USDA Animal and Plant Health Inspection Service
U.S. DEPARTMENT OF AGRICULTURE

Plant Protection Act Section 7721

Fiscal Year 2027 Implementation Plan

Plant Pest and Disease Management and Disaster Prevention Programs

and

The National Clean Plant Network

Contents

Introduction

Under the Plant Protection Act Section 7721 (PPA 7721), the U.S. Department of Agriculture (USDA) Animal and Plant Health Inspection Service (APHIS) annually makes funds available to cooperators—from state and federal agencies, Tribal nations, colleges and universities, non-profit organizations, and industry—to support projects that protect specialty crops, nursery systems, forestry, other agricultural production systems, and natural resources from harmful and invasive plant pests and pathogens. It authorizes permanent funding for the Plant Pest and Disease Management and Disaster Prevention Program (PPDMDPP) and the National Clean Plant Network (NCPN), at $90 million per year.

Since 2009, APHIS has supported more than 6,200 projects and provided over $1 billion in funding through PPA 7721. These projects have played a significant role in our efforts to protect American agriculture and educate the public about the threat posed by invasive species. For fiscal year (FY) 2026, the PPA 7721 program received submissions for 730 suggestions requesting over $160 million in funding, including $147.3 million requested for 706 PPDMDPP projects and $11.4 million requested for 24 NCPN projects.

PPA 7721 Overview

Under PPA 7721, APHIS offers funding for projects that enhance our ability to safeguard agriculture and facilitate safe agricultural trade. Cooperators nationwide use this funding to strengthen plant pest exclusion systems, optimize domestic pest management and eradication programs, keep commodities moving in commerce without spreading pests and diseases, and expand market opportunities for U.S. products. This work is critical to the USDA mission and helps American agriculture thrive.

Many organizations play a crucial role in protecting our Nation's agriculture, environment, and natural resources from plant pests and diseases. APHIS works closely with numerous federal agencies, state governments, Tribal nations, industries, academia, and other collaborators to develop and implement scientifically-sound approaches to pest detection, surveillance, and eradication. APHIS is responsible for coordinating the identification and prioritization of plant pest threats of national interest, identifying survey protocols, prescribing pest diagnostic procedures, confirming taxonomic identity of plant pests, administering cooperative agreements with cooperators to carry out pest and disease detection surveys, ensuring timely recording and reporting of survey results, and coordinating regulatory responses to pest and disease outbreaks.

Agencies within USDA that may partner with APHIS on PPA 7721, include:

- Agricultural Research Service (ARS) - conducts research, searches for biological control agents in foreign countries, and coordinates the development of certain high-priority National Plant Disease Recovery preparedness documents in response to Homeland Security Presidential Directive 9—Defense of United States Agriculture and Food. ARS also serves as a technical liaison to the U.S. Environmental Protection Agency on pesticide issues via the USDA's Office of Pest Management Policy.
- U.S. Forest Service - manages pests (including survey activity) in national forests and coordinates similar efforts with state and private foresters.
- National Institute of Food and Agriculture (NIFA) - provides outreach to and training for first detectors, oversees the National Plant Diagnostic Network, and conducts diagnostic

response exercises for pests of regulatory significance. When a pest cannot be eradicated, NIFA, through the Land Grant University system, may provide funding for research to support long-term control efforts.

As required to implement Section 7721 of the Plant Protection Act, APHIS seeks input from the National Plant Board and state departments of agriculture. State departments of agriculture play a critical role by carrying out plant pest and disease detection surveys. States also carry out specific delimiting surveys to support control and eradication programs. States often lead regulatory responses to new plant pests in accordance with APHIS national policy, sometimes in conjunction with APHIS under the Incident Command System (ICS). APHIS also consults with Cooperative Agricultural Pest Survey (CAPS) cooperators, the Specialty Crop Farm Bill Alliance, industry organizations, and other governmental and non-governmental stakeholders to implement PPA 7721.

Expanded and enhanced partnerships with plant industries and academia have created opportunities for information sharing, coordinated plant pest and disease detection, and reporting activities. Collaboration and cooperation, based on well-established partnerships between plant industries, state officials, academia, and APHIS, remains the catalysts for continued success. APHIS' partnerships are essential to the success of actions identified in this implementation plan, as well as future strategies.

APHIS continues to bridge the gaps between a myriad of pest detection and surveillance programs and increase the diagnostic capacity for plant pests and diseases. By better integrating and coordinating federal, state, and industry efforts on this front, APHIS can develop a more comprehensive picture of plant health in the United States based on solid, accurate data. This information will help to facilitate and enhance trade opportunities for U.S. plant producers and nursery growers. APHIS will adjust to evolving plant pest and disease concerns; projects addressing pests of specialty crops will remain a high priority for the PPDMDPP. Specialty crops are defined as most cultivated plants, or the products thereof, produced in the U.S. except for wheat, feed grains, oilseeds, cotton, rice, peanuts, sugar, and tobacco. This definition is consistent with existing USDA funding opportunities for specialty crops. Suggestions submitted under this funding opportunity may cover more than one U.S. specialty crop.

Plant pest, for the purposes of the FY 2027 Implementation Plan, shall mean any organism as defined in **7 USC Chapter 104: PLANT PROTECTION**, when the organism is:

- regulated OR of regulatory significance; or
- non-native AND not established, OR of limited distribution, OR not yet found in the United States.

Guidance for Submitting Suggestions

This document provides guidance for submitting suggestions that fall within the scope of the PPDMDPP and NCPN. Each year a funding interval opens for suggesters to submit suggestions, also referred to as the Open Period, which is typically late spring through summer. Given the extremely competitive nature of the PPA 7721 program, not all suggestions will receive funding.

National Clean Plant Network

The NCPN receives a minimum of $5 million annually from the $90 million in PPA 7721 funding. This section of PPA 7721 supports a network of clean plant centers to provide high quality propagative plant material free of targeted plant pathogens that cause economic loss, to protect the environment and ensure the global competitiveness of specialty crop producers. Network clean plant centers conduct diagnostic and pathogen elimination services and establish foundation collections to provide pathogen-tested, clean plant materials to nurseries, growers, and to state certification programs. More information on the NCPN goals, objectives, and strategies for interested applicants can be found in **Appendix A**. The NCPN website provides further information on the Program's application process, which is independent of the PPDMDPP process.

Plant Pest and Disease Management and Disaster Prevention Program

PPDMDPP funds projects focused on critical needs and opportunities to prevent, detect, and mitigate invasive plant pests and diseases. PPDMDPP funding is intended to support short to medium-term projects that enhance the safeguarding of U.S. agriculture and/or facilitate trade. Suggestions are to be written for a one-year (12 month) timeframe. Suggestions that will require multiple years to achieve success can be submitted. However, these suggestions must clearly state deliverables for the current year, and ensure the requested budget is appropriate for one year of activity. Receiving funding for a suggestion in one year does not guarantee or imply funding for subsequent years. Suggestions with a finite timeframe, defined goals and deliverables, and a clear exit strategy are preferred. For more information, including program resources, visit the PPDMDPP website.

PPA funding may be utilized for initial program development, but suggestions should indicate how the program will become self-sufficient, including a timeline. Priority will be given to suggestions that clearly state a justifiable plan for self-sufficiency in a reasonable time-frame.

PPDMDPP projects are organized around six goal areas. Descriptions of the goal areas, and objectives, strategies, and rationale for each goal, are included in this document. Suggestions that include new and innovative strategies for meeting the objectives are encouraged.

Projects and goal areas may evolve from one year to the next. Suggesters should review the objectives of the suggestion against the current objectives and strategies of the goal area to ensure the suggestion is subsequently submitted to the correct goal area.

Budgets should include information on all cooperators and contractors (if applicable) and provide justification for funding. If an individual's salary is split across multiple suggestions, indicate this in the detailed budget with reference to the other relevant suggestion number(s).

In the project suggestion, it is essential to outline the:

- Desired purpose and objectives(s) of the project – what will be accomplished;
- Technical approach to be used in the project – how will objectives be accomplished;
- Milestones and timeline – what are the specific activities and when will they be completed; and

- Anticipated results or impacts of the objectives, including how the product or tool will be used, how the results or impacts will benefit stakeholders and industry, and indicate how success will be measured and determined.

Project suggestions that fail to focus on a plant pest, fail to use the correct budget or Goal 1S templates, fail to provide a narrative report (when applicable), span more than one goal area, or do not align with the goal area to which they are submitted, will not be considered for funding. Suggestions must also be submitted in English for consideration.

For more information on submitting a PPDMDPP suggestion, refer to **Appendix B**.

ServiceNow
PPDMDPP suggestions are submitted using the online ServiceNow platform, during the annual Open Period. Guidance documents for submitting suggestions in ServiceNow can be found on the PPDMDPP website.

Review Criteria
Suggestions will be reviewed to identify high quality projects that will have meaningful impacts. Reviewers will evaluate suggestions on several criteria, including:

- Alignment with a single PPDMDPP goal area, and its objectives and strategies;
- Benefits for plant pest surveillance and management efforts;
- Impacts on/benefits to specialty crops and agricultural industries;
- Alignment with PPQ priorities (See **Appendix C**);
- Likelihood of project success;
- Prior/relevant experience of all cooperators;
- Validity of scientific and technological merit; benefits compared to existing technology;
- Appropriate project timeline for intended deliverables; and
- Reasonable budget, with adequate detail/description and justification, to indicate appropriate use of funds.

Suggestions submitted to goals 1A, 1S, or 2 will also be evaluated based on the special funding considerations outlined in PPA Section 7721 sub-section b(6).

Suggestions submitted to goals 3, 4, 5, and 6 will also be evaluated for alignment with operational needs, including clear operational deliverables and timelines, end user applications, and transferability of outcomes to State departments of agriculture and/or operational partners.

Each suggestion will be reviewed to confirm the suggestion meets the following five criteria:

- Focuses on an invasive plant pest;
- Answers all fields within the ServiceNow suggestion form completely;
- Includes the required budget template, filled out completely;
- Includes a narrative report (if applicable for a repeat suggestion); and
- Fits within the goal area to which it was submitted.

Suggestions that fail to meet these five criteria will be removed from further funding consideration.

