goal 3: Science-based methods and analysis and technology for program delivery.

#### Strategic Result: Enhanced Targeting of and Response to Pest Threats

##### Objective 4.1 Optimize the Acquisition of Quality Data

PPQ bases decisions on sound science and analysis. Pertinent data must be made available to PPQ programs quickly in an electronic format that contains information on specific plant pests and survey strategies. Information provided by CPHST can give PPQ an expanded choice of actions to make decisions in response to emerging plant pests. Providing this information in a timely manner will increase its usefulness and improve the efficiency and consistency in the decision-making process.

**Key Outcome:** Timely, Science-based Regulatory and Operational Decisions Are Made with Desired Outcomes Being Achieved

##### Performance Measure 4.1.1

Reduction in numbers of decision reversals that have to be made because correct information was not available in a timely manner

##### Actionable Strategies

###### Future actions will include:

- Align CPHST data management and decision support tools with APHIS data management standards/initiatives;
- Establish predictive systems for five high priority

pests to:

- Link and obtain world weather data related to host and pest population development, critical to a predictive system;
- Estimate impacts if predictive systems are not established for PPQ operation managers;
- Refine the electronic communication network for PPQ operation managers to alert entire system of incidents in order to elicit appropriate response (e.g., National Plant Diagnostic Network (NPDN) and Laboratory Information Management System (LIMS));
- Obtain latest technology (i.e. treatment options, biocontrol methods and survey strategies/ techniques) to improve corrective actions and consistency in treatments;
- Conduct a systematic, routine five-year review of all treatments in the PPQ Treatment Manual;
- Establish an SOP, including a check list, to ensure all relevant scientific, social and economic data are available for use;
- Provide analyzed and pre-decisional data within 48 hours of the request in an electronic, comprehensive format;
- Maintain relationships with the international scientific community to sustain an ongoing awareness of international pest issues;
- Utilize the national and international scientific community to obtain existing data and advice; hold discussions and work on problems requiring additional research (Also See Goal 5);
- Establish quality management protocols consistent with Agency standards to ensure previous PPQ actions are referenced for consistency of new proposed actions, improvement opportunities, new ground breaking areas, and other actions, such as updating treatment manuals.

##### Objective 4.2 Enhance Analysis and Interpretation of Data

Appropriate data analysis is crucial to understanding pest biology, potential pest outbreak and impacts on American agriculture, the environment and foreign trade. Efficient and accurate analyses of emerging issues provide PPQ Programs with the capacity to



## Strategic Goal 4

react effectively and eradicate or manage threatening pests. CPHST must obtain better understanding of the pests approaching and build upon previous success. Also, a “library of approaches” enables the recognition of similarities and patterns for each new problem such that solutions to problems are reached quickly. We will build a library and a data repository, and train staff to effectively use it. CPHST will provide solutions to new problems from the knowledge gained from experience and developed methods.

**Key Outcome:** Increased Pest Interceptions and Decreased Magnitude of New Introductions and Infestations

### Performance Measure 4.2.1

Number of new and improved tools adopted by programs resulting in an increased frequency of pest interceptions and reduction in magnitude of new introductions or infestations

### Actionable Strategies

#### Future actions will include:

- Expand APHIS Plant Pest Forecast (NAPFFAST) to provide programs with information on changing weather patterns and potential impacts to increase predictability of pest outbreaks;
- Track and analyze trade patterns, pest biology, weather and population dynamics to predict potential pest incursions;
- Provide operational programs with changes in pest status and distribution to improve pest planning, preparedness, and response-and-recovery;
- Develop standardized tools for pest identification to increase capacity of cooperators (e.g., CAPS) and field staff to accurately identify encountered organisms;
- Improve the risk analysis process to ensure a timely response for better management of emerging pest issues;
- Maximize use of available data from Customs and Border Patrol (CBP) to improve CPHST recommendations so PPQ may better target its resources to high-risk pathways.

### Objective 4.3 Enhance PPQ Field Staff’s Awareness of Emerging Issues

Pest risks associated with trade are increasing exponentially. In recent years, the number of pest incursions has increased significantly but the resources necessary to identify and respond to these emerging pest threats have not kept pace with the increased volume of trade imports. PPQ must anticipate and respond to pest threats in a timely manner. CPHST must compliment and build on Agency expertise by providing ongoing information and analysis of the threats potentially approaching the United States. CPHST’s New Pest Advisory Group (NPAG) monitors and analyzes information that the Offshore Pest Information System (OPIS) provides to identify the potential likelihood for serious pest threats to occur in the U.S. NPAG provides PPQ with information about possible incursions and guidance regarding actions PPQ can take to target survey activity and possible response should the pest be found.

