CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE Office of Environmental Farming and Innovation

PROACTIVE INTEGRATED PEST MANAGEMENT SOLUTIONS

REQUEST FOR PROPOSALS (RFP)

Release date: July 1, 2024

Grant Proposals Due Date: August 30, 2024

Late grant proposals will not be accepted

https://www.cdfa.ca.gov/oefi/opca/proactive-ipm.html

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About the program

The California Department of Food and Agriculture's (CDFA) Office of Pesticide Consultation and Analysis (OPCA) is now accepting applications for the Proactive Integrated Pest Management (IPM) Solutions grant program. The purpose of this Request for Proposals (RFP) is to develop IPM program(s) or pieces of IPM program(s) that can be rapidly implemented if a new invasive pest becomes established in California.

A total of \$1.1 million for two awards is available in this grant cycle. Funds for the current RFP come from a General Fund appropriation.

Background

California's diverse agriculture, producing over 400 commodities, faces a constant threat from new invasive pests. While exclusion or eradication of new invasive pests are the preferred first lines of defense, some pests become established and require long-term management strategies. These new pests pose a significant challenge for growers, often leading to increased reliance on insecticides. Increased use of broad-spectrum insecticides can disrupt integrated pest management systems, creating secondary pest outbreaks, and potentially decreasing profits. At the same time, growers are under pressure from ever-tightening regulations and need to adopt new more sustainable pest management methods to remain competitive.

CDFA safeguards the state's agricultural industry by preventing the establishment of invasive pests and mitigating their impact. Global travel and inadvertent introductions often bring these pests into urban areas first. To prevent their spread to agricultural regions, CDFA proactively controls pest outbreaks in urban environments. However, due to growing concerns in affected communities about the health and environmental impacts of insecticide use, exploring alternative solutions is essential.

CDFA uses pest management efforts based on IPM, usually including biological control. Biological control is a valuable tool but can be a lengthy process. Discovering, evaluating, permitting, and releasing biological control agents can take many years. This lag allows invasive pest populations to expand well beyond the initial infestation. CDFA's Proactive IPM Solutions program aims to anticipate which invasive pests are likely to arrive in the state and develop effective long-term IPM strategies for these pests beforehand and prevent the spread of locally established invasive pests to different regions within the state. These strategies might involve testing low-risk chemicals, biopesticides, cultural control, life history analysis to determine vulnerable developmental stages, monitoring techniques for tracking pest populations, and testing of natural enemies for rapid deployment upon pest establishment. Advanced knowledge of such pest management strategies allows for a swifter response, minimizing disruption to California's growers and urban communities.

Research Priorities

This program develops and tests IPM strategies to control one of the target pests identified by CDFA (Table 1). The IPM program could be quickly implemented once the invasive pest becomes established in California. It is a priority to first utilize and adapt existing knowledge and technology that may exist outside of California. Additionally, the focus is on targets suitable for long-term IPM control. Pests that are typically successfully eradicated, such as certain fruit flies, will not be a high priority.

A proposal should provide straightforward descriptions of the proposed IPM project or strategy, including a detailed scope of work, commitments from team members, and a budget justification (details provided in the **Grant Proposal Requirements** section). CDFA encourages but does not require matching funds from industry partners.

Proposals must identify and justify a high priority target pest from the CDFA target pest list (Table 1). Project proposals must include details and reasoning on what IPM techniques for that pest (biological/cultural control, monitoring, etc.) will be investigated. Projects may include any number of IPM components, including a single aspect of an IPM system. Projects with biological control components should detail a plan to collect data necessary to obtain a release permit and describe the process to obtain it. The focus of the research should be on long-term control of the invasive pest that minimizes disruption of urban communities and existing agricultural IPM systems. For example, it would be preferable to prioritize testing selective chemistries, biological chemistries, cultural control, and biological control, over broad-spectrum insecticides. Proposals should consider availability of products not registered in California and potential remedies. The proposal must focus on management strategies for pests on the target list (Table 1).

