

Northeastern Integrated Pest Management Center
Partnership Grants Program
Request for Applications (RFA) – September 15, 2023

Due Date	5:00 p.m. eastern time, Thursday, November 9, 2023
Total Amount Available	Approximately \$160,000
Range of Awards	Max. \$40,000. (\$10,000 additional if it meets the competitive preference priority 2)
Start Date & Length	March 1, 2024/April 1, 2024; projects may be up to 24 months.
Mission	To foster the development and adoption of integrated pest management, a science-based approach to managing pests in ways that generate economic, environmental, and human health benefits.
We Fund 3 Types of Projects	<ul style="list-style-type: none"> • IPM Applied Research • IPM Working Groups • IPM Communications
Eligibility	Qualified public and private entities, including all colleges and universities; federal, state, and local agencies; and nonprofit and for-profit private organizations or corporations. Must be able to meet the criteria for subrecipients (Appendix E).
Basic Requirements	Proposals must include all of the following: <ul style="list-style-type: none"> • Focus on IPM • Address ≥ 1 priority, see neipmc.org/go/sp • Include regional collaborations • Project director must work in the Northeast • Work must be conducted in the Northeast • Initiated consultation with IRB office about the project if needed. *Please see Appendix C (page 26)
Competitive Preference Priorities	<p>1: Economic Analysis. Projects that produce improved cost benefit analysis of IPM are eligible for up to 3 additional points.</p> <p>2: Diversity. Projects that include an 1890 institution or meaningfully includes historically underserved audiences are eligible for 3 additional points and may apply for up to an additional \$10,000.</p>
Informational Webinar	October 2, 2023, 11:00 a.m. – 12:00 noon.
Questions	Jana Hexter Deborah Grantham

I. SUMMARY

The Northeastern Integrated Pest Management Center (Center) announces the availability of funds and requests stakeholder-led proposals that support Center priorities.

Informational webinar. We will conduct a webinar on *October 2, 2023, 11:00 a.m. – 12:00 noon* to provide information about this funding opportunity. The webinar will be recorded and posted on the Center's website for those unable to attend. Individuals [can register for the webinar here](#).

Proposal submission. All proposals must be submitted through the online grant management system (see Appendix A) by either the project director (PD) or an institutional representative. The submission deadline is *5:00 p.m. eastern time on Thursday, November 9, 2023*.

Available funds. Approximately \$160,000 is available, with a maximum of \$40,000 per award, (\$50,000 if it meets competitive preference priority 2 – see page 5). ***There is a 24-month time limit on funded projects.*** PDs should propose a March 1, 2024, start date for one-year projects and April 1, 2024, start date for two-year projects. Applicants may submit more than one proposal.

The Center's mission is to foster the development and adoption of integrated pest management (IPM), a science-based and sustainable approach to managing pests in ways that generate economic, environmental, and human health benefits. We work to identify and address regional priorities for research, education, and outreach in partnership with stakeholders from both rural and urban settings. We are committed to improving quality of life: healthy people, thriving farms and ecosystems, and strong communities, all through sustainable pest management. The Center engages with a broad range of people and organizations to set priorities for IPM research, extension, and education projects and then to collaborate on work that will address these priorities. We focus the expertise needed to successfully address current and emerging challenges that require an IPM approach, thus fostering resilience in ecosystems that include all levels of management in locations including natural areas, agriculture, and the built environment.

II. NORTHEASTERN IPM CENTER PRIORITIES

The efforts of the Center are organized under six Signature Programs and four cross-cutting issues where our leadership and advisory bodies see the greatest need. At present, the areas of focus for the programs are (not in order of priority) 1) Community IPM, 2) IPM and Organic Systems, 3) Climate Change and Pests, 4) Pollinators, 5) Next Generation Education, and 6) Advanced Production Systems. The four cross-cutting issues are 1) Diversity in IPM, 2) Emerging Invasive Species, 3) Pesticide Resistance, and 4) Economics.