**Key Outcome:** More Effective and Rapid Response to Emerging Pest Threats

### Performance Measure 4.3.1


Number of new emerging pest issues raised by CPHST resulting in actions taken by PPQ operations

### Actionable Strategies

#### Future actions will include:

- Maintain relationships with the international scientific community to sustain an ongoing awareness of international pest issues (*Also see Objective 4.1*);
- Develop and implement an alert system to notify and provide guidance to CBP and Plant Inspection Station (PIS) on ways to respond to changing risks;
- Develop a decision support tool to facilitate development of new pest response guidelines when little information is available or a rapid decision is required.





## Strategic Goal 5

### Enhance PPQ's Capacity to Anticipate and Respond to Emerging Scientific, Technical and Regulatory Issues through Partnerships



CPHST provides tools that PPQ staff need to fulfill their safeguarding mission, not to conduct “bench science” research. CPHST must develop long-term active partnerships with local, state, federal and foreign governments, industry and academia to understand emerging scientific and technical issues. CPHST scientists must value and interpret scientific issues and disseminate the appropriate tools, technology and data as needed. Collaborating/cooperating with different entities creates a portal of information and tools based in CPHST that can be accessed by PPQ. As technology develops and new threats occur, partnerships ensure PPQ has the best resources available to address the pressing issues of the day.

This goal supports three PPQ Strategic Goals: Goal 1: Build protection of the U.S. homeland from agro-terrorism into U.S. plant resources safeguarding; Goal 2: Maintain a U.S. safeguarding continuum to protect U.S. plant resources from unintentional introductions. Goal 3: Science-based methods for analysis & technology program delivery.

#### **Strategic Result: PPQ and CPHST Will Better Anticipate and Support Current and Emerging Scientific, Technical, and Regulatory Issues**

#### **Objective 5.1 Expand the Network of Cooperators and Collaborators**

Collaboration/ cooperation with external entities is essential for effective data gathering and rapid response. CPHST must cultivate relationships to establish networks nationally and internationally that address science, technology and information needs to support PPQ's mission. NAPPO, Quads, EEPO and IPPC are valuable forums in which to develop international relationships. Domestic relationships involve academia, industry, USDA FS, USDA ARS, USGS and other agencies. With these networks, CPHST can improve its surveillance of potential threats and respond to existing issues more effectively.

**Key Outcome:** Needed Resources, Information and Additional Technologies Are Readily Made Available to Address and Respond Quickly to Current and Emerging Plant Health Issues

#### **Performance Measure 5.1.1**

Evidence of additional resources (more options), new information and additional technologies are made available to and adopted by PPQ to address current issues and to respond to emerging plant health issues, as perceived by the “customer”

#### **Actionable Strategies**

##### **Future actions will include:**

- Assess the current network and identify gaps in the network's response to current and emerging issues;
- Establish a formal interagency network from which CPHST and PPQ operations can draw the best available expertise to support current plant health issues and respond to emerging plant health issues:
  - Identify appropriate federal and state agencies and universities that should be included in the network;
  - Establish mechanisms to ensure ongoing communication to identify critical issues and PPQ needs and resources, such as regularly scheduled meeting/conference calls and list serves;
  - Better utilize existing interagency Memoranda of Understanding (MOUs) or agreements, such as ITAP and FICMNEW, to ensure other agencies support PPQ programs effectively and efficiently;
  - Develop intra-agency and interagency temporary duty (TDY) opportunities;
- Establish a process for rapid response and mobilization of partnerships (Also, see Goal 2);
- Strengthen current foreign partnerships (*e.g.*, NAPPO, Quads, IPPC, EPPO);
- Identify other foreign organizations and evaluate nature of existing relationships with them;



## Strategic Goal 5

- Improve and increase communication and information exchange with partners in areas such as regulatory changes governing biocontrol agents importation and implementation and latest technology developments through list servers and meetings;
- Improve and increase contact with intelligence communities, such as Customs and Border Patrol (CBP) - National Bio-surveillance Integration System (NBIS), and the Central Intelligence Agency (CIA), to identify/track bio-security-type information and issues relevant to APHIS/PPQ.