Table 1: CDFA Target Pest List

| Scientific name | Common name |
|--------------------------|---------------------------|
| Acalitus phloeocoptes | |
| Acleris comariana | Strawberry tortrix |
| Acutaspis albopicta | Albopicta scale |
| Agonoscena pistaciae | Pistachio psyllid |
| Agrilus planipennis | Emerald ash borer |
| Aleurocanthus woglumi | Citrus blackfly |
| Anoplophora chinensis | Citrus longhorned beetle |
| Anoplophora glabripennis | Asian longhorned beetle |
| Anthonomus rubi | Strawberry blossom weevil |
| Anthonomus signatus | Strawberry bud weevil |
| Aonidiella orientalis | Oriental scale |
| Argyrotaenia ljungiana | Grape tortrix moth |
| Capnodis carbonaria | • |

| Scientific name | Common name |
|----------------------------|-------------------------------|
| Cerambyx dux | |
| Clavaspis perseae | Armored scale |
| Conotrachelus nenuphar | Plum curculio |
| Contarinia nasturtii | Swede midge |
| Cryptoblabes gnidiella | Honeydew moth |
| Curculio caryae | Pecan weevil |
| Cydalima perspectalis | Box tree moth |
| Davidsonaspis aguacatae | Armored scale |
| Deudorix livia | Pomegranate butterfly |
| Erschoviella musculana | |
| Eupoecilia ambiguella | European grape berry moth |
| Eurytoma amygdali | |
| Harrisina americana | Grapeleaf skeletonizer |
| Heilipus spp. | Avocado seed weevils |
| Helicoverpa armigera | Old World bollworm |
| Lobesia botrana | European grapevine moth |
| Lycorma delicatula | Spotted lanternfly |
| Lymantria dispar | Gypsy moth |
| Monosteira unicostata | |
| Oebalus pugnax | Rice stink bug |
| Oncometopia nigricans | Florida sharpshooter |
| Oncometopia orbona | Broad headed sharpshooter |
| Oryctes rhinoceros | Coconut rhinoceros beetle |
| Osphranteria coerulescens | |
| Ostrinia nubilalis | European corn borer |
| Paralobesia viteana | Grape berry moth |
| Parlatoria blanchardi | Parlatoria date scale |
| Parlatoria ziziphi | Black citrus scale |
| Paysandisia archon | South American palm borer |
| Phytomyza gymnostoma | Allium leafminer |
| Pinnaspis strachani | Armored scale |
| Prays oleae | Olive moth |
| Raffaelea lauricola | Laurel wilt |
| Resseliella citrifrugis | Gall midge |
| Rhynchophorus palmarum | South American Palm Weevil |
| Schizotetranychus smirnovi | |
| Scolytus amygdali | |
| Stenoma catenifer | Avocado seed moth |
| Thaumatotibia leucotreta | False codling moth |
| Toxoptera citricida | Brown citrus aphid |
| Trioza spp. | Avocado leaf-galling psyllids |
| Tuta absoluta | Tomato leafminer |

| Scientific name | Common name |
|-------------------------------------|-------------------------|
| Xyleborus glabratus | Red bay ambrosia beetle |
| Xylella fastidiosa subspecies pauca | Pierce's disease |
| Zeuzera pyrina | Leopard moth |

CDFA will use the following priorities rubric (Table 2) to evaluate proposals for each target pest. Applicants may only propose projects related to the pest on the target list. Note: it is not a requirement for target pests to fall into the highest priority category. This rubric is meant to serve as a guide to researchers when selecting target pests and discussing their importance to California and suitability for this program.