Signature Programs

Funded projects are expected to contribute significantly to the adoption and/or development of IPM in one or more Signature Program while addressing one or more cross-cutting issue through the following:

- Forming partnerships among growers, scientists, educators, environmental groups, governmental agencies, and other audiences for the purpose of advancing IPM
- Increasing knowledge about pests and how to manage them in traditional and new settings
- Establishing or addressing regional IPM priorities for research and extension
- Teaching others how to use IPM to decrease risks associated with pest management
- Developing capacity for growing food sustainably using IPM.

Community IPM: We foster the adoption of IPM in structures and surrounding landscapes including housing, schools, food service facilities, and commercial and public properties. A nation-wide program led by the Center is “Promoting IPM in Affordable Housing,” which teaches managers, maintenance staff, and residents how to use IPM. Efforts are centered on eliminating obstacles to using IPM in affordable housing and refining an implementation process for housing providers.

IPM and Organic Systems: IPM and organic systems share many of the same goals and challenges, and we support collaboration between these two communities to build a more sustainable agricultural system.

Climate Change and Pests: Climate change (CC) is resulting in increased extreme weather events and a gradual rise in average annual temperatures. While research is giving us a picture of what CC will mean for the distribution and occurrences of pests, the research and development of IPM tools and practices tailored to address emerging needs must be supported. We provide funding for advancing knowledge and IPM solutions specific to the challenges of CC.

Pollinators: Decline of wild and managed pollinators is one of the most critical issues facing our food systems. Habitat destruction, CC, and pesticide use are some of the contributing factors. We will continue to give this issue priority and encourage efforts to develop IPM practices protective of and with lower risk to wild and managed pollinators.

Next Generation Education: It is critical to maintaining the IPM knowledge base that there are scientists, educators, and practitioners who understand IPM basics. Our Center can advise students on internship projects that provide real-world experience and allow for partnerships to be built with growers, educators, researchers, and industries who will want to work with these interns and possibly employ them post-graduation. We recognize students in IPM in our annual Outstanding Achievements in IPM award, as well as practitioners and academics. We will continue to support young people striving to be successful in the field of IPM, both as practitioners and in academia.

Advanced Technology for IPM: This signature program continues from an earlier one called “Advanced Production Systems” but is more specific to technologies that can assist in the implementation of IPM. One issue identified by NEERA-2104 is that of farm labor shortages in the NE. One way of assisting with this problem while improving adoption of IPM is through technologies including weather tools such as NEWA (Network for Environment and Weather Applications), remote sensing technologies with demonstrations of efficacy in NE settings and scales, agricultural applications of AI, and learning models. We will encourage demonstration and adaptation of technologies for use in NE agricultural systems.

Cross-Cutting Issues

These issues cut across all aspects of IPM and food security and are integral to each signature program. We describe cross-cutting issues separately here to provide the emphasis and visibility necessary to make progress.

Diversity in IPM: The Center is committed to engaging all stakeholders in the adoption of IPM. We understand that a conventional, academic approach to distributing funding and to extending knowledge does not work for all stakeholders, there is much to be learned from understanding traditional practices and listening to traditional practitioners, and there are barriers to BIPOC, 2SLGBTQIA+, and other communities achieving professional success in the field of IPM and related sciences.

Emerging Invasive Species (IS): Many pests of concern are IS that have become established, but emerging or newly identified IS are of great concern because major damage may occur before management can be developed or there may be a window for developing management practices before there is major damage. We support new collaborations, research, and education to address these pests.

Pesticide Resistance: Resistance to pesticides is increasing and is impacting the range of options available to pest managers in all situations, including housing and school buildings. Efforts to identify alternative pesticides and alternative or new IPM practices, such as biological pesticides or cultural methods, are critical to long-term effective pest management. Steps in an IPM practice, such as monitoring for presence and using degree-day models to predict emergence, can help tune the use of pesticides to the need in a specific setting.