The most common reasons suggestions are removed from consideration are:

- Failure to align with the selected goal area
- Failure to focus on a plant pest
- Failure to submit all required information

Accomplishment Report
If funding was previously provided, the suggester must provide an update on the status of the project/work-to-date. Upload a report when submitting the next suggestion for continued funding, showing progress towards completion of the previous project's objectives and deliverables. A cooperative agreement Accomplishment or Progress Report can be utilized, if it provides the necessary details, though other formats are acceptable.

Ineligible Expenses
To ensure consistent and proper use per Congressional intent, funding cannot be used to:

- Purchase vehicles (lease, vehicle fuel, and routine maintenance are allowed);
- Build or purchase structures;
- Pay the salaries of permanent Animal and Plant Health Inspection Service-Plant Protection and Quarantine (APHIS-PPQ) staff; or
- Develop or maintain IT applications and systems that:
  - Are duplicative of other PPQ initiatives or PPA 7721 funded projects;
  - Contain personally identifiable information; or
  - Require long-term PPA funding.

Refer to **Appendix D** for further information.

Appendices for Goal Areas
In addition to the information under each goal area section, make sure you read the relevant appendices for Goals 1S (**Appendix E**), 2 (**Appendix F**) and 3 (**Appendix G**).

Utilization of Canines
Any suggestion that includes a canine component should refer to **Appendix F** for additional information on canine training and utilization requirements, and health and wellness standards for canine teams.

Procurement of Unmanned Aerial Systems (UAS)
Any suggestion that aims to use federal funds to procure UAS (i.e., drones) to be utilized in the objectives and deliverables of a suggestion must adhere to the requirements set forth in the Office of Management and Budget Memorandum M-26-02. Evidence of compliance with this memorandum must be indicated in the Technical Approach section of the suggestion.

National Environmental Policy Act (NEPA) Compliance
All federally funded projects, including those submitted under PPA 7721, must comply with the National Environmental Policy Act (NEPA), which may require environmental documentation

before federal funds can be used. Cooperators should consider early whether their proposed activities—such as surveys, treatments, or field operations—could trigger federal environmental review and plan accordingly. Consideration of NEPA requirements helps prevent delays in project approval and implementation. Evidence of compliance with NEPA must be indicated in the Technical Approach section of the suggestion.

Plant Pest Permits

Suggestions where the project work will involve the **import, interstate movement, or release into the environment of any plant pest**, including plant-feeding insects, mites, snails, slugs, plant-pathogenic microbes, biological control organisms, bees, parasitic plants, or federally listed noxious weeds may require a PPQ 526 permit. A permit is also required when importing or moving **soil or potentially infected host materials** (such as plant material, insects/arthropods, or environmental samples, etc.) for the purpose of isolating or culturing microorganisms. These requirements ensure APHIS can evaluate and mitigate potential plant-health risks. Therefore, submitters must demonstrate that they have obtained, or are in the process of obtaining, any required permits as part of their suggestion details (e.g., within the Technical Approach or Past Performance sections). New and returning submitters are encouraged to connect early with the PPQ Pest Permits Team during their suggestion planning if they meet any of the above criteria and do not currently have appropriate permits with APHIS. The PPQ Pest Permits Team provides consultation on permit applications involving new customers, novel regulated articles, new intended uses, and emerging operational challenges. Early engagement with the team greatly streamlines the application process and helps ensure efficient review and timely coordination. Submitters may contact the team at pest.permits@usda.gov using the subject line "Pest Permit Application Consultation Related to PPA 7721". Information about regulated organism and soil permits, as well as permits for containment facilities, can be found on the APHIS Regulated Organism and Soil Permits website. For genetically engineered plant pests, submitters must contact APHIS' Biotechnology Regulatory Services (BRS) at brspermits@usda.gov for potential biotechnology permit applications. Evidence of permit compliance must be indicated in the Technical Approach section of the suggestion.

Rapid Response

Rapid response funds may be used to support suggestions that focus on an emerging, invasive plant pest of federal concern, to address an immediate need for mitigation or treatment. Such suggestions may additionally include survey, outreach, or research in direct support of a federal emergency response. Suggestions submitted during the Open Period that meet the above criteria should be submitted to Goal 6 for rapid response funding consideration. Suggestions that lack a mitigation component will not be considered for rapid response funding.

Suggesters are encouraged to work with their State Plant Health Director and the relevant PPQ pest cross functional working group prior to submitting a suggestion for rapid response funding. Rapid response funding decisions may be announced after the release of the Spending Plan.

Additional Rapid Response Guidance

The time between the detection of an invasive plant pest and corresponding unified response activities is a critical window in which to limit international trade impacts, environmental damage, and economic costs.

APHIS will provide funds for emergency/rapid response activities, including:

- Travel costs associated with personnel mobilization;
- Technical working group and subject matter expert activities;
- Resource purchasing for incident activities;
- Vehicle rentals, use, and maintenance;
- Communications and outreach activities, including news and media events to alert stakeholders and the public of the pest threat;
- Program command post startup and overhead;
- Identification and diagnostic equipment and temporary personnel;
- Rapid survey and detection tools and equipment;
- Information technology equipment and support;
- Development of emergency action plans;
- Safety equipment and personnel protective devices; and
- Mitigation and containment costs.

PPDMDPP Goal Area Overview

PPA 7721's PPDMDPP is organized into six goal areas. Each goal is described with specific objectives and implementation strategies. Each PPDMDPP project suggestion must clearly align with a single goal area, and provide detailed information on project methodology, activities, and milestones, as well as a detailed budget.

Goal 1A – Plant Pest and Disease Analysis

Goal 1A strives to enhance the analysis of available data to make informed decisions to assess plant pest threats. This includes development of new and innovative data analytic approaches or algorithms to improve analytical results, predictive modeling, and surveillance efficiency for invasive pest species.

Goal 1A is not intended to fund experimental work, surveys/monitoring, or observational studies to generate data, or outreach or training on developed products. New data developed as part of validating a tool or model is acceptable under Goal 1A. Additionally, Goal 1A could fund the analysis portion of multi-year surveys once the data has been collected or through the leveraging or synthesis of complementary data sets for modeling or predictive purposes. Other goals may be suitable to fund surveys or experimental work.

Suggestions that result in the development of a tool, model, or application must include where that item will be housed, how the item will be made accessible to the larger community, and the plan for long-term maintenance.

Goal 1A Objectives and Strategies

Objective 1: Develop analytical tools or methodologies that help APHIS or state partners identify or define plant pest and pathway risks using available data.

> ***Strategy 1:*** Development or application of decision support algorithms, approaches, or tools integrating data from various sources for prioritizing areas for surveillance.

Strategy 2: Develop and implement data-sharing protocols across APHIS, Customs and Border Protection, and other agencies for commercial data analysis.

Strategy 3: Identify and use appropriate offshore, port of entry, and domestic datasets for analyzing pathways for risk of plant pest introductions.

Objective 2: Develop risk-based models and decision-support algorithms, approaches, or tools to reduce the entry, establishment, and spread of invasive plant pest species.

Strategy 4: Better define biotic and abiotic variables, detect patterns, and test hypotheses that improve the understanding of where a plant pest may enter, establish, and/or spread.

Strategy 5: Conduct evaluations of analytical and resource allocation techniques to optimize decision making.

Strategy 6: Better define variables that help determine whether an invasive plant pest will cause economic impact.

Goal 1A Rationale

There is a critical need to assess plant pest threats due to increases in passenger travel, trade, and interstate and international movement of plant products. Analytical tools and approaches help APHIS target high-risk pathways to prevent plant pest entry and prepare for the potential establishment of high-risk plant pests. They also help APHIS allocate survey resources more strategically and better understand invasion biology of plant pests so that APHIS can effectively respond to plant pest incursions and/or reduce the likelihood of establishment.

Goal 1S – Plant Pest and Disease Survey

Goal 1S provides funding for survey work and provides taxonomic expertise and increases identification capacity to enhance APHIS' plant pest surveillance activities and facilitate the early detection of invasive plant pests. Early detection of invasive plant pests allows for more options when considering the appropriate response and improves the likelihood of a successful outcome. APHIS' plant pest surveillance activities offer an essential safeguard that complements offshore preclearance and port of entry activities.

This goal area fosters alignment between Goal 1S surveys and other plant pest surveillance surveys (for example, the CAPS Program) or surveys supporting domestic program pests. APHIS' plant pest surveillance activities continue to encourage surveys targeting multiple pests based on commodities, taxa, environments and habitats, industries and businesses, and high-risk pathways.

Goal 1S Objectives and Strategies

Objective 1: Conduct invasive plant pest surveys and provide taxonomic expertise to increase diagnostic capacity in support of agriculture crops, specialty crops, trade, and identified program surveys listed below under Survey Strategy.

Strategy 1: Conduct National Priority Surveys, Pest Program Surveys, and Cooperator Surveys, for invasive plant pest introductions across the United States, with broad participation by states, universities, and Tribes.

Strategy 2: Provide taxonomic expertise and increase capacity for preliminary identification needs for plant pest surveys and provide cost-efficient identification centers that accept and process survey samples from other states.

- Provide expert systematic and taxonomic identification services for samples collected from PPA 7721 Goal 1S surveys, APHIS' pest detection activities, and CAPS surveys.

Note: Suggestions should focus on the processing and identification of survey samples only. Other products such as screening aids, job aids, training materials, and/or workshops should be submitted under PPA 7721 Goal 3. Outreach focused efforts should be submitted under PPA 7721 Goal 5.

Objective 2: Target multiple high-risk pathways across the United States to prevent invasive plant pest introductions and improve preparedness and response capabilities.

Strategy 3: Conduct surveys targeting multiple pathways for invasive pest introduction, to increase knowledge about the distribution and risk of plant pests.

Notes:

- Goal 1S surveys should be tied to regulated pests or regulatory activity for early detection purposes. A survey that seeks to monitor a pest population after a control treatment has been applied would not fall into Goal 1S.
- Surveys intended to support research activities or management of generally established pests should be submitted to Goal 3 or 6 as appropriate, and include other activities in direct support of that goal area's objectives and strategies. Such survey activity should be a minor component of the overall suggestion.
- Goal 1S will not support outreach efforts. Surveys related to gaining public reporting or performing surveys of the public are not appropriate under this goal area. Such outreach efforts should be submitted to Goal 5.
- Survey activities intended to confirm success of, or are supplemental to, a regulatory treatment must be submitted under Goal 6.