Table 2: Rubric to Guide Target Pest Selection

| | HIGHEST PRIORITY | HIGH PRIORITY | MEDIUM- PRIORITY |
|---|---|---|---|
| LOCATION OF PEST | In the USA or territory | In a country with similar climate and trade routes to CA | In a country with similar climate or trade routes to CA |
| AVAILABILITY OF IPM CONTROL TOOLS (BAITS, LURE, PHEROMONES, THRESHOLDS, SOFTER CHEMISTRIES, ETC.) | Three or more | One or two | None known |
| STATUS OF IPM PROGRAM | Developed and used in other areas | Developed but not widely used | No IPM systems known or used |
| | Known and cultured | Known | Not known |
| STATUS OF NATURAL ENEMIES | | | |
| STATUS OF BIOLOGICAL INSECTICIDES OR SELECTIVE CHEMISTRIES | Known, tested on other insects, and effective | Known but not tested | Not known |
| IMPORTANCE OF AFFECTED CROP(S) | Multiple crops of major economic or cultural significance in CA | At least one crop of major economic or cultural significance in CA | At least one crop with some economic or cultural significance in CA |

| STATUS OF BIOLOGICAL CONTROL PROGRAM | Other states and/or the federal government has started a program | Other countries' governments have started a program | There is no known BC program for the pest |
|---|---|---|---|
| INVASIVE POTENTIAL | Pest is highly invasive in environments similar to, or in areas growing similar crops to CA | Pest is highly invasive in many parts of the world | Pest is invasive in some parts of the world |
| COMMODITY INVOLVEMENT | Commodity is willing to contribute financially to the project | Commodity is a collaborator | Commodity has not yet been brought into the project |

Funding and Grant Term

CDFA will select proposals based on the criteria presented below in the **Evaluation Criteria** section. A timeline is available <u>here</u>. Projects should start on January 1, 2025, and end on or before February 28, 2028. Maximum funding is \$550,000. Applicants may submit for the full amount or anything less. CDFA encourages but does not require matching funds.

Funding must supplement, not supplant, existing activities/programs. Supplement is defined as adding to existing funds to enhance or expand existing activities. Supplant is defined as replacing existing funds for an activity because grant funds are to fund the same activity.

CDFA reserves the right to offer an award different than the amount requested.

Project Eligibility

Public or private colleges and universities, local, state, and federal government entities including California Native American Tribes, and non-profit organizations are eligible to apply.

The project lead(s) and their institutions must be based in California but can work with out-of-state collaborators.

The project lead(s) and/or collaborators must have access to a quarantine facility if the project involves biological control or testing products on insects that are not yet established in California.

Researchers must obtain all necessary federal and state permits for work with any non-exempt species.

How to Submit a Grant Proposal

Grant proposals must be submitted via the <u>AmpliFund application portal</u> no later than the grant due date at 5 pm. Applicants must first create an account through AmpliFund, login, and fill out all required sections of the online application form. Applicants must upload and submit completed budget templates and appendices (e.g., CVs, letters of support) through the portal as well. The application link and budget form are both available on the program <u>webpage</u>.

CDFA does not accept late submissions.

CDFA cannot assist in the preparation of grant proposals; however, applicants may submit general questions to cdfa.opca@cdfa.ca.gov. In order to ensure that all potential applicants benefit from all submitted questions and answers, CDFA will post all questions and responses on the Proactive IPM Solutions webpage.

Proposal Review and Evaluation

A committee consisting of scientists and specialists at CDFA and other State agencies, California universities, non-governmental environmental organizations, and/or grower representatives will review the merits of the proposals and provide feedback. Any member of the committee who is connected to a submitted project will recuse themselves from the process. The evaluation criteria are found at the end of this document. CDFA will make final funding decisions.

Award Notification

CDFA will notify all applicants regarding the status of their proposal and provide comments. Successful applicants will complete a grant agreement following the award announcement. Grant recipients may not begin project activities until both parties have executed the grant agreement. This program requires recipients to submit annual reports and a final report to demonstrate project accomplishments, address problems and delays, and describe activities planned during the next reporting period. This program requires quarterly invoices and may consider more frequent invoices on a case-by-case basis.