Economics: Two surveys conducted by the Center and priority-setting discussions by NEERA-2104 all indicate that economics, specifically the cost/benefit ratio and the need for good cost analyses, is central to IPM adoption.

See Appendix A for more details about current stakeholder priorities.

Note: Projects that propose to evaluate commercial or research-grade products without explicitly stating how they also will be tested as a part of an IPM approach will not be supported by our grants program.

Competitive Preference Priorities

Competitive Preference Priority 1: Economic Analysis. Proposals that produce improved economic analyses of the costs and benefits of IPM adoption are eligible for up to 3 additional points

Competitive Preference Priority 2: Diversity. These projects are eligible for 3 additional points and may apply for up to an additional \$10,000.

A: 1890 Institution Participation. Projects that are led by or include an 1890 land-grant institution (University of Maryland, Eastern Shore; Delaware State University; and West Virginia State University) as a project partner are eligible for up to 3 additional points based on the scope and depth of the collaboration.

OR

B: Meaningfully includes historically underserved audiences. USDA defines historically underserved audiences to include stakeholders belonging to the following groups: American Indians or Alaskan Natives, Asians, Blacks or African Americans, Native Hawaiians or other Pacific Islanders, Hispanics, and women. The Center also considers 2SLGBTQIA+ to be historically underserved. This may include:

- Is a project focused on a historically underserved audience, *or*
- Is led by or partner with a Native Nation affiliated organization, *or*
- Is led by or partners with a non-profit that focuses on historically underserved audiences.

III. TECHNOLOGICAL SUPPORT AVAILABLE TO SUCCESSFUL APPLICANTS

All funded IPM projects are eligible for assistance from the regional IPM centers' Facilitation of Innovation Through Technology (FITT) initiative for aspects including online conferencing (Zoom), online project management and communications software (Basecamp), online conversations (Slack), email newsletter generation and management (Mailchimp), pest reporting/monitoring, storage of pest occurrence data, real-time maps online (EDDMapS), web content hosting, advice on technology use, and other tools. A complete listing of [FITT offerings](#) is available online.

FITT support comes at no added cost to the project. Costs for these functions should not be included in the budget, but expectation/request for the support should be included in the proposal. Any expectations of such support should be mentioned explicitly in Section E: Activities and Procedures of the Project Description, Approach and Procedures of the proposal.

PDs are encouraged to discuss their technology needs with the Northeastern IPM Center staff while planning the proposal to ascertain whether FITT has the required capability. Use or non-use of FITT is not a factor in scoring the proposals.

IV. GENERAL PROPOSAL CRITERIA

Eligibility. Public and private institutions or organizations, businesses, commodity groups, and private individuals are eligible for these funds as long as they are able to meet the criteria for subrecipients required by federal regulations and Cornell University (see Appendix E). Project directors (PDs) from smaller states, 1890 land-grant institutions, Hispanic-serving institutions, and community colleges are encouraged to apply. All PDs must work and conduct the relevant work in the Northeast. Co-PDs may be from outside the region. PDs based at Cornell University must be PI eligible within the university.

V. TYPES OF PROJECTS

The IPM Partnership Grants Program funds three types of projects:

- IPM Applied Research
- IPM Working Groups
- IPM Communications

Project types may not be combined into one proposal, but more than one project type for a specific topic may be submitted. However, this is not recommended because the projects will compete against each other, and typically the Center does not fund more than one project per state each year. For example, an emerging pest issue could be addressed through

1. a detailed and strategically planned assembly of individuals (Working Group), *or*
2. a focused applied research project (Applied Research), *or*
3. the development of publication(s) and/or a pest management strategic plan (Communications), *or*
4. the collaboration of PDs submitting 3 complementary proposals listed above.

If you have an idea for an IPM proposal but are not sure which project type is appropriate, please see the table below.