Goal 1S Rationale

Funding should be allocated to address high-risk plant pests across the United States. Goal 1S provides funding to primarily meet the increasing demands of surveying for invasive plant pests that are of national concern. This goal will address the most significant plant pests for which a robust national detection program is necessary to protect agricultural, environmental, and natural resources. Early plant pest detection is critical to avert economic and environmental damage, **reducing losses from plant pest damage and/or mitigation measures**. If a plant pest spreads, mitigation costs can reach millions of dollars, in addition to lost farm revenues and damage to ecosystems. Survey results can also support export certification and retain or expand U.S. export markets. Survey funding may also support surveys of state concern.

Survey Strategy

For FY 2027, survey suggestions under Goal 1S will be divided into three overarching areas:

I. National Priority Surveys
II. Pest Program Surveys
III. Cooperator Surveys

I. National Priority Surveys

National Priority Surveys primarily target plant pests on the FY 2027 National Priority Pest List, available on the CAPS Resource and Collaboration website. Suggestions seeking funding as a National Priority Survey must:

- Use an approved survey name for National Priority Surveys (See **Appendix E**);
- Include multiple plant pests;
- Ensure at least 70% of the plant pests in the survey are National Priority Pests;
- Align with the intended host(s) or habitat; and
- Align with the Host Matrix, which identifies National Priority Pests and hosts.

For example, if a suggestion proposes a Forest Pest Survey for Siberian silk moth, black fir sawyer, pine-tree lappet, and hemlock wooly adelgid, this would be allowed because the survey:

- Aligns with one of the approved National Priority Survey names;
- Targets three National Priority Pests (Siberian silk moth, black fir sawyer, and pine-tree lappet);
- Includes one pest of state concern (hemlock wooly adelgid);
- At least 70% of the pests are from the national priority pest list; and
- Work for all pests is about equal in scope. Note: a suggestion that seeks most of the work to complete hemlock wooly adelgid surveys and only token surveys for National Priority Pests would not be supported.

If a state is interested in only surveying for pests of state concern, like pecan weevils, then they should not submit a suggestion for a National Priority Pest survey because this insect is not listed as a National Priority Pest. This type of suggestion can be submitted as a Cooperator Survey.

Pathways surveys for National Priority Pests. The pathway approach to survey is based on identifying areas that are at the highest risk for plant pest introductions. For example, moths included in the Asian defoliator survey lay eggs on shipping containers. Locations that store shipping containers from Asia are potential high-risk areas for new plant pest introductions. The pathway approach would identify critical points along the pathway for a survey. This type of targeted detection survey or risk-based survey enhances the ability to identify and target high-risk areas, zones, locations, and sites that have an increased potential for exotic plant pest introductions. This approach can be combined with any survey using sound analytical tools, known risk sites, history of pest detections in an area, and other sources of information.

II. Pest Program Surveys

Pest Program Surveys are associated with specific PPQ domestic programs and primarily support the program's detection surveys. See the Recognized Federal Programs or Program Pests list (**Appendix E**). Survey methods for Pest Program Surveys must:

- Follow the PPQ program's guidance for survey;
- Clearly be associated with the PPQ Program's detection survey activities; and
- Not support treatment or post treatment activities.

III. Cooperator Surveys

Cooperator Surveys are for plant pests not regulated nationally, or less than 70% of plant pests included in the survey are on the National Priority Pest List, and/or are part of a specific

commodity survey which supports export or trade. These surveys are usually rated lower than the other surveys, as the focus of Goal 1S funding is on National Priority Surveys and Pest Program Surveys. Some examples of Cooperator Surveys include coffee pest survey and weed surveys on state lands.

Additional Guidance for Goal 1S Surveys

Survey Methods
Goal 1S uses active surveillance as the primary method for detecting new plant pests. This generally includes trained staff monitoring traps, visually inspecting plants, or collecting plant samples.

For the most up-to-date methods for survey and identification, see the Approved Methods for National Priority Pests. All surveys conducted for National Priority Pests must use the survey methods defined in the Approved Methods page for the specific pest. The information on the Approved Methods site supersedes any survey and identification/diagnostic information that may be found in other CAPS documents (i.e., Commodity-based Survey References and Guidelines, CAPS Pest Datasheets, others). Suggesters should describe the survey methodology in the Technical Approach section when submitting a suggestion.

Submitting Goal 1S Suggestions
Starting with the FY 2026 funding cycle, fields for 'Purpose' and 'Technical Approach' have been added within the ServiceNow Goal 1S suggestion form.

Purpose
Include how this survey supports early pest detection and/or mitigation. Provide clear justification on why this survey is necessary and what specialty crop or agricultural industry it supports. If applicable, include impacts on trade.

Technical Approach
Provide specific survey processes and methodology. If the survey focuses on a pathway, describe the pathway(s) you intend to target to protect agriculture and natural resources.

Accomplishment Report
The accomplishment report should include:

- Number of traps set and monitored or visual surveys conducted
- Number of samples collected
- Number of positive and negative traps/visual surveys/samples per counties

See additional general guidance for Accomplishment Reports on page 6.

Upload the Correct Template
Goal 1S suggestions must attach either the Goal 1S Survey or Goal 1S Diagnostic Laboratory Template found on the PPDMDPP Website. These templates are required, and failure to provide complete and accurate responses throughout the templates will negatively impact your overall suggestion rating. Contractual costs must be shown and justified in the financial template. Additional worksheets (tabs) can be added to accommodate multiple cooperators and/or contractors.

Submitting any other budget template may result in the suggestion being removed from funding consideration.

See **Appendix E** for specific guidance with Goal 1S.

Goal 2 – Domestic Inspection

This goal strives to target domestic inspection activities at vulnerable points in the safeguarding continuum focusing on the movement of products and commodities potentially carrying plant pests of regulatory significance.

Goal 2 Objectives and Strategies

Objective 1: Promote and expand inland inspections of high-risk pathways for regulated articles and plant pest movement.

> ***Strategy 1:*** Conduct inspection activities of regulated articles moving internationally or interstate.
>
> ***Strategy 2:*** Conduct follow-up inspections in states receiving international and interstate regulated cargo that present a risk of moving plant pests, to include the development of inspection techniques.
>
> ***Strategy 3:*** Develop, design, or improve ways to analyze plant pest inspection programs for efficiency and effectiveness.

Objective 2: Expand the use of canine teams for domestic inspection activities.

> ***Strategy 4:*** Develop new capacities of agriculture detection canine teams in support of destination inspections, including pilot/proof-of-concept projects (establishing if a canine can detect a specific plant pest of concern).
>
> ***Strategy 5*****:** Development or testing of canine training procedures that advance pest detection tools or technologies. This includes the development of canine training aids that require chemical analyses and laboratory validation steps.

Notes:

- Goal 2 should be the default goal area for submitting canine suggestions, with the following exceptions:
    - Canine activities related to domestic survey/pest detection activities should be submitted under Goal 1S.
    - Canine activities in support of mitigation activities should be submitted to Goal 6.

Goal 2 Rationale
Information gained from the interception of agricultural items and pests in domestic inspection activities can improve states' risk assessment efforts.

Several plant pests of limited distribution within the United States are regulated by the Code of Federal Regulations and Federal Orders. Many of these allow the movement of regulated articles under Compliance Agreements and Limited Permits. Increasing the number of inspections and audits of facilities at origin and destination will increase the level of protection against introduced plant pests and increase the effectiveness of completing inspections and audits.

Canine teams have demonstrated their effectiveness in detecting plant pests and prohibited items during inspections at ports of entry and in domestic inspections. Expanding canine detection activities may provide an additional line of defense to prevent the introduction and interstate movement of harmful plant pests that may have gone undetected at ports of entry. Additionally, increases in e-commerce traffic has resulted in increased illegal movement of quarantine products and plant pests, resulting in greater need for inspections at mail facilities and express carrier hubs. These highly active pathways represent prime locations for targeted canine detection activities.

See **Appendix F** for specific guidance with Goal 2.

Goal 3 – Increase Identification Capacity and Strengthen Pest Detection Technology

This goal strives to increase the capacity for identifying and detecting plant pests of regulatory significance by improving survey technologies and methodologies, trap and lure technologies, providing taxonomic expertise, developing diagnostics, and producing training resources.

Suggestions can target plant pests and diseases in any taxonomic group, although preference will be given to suggestions that address quarantine pests of economic importance. These can include, but are not limited to, arthropods, bacteria, fungi, nematodes, phytoplasmas, viroids, and viruses. Suggestions should explain why the plant pest or disease, and proposed tool or training resource, are important and what benefits the proposed work will provide.

PPQ requires a specific taxonomic level of identification for making regulatory decisions on regulated plant pests; therefore, suggestions that incorporate machine learning or artificial intelligence must address that minimum taxonomic level of identification. Further, the methods must ensure the proposed plant pest(s) and non-targets can be distinguished based on the proposed technology.

Suggestions should also consider whether/how the technology can be deployed in the field, and if it is cost-effective for use in regional or national surveys. Suggestions that use environmental DNA (eDNA) to detect plant pests are generally not funded. PPQ cannot respond to a plant pest detection without having a physical sample.

Any proposed diagnostic tool must effectively discriminate target species from related species and be effective for large composite samples and high throughput, with demonstrated sensitivity and practical implementation for survey programs. The development of tools for final

confirmatory diagnostics must ensure accuracy and reproducibility. Comparisons with existing screening tests are encouraged to identify a logical flow for early detection and confirmatory diagnostics. Projects addressing confirmatory diagnostic tests should be coordinated in advance with the appropriate PPQ programs.

Goal 3 Objectives and Strategies

Objective 1: Develop/improve all aspects of early detection technologies and resources.

Strategy 1: Support the early detection of plant pests by developing or improving survey methods, trap technologies, and lures or attractants.

Examples include:

- Increase efficiency of catching target plant pests by developing specific traps or lures to reduce bycatch (non-target species), especially where non-target species are morphologically similar to the target pests.
- Develop traps or methods that would improve the handling and processing of survey samples, prevent specimen damage, and/or allow for easier identification of target species. This would include alternatives to sticky traps.
- Develop novel traps, lures, and/or survey strategies to detect target species more efficiently. Novel trap technologies should be cost-effective to implement and target plant pests of concern to PPQ (e.g., Program Pests or those on the National Priority Pest List). Specific areas of need include:
  - Traps that can record the time and date of capture, report captures remotely, and screen captures to determine target species.
  - Traps that can effectively accommodate multiple lures for multiple high priority target plant pests.
  - Traps that exclude or segregate non-targets from target plant pests.
  - Traps that can increase the rate of detection or efficiency of captures.
- Develop effective quality control standards to produce high-quality lures and/or improve lure releasing rates while maintaining efficiency.