Disqualifications

The following will result in the disqualification of a grant proposal:

- Incomplete grant proposals with one or more unanswered questions and/or missing, blank, unreadable, corrupt, or otherwise unusable attachments
- Applicant is not an eligible entity
- Proposals that include activities outside the allowable grant duration
- Proposals requesting funds outside of the grant term
- Proposals requesting more than the maximum or less than the minimum award amount
- Proposals with non-allowable costs or activities necessary to complete the project objectives
- Proposals with indirect costs that exceed the limit set forth in this document
- Proposals submitted outside of the AmpliFund system

Appeal

Any disqualification taken by the Office of Environmental Farming and Innovation (OEFI) during the administrative review for the preceding reasons may be appealed to CDFA's Office of Hearings and Appeals Office within 10 business days of receiving a notice of disqualification from CDFA. The appeal must be in writing and signed by the responsible party name on the grant application or his/her authorized agent. It must state the grounds for the appeal and include any supporting documents and a copy of the OEFI decision being challenged. The submissions must be sent to the California Department of Food and Agriculture, Office of Hearings and Appeals, 1220 N Street, Sacramento, CA 95814 or emailed to CDFA.LegalOffice@cdfa.ca.gov. If submissions are not received within the time frame provided above, the appeal will be denied.

Grant Proposal Requirements

Allowable and non-allowable costs

A cost is allowable if it directly relates to the project and is incurred solely to advance work under the Grant Agreement. Allowable costs include, but are not limited to, salaries and wages, release time (California State University researchers), indirect costs, fringe benefits, consultant services, travel, equipment (lease/rental), subcontractors and materials, data processing, land rentals, training, and communications. Non-allowable expenses include, but are not limited to, costs for hospitality suites, alcoholic beverages, costs of entertainment, and costs for organized fund raising including financial campaigns and solicitation of gifts. CDFA does not reimburse non-allowable costs.

More information about allowable and unable items of cost can be found here: https://www.cdfa.ca.gov/Regulations/General/FinalSelectedItemsofCost Guidance.pdf

Executive Order N-6-22 – Russia Sanctions

On March 4, 2022, Governor Gavin Newsom issued Executive Order N-6-22 regarding Economic Sanctions against Russia and Russian entities and individuals. "Economic Sanctions" refers to sanctions imposed by the U.S. government in response to Russia's actions in Ukraine, as well as any sanctions imposed under state law. By submitting a proposal or application, Applicant represents that it is not a target of Economic Sanctions. Should the State determine Applicant is a target of Economic Sanctions or is conducting prohibited transactions with sanctioned individuals or entities, that shall be grounds for rejection of the Applicant's proposal/application any time prior to agreement execution, or, if determined after agreement execution, shall be grounds for termination by the State.

Indirect costs

Indirect costs are facilities and administrative costs that cannot easily be tied directly to the activities of the grant. Examples of common indirect costs include administrative/clerical services, rent, utilities, internet and telephone service, maintenance, and general office supplies. Indirect costs should be calculated as a percentage of the modified total direct costs (MTDC). MTDC is calculated as all total direct costs minus excluded costs such as tuition and equipment in excess of \$5,000. Subawards are also subject to the 10% indirect cost cap and may not be included in the MTDC calculation for the full project budget. University of California, California State University, and other entities with negotiated rates, should use those. Entities without negotiated rates will be capped at 10%. See OPCA's Indirect Cost Policy document for more information: https://www.cdfa.ca.gov/oefi/opca/docs/opca_indirect_costs_policies.pdf

Full Proposal Outline

A. Applicant Information

- 1. Project Leader(s). Specify each project leader's name, title, affiliation, mailing address, telephone number, email address, and project role. A curriculum vitae, a list of recent publications, and a description of current research/outreach activities must be included for each project leader under section Appendices.
- 2. Research Collaborator(s). Specify each collaborator's name, title, affiliation, mailing address, telephone number, and email address. Commodity boards/growers/grower groups providing funding or in-kind support should be included here. A letter from each collaborator must be included under Section D: Appendices describing their role in the project, estimated time commitment, and a statement of agreement to participate in the project. Do not include a collaborator's name on the cover page unless a support letter is included with the proposal at the time of submission.