IPM Applied Research
Addresses a gap in knowledge that prevents IPM adoption
Designs experiment(s) to build knowledge
Presents/publishes results, including to extension/outreach colleagues/community

Results in new knowledge or practices that improve efficacy of IPM
IPM Working Groups
Identifies and convenes stakeholders around a defined topic
Identifies gaps in knowledge, adoption of practices, or communication
Develops plan for addressing gaps (for example: white paper, proposal, conference)
Results in new or enhanced efforts to advance adoption of IPM
IPM Communications
Identifies an audience(s) that lack knowledge of IPM
Synthesizes knowledge and research results
Disseminates information by methods appropriate to identified audiences
Educates
Results in changes in behavior or conditions, specifically adoption of IPM

IPM Applied Research Projects

IPM Applied Research Goal: Promote the development and adoption of IPM through studies conducted in the field, laboratory, or greenhouse, using the scientific method, that result in empirical or measurable evidence.

IPM Applied Research Objectives: By clearly defining measurable objectives, detailing the methods of the research protocol in each proposal, and submitting complete reports at the project conclusion, PD's will demonstrate outputs, outcomes, and potential impacts of the applied research project.

IPM Applied Research Activities: Projects are multistate that address regional issues identified by IPM working groups and other entities such as the Northeast Region Technical Committee on IPM (NEERA1604) (see Appendix A for regional priorities).

Sample Outputs for Applied Research Projects

Outputs to Demonstrate Knowledge Gained:

- Attendance at trainings (workshops) or tours (field days) increased/decreased? By how much?

Outputs to Demonstrate Behavior Changed:

- Number of new farmers (< 15 years' experience) adopting IPM practices increased/decreased? By how much?
- Number of senior farmers (> 15 years' experience) adopting IPM practices increased/decreased? By how much?

- Number of small farms (< 100 acres) adopting IPM practices increased/decreased? By how much?
- Number of large farms (> 100 acres) adopting IPM practices increased/decreased? By how much?
- Number of organic farmers adopting IPM practices increased/decreased? By how much?
- Number of conventional farmers adopting IPM practices increased/decreased? By how much?

Outputs to Demonstrate Condition Improved:

- External funds were leveraged Yes/No? How much?
- Yields increased/decreased? By how much?
- Inputs for pest management increased/decreased? By how much? Which kinds (chemical, mechanical, cultural, biological)?
- Acres farmed increased/decreased? By how much?
- Beneficial insects increased/decreased? By how much?
- Plant diversity increased/decreased? By how much?
- Weeds were suppressed/not suppressed? With what (mulch, other plants)?
- Soil erosion was increased/decreased? By how much?
- Regulations for farming increased/decreased? Laws? Incentives? Easements?
- Exposure to pesticides was increased/decreased? By how much? What methods?

The data should come directly from the findings of the study and can be extrapolated to the local, state, regional, or national scale.

IPM Working Groups

IPM Working Groups Goal: Strategically plan assemblies of researchers, educators, practitioners, and other stakeholders to increase collaboration on and develop an approach for applying IPM to a specific pest management issue or setting, and to make progress toward implementation.