Objective 2: Develop or improve diagnostic tests, identification resources, and taxonomic expertise for high priority plant pests.

Strategy 2: Develop, validate, or improve diagnostic methods, including molecular-based assays and other technologies, to detect and/or identify plant pests.

Examples include:

- Develop novel tools or improve existing methods for screening and/or confirmatory diagnostics of plant pests. Diagnostic tools should identify plant pest species to a level useful for making informed decisions regarding quarantine status and response, such as:
  - In trap samples that contain large numbers of non-targets that are morphologically similar to the target plant pest. This is especially needed for species that must be dissected to be identified (e.g., many Lepidoptera).
  - In symptomatic host materials suspected of infection by invasive plant pathogens or closely related endemic pathogens (such as peach X-disease phytoplasma). Diagnostic tests for group or genus-level detection (e.g., ELISA or lateral flow tests for phytoplasma or virus detection) are an invaluable tool for efficiently detecting plant pathogens and ruling out abiotic stress as a source of symptoms.

- Develop field-deployable diagnostic tools or assays that are affordable and can be performed by non-laboratory personnel with minimal training.
- Perform validation of existing diagnostics or develop resources to assist with validation efforts to improve diagnostics:
    - Expand the validation of existing diagnostic tools for plant pests of regulatory significance at higher validation tier levels (e.g., inter-laboratory validation) to ensure assay robustness when deploying across testing programs.
    - Develop and validate biological reference material, and synthetic diagnostic controls for plant pathogens to support diagnostic programs. Controls should be developed following quality control and assurance methods to track potential contamination. Coordinate efforts with appropriate PPQ programs.

Strategy 3: Perform systematic research, produce identification resources, and/or develop additional expertise and capacity to improve the identification of high priority plant pests. Examples include:

- Perform systematic research and develop electronic identification tools to allow for the identification of plant pests in poorly characterized groups and species complexes:
    - Develop electronic tools, such as interactive keys and image databases to support PPQ identifiers performing morphological identifications of plant pests.
    - Characterize unresolved species complexes that contain plant pests of regulatory significance to support identification needs for surveys and effective plant pest management/eradication strategies.
    - Create systematic revisions of groups that contain invasive plant pests. Revisions should provide practical data to help target and restrict potential pathways of introduction.
    - Generate high-quality sequence data for plant pests and closely related species from specimens that are expertly identified and will be vouchered in curated collections. Suggestions could focus on a plant pest genus or family, from varied geographic locations, especially for plant pest groups where existing molecular data is lacking.
- Develop identification resources, including interactive matrix-based taxonomic keys, to assist with the identification of quarantine plant pests and non-targets. Interactive taxonomic keys should provide credible information for confirmations of suspect taxa encountered in domestic surveys or during quarantine inspections. Suggestions that target a specific taxonomic group (e.g., genus, family), should clearly explain the quarantine importance of the group and why taxonomic keys are needed.
- Develop new recorded or in-person training sessions led by recognized taxonomic experts to teach identifiers how to distinguish quarantine plant pests from established and native species. Training should involve PPQ-approved methods and specifically address taxa on the current National Priority Pest List or a PPQ Program Pest, or the suggestion should clearly explain the importance of the work to PPQ if other plant pests are targeted. Suggestions that include the production of recorded webinars that can be accessed online are encouraged. Suggestions that include a significant travel budget for participants need to justify why the training cannot be performed remotely.

Note:

- Research using existing data to identify areas or develop an analytical tool or risk-based model for prioritizing areas for surveillance should be submitted under Goal 1A. New data developed as part of validating the tool or model is acceptable under Goal 1A.
- Canine detection suggestions, even those that involve the training canines or methods development, should be submitted to Goal 2.
- Suggestions in support of nursery certification programs or integrated pest management in a nursery environment should be submitted to Goal 4.

Goal 3 Rationale

Early detection and accurate identification of invasive plant pests are essential for PPQ to accomplish its mission. Goal 3 supports this mission using strategies that enhance PPQ's ability to respond to invasive plant pests.

Developing effective and efficient surveillance tools is critical for the early detection of invasive plant pests. For example, increasing the efficiency and specificity of traps and lures results in improved screening. Novel traps and lures allow for the detection of plant pests that might be otherwise overlooked. Likewise, developing, optimizing, and validating molecular diagnostic tools for exotic plant pests and pathogens is essential for early detection programs. Increasing the availability of tools optimized for broad bio-surveillance of plant pests can increase the likelihood of early detection and significantly impact the success of eradication and management programs.

Developing diagnostic tools in anticipation of future threats allows for a rapid response when new exotic plant pests are detected. Although the use of molecular diagnostics for screening and identification is increasing dramatically, Goal 3 continues to support development of more traditional methods and tools, such as interactive identification keys and image databases. The systematic research necessary to resolve species complexes and improve the identification of plant pests in these groups is also supported. Finally, Goal 3 supports capacity building for plant pest identification through training development by taxonomic experts that can be widely distributed to field personnel. Training development includes the creation of materials or processes to be used to train taxonomic experts, such as the development of a training video.

See **Appendix G** for specific guidance with Goal 3.

Goal 4 – Safeguard Nursery Production

This goal strives to develop management strategies for the mitigation of pests and pathogens in nursery settings and encourages the development and harmonization of standards to support systems-based approaches for nursery certification initiatives.

Suggestions should identify who will benefit from the suggestion and how the strategies or tools developed, including best management practices, critical control points, and mitigation or management tools or approaches, will be disseminated to or benefit the nursery industry.

Goal 4 Objectives and Strategies

Objective 1: Develop science-based best management practices (BMPs) and risk mitigation practices to exclude, contain, and/or control regulated plant pests from the nursery production chain.

> ***Strategy 1:*** Initiatives that develop and implement the integration of BMPs, integrated pest management, and other risk mitigations to holistically exclude, contain, and/or control regulated plant pests from the nursery production system.

Objective 2: Support development or improvement of nursery certification programs, including the harmonization of different certification programs (both inter- and intra-state).

> ***Strategy 2***: Initiatives that enhance harmonization, and/or increase the capacity to implement and support the wide-spread adoption of certification programs.

Note:

- Suggestions focused on detection technologies and trap/lure development for early detection or pest survey should be submitted to Goal 3.
- Suggestions focused on outreach and education, including those for a nursery audience, should be submitted to Goal 5.

Goal 4 Rationale

Safeguarding nursery production is the first step in an integrated plant pest management approach to prevent the introduction or spread of harmful plant pathogens and pests that cause economic loss, and to ensure the global competitiveness of specialty crop producers. This goal supports the development and implementation of science-based methods, best management practices, and systems approaches to exclude or control regulated plant pests from the nursery production system. The increased understanding of plant pests/pathogens and host materials will also help regulatory and nursery staff refine program policies, protocols, procedures, and regulations to more effectively manage or eradicate the plant pests/pathogens in the nursery setting.

Certification programs play a key role in safeguarding nursery production by providing a system for the production of plants free of regulated pathogens and facilitating the availability, movement and maintenance of virus-tested plants. Developing an integrated nursery certification program to facilitate safe movement of nursery stock in partnership with state regulatory officials is crucial for comprehensive plant pest/pathogen management strategies and programs, and production efficiencies. Nursery certification programs are intended to ensure that nurseries are:

- providing the cleanest possible environment;
- isolating the clean materials;
- and following systems approaches and best management practices to keep the plants healthy, including proper documentation, recordkeeping, auditing, and compliance.

Such certification programs will meet the mutual needs of industry, the states, and PPQ to ensure nursery production systems adequately safeguard the nursery industry from the introduction or spread of invasive plant pests. An effective nursery certification system will facilitate the safe domestic movement and export of planting material. The establishment of harmonized certification programs across states would reduce plant pest risks and the costs associated with safeguarding domestic movement of certified planting material.

Working with all stakeholders and cooperators to develop and support certification programs for the nursery industry provides vital linkages between this goal area and allied initiatives. This includes launching certification program pilots in select states, developing training modules for certification programs, and integrating with planned initiatives of the NCPN.

Goal 5 – Outreach and Education

This goal seeks to increase awareness in, and knowledge of, high-consequence plant pests to prevent their introduction into and/or spread throughout the United States.

Goal 5 is not intended to support suggestions to collect, track, and/or respond to reports of invasive species, fund general career development, or conduct information-gathering surveys.

Goal 5 Objectives and Strategies

Objective 1: Provide education and encourage behaviors that enhance safeguarding activities.

Strategy 1: Provide education and information to target audiences on plant pest issues, including:

- Providing education and outreach, including workshops, seminars, or training programs to detect, identify, and/or respond to plant pest threats.
- Encouraging implementation of best management practices to enhance safeguarding of plants and plant products at production and distribution sites.
- Educating on how to look for and report signs and symptoms of a plant pest or disease.
- Informing about plant pests and diseases, and steps to take to prevent their introduction or spread.

Objective 2: Increase the number of people actively looking for and reporting high-consequence plant pests at vulnerable points along high-risk pathways.

Strategy 2: Develop volunteer programs to support plant pest detection and reporting activities.

Objective 3: Increase public awareness and support for high priority plant pest and disease eradication programs and acceptance of control efforts.

Strategy 3: Apply best practices or incorporate innovative approaches to increase public awareness, acceptance, and support of high priority plant pest and disease eradication and control efforts.

Target Audience: Below is a list of target audiences (including examples) for outreach and education activities, prioritized high to low, based on the likelihood of impact on early detection and surveillance of pests. Outreach suggestions focused on these groups will be given preference over those targeting other audiences.

1. Plant producers – farmers, nursery stock growers, field workers
2. Other green industry representatives – nursery, garden center, and green industry owners and employees
3. Plant health professionals – natural resource managers, state and local government employees, extension staff, and crop consultants
4. Commercial importers – warehouse staff, import specialists

5. Citizen scientists
6. Students and educators
7. General public and travelers

Goal 5 Rationale
Outreach and education activities support and enhance efforts to prevent the introduction and/or spread of high consequence plant pests into and throughout the United States, particularly in susceptible, high-risk areas. Suggestions should focus on activities that will result in increased numbers of individuals looking for and reporting high consequence plant pests. Suggestions may also focus on equipping people with the knowledge to implement best practices and safeguarding activities.