3. Supporter(s). Specify organizations and/or individuals that support the ideas and objectives of the project but are not providing funding. A letter from each supporter must be included under Section D: Appendices explaining the rationale for their support. Do not include a supporter's name on the cover page unless the support letter is included with the proposal at the time of submission.

B. Project Information

- **1. Project Title.** Provide a unique and concise title for the proposed project that adequately describes the project.
- **2. Project Summary** (not to exceed 1,000 words). Concisely describe the project, including project objectives. Concisely define the problem as it relates to the chosen priority target pest, state project objectives, describe the approach to be used, and identify criteria that will be used to evaluate the project's success.

3. Introduction and Justification.

- 3.1 Specify reasons for selecting the target pest including how it might impact California.
- 3.2 Explain how the project will contribute to the goals of the Proactive IPM Solutions.
- 3.3 Describe relevant research about the target pest and/or system.
- 3.4 If biological control is a component, explain how and where the proposed testing will be conducted.
- **4. Work Plan and Methods.** Provide a work plan in which the project is divided into tasks and sub-tasks. Identify who is responsible for completing each task.
- **5. Project Management and Evaluation.** Provide a timeline. Describe how data will be collected and shared with the CDFA. Detail what measures will be used to evaluate the project and how they will be assessed and reported to CDFA.

C. Budget

Complete the budget table and upload it to the online application form. An Excel version of budget table is available on the Proactive IPM Solutions webpage.

If there is a subaward, include a budget table for the subaward as well. Costs that are not personnel, operating expenses, or subawards should be listed individually under other direct costs. These might include, but are not limited to, greenhouse rentals, quarantine costs, and/or publishing costs.

Provide a detailed narrative of your proposed budget broken into years 1, 2, and 3. As described above, funding for subsequent years will not be released until the year 1 benchmark has been met. The budget should contain a narrative in paragraph format for each budget category to determine that the costs are reasonable and allowable. Allowable and non-allowable costs are defined in the Allowable and non-allowable costs section above. Assume a start date of 1/1/2025 and explain all of the following:

- **1. Personnel.** Provide classification level, percentage of time based on full time salary/wages, benefits, employment period, and name of individual to be hired, if available.
- **2. Operating Expenses**. Itemize and justify all of the following operating expenses:
- **A. Supplies.** Itemize and justify all supplies to be purchased. Supplies include all consumable materials with an acquisition cost less than \$5,000 per unit. Supplies must be used exclusively for the project. For each grant year, provide an itemized list of projected supply expenditures, the dollar amount for each item, and describe how it will support the purpose and goal of the project.
- **B. Travel.** For each grant year, itemize and indicate the following information, if applicable, for each trip: (a) destination; (b) purpose of trip; (c) number of trips; (d) identify travelers; (e) number of days traveling; (f) estimated airfare costs; (g) estimated ground transportation costs; (h) estimated lodging and meals costs; and (i) estimated mileage rate. The maximum travel rates allowable are the rates in effect at the time of travel as established by the <u>California Department of Human Resources (CalHR)</u>.

Exceptions: For federal entities, if domestic travel is a reimbursable expense, receipts must be maintained to support the claimed expenditures. The maximum rates allowable are those established by the Federal Travel Regulation, issued by <u>General Services</u>

<u>Administration (GSA)</u>, including the maximum per diem and subsistence rates prescribed in those regulations. Colleges and Universities must comply with their institution's travel policies.