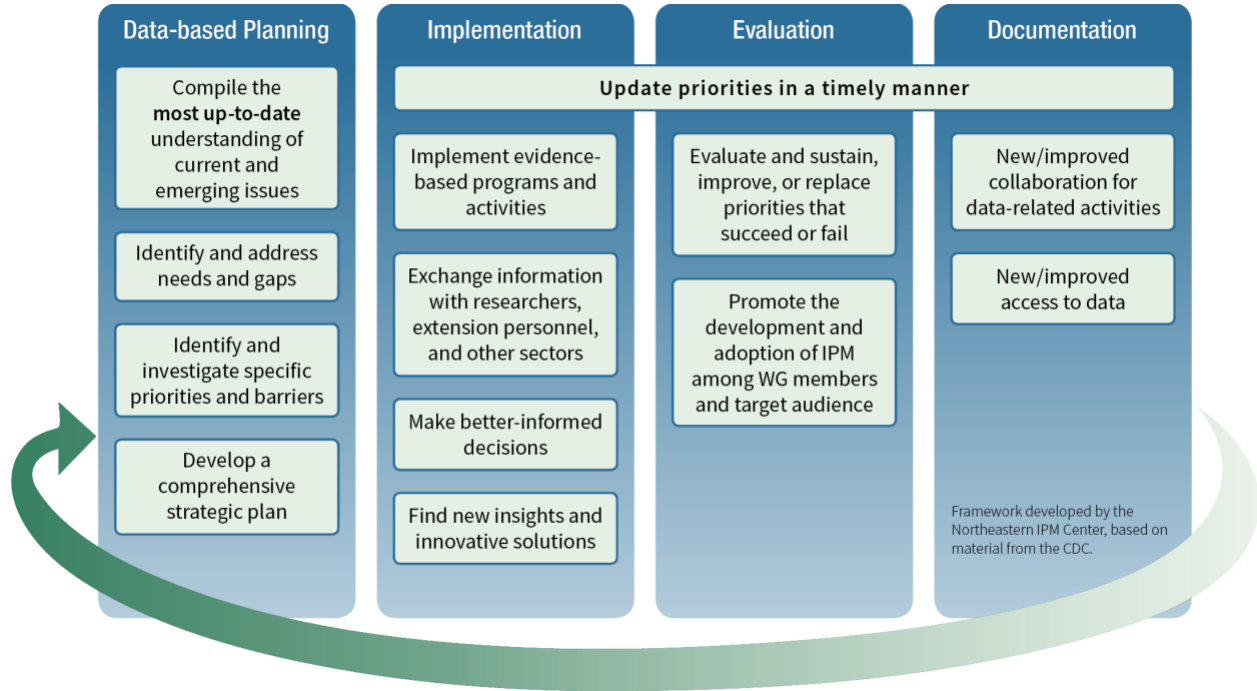
IPM Working Group Objectives: By clearly defining measurable objectives and detailing the working group protocol in each proposal, and submitting complete reports at the project conclusion, PD's will demonstrate outputs, outcomes, and potential impacts of the working group.

NEW in 2024: We welcome working group proposals that focus on one of our signature programs.

IPM Working Group Activities: WGs are intended to be collaborations that assess and address new emerging issues and provide valid and reliable information back to the Center in the form of

meaningful outputs and outcomes. For example, the spotted lanternfly (SLF) working group was funded as it became clear that this invasive pest posed threats to fruit production in the Northeast.

IPM Working Group Process



IPM Communications Projects

IPM Communications Goal: Promote the development and adoption of IPM through the production and distribution of science-based IPM-related information.

IPM Communications Objectives: By clearly defining measurable objectives and detailing the communication/education/Extension protocol in each proposal, and submitting complete reports at the project conclusion, PD's will demonstrate outputs, outcomes, and potential impacts of the communications project.

IPM Communications Activities: IPM Communications support the development of multistate and regional IPM publications and other media and dissemination of the knowledge contained in the materials. Funds may be used to plan, develop, and produce IPM-related materials with multistate or regional applicability. These include printed publications, mobile apps, workshops, pest alerts, websites, conferences, webinars, videos, IPM success stories for public officials, educational exhibits, planning and assessment documents, pest management strategic plans, IPM guidelines, standards for practices, and *artistic performances and other creative options* not listed here. (See Appendix A, number 17, for an example of a publication produced with Northeastern IPM Center funds.)

IPM Communications Priorities: Proposals must 1) fill important gaps, 2) have wide applicability within the northeastern region, 3) facilitate and promote interstate collaboration, and 4) have a sound plan for disseminating the knowledge and materials. These projects can't simply be the development of materials without an effective means of getting the information into the field for application. The content and design of all products must meet standards delineated in the Northeastern IPM Center *Guidelines for Center-Funded Communications Projects* (see Appendix A, number 18).