The cornerstones of this goal include developing and delivering educational programs for plant producers, industry representatives, and plant health professionals; creating outreach materials; establishing and promoting volunteer first responder programs; and engaging the public through traditional and social media. The most successful projects are innovative and promote best practices, often incorporate partnerships to amplify the combined impact, and leverage existing public resources to maximize efficiency.

Additional guidance for submitting a suggestion:
- Include the plant pests and pathways targeted in the outreach strategy.
- Identify the target audience.
- Identify whether the program is private or public, for suggestions that develop and host an educational program (e.g., webinar or classroom course).
- Consider leveraging existing public resources instead of creating all new materials. Update and localize existing outreach resources whenever possible. Be creative and practical in the approach.
- Provide a clear plan for meaningfully evaluating the effectiveness of outreach efforts/project outcomes, including providing an evaluation plan for proposed activities.

When submitting a suggestion, include results or metrics:
- Qualitative indicators (e.g., behavioral change and message retention) include details about how the lesson(s) can or will be applied by the target audience, or the behavior the outreach modifies.
- Quantitative indicators include documenting the number of participants at an outreach event; hits on an article; no. of materials distributed; booth engagements; or digital reach.
- Surveying attendees to measure knowledge retention/awareness or adding a question in a public reporting tool that captures how the public learned about the plant pest can facilitate measuring and reporting the impacts of these outreach efforts. These types of questions can be either quantitative or qualitative, depending on the analysis.

Goal 6 – Enhance Mitigation and Rapid Response

Goal 6 seeks to develop plant pest mitigation/control tools and technologies and increase the knowledge base for use during plant pest response activities. It also supports the development of New Pest Response Guidelines. Early plant pest response activities will help to reduce potential

adverse impacts and further spread of detected plant pests of regulatory significance and/or economic or environmental concern. Suggestions should explain why the plant pest or disease, and proposed knowledge base or tool/technology, is important and what benefits the proposed work provides.

Goal 6 supports key areas of mitigation and response.

- It prioritizes projects with rapid timelines for ready-to-use mitigation tools and activities.
- Projects with a significant survey component must justify how the survey relates and is necessary to the mitigation activity. Surveys not in direct support of a mitigation activity should be submitted under Goal 1S.
- Some Goal 6 suggestions may be funded through rapid response, for specific pest program activities identified by USDA. Refer to the rapid response section on page 7 for further information.

Goal 6 suggestions typically fall into either scientific or operational categories.

- Scientific projects contain methods development or use the scientific method to evaluate a hypothesis, provide technical assistance, improve knowledge base, conduct tech transfer activities, or develop and adapt existing tools and methods.
- Operational projects aim to use existing tools and/or approved methods for the overarching goal of containment, control, mitigation, or eradication of a plant health emergency.

Goal 6 Objectives and Strategies

Objective 1: Develop or adapt new control technologies, tools, and treatments for use in plant pest emergencies and/or established pest programs or increase the knowledge base to address a potential or ongoing plant pest emergency.

> ***Strategy 1:*** Increase the knowledge base to develop, promote, and implement new control technologies, tools, and treatments for use in plant health emergencies and/or established pest programs (*Scientific*).
>
> Examples of increasing the knowledge base may include suggestions that focus on evaluating host preferences of a new insect pest, or pathogen transmission rates to improve biological understanding, or risk to certain hosts for a specific pest to assess potential impact.
>
> ***Strategy 2:*** Provide technical assistance prior to, during, and immediately following the development of a plant health emergency through the development of New Pest Response Guidelines (NPRG) and Rapid Response Action Plans for the potential introduction of exotic plant pests (*Scientific*).
>
> Examples include quarantine treatments, enhanced mitigation, technology transfer support, and certain stages of biocontrol with a deliverable within one year (e.g., complete a release permit, collect additional data for a permit, develop rearing technology).
>
> **Biological Control Suggestion Guidance:** Biological control is a long-term commitment and investment. Therefore, appropriate PPA 7721 biological control suggestions must

describe short- to medium-term projects with specific goals and objectives that can be attained within the single year of the funding and cooperative agreement. Each suggestion must represent a specific aspect or activity leading to a biological control solution. Examples may include native natural enemy surveys, completion of host range testing, rearing of non-target hosts for testing, development, and approval of a first-time release permit, rearing and development of rearing systems for targets and/or hosts that produce highly fecund and healthy agents for first time releases, initial release and data collection protocols, and field establishment verification studies after first time releases.

Objective 2: Improve response options and capabilities in preparation for a potential plant pest emergency.

Strategy 3: Enhance preparation for a plant pest emergency by improving the response options and capabilities prior to the onset of a plant pest emergency (*Operational*).

Examples include the development and training of rapid response teams (i.e., ICS) and management options for key invasive pests before they arrive. Infrastructure purchases (i.e., purchase of vehicles or buildings) cannot be funded through PPA 7721.

Objective 3: Support the use of existing tools and initial response protocols for the overarching goals of containment, control, and/or eradication of plant pests.

Strategy 4: Provide initial or short-term funding to quickly implement programs that employ existing tools or approved methods and initial response protocols for the overarching goals of containment, control, or eradication immediately following the development of a plant health emergency (*Operational*).

Note: Suggestions that:

- Conduct general detection or delimiting surveys, not in support of mitigation activities, should be submitted to Goal 1S.
- Develop or improve traps, lures, diagnostics, or taxonomic evaluation should be submitted to Goal 3.
- Conduct outreach and education activities should be submitted to Goal 5.

Goal 6 Rationale

This goal provides funding for efforts to enhance APHIS scientific and operational plant pest mitigation and control activities. Upon detection and identification of a plant pest, early deployment of mitigation practices has the strongest likelihood to successfully manage threats to American agriculture. Increasing the availability of practical, readily deployable tools for exclusion and management, including assessing potential impacts of new invasive plant pests to the U.S. and developing appropriate response options, is essential for effective mitigation.

APPENDIX A – The National Clean Plant Network (NCPN)

This special focus area within PPA 7721 supports a network of clean plant centers and allied programs to provide high quality propagative plant material free of targeted plant pathogens that cause economic loss, to protect the environment and ensure the global competitiveness of specialty crop producers. Network clean plant centers conduct diagnostic and pathogen elimination services and establish foundation collections to provide pathogen-tested, clean plant materials to nurseries, growers, and to state certification programs.

The proposal process for NCPN uses a separate process from PPDMDPP. This process is detailed in the NCPN Request for Proposals that is published at the beginning of the Open Period.

NCPN Objectives

Objective 1: Network Program Operations: Optimize the production, maintenance, and distribution of clean plants.

Strategy: Operational support of clean plant centers involved in the diagnostics, production, maintenance, and distribution of clean, disease-tested propagative plant materials for specialty crops. The network currently serves seven specialty crop groups: berries, citrus, fruit trees, grapes, hops, roses, and sweetpotato. Activities supported under this strategy include:

- Diagnostic testing for target pathogens in new accessions, including introductions from domestic or imported sources;
- Pathogen elimination/therapeutics services to produce plant material free from targeted viruses or other graft-transmissible diseases;
- Maintenance of foundation collections of clean plant accessions; and
- Distribution of clean propagative material to industry.

Objective 2: Advancing Special Initiatives: Optimize the adaptation and implementation of novel technologies and new ideas while increasing the awareness of the importance, availability, and use of clean plants.

Strategy: Advancing special initiatives to optimize clean plant center operations and use of clean plant material. Activities under this strategy may include:

- Implementing new technologies and information sharing to improve clean plant center operations and protect foundation collections;
- Conducting education and outreach activities promoting the value and use of clean plants;
- Supporting improvements for quality management in center operations.

Objective 3: Governance and Networking: Optimize Network resources.

Strategy: Optimize network resources through governance and networking. Activities under this strategy include:

- Network coordination and governance among the network cooperators and research, extension, industry, and regulatory stakeholders to more effectively accomplish the NCPN mission. This activity supports information sharing among centers and promotes collaboration and engagement in critical discussions around

network/commodity topics; and
- Organizational advancement and strategic planning for the network and crop governing bodies, and clean plant centers.

NCPN Rationale
Viruses and other graft-transmissible diseases in vegetatively propagated crops can cause significant losses in yield and quality. These pathogens are often difficult to detect in propagation material and can be spread widely in nursery material. For growers, starting with healthy, disease-tested planting stock is key for preventing disease spread and crop damage.

The National Clean Plant Network was established to ensure that plant propagation material is clean and available, and to protect U.S. specialty crops from the spread of economically harmful plant diseases. The NCPN ensures the global competitiveness of U.S. specialty crop producers by creating high standards for clean plant programs. The purpose of the network is to provide diagnostic and pathogen elimination services to produce clean propagative plant material and to maintain blocks of pathogen-tested plant material in sites located throughout the United States.

APPENDIX B – Submitting a PPDMDPP Suggestion

Below are questions that will be asked as part of the suggestion submission process in ServiceNow. This information will assist submitters in preparing and submitting PPDMDPP suggestions. Submitters may find it helpful to prepare answers to these questions prior to beginning the suggestion submission process.

Information in this appendix is not exhaustive. Additional information for developing and submitting a suggestion is available in guidance documents and by participating in the Help Webinars that will be offered in June and July 2026. Refer to the PPDMDPP website for these guidance documents and webinar dates.