### Objective 5.2 Enhance support for Agricultural Quarantine Inspection Operations

Quarantine inspections and mitigating treatments represent the final line of defense against exotic species. The CPHST Agricultural Quarantine Inspection (AQI) and Port Technology (PT) Program partners with PHP and the Regions to enhance scientific support for agricultural port inspections and treatment technologies. AQI&PT will enhance their relationship with CBP to effectively design and utilize surveillance technologies to target and detect incoming pests and disease at U. S. borders and in phytosanitary certification programs overseas. CPHST supports PPQ and CBP to build a seamless agricultural safeguarding continuum to rapidly detect and deter potential threats, and prevent and protect agricultural production and infrastructure from bioterrorism.

**Key Outcome:** More Effective and Efficient AQI Operations

#### Performance Measures 5.2.1

Number of inspection techniques and new treatments made available to and adopted by PPQ AQI

#### Actionable Strategies

##### Future actions will include:

- Improve and deploy inspection techniques and strategies through QPAS for CBP to improve their targeting shipments and commodities inspected for agricultural pests;
- Identify opportunities with partners (such as CBP, Quads, and research organizations) to share tools, information, resources and cooperative projects;
- Participate in reviews of Port Operations and Plant Inspection Stations.

### Objective 5.3 Improve Relations with PPQ Regions and Headquarters

CPHST must embrace partnerships with PPQ regions and headquarters and work collaboratively to prioritize and budget projects for PPQ Programs. CPHST deliverables and project status will be communicated through outreach activities, participation in meetings, newsletters and annual reports. This partnership is critical in supporting the PPQ mission and focused on APHIS priorities. CPHST capacity building is supported by intra-agency and interagency temporary duties (TDYs).

This objective also supports and is supported by the Management Initiatives included in this plan.

**Key Outcome:** Increased Trust and Respect for Each Other

#### Performance Measure 5.3.1

Positive response to CPHST customer service surveys conducted and activities

#### Actionable Strategies:

##### Future actions will include:

- Involve PPQ operations staff to encourage more input from PPQ operations in setting CPHST priorities and developing workplans (Also, see Management Initiative 3);
- Continue to use PPQ operations staff for CPHST peer reviews;
- Continue and improve communications to PPQ staff through CPHST newsletters and annual reports (Also see Management Initiative 1);
- Encourage partnerships by engaging in more outreach activities at appropriate meetings, such as State Plant Health Director, Cooperative Agricultural Pest Survey (CAPS) and National Plant Board (NPB) meetings, to present information on CPHST capabilities, organization, product and data updates, and current projects;
- Provide annual updates and/or requested information at stakeholder (*e.g.*, commodity groups, NPB) meetings;
- Develop intra-agency and interagency TDY opportunities within CPHST and participate in TDY opportunities at headquarters and the regions;
- Increase CPHST participation in routine PPQ operations staff meetings and conference calls to obtain and provide feedback to NSPLs and Lab and Unit Directors;
- Reestablish a seminar exchange with headquarters staff.





# Management Initiative 1

## Improve Communications with CPHST Customers



CPHST is strengthening its management through vigorous execution of PPQ's management strategies. Better management will result in more efficient program operations that offer improved customer service and more effective stewardship of taxpayer funds.

CPHST has developed three management initiatives to ensure successful implementation of its newly developed Strategic Plan. The first initiative is aimed at improving communication with customers to ensure CPHST products meet customer's needs. The second focuses on allocating and managing CPHST resources to increase efficiency of CPHST product delivery. The last initiative focuses on customer consultation in developing and implementing a more effective process for workplans to ensure timely delivery of quality products. These initiatives work in concert but each has a unique objective.

These initiatives are aligned with PPQ's strategic Goal 5: Management Improvement and Organizational Performance.

CPHST aims to establish and maintain an effective dialogue with its customers. This initiative identifies communication challenges and proposes an accountability system to address these challenges. Challenges include 1.) aligning CPHST projects with PPQ needs; 2.) effectively utilizing CPHST resources to ensure appropriate resources are assigned and redundancies are reduced; 3.) requesting feedback as projects unfold; 4.) deploying cross-functional teams; and 5.) communicating CPHST knowledge, skills and products to the rest of the organization.

CPHST recognizes the importance of building positive working relationships with its customers through more "face time." Staff participation in temporary duty (TDY) assignments in PPQ programs and ongoing communication throughout the lifespan of a CPHST project develops working-relationship building blocks.