- **C. Other Direct Costs.** Identify and explain any additional expenses not covered by the above categories. Other expenses include, but are not limited to, conferences or meetings, communications, speaker/trainer fees, publication costs, data collection, and other budgeted costs associated with the project.
- **D. Indirect costs.** Indirect costs are facilities and administrative costs that cannot easily be tied directly to the activities of the grant. Examples of common indirect costs include administrative/clerical services, rent, utilities, internet and telephone service, maintenance, and general office supplies. See OPCA's Indirect Cost Policy document for more information: https://www.cdfa.ca.gov/oefi/opca/docs/opca_indirect_costs_policies.pdf
- **3. Other Funding Sources.** Indicate if any Federal, State or other grant program(s) are providing funding for this project. Identify the federal, state agency or organization administering the program(s), and the amount(s) of funds requested/awarded.

D. Appendices (uploaded as a single PDF file)

1. **Project Leaders.** Include a two-page resume and list of recent publications. Also include a description of current research/outreach activities; provide information on all current,

- planned, pending, and recent projects, whether or not there is a specific time commitment and how it will impact the proposed project.
- **2. Research Collaborators.** Include a letter of support from each research collaborator, including a description of their role in the project and statement of agreement to participate in the project.
- **3. Supporters.** Include a letter from each supporter explaining the rationale for their support. Scanned copies of letters are acceptable if attached to the proposal at submission time.
- **4. Budget Table.** Include a complete budget table.
- 5. Literature Cited.

Evaluation Criteria

All applications will be evaluated based on the criteria detailed below (Table 3).

Table 3: Evaluation criteria

| EVALUATION CRITERIA | Max |
|--|--------|
| | points |
| Proposal Quality | 25 |
| • Project Summary: Concisely defines the problem, describes the approach to be used, and identifies criteria that will be used to evaluate the project's success. | |
| Objectives: Provides a clear and concise statement of each objective. | |
| • Work Plans and Methods: Work plan is organized by tasks and subtasks and includes milestones. Clearly explains path to conduct, for instance, host range testing and/or efficacy testing. Clearly explains experimental design and statistical analyses. | |
| Project Management and Evaluation: Gives detailed timeline and evaluation metrics. | |
| Additional information includes required information for project leaders, cooperators, and supporters. | |
| Project Justification | 30 |
| • Relevance to Research Priorities: Clearly states how proposed target pest fits into the priority rubric. | |
| • Justification: Defines/describes the problem, explains impact on a local/regional/statewide level, indicates potential contribution to long-term problem resolution, describes previously conducted related research, and specifies new information to be generated. | |

| EVALUATION CRITERIA | Max |
|---|--------|
| | points |
| Project Team and Resources | 15 |
| Team | |
| • Are the project leaders, cooperators, and other researchers well-suited to the project? | |
| • Collaborative/multi leader project: Do the investigators have complementary and integrated expertise and is their leadership approach/governance and organizational structure appropriate for the project? | |
| • Does the project proposal have strong support from relevant organizations/individuals? | |
| Have any commodities provided matching funds? | |
| Resources | |
| • Are the institutional support, equipment, and other physical resources available to the investigators adequate for the project proposed? | |
| • Will the project especially benefit from the unique features of the scientific environment and/or collaborative arrangements? | |
| Feasibility and Impact | 20 |
| • Project is manageable within the proposed framework of budget, time and personnel. | |
| • Project objectives are clear, well stated, and achievable. | |
| • The overall strategy, work methodology, and analyses methods are well-reasoned and appropriate to accomplish the objectives of the project. Potential problems, alternative strategies and benchmarks for success are included. | |
| Fiscal Merit | 10 |
| • Project's budget is detailed, reasonable, and accurate. | |
| • Budget Narrative: Itemizes, describes, and justifies all project expenses. | |
| Total points | 100 |

For a comprehensive list of CDFA's Grant Programs, please visit https://www.cdfa.ca.gov/grants/. A complete list of California grant and loan programs can also be found on the State Library's California Grants Portal: https://www.grants.ca.gov/.