Fields to complete when submitting a suggestion:

1. Suggestion Title
2. Submitter contact information (name (first and last), address, city, state or territory, zip code, phone, email address, cooperator organization, and cooperator type)
    a. If the submitter is not a cooperator, but instead is submitting on behalf of a cooperator, select 'Submitted on behalf of another' and fill in the anticipated cooperator's contact information
3. Goal area under which the suggestions is being submitted
4. Goal area strategy to which this suggestion aligns (can select more than one)
5. Indicate whether the suggestion includes a Federal Program Pest, National Priority Pest, specialty crop pest, or other plant pest or disease
6. Indicate the specific specialty crop or commodity that will directly benefit from this suggestion
7. Select applicable PPA 7721 attributes
8. Indicate if the project will involve the development or extensive modification of a software application, database, or other technology component
    a. If yes, briefly describe the software application, database, or technology component
9. Select which state or territory the projected work will directly benefit
10. Budget – enter the total budgeted amount for the project
11. All goals—EXCEPT Goal 1S—Attach the completed budget template
    a. If a Goal 1S Suggestion – Upload the Goal 1 Survey or Diagnostic Laboratory template
12. Are there additional cooperators that will be receiving funding through cooperative agreements directly with USDA? Do not include contractual participants here
    a. If yes, provide the cooperator organization, cooperator state, cooperator budget amount, and cooperator level for each cooperator
13. Are there additional participants (i.e., collaborators) on this suggestion that are not receiving funds but will have an active role in achieving project success?
    a. If yes, provide the participant organization and state
14. Was this suggestion provided PPA 7721 funding in previous years?
    a. If yes, upload a narrative report to explain project progress to date
    b. List all previous years for which funding was provided

i. If funded by PPA 7721 since FY 22, select the suggestion number from the most recently funded prior fiscal year

15. Provide an abstract for the suggestion
16. Describe the purpose of the suggestion
17. Provide the technical approach for the suggestion
18. Provide specific information and/or examples of relevant past performance
19. Milestones – Outline the timeline of the project and indicate when each activity is expected to occur

APPENDIX C – Pest Program Priorities

PPQ cross functional working groups have identified program priorities that fit within the PPA 7721 framework. Submitters may consider how their suggestion meets a priority listed below. Alignment with PPQ priorities, including program priorities, is one consideration in the review process. However, alignment with a program priority does not guarantee funding, and the list below is not exhaustive. Additionally, PPA 7721 continues to support new and innovative ideas and approaches, including projects not found on this list.

Agricultural Detector Canine Utilization

- Develop canine training aids for use when the pest organism is not present in a given area for training/testing, including but not limited to target pest volatiles, polymer odor capture and release (POCR) films, etc.
- Increase capacity with successful canine projects/developing more detector canine teams; cross train existing canine teams for multiple pests/targets; and establish canine teams in states addressing pathways and pests of state and PPQ concern.
- Conduct third party testing and evaluation to accurately report on the effectiveness of PPQ's current canine training program and ensure that the agency's canine capabilities meet mission requirements. A third-party testing and evaluation event provides an independent, objective assessment that strengthens program credibility and supports continuous improvement.
- Provide detector dog training and certifications for existing domestic canine teams using protocols established by PPQ's National Detector Dog Training Center.

Asian Longhorn Beetle

- Develop and provide public outreach in program areas, targeted to the communities in the eradication and quarantine areas.
- Develop and provide public outreach in non-program areas, outside of regulated areas.
- Develop and integrate ALB risk model and spread tracking tool from U.S. Forest Service to the ALB program for risk analysis, survey progression planning, and enhancing ALB program management capabilities to more efficiently meet eradication priorities.

Box Tree Moth (BTM)

- Conduct BTM surveys in boxwood producing states.
- Develop, improve, or test best management practices and integrated pest management approaches to exclude, contain, and control BTM in boxwood production settings.
- Develop and provide educational materials to inform boxwood producers and distributors about best pest management practices to enhance nursery safeguarding.
- Develop and implement new control technologies, tools, and treatments to support management and mitigation of BTM. Establish and implement BTM compliance programs following a systems approach to enhance mitigation and prevent spread in nursery production.

Citrus Health Response

- Improve sampling strategies for asymptomatic pathogens of regulatory concern.
- Develop strategies to protect citrus from exposure to regulated pests.

- Develop strategies (e.g., improved labeling, outreach) to raise awareness and reduce the illegal movement of regulated citrus articles (e.g., citrus fruit, citrus nursery stock) via eCommerce, roadside vendors, and other avenues.
- Conduct citrus surveys for regulated pests of concern in non-commercial citrus producing areas where there has been a recent expansion in citrus production.
- Develop a decision support tool that characterizes the level of risk for Federally regulated citrus pests across the citrus producing areas of the United States by leveraging available or obtaining new information such as results of survey activities, distance from host material, etc.
- Determine the relative contribution of citrus greening-infected tree removal and Asian citrus psyllid control on the rate of disease spread.

Cucumber Green Mottle Mosaic Virus (CGMMV) and Watermelon Green Mottle Mosaic Virus (WGMMV)

- Conduct detection surveys.
- Conduct hold and abatement verification surveys for cucurbit production in infested fields.
- Develop seed treatments to eliminate/deactivate the viruses while retaining seed viability.

Emerald Ash Borer (EAB)

- Develop and refine methods for monitoring EAB biocontrol in field settings.
- Document the natural spread and establishment of EAB parasitoids beyond initial release sites in Michigan and the Northeast, to estimate the number of EAB-infested counties where parasitoids have successfully established.
- Develop field-level validation of growing degree day models to understand the phenology (timing of biological events) for both EAB and its parasitoids, with a focus on southern climates and high-altitude regions.

Fruit Fly

- Develop new male-only fruit fly strains to improve Sterile Insect Technique programs using CRISPR technology.
- Improve and/or develop traps and lures for attracting fruit flies of concern, specifically for *Anastrepha spp.*, female *Bactrocera* spp., and female *Ceratitis capitata*.
- Improve pre- and post-harvest treatments and control methods by exploring new chemistries, insecticide rotations, and phytosanitary treatments to facilitate the movement of host commodities from core areas of fruit fly quarantines while minimizing fruit damage.
- Develop methods and technologies to improve identification and mitigation of potential fruit fly pathways, improve accuracy of point of origin analyses and reduce identification time.
- Improve operational efficiencies through increased automation of fruit fly trapping, rearing, and release procedures.

Japanese Beetle (JB)

- Identify/develop novel methods for controlling JB, especially in areas at risk to rapidly transport outbreak populations of JB located near air cargo shipping hubs.
- Conduct projects to assist in establishing the JB biocontrol pathogen, *Ovavesicula popilliae*, to new sites and/or provide testing of samples to confirm the pathogen is present/established.
- Complete host specificity testing for *O. popilliae* on closely-related scarab beetle surrogates to ensure that the JB biocontrol pathogen will not negatively impact listed (threatened and endangered) species (i.e., Casey's June beetle (*Dinacoma caseyi*) and Mount Hermon June beetle (*Polyphylla barbata*).

Karnal Bunt

- Evaluate Karnal bunt-resistance in varieties of wheat, durum wheat, and triticale.
- Identify and validate methyl bromide alternatives.
- Develop biopesticide(s) for treatment of Karnal bunt.

Mollusk

- Standardize survey, exclusion, and monitoring tools for generic application to emerging snails/slugs of agricultural or environmental significance.
- Develop diagnostic tools/resolve taxonomic issues for problematic groups of snails/slugs such as *Monacha* spp.

National Seed Testing Onshore Program (NSTOP)/Seed Health

- Research efficacy of a seed treatment(s) to eliminate seed-transmitted or seed-borne pathogens, such as fungi, bacteria, viroids, and viruses.
- Quantify the impact of agronomic practices or seed processing methods toward eliminating or reducing the prevalence of pathogens (seed-borne or seed-transmitted) or other plant pests affecting seeds.

Nematodes, Golden (GN) and Pale Cyst (PCN)

- Conduct deregulation and enhanced regulatory activities of GN and PCN in infested fields.
- Conduct research for development of GN and PCN resistant potatoes, including novel genetic sources of plant resistance to potato cyst nematodes.
- Conduct GN and PCN surveys in multiple states.
- Identify and isolate the genetic defenses of plants known to be immune to potato cyst nematodes, for transfer into potato cultivars suitable for production in the Northwest United States.
- Elucidate pathotypes of potato cyst nematodes through evaluation of their genetic variability and differentiate populations of potato cyst nematodes based on differences in virulence/avirulence.

Old World Bollworm (OWB)

- Determine the impact of introgressed pesticide resistant genes on native *Helicoverpa* under current control measures.

- Develop methods to mitigate problems caused by introgressed pesticide resistant genes in native *Helicoverpa*.
- Develop a pheromone to attract OWB while repelling native non-targets and/or pollinator bycatch.
- Develop techniques to monitor *Helicoverpa* for evidence of additional regions of genomic introgression and/or adaptation related to survival in agricultural environments.
- Assess biocontrol methods for the reduction of *Helicoverpa* populations.

Pasture Mealybug (PMB)

- Develop and provide educational materials and information for detecting and reporting PMB, properly identifying the pest, and employing best practices to manage PMB.
- Determine biological parameters (e.g., climatic limitations, number of generations, phenology, complete host list, etc.) that are critical to the management of PMB.
- Develop and implement new control and/or mitigation technologies, tools, and treatments (e.g., biocontrol, insecticides, biopesticides, etc.) to manage and/or mitigate PMB in affected commodities.
- Develop, improve, and test grower best management practices and integrated pest management approaches to exclude, contain, and mitigate PMB in production settings.
- Conduct surveys for PMB outside known infested counties on economically important hosts, including pastures/hayfields, turf, ornamental grasses, sugarcane, rice, and grain sorghum, to determine its full distribution and inform regulatory response decisions.

Pest Identification

- Support Cooperative Agricultural Pest Survey (CAPS) and PPA 7721surveys by providing screening and identification services for Coleopteran, Hemipteran, Hymenopteran, Lepidopteran, Orthopteran, wood-boring, and other insect pests, plant pathogens, and nematodes.
- Develop screening job aids and taxonomic identification aids for National Priority Pest surveys.
- Build capacity for providing molecular preliminary screening services for CAPS and PPA 7721 survey pests.

Phytophthora ramorum

- Improve risk modeling of *P. ramorum* in extreme environmental conditions.
- Develop effective *P. ramorum* mitigations with low off-target effects, across environments.
- Determine the impacts of various *P. ramorum* genotypes.
- Identify impacts of *P. ramorum* genotypes on host susceptibility.

Plum Pox Virus (PPV)

- Conduct PPV detection surveys in previously infested and uninfested areas.

Pollinator Health

- Conduct *Tropilaelaps* research including but not limited to lifecycle, development, host-range and distribution, transmissions, management, and control. Research focused on non-Varroa transmission pathways for pathogens.
- Research of novel pests and pathogens impacting pollinator health.
- Yellow-legged hornet research including but not limited to lifecycle, foraging habits, and control.
- Develop and improve molecular tools and services for screening imported bees and other genetic material for pests, fungi, parasites, and viruses of bee.

Potato wart

- Conduct potato wart trace surveys as necessary.
- Identify and validate alternative treatments to methyl bromide.