CPHST will remain responsive to PPQ's operational needs by managing customer communication and delivering service to customers.

**Strategic Result: Improved CPHST Performance and Delivery to PPQ Operations**

### Objective 1.1 Maximize the Use of Cross-functional Teams with PPQ Operations

CPHST must identify and understand PPQ's scientific and technology needs to build better relationships within PPQ. CPHST must communicate or market staff skills, resources and capabilities to PPQ. Cross-functional teams can be developed when customers understand CPHST's capabilities.

**Key Outcome: Optimal Use of CPHST Resources, Capabilities, Staff Skills and Abilities**

#### Performance Measure 1.1.1

Number of CPHST scientists actively participating on a cross-functional team or issue group

#### Actionable Strategies

##### Future actions will include:

- Identify customer's general needs and current/emerging program issues by consulting with Agency issue groups;
- Update the CPHST Knowledge and Skills Inventory database to ensure the information addresses PPQ operational requirements;
- Reinvigorate PPQ program contacts cross-cutting matrix;
- Develop a communications plan with coordinated elements that educates PPQ about CPHST's capabilities, the mission of each work unit, staff skills and abilities, typical program issues it addresses, and point-of-contact regarding specific issues;
- When projects are assigned to CPHST:
  - Identify CPHST staff responsible for communicating with the project champion;
  - Link the appropriate program representation to a cross-functional team or issue group;
  - Identify the appropriate project champion;
  - Identify CPHST leader for projects;



## Management Initiative 1

- Identify appropriate PPQ Operations staff to participate in the project;
- Develop and use a plan-of-action or workplan standardized format;
- Set up a communications plan and mechanism to keep the customer informed of project status. Hold lead scientists accountable for keeping champions and stakeholders informed of project status;
- Document PPQ success in the application of new technologies, solutions and tools.

### Objective 1.2 Improve CPHST Knowledge and Understanding of Customers

PPQ is comprised of diverse programs, physical environments, issues and project objectives. These conditions require that CPHST must understand the customer and circumstance to provide appropriate deliverables. With the refinement of CPHST's knowledge of its customers, we are better able to respond to the call-for-work, emergencies, and *Ad hoc* projects promptly and effectively. CPHST must plan and discuss project goals and objectives to ensure the workplan corresponds to customer's needs and expectations. All projects must engage their champions to identify the end-user's applications of the products.

**Key Outcome:** CPHST Deliverables Meet Customer's Needs

#### Performance Measure 1.2.1

CPHST deliverables meet the operational needs based on a survey of project champion and end-users for each project

#### Actionable Strategies

##### Future actions will include:

- Ensure the lead scientist, project champion and project requestor meet at the beginning of the project to better understand project deliverables, allow the customer to provide feedback to the lead scientist on proposed workplans, establish milestones and prepare a communications schedule; (Also see Management Initiative 3)
- Place scientists responsible for tool development in the field to ensure effective tech transfer and learn more about implementation under field

conditions;

- Incorporate customer-survey comments into improvements on future projects;
- Encourage CPHST scientists to participate in TDY assignments with PPQ Program Managers;
- Pursue CPHST representation on PPQ issue-driven work groups;
- Improve and formalize the call-for-work process and communicate the importance of the process to PPQ National and Regional Program Managers and CPHST National Science Program Leaders, Laboratory Directors, and scientists;
- Strengthen reporting requirements and delivery timelines for scientists to ensure projects are completed on schedule and meet customer needs.

### Objective 1.3 Communicate CPHST Skills, Capacity and Product Knowledge to PPQ Operations

CPHST recognizes the importance of communicating staff capabilities, knowledge, skills and products to better serve PPQ. CPHST must identify proper and effective marketing methods for customers. Communication tools such as CPHST work unit and staff brochures, newsletters, workshops, video conferences and meetings are available for PPQ staff and stakeholders to understand the services CPHST offers and allow feedback. CPHST must assess the target audience to engage effective communication methods.