Ralstonia

- Conduct *Ralstonia solanacearum* detection surveys.
- Develop improved rapid screening tools specific to *R. solanacearum* race 3 biovar 2.
- Develop improved sampling strategies for asymptomatic greenhouse plants affected by *R. solanacearum* race 3 biovar 2, in particular roses.
- Develop antibacterial or biological control treatments for *R. solanacearum* race 3 biovar 2.

Rice Hoja Blanca Virus (RHBV)

- Conduct RHBV surveys outside of its known range, to assess the extent of distribution.
- Conduct surveys on the RHBV vector, rice delphacid (*Tagosodes orizicolus),* to assess the extent of its distribution.
- Develop a field deployable detection tool for RHBV.
- Develop guidance for RHBV best management practices including pest scouting, recognition of symptoms, and control methods.

Shot Hole Borers (SHB)

- Conduct biological control research and host specificity testing of SHB parasitoids.

Spongy Moth and Flighted Spongy Moth Complex

- Build capacity to conduct preliminary molecular diagnostics for *Lymantria dispar dispar*, *L. d. asiatica*, *L. d. japonica*, and *L. umbrosa* (following approved diagnostic protocols).
- Improve, enhance, and provide outreach to the public and moving companies to reduce the spread of spongy moth on regulated articles, including outdoor household articles.
- Conduct spongy moth early detection and precision delimitation surveys outside of the quarantine area to bundle with Asian defoliator priority pest surveys in spongy moth high-risk pathways and areas at risk of establishment.
- Conduct Asian defoliator early detection and precision delimitation surveys in known high-risk pathways and areas at risk of establishment.
- Conduct eradication activities of confirmed spongy moth detections outside of the quarantine area and/or flighted spongy moth complex incursions detected anywhere domestically in the U.S.

- Strengthen flighted spongy moth complex maritime pathway protections by analyzing infestation risks occurring post-certification during transit through high-risk corridors using vessel movement data and port-call history.

Spotted Lanternfly (SLF) - For additional details, review APHIS' SLF Research Priorities List.

- Develop, refine, and analyze efficacy of sustainable control measures for SLF and/or Tree of Heaven, including but not limited to biological control agents, non-chemical treatments, and alternative management strategies for various environments.
- Improve detection and monitoring methods including but not limited to optimizing trap and lure/attraction technology, refining survey protocols, and exploring AI-powered, spectral, and molecular detection tools.
- Develop and improve predictive models and data-driven strategies to optimize survey efforts, improve resource allocation, enhance early detection surveillance, and identify high-risk pathways.
- Evaluate impacts of SLF on growth of grapes and other economically important plants and crops (e.g., hops, basil, citrus, avocado, almond, corn, soybean) and the quality of associated products.
- Investigate SLF behavior, movement, and population dynamics to improve forecasting and management.
- Support priority surveys and treatments targeting specialty crops, high-risk pathways, and areas of long-range dispersal of SLF.

Tomato Brown Rugose Fruit Virus (ToBRFV)

- Develop novel, validated cleaning and disinfection protocols for greenhouses, screenhouses, and hoop houses.
- Develop seed treatments to deactivate/eliminate the virus while retaining seed viability.

Two-Spot Cotton Leafhopper

- Conduct surveys outside of known range of *A. biguttula* on susceptible crops such as cotton, eggplant, okra, and sunflower to assess extent of its distribution.
- Identify the most effective control options and optimize mitigation strategies in nurseries and/or field crops.
- Support research on insect life cycle, development, and biological parameters that guide effective treatment timing.
- Develop an integrated pest management (IPM) strategy considering effective monitoring and detection, chemical treatments, biocontrol, mechanical and cultural practices.
- Support breeding programs and the development of tolerant or resistant germplasms and vegetable varietals (cotton, eggplant, okra, sunflower).

Witchweed

- Conduct research on witchweed (*Striga asiatica*) including, but not limited to, seedbank longevity, detection, and treatment.
- Identify and develop new methods that can potentially speed the eradication of witchweed from infested and quarantined fields.

APPENDIX D – Use of Funds

This guidance describes allowable and unallowable expenses that can be funded through the Plant Protection Act Section 7721 Plant Pest and Disease Management and Disaster Prevention Program (PPDMDPP).

Allowable Costs

Allowable costs must be reasonable, allocable, and necessary for project completion. When identifying the resources needed, the suggester must comply with Federal policy and should include the following details.

Personnel: The total compensation per individual employee must be reasonable for the work performed. Salary and wages for non-APHIS personnel who are essential to complete the activities described in the suggestion are allowable. Salary and wages for APHIS personnel are only allowable for Limited Appointment and Term employees.

Fringe Benefits: List the benefits rate. This percentage is determined by the cooperator. Benefits may include health and life insurance, unemployment insurance, worker's compensation, retirement, social security, pensions, etc.

Travel: Funds may be requested for field work, training, attendance of meetings and conferences, and other travel costs associated with the proposed work. Federal per diem rates should be used. Federal per diem rates can be found on GSA. Reference 2 CFR Part 200.474.

- Local travel: Identify any local travel to project work sites as outlined in proposed activities. Indicate, by position type, who will be traveling, total projected mileage, and rate per mile. Include number of days and per diem rates for extended or overnight travel. Indicate the number of trips per day/week/month, as appropriate.
- Out of State travel: Identify the number of travelers, meeting/conference/training title, and destination. Provide the cost of transportation, lodging, subsistence and related items, number of days, rate per day, as well as the total expense. Registration fees should be included in the "Other" category.
- Foreign travel: Identify any travel outside of Canada and the United States and its territories and possessions.
- Conference travel: Only conference travel in direct support of the objectives of the suggestion may be approved. Describe how conference travel directly contributes to the project objectives. Inclusion of funding for travel in an approved cooperative agreement does not supersede the need for any cooperator, including federal staff, to follow all applicable internal guidance and processes for requesting travel approval.

Per diem for overnight travel is allowable up to the approved federal per diem rate for that location. Reimbursement will not be made for any incurred per diem expenses above the federal per diem rate.

Equipment: The federal definition of equipment is tangible personal property (including information technology systems) having a useful life of more than one (1) year and a unit value of $10,000 or more. Provide a description of the equipment to be purchased or leased, including unit cost, and total purchase or leasing costs. The purpose of each equipment item

and how it will benefit or be used for the project must be provided in the suggestion.

- APHIS may request the return of equipment over $10,000 at the completion of the cooperative agreement.
- Maintenance contracts and reasonable repair expenses for equipment specific to the cooperative agreement may be covered.

Supplies: Provide a general description of the supplies required to perform the proposed activities. Provide an itemized breakdown of the types of supplies and total estimated cost per type.

Contractual: Applicants must describe what the subaward/contract will accomplish. Applicants must include the total contract cost, by contractor or subrecipient, in the project budget. Provide a separate budget with cost breakdowns for each contractor or subrecipient, for all applicable cost categories and totals.

Contractual expenses do not include those expenses typically paid with an invoice. Expenses paid by invoice should be reported in the equipment and supplies section.

Other: Identify and justify any direct costs which were not itemized elsewhere, such as conference registration fees, communications, printing, publication charges, computer time or usage, laboratory testing, etc.

> **Tuition and Student Stipends:** Applicants can include tuition and student stipends proportionate to the time spent on the project. For example, a student spending 20% of their time on the project should only receive 20% of the tuition and stipend through this funding.

Information Technology: Suggestions that include a cumulative request for Information Technology of $25,000 or more require additional USDA IT review. Information Technology is any equipment, interconnected system(s), or subsystem(s) of equipment that is used in the automatic acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of data or information by an Agency. The term "information technology" includes, but is not limited to, computers, network and ancillary equipment, software, firmware, and similar procedures, services (including support services), and related resources. Refer to 2 CFR Part 200.1 for additional information.

Outreach Materials: Program funds may be used for outreach materials as needed, to complete approved projects that support the program priorities. This may include developing, distributing, and delivering educational materials or content such as training curricula, videos, websites, pamphlets, fliers, fact sheets, publications, and other print and media. A suggester who receives funding for a project that includes the production, purchase, or distribution of materials is not obligated to put the USDA logo on the materials they produce or purchase under a cooperative agreement. However, APHIS has the option of reviewing all materials to be produced and may request acknowledgement of funding from the USDA APHIS PPA 7721 program if we determine it is in our collective best interest. Refer to the General Terms and Conditions for APHIS Cooperative Agreements Grants, Publications and

Audiovisuals article for additional information.

Unallowable Costs

The items below will not be funded through PPA 7721 Cooperative Agreements.

- Costs incurred prior to the effective date of the agreement (unless a pre-award has been signed);
- Purchase of vehicles;
- Construction of a new building or facility, or the acquisition or expansion of an existing building or facility, including site grading, improvement, and architect fees;
- Land acquisition;
- Thank-you materials, incentives to encourage participation, or similar costs unallowable by OMB cost principles;
- Bonuses or commissions;
- Fundraising;
- Meeting, conference, symposia, or workshop honoraria which is payment to individuals or guests other than for documented professional services; and
- Compensation of Federal Employees. Salary payments, consulting fees, or other remuneration of full-time Federal employees are unallowable costs. Temporary duty assignment (TDY) and limited appointment (LA) costs are allowable.

Indirect Costs

PPA 7721 cooperative agreements are limited to an eligible applicant's assessment of indirect costs to no more than 15 percent of the project's total costs or the application of their negotiated indirect cost rate agreement (NICRA), whichever is less. This limit also applies to sub-applicants (subawards). If you are submitting a proposal for PPA 7721 funding and requesting indirect costs, please calculate your indirect costs based on the following information.

Indirect cost equals the total federal award (i.e., direct costs + indirect costs), multiplied by 15%. The simplest way to calculate the indirect costs is to multiply the total direct costs (i.e., the sum of all personnel, fringe benefits, travel, equipment, supplies, and miscellaneous costs) by 17.647%.