**Key Outcome:** Customers Better Understand CPHST's Skills and Services

#### Performance Measure 1.3.1

Numbers and types of achievable requests from broader cross-section of customers have increased

#### Actionable Strategies

##### Future actions will include:

- Identify information that is most useful to CPHST customers to better understand what CPHST can do for them and how they can contact CPHST about projects;
- Develop the message or content and method for communicating information about CPHST, such as providing current and relevant information on the CPHST website targeted to CPHST



- customers;
- Evaluate current content and communication methods with target audience:
  - Delivery method
  - Content;
- Develop and implement a communications plan:
  - Video teleconference
  - Webinars, posters, workshops
  - Tap into existing conferences;
- Survey customers to determine readership/use of existing marketing efforts. Consider using a focus group or the PPQ Communications Group as a resource for evaluating the marketing efforts;
- Consider consulting with external experts about creating a position responsible for communicating CPHST services.

### Objective 1.4 Develop and Implement a Project Evaluation Process

Asking the project champion and end-users to supply feedback on products helps improve project quality. CPHST will implement a Project Evaluation Process to identify and resolve issues as they occur and to ensure customer's needs are consistently met. This process is intended to solicit ongoing feedback during project execution and after the final product has been delivered and applied in field conditions.

**Key Outcome:** Timely Identification and Resolution of Issues Leading to Improvement of Product Quality

#### Performance Measure 1.4.1

Increased effective utilization of products produced

#### Actionable Strategies

##### Future actions will include:

- Continue the CPHST Quality Management System (QMS): ISO 9001:2000/17025. This system ensures the development of quality goals and objectives, measurement of customer satisfaction, continual improvement, quality control of work processes and quality assurance of the system status through audits and management reviews of the QMS;
- Develop and implement an SOP to ensure the project champion and end-users provide feedback to CPHST staff assigned to the project. Feedback should include views of project progress and

effectiveness. This includes:

- Surveys and tracking responses
- Solicit feedback from the customer at milestone meetings to determine whether a project should change direction;
- Conduct an end-of-project evaluation to explore issues such as:
  - How well did we do?
  - What could we do better or differently next time?
  - Where we are going next?
  - How may needs change?







## Management Initiative 2

### Allocate and Manage CPHST Resources More Strategically to Meet PPQ's Needs



Effectively managing CPHST resources to meet PPQ's needs is essential in order to increase efficiency and cost-effective delivery of CPHST products. A dynamic tension is created by the reallocation of resources to address new emergencies that require CPHST support. At any moment, all CPHST resources (money, equipment, staff) are committed. This commitment is challenged when new emergencies appear and the existing priorities must be rearranged to accommodate new demands for these resources.

CPHST will improve resource management by implementing a process to track resource utilization of personnel, funds and projects. CPHST will inventory existing resources (skills, equipment, databases, facilities and funds). CPHST will work with stakeholders and customers to develop and implement protocols that ensure resources can be reallocated in a timely, appropriate and sustainable manner. CPHST will receive work priorities from PPQ operations and assign resources to projects according to these priorities.

#### Strategic Result: Increased efficiency in delivery of the appropriate CPHST products

#### Objective 2.1 Match CPHST Resources to PPQ Operations' Immediate and Long-term Needs

CPHST will help assess the prioritized needs of the end-user and identify internal resources (skills, staff, infrastructure and funds) necessary to complete approved projects. A cost-benefit analysis of major projects provides status transparency and a mechanism for determining the relative value of projects. A cost-benefit analysis can provide objective criteria that can be used to determine and manage resource allocation. Improving and using the Fund Allocation Process will allow maximum distribution and effective use of resources allocated to emergency programs, *Ad hoc* projects, long-term workplans, and other needs.

**Key Outcome:** Resources are Allocated More Efficiently to PPQ Operations "High Priority" Needs/Clients

#### Performance Measure 2.1.1

Resources are allocated each year according to the priorities established by PPQ operational leadership

#### Actionable Strategies

##### Future actions will include:

- Identify and prioritize end-user needs both within and across program units each year;
- Assess available CPHST resources:
  - skills
  - infrastructure;
- Redirect/reallocate/restructure resources as needed to match PPQ's program needs;
- Identify and manage sources of revenue to CPHST;
- Obtain guidance from the PPQ ET regarding their program funding priorities (This discussion will have the greatest impact on the Plant Methods line.);
- Conduct cost-benefit analysis of projects within an operational program area to inform the program managers of the expected cost to achieve expected outcomes and deploy CPHST resources to maximize impact highest priority requirements;
- Improve and continue to use the call-for-work process:
  - long-term out
  - workplan selection process (Also see Management Initiative 3)
  - proactive two-way communications with champion and end-users;
- Improve and continue to use the *Ad Hoc* Project Process to facilitate communication between lead scientist and project champion to ensure the issue is properly framed and understood;
- Develop an assessment and reallocation system/process for emergencies and immediate *Ad hoc* resources needs;
- Develop a process to communicate new technology opportunities to upper management and the Executive Team;
- Proactively identify and secure additional sources to fund CPHST projects.



## Management Initiative 2

### Objective 2.2 Ensure Effective Resource Management Continues in CPHST

CPHST will develop and improve resource management to catalog resources, track fund utilization, business and project costs, and personnel expenses; evaluate the impact of analysis of workplans; and implement success planning and management.

**Key Outcome:** CPHST Resources Are More Efficiently and Effectively Deployed

#### Performance Measure 2.2.1

PPQ Executive Team actively supports CPHST resource deployment each year

#### Actionable Strategies

##### Future actions will include:

- Continue to catalog all CPHST resources to ensure the database is current; Continue to develop and refine a process to track resources utilization:
  - funds and cost of business/projects
  - personnel
  - infrastructure
  - position management;
- Consider hiring a management analyst to support resource management efforts;
- Obtain Executive Team approval for a Succession Plan for CPHST;
- Conduct routine evaluation (impact analysis) of project deliverables.

### Objective 2.3 Ensure CPHST Meets PPQ Emergency Response Needs Without Undue Impact on Long-term Projects

CPHST will develop a structure and process to enable, facilitate and ensure the redirection of resources to support emergency programs, *Ad hoc* requests, and ongoing project workplans. When emergencies occur and a need exists for redirection of resources, the infrastructure supporting the transition process must be flexible to react to the emergencies while remaining focused on other project's progress.

**Key Outcome:** CPHST Resources Are Allocated to Meet the Immediate Needs with Minimal Impact to Other Projects

#### Performance Measure 2.3.1

Number of long term projects completed within 3-6 months of targeted deadline

#### Actionable Strategies

##### Future actions will include:

- Develop a protocol that will include project champions and PPQ management to facilitate resources redirection in response to emergencies while minimizing impacts on longer term projects;
- Identify external or alternative support and expertise sources that can be used when needed;
- Develop and implement a CPHST "Rapid Response Team" to fulfill the unique roles CPHST plays in Emergency Programs (science panels, etc.) more effectively and responsively;
- Fill National Science Program Leader vacancy for the Response and Recovery Systems Technology Program.





## Management Initiative 3

### Improve the Workplan Development and Project Prioritization Process



CPHST strives to produce quality products that satisfy the customer's needs and are delivered in a timely manner. CPHST will continue to develop a process with PPQ operations to produce mutually acceptable workplans that ensure appropriate product quality. Quality products targeted to operational needs minimize resource misuse, inefficiency and customer dissatisfaction. With limited resources, CPHST must make informed decisions that ensure scientists deliver the right product and which result in credibility gain. CPHST will enhance the call-for-work and work prioritization process to achieve improved performance and better align CPHST projects with the Agency's mission. CPHST wants to ensure communication and customer input continues through the lifespan of a project. This goal is aimed to improve appropriate quality products that are delivered on time and fully support PPQ operations and programs.

#### Strategic Result: Timely Delivery of Quality Products that Satisfies Customer's Needs

#### Objective 3.1 Revise the Call-for-work and Work Prioritization Process

CPHST will develop and implement a process to establish a PPQ-wide Priority Project List that ensures a mix of long-term projects and cutting-edge-technology work while factoring possible emergency impacts on projects. Initially, CPHST will work directly with individual requestors to assess and evaluate their submitted requests to determine the effort level required for project completion and the work unit's priorities. This process will allow the end-user and CPHST to propose an initial prioritized project list that can be approved by the PPQ Executive Team or other designated group.

**Key Outcome:** The High Priority Projects Are Completed On Time with the Agreed Quality Level

#### Performance Measure 3.1.2

Increased number of priority projects completed with the agreed to resource allocation, by the established deadline and at the agreed level quality

#### Actionable Strategies

##### Future actions will include:

- Work directly (face-to-face) with individual requestors who submit requests to evaluate their requests, estimate the required effort level to complete the project, and determine individual work unit's priorities;
- Refine the process to establish the priorities across units to establish a PPQ-wide priority list, factoring in:
  - long-term projects
  - practical deliverables needed to address the presenting issue as quickly as possible while longer term solutions are developed
  - effort level focusing on future cutting edge technologies
  - impact of emergencies on the priority projects;
- Explore and adapt the Quad Chart used by ARS, DoD and DoE to identify and display all proposed projects in a simple format, which helps establish the priorities and determine the value of each project relative to the entire proposed project slate.