Example:

Direct costs for a project = $35,000
$35,000 x .17647 = $6,176

Direct cost	$35,000
Indirect cost	+ $ 6,176
Total federal award	= $41,176

APPENDIX E – Specific Guidance for Goal 1S: Survey

Survey Names for National Priority Surveys:

Asian Defoliator Survey
Berry Pest Survey
Citrus Commodity Survey
Corn Commodity Survey
Cotton Commodity Survey
Cyst Nematode Survey
Exotic Buprestid (Cerceris) Survey
Exotic Wood Borer/Bark Beetle Survey
Field Crops Pest Survey
Forest Pest Survey
Fruit Crops Pest Survey
Grape Commodity Survey
Greenhouse Crops Pest Survey
Legume Pest Survey
Mollusk Survey
Nursery and Ornamental Survey
Nut Pest Survey
Oak Commodity Survey
Orchard Commodity Survey
Other Specialty Crop Survey
Palm Survey
Pathways Survey-Multiple Agricultural Systems
Pathway Survey-Non-Agricultural Systems
Pine Commodity Survey
Rice Pest Survey
Small Fruit Pest Survey
Small Grains Commodity Survey
Solanaceous Commodity Survey
Soybean Commodity Survey
Stone Fruit Commodity Survey
Tree Nursery Pest Survey
Tropical Hosts Pest Survey
Vegetable Crops Pest Survey

Recognized Federal Programs or Program Pests

Asian citrus psyllid
Asian longhorned beetle
Biological Control
Black stem rust
Boll weevil (*Anthonomas grandis*)
Box tree moth
Cactus moth (South American)
Canine/Detector dog
Chrysanthemum white rust
Citrus black spot
Citrus canker
Citrus leprosis
Citrus yellow vein clearing (CYVCV)
Coconut rhinoceros beetle
Cogongrass
Cucumber green mottle mosaic (CGMMV)
Emerald ash borer
European cherry fruit fly
European grapevine moth
European larch canker
Flighted spongy moth
Fruit flies (Tephritidae)
Giant African snail
Glassy-winged sharpshooter
Golden or pale cyst nematode
Grasshopper or Mormon cricket
Huanglongbing/Citrus greening
Imported fire ant
Japanese beetle
Karnal bunt
Khapra beetle
Light brown apple moth
Mollusks
Navel orangeworm
Old World bollworm
Phytophthora ramorum
Pink bollworm
Plum pox (PPV)
Pollinator Health/Bee Pests
Potato wart
Ralstonia solanacearum Race 3 biovar 2
Roseau cane scale
Shot hole borers
Spongy moth
Spotted lanternfly
Sweet orange scab
Thousand cankers disease
Tomato brown rugose fruit (ToBRFV)
Witchweed

Survey Supplies
Survey supplies (traps, lures, and accessories) for PPA 7721 funded suggestions targeting National Priority Pests will be provided by PPQ through separate PPA 7721 funding; individual suggestions should not include these items in the submitted budget. The timeframe for ordering these supplies will be communicated at a later date. Questions should be directed to the Survey Supply Procurement Program (SSPP) National Policy Manager. For non-priority pests, states should request funding for traps, lures, or survey kits in their suggestion and final work plans.

APPENDIX F – Specific Guidance for Goal 2: Domestic Inspection

Goal 2 targets domestic inspection activities at vulnerable points in the safeguarding continuum resulting from movement of products and commodities potentially carrying pests of regulatory significance. This goal does not cover survey work. Survey work is covered in Goal 1S.

There are specific requirements for canine teams utilized for domestic inspection activities:

Utilization and Training:
Detector canines must at minimum follow the industry standard of two hours of utilization per workday and eight hours of detection training every two weeks. Metrics on canine utilization including hours of use and number of inspections must be included in the suggestion and narrative report (if applicable).

Requirements:
The USDA APHIS cooperator will implement a multipart action plan consisting of the following elements:

- Take possession of the canines from the USDA/National Detector Dog Training Center and maintain the canines, if applicable.
- Establish and maintain kennels for program canines.
- Care of the canines including grooming, exercising, bathing, and healthcare.
- Provide appropriate training for the canine, canine handler, and personnel for all activities associated with the detector canine program. Canines will be certified annually for pest detection accuracy, and the certification will be documented for each canine in the program.
- On a monthly basis, determine accuracy of each canine by reviewing data entered by handlers.
- Work with each canine team to achieve a minimum of 80% accuracy in alerting.
- Develop, collect, and maintain program data and information in support of program activities and provide to USDA APHIS monthly. The information collected will at a minimum include:
    - **General Information:** Canine name, microchip number, canine date of birth, canine handler, duty station, agency, and kennel address.
    - **Canine Utilization:** Date of inspection, location of inspection, application, search time, total responses, positive responses, false positives, if applicable U.S. Parcel Service (USPS) class of mail, labeled per USPS regulation, quarantine pest genus and species, regulated pest status, package origin, and follow up actions.
    - **Canine Training:** Date, location, application, search time, responses, positive responses, false responses, and number of targets planted.
    - **Canine Health:** Date monthly preventatives given, feeding amount, number of vet visits, date of visit, reason for visit, duty status of canine, weekly canine weight, and date kennel sanitized.
    - **Exercise Log:** Date, exercise activity, and duration.
    - **Daily Health Check:** Canine name, handler name, Monday date, eyes, ears, nose, mouth teeth, body extremities, coat, genitalia, stool, weight, feed amount, attitude, and temperature.

- **Monthly Kennel Inspection:** Grounds, cleanliness of kennel, structural soundness, food preparation area, name of kennel, handler, and date of inspection.

The cooperator must also provide USDA APHIS data through semiannual and annual reports.

Health and Wellness Standards:
Cooperator will acknowledge by signature on the agreement indicating they have local policy in place that covers the 18 subject areas as identified by GAO Statement of Facts: Review of Federal Working Dogs (104489) listed below.

Issue	Examples of subjects addressed
Abuse and neglect	Processes describing how to prevent, identify, report, investigate, and sanction suspected abuse and neglect of working dogs.
Emergency care	Processes describing how working dogs are to receive emergency medical care, either by a veterinarian or a trained handler.
Euthanasia	Processes describing when euthanasia is permissible, decision-making processes, and specifying those officials with decision-making authority.
Exercise	Processes describing sufficient exercise for working dogs appropriate to weight and breed, or specific regimens (possibly in consultation with a veterinarian).
Food and water	Processes describing how working dogs are to be fed and watered, including timing of feeding, type and amount of food, specific regimens (possibly developed in consultation with a veterinarian).
Grooming	Processes describing the handler's responsibilities or practices for grooming the working dog.
Health and welfare training	Processes describing the training related to the health and welfare of the dog that handlers should receive.
Housing	Processes describing how the working dog is to be housed (either at a handler's home or a kennel), standards for housing, and contingencies when usual housing is unavailable.
Medical needs after retirement	Processes describing who has responsibility for addressing the medical needs of working dogs after they retire.
Medical records	Processes describing the requirements and practices for keeping and storing working dog medical records.
Medication	Processes describing how to provide medication for working dogs, including requirements for frequency or types of medication and instructions for administering medication and safe storage of medication.
Procurement	Processes describing the requirements an agency has for procuring its working dogs, including sourcing, providers, preferred breeds, selection criteria, health and temperament testing, and identification of responsible officials.

Issue	Examples of subjects addressed
Rest and length of on-duty time	Processes describing the requirements an agency has for giving the working dog rest and off duty time, including length of shifts, timing of breaks, and rest requirements.
Retirement	Processes describing the criteria for retiring a working dog and systems for determining who may adopt a retired working dog.
Routine veterinary care	Processes describing how frequently to take working dogs in for routine veterinary care, issues addressed at periodic visits, and identification of officials responsible for ensuring routine care takes place.
Routine welfare evaluations	Processes describing the checks for health and wellbeing carried out by a handler daily or at regular intervals and specifics of conducting a check.
Sanitation	Processes describing the sanitation requirements for housing, vehicles, food, or water.
Transportation	Processes describing the characteristics of vehicles used to transport canines, including provisions for transporting dogs in heat or cold, frequency of checks on dogs in vehicles, and practices for air travel.

APPENDIX G – Specific Guidance for Goal 3: Increase Identification Capacity and Strengthen Pest Detection Technologies and Resources

Appendix G includes pests where PPQ has determined development is needed for survey methods, molecular diagnostics, or general identification methods. Goal 3 suggestions can address other pests, including those found on the National Priority Pest List or not currently on any list. However, suggestions addressing taxa that are not well-known pests should clearly explain why the pests are important to PPQ, and why the suggestion should be funded.

Develop/optimize attractants and traps for the following survey targets, such as:

- Curculionidae*: Acanthotomicus suncei* – lure development
- Scutelleridae: *Eurygaster integriceps* – survey method improvement
- Crambidae: *Maruca vitrata* – lure development
- Pseudococcidae: *Rastrococcus iceryoides* – trap and lure development
- Pseudococcidae: *Rastrococcus invadens* – trap and lure development
- Delphacidae: *Sogatella furcifera* – trap and lure development
- Tephritidae: *Anastrepha ludens* – attractants development
- Cicadellidae: *Amrasca biguttula* – attractants development, survey method improvement
- Lepidoptera (any target pest) – attractants and traps that eliminate or reduce bee bycatch in bucket traps

Plant pathogen targets with diagnostic needs include, but is not limited to:

- Anguinidae (Nematoda): *Ditylenchus gigas* – molecular diagnostic methods
- Ascomycota (Fungi): *Raffaelea quercivora* – molecular diagnostic methods
- Basidiomycota (Fungi): *Cronartium flaccidum* – molecular diagnostic methods
- Oomycota – *Peronosclerospora maydis* - molecular diagnostic methods
- *Candidatus* Phytoplasma species – increased capacity to identify phytoplasmas to species level; need more information about endemic phytoplasmas and the hosts they infect; improved molecular diagnostic methods to differentiate them from exotic phytoplasmas
- *Fijivirus Fiji disease virus* (Virus) – molecular diagnostic methods
- Seed-transmitted and seed-borne viruses – improved seed homogenization methods for high-throughput processing of emerging viruses on economically important hosts (e.g. vegetables and row crops)

Insect targets with diagnostic needs include, but is not limited to:

- Crambidae: *Ostrinia furnacalis* – identification methods
- Elachistidae: *Stenoma catenifer* – taxonomic research to resolve species complex
- Laelapidae: *Tropilaelaps* spp. – identification methods
- Pseudococcidae: *Rastrococcus iceryoides* – identification methods
- Pseudococcidae: *Rastrococcus invadens* – identification methods
- Tortricidae: *Crocidosema aporema* – taxonomic research to resolve species complex
- Tortricidae: *Gymnandrosoma aurantianum* – identification methods