#### Objective 3.2 Ensure a Transparent Workplan Development Process

CPHST is committed to working with PPQ operational staff to establish a mutually agreeable, transparent process and framework that results in detailed workplans for priority projects. The use of this process and framework will ensure that projects address the right issues, meet high-quality standards for customer needs and accomplish project objectives.

**Key Outcome:** The Appropriate Quality Products Are Delivered On Time



### Performance Measure 3.2.1

Number of times the workplan development process is used and followed for each project

### Actionable Strategies

#### Future actions will include:

- Establish a work group of PPQ operations staff and CPHST personnel to develop a process and standard template that details workplans for priority projects. The work group is charged with considering all elements of the process starting with the request-for-work through identifying and selecting priority projects;
- Elements of workplans should be defined to include:
  - Project scope: Define project needs and required effort levels
  - Clearly identified project champion at the appropriate level of PPQ organization to ensure engagement and investment in project
  - Identify end-user of deliverable(s)
  - Clarify roles and responsibilities through the project's life
  - Establish an acceptable quality level that meets operational needs
  - Resource allocation
  - Realistic total project cost
  - Technology transfer costs, timelines, milestones and deadlines
  - Communication agreement to determine what, when, and under what circumstances a project's progress is communicated to the requestor (*e.g.*, delays resulting from diversion of resources to respond to an emergency)
  - Pre-determination of what happens to a project when an emergency impacts resources, personnel and timelines
  - Technology transfer strategy: CPHST transfers the technology to the operational programs and then assumes an advisory role to focus on next priority issue;
- Hold lead scientists accountable for meeting face-to-face with project champions and/or project requestors to develop and implement the projects' workplan.

### Objective 3.3 Deliver Quality Products that Are Acceptable to the Customer and CPHST Scientist

CPHST strives to deliver quality products that are acceptable and utilized by the customer. CPHST will accomplish this objective by the customer and scientist agreeing on the product quality-level and building quality-control mechanisms into the projects. CPHST scientists will work closely with their customers to ensure the end-user is prepared to use the product appropriately and effectively, and will routinely review and evaluate products after they are delivered and used by the customers.

**Key Outcome:** PPQ Operations and Programs Are More Effective

### Performance Measure 3.3.1

Percent of CPHST products accepted and used effectively by the customer

### Actionable Strategies

#### Future actions will include:

- The customer and CPHST scientist meet to discuss and mutually agree on the final product's specific deliverables and acceptable quality level, balancing political realities and field conditions where the product is to be used and the standards for scientific integrity of the product;
- Craft Quality Control (QC) mechanisms into the project to ensure delivery of the product's agreed quality level;
- Ensure the technology transfer component of the project adequately prepares the customer to use the product appropriately and effectively;
- Develop and implement a process to routinely review and evaluate products after delivered to and used by the customer;
- Fix or refine products based on reviews and evaluations of the product.



# Appendix A

## Strategic Planning Workshop Attendees

### CPHST Director's Office

#### Title

Gordon Gordh	Director
Alan Dowdy	Associate Director
Karen Abernathy	Administrative Officer
Aziza Clark	ASA
John Gallagher	Director, Quality Management Unit
Lynn Garrett	Agricultural Economist
Clinton Harley	ASA
Christina Lohs	Writer/Editor

### CPHST NSPLs

#### Title

Phil Berger	NSPL, Molecular Diagnostics and Biotechnology
Daniel Fieselmann	NSPL, Survey Detection Identification
Ron Sequeira	NSPL, Risk & Pathway Analysis
Larry Zettler	NSPL, Agriculture Quarantine Inspections

### CPHST Laboratory and Unit Directors

#### Title

Ken Bloem	Biological Control Coordinator
Robert Griffin	Laboratory Director
Laurene Levy	Laboratory Director
Nic Liquido	Senior Risk Analyst
Paul Parker	Laboratory Director
Robert Smith	Deputy Director
Michelle Walters	Acting Laboratory Director, Entomologist
Richard Zink	Laboratory Director

### CPHST Staff

#### Title

Anne-Marie Callcott	Supervisory Entomologist
Matt Ciomperlik	Entomologist
Renee DeVries	Plant Pathologist/Quality Manager
Juli Gould	Entomologist
Rick Hansen	Entomologist
Heather Hartzog	Plant Pathologist
Tom Kalaris	Director, Surveillance Technology Unit
Vessela Mavrodieva	Researcher
John Molongoski	Biological Science Technician
Greg Parra	Biological Science Technician
Dave Prokrym	Science Coordinator
Russell Sheetz	Biological Science Technician
Scott Wood	Director of TQAU



## Appendix A

ARS	Title
Rick Bennett	National Program Leader
Ken Vick	Senior National Program Leader
Regional Office	Title
Phil Garcia	Regional Director, WR
Victor Harabin	Regional Director, ER
Stephen Johnson	Assistant Regional Director, WR
Calvin Shuler	Senior Regional Program Manager
State Plant Health Directors	Title
Joann Cruse	State Plant Health Director
Stuart Kuehn	State Plant Health Director
Bruce Shambaugh	State Plant Health Director
Leyinska Wiscovitch	State Plant Health Director
PHP	Title
Murali Bandla	Director, PSPI
Bill Thomas	Director, Quarantine Policy Analysis and Support
Jennifer Lemly	Agriculturalist, Trade Director
Shirley Wager-Page	Branch Chief, CIAO
Jane Berkow	Senior Program Analyst & Planning Specialist
EDP	Title
David Kaplan	Assistant Deputy Director
Bill Dickerson	Coordinator, Invasive Species Programs
Osama El-Lissy	Director, Invasive Species & Pest Management
Joel Floyd	Team Leader, Planning & Preparedness
Billy Newton	Interim Nat'l Survey Coordinator Emergency & Domestic Programs
Matt Royer	Assistant Director
Mike Stefan	Director, APHIS Fruit Fly Programs
National Plant Board	Title
Gary W. Gibson	Director, Plant Industries Division
CSREES	Title
Bob Nowierski	
Industry	Title
Ted Batkin	President
Craig Regelbrugge	Senior Director    Government Relations
Lin Schmale	Senior Director    Government Relations
Speakers	Title
R. James Cook	Professor, Scientist & Endowed Chair in Wheat
David Pimentel	Professor Emeritus
Devon Zagory	Senior Vice President Food Safety & Postharvest Programs



## GLOSSARY

### ACRONYMS

APHIS	Animal and Plant Health Inspection Service
AQI	Agricultural Quarantine Inspection
ARS	Agricultural Research Service
CAPS	Cooperative Agricultural Pest Survey
CBA	Cost benefit analysis
CBP	Customs and Border Patrol
CIA	Central Intelligence Agency
CIAO	Commodity Import Analysis & Operations
CPHST	Center for Plant Health Science and Technology
DoD	Department of Defense
DoE	Department of Energy
EDP	Emergency and Domestic Programs
EEPO	European and Mediterranean Plant Protection Organization
ET	Executive Team
FAS	Foreign Agricultural Services
FICMNEW	Federal Interagency Committee for the Management of Noxious and Exotic Weeds
GIS	geographic information systems
GPDD	Global Pest and Disease Database
IPPC	International Plant Protection Convention
IS	International Services
ISO	International Organization for Standardization
ITAP	Invasive Terrestrial Animals and Pathogens
LIMS	Laboratory Information Management System
MOC	Memoranda of Cooperation
MOU	Memoranda of Understanding
NAPFFAST	APHIS Plant Pest Forecast
NAPPO	North American Plant Protection Organization
NBIS	National Bio-surveillance Integration System
NPAG	New Pest Advisory Group
NPB	National Plant Board
NPDN	National Plant Diagnostic Network
NPPO	National Plant Protection Organization
NSPL	National Science Program Leader
OPIS	Offshore Pest Information System
PHP	Plant Health Programs
PIM	Phytosanitary Issues Management
PIS	Plant Inspection Station
PPQ	Plant Protection and Quarantine
PRA	pest risk analysis
PT	Port Technology
QC	Quality Control
QMS	Quality Management System
QPAS	Quarantine Policy, Analysis & Support
Quads	Quadrilateral Scientific Collaboration in Plant Biosecurity
SDA	state departments of agriculture
SOP	standard operating procedures
TDY	temporary duty assignment
USDA	United States Department of Agriculture
USGS	United States Geological Survey