VI. PREPARATION AND SUBMISSION OF PROPOSALS

A. Proposal Format and Preparation

NOTE: Proposals that do not adhere to the RFA (over the page limit, missing sections, over-budget, etc.) will not be reviewed.

PDs will need to register in the online [grant management system](#) before applying. It is recommended that registration be done well in advance of the deadline. Proposals should be developed and written offline and then entered in stages in the appropriate sections. Once the submission process has been initiated in the online grant management system, PDs can edit and save as needed before the final deadline. (See Appendix A for frequently asked questions.) Please download required forms and form instructions from the online grant management system (see Appendix A). Forms can be downloaded without logging in. Submission of forms requires PD registration and logging in.

For text such as the project description, use single-spaced, Times New Roman, 12-point font with 1-inch margins on 8.5" × 11" paper. All documents must be converted to PDF files before uploading them. Documents such as support letters, or appendices that need to be scanned should be submitted as searchable text and not as pictures.

B. Required Proposal Components

Project Information

The project title should be descriptive and no longer than 100 characters (letters, punctuation, and spaces between words). Use the IPM initialism rather than writing out integrated pest management.

When determining project start and end dates, note that one-year projects will be available by March 1, 2024, and must be expended by February 28, 2025. Two-year projects will be available on April 1, 2024, and must be expended by March 31, 2026.

Project Abstract/Summary. The project summary (300 words max) should be written in simple terms that can be understood by the general public and should briefly explain a) the problem or opportunity, b) the approach, and c) the potential scope of outcomes and impacts of the project.

Project Narrative. *Do not exceed 8 pages, excluding references cited* (existing WGs may use an extra page as described below). A high value is placed on the partnership between PDs and the Center to fulfill the shared goal of advancing the development and adoption of IPM. It is extremely important to develop an effective method to report on the results of the project. This information is vital to the Center in assessing its impacts in the region and contributing to a meta-analysis that the Center is conducting on the effectiveness of IPM.

A. Resubmissions. If this is a resubmission of a previous proposal to the Center's Partnership Grants Program, please detail the responses to the previous year's review in the current proposal.

B. Priority Statement. (10 points) Address the specific issue(s) identified by growers or other qualified stakeholders in the northeastern region within the six Signature Programs and cross-cutting issues (see Appendix A). List which Signature Program the project addresses and briefly describe why it fits this category. *Cite at least one IPM stakeholder priority* used to formulate the project (web link, year, and source must be cited). If no priority is posted, indicate this by citing a journal review article, proceedings from scientific workshops, or other sources produced by qualified stakeholders. Include data on the environmental, economic, and human health ramifications of the pest(s).

There are detailed instructions on how to set priorities listed in Appendix A.

Describe how your project is relevant to and benefits or will potentially benefit the entire region.

C. Opportunity Statement and Literature Review. (15 points) Describe why this is the best time to conduct this project. Is there a window of opportunity that currently exists that did not exist in the past or may close in the future?

Include a current review of ongoing or completed work (local/regional/national) with a list of references and tie it to the project. How does this project fit within your ongoing work and/or with previous projects funded in the region by the Center? See Appendix A for a database of funded projects. Cite references in the main text by author and year (e.g., Smith 1999).

If this is a continuation of an existing WG or if the group has received funding from the Center for related work in the past, briefly describe the results and evaluation of the earlier work.

Proposals for continuation of existing WGs must include an update on the a) progress to date, b) accomplishments, and c) future direction(s) for the group. PDs may put this on an extra page that is not included in the 8-page limit.

D. Diversity Statement. (5 points) Describe how this project directly or indirectly serves the interests of diverse participants or is led by these stakeholders. USDA defines historically underserved audiences to include stakeholders belonging to the following groups: American Indians or Alaskan Natives, Asians, Blacks or African Americans, Native Hawaiians or other Pacific Islanders, Hispanics, and women. The Center also considers 2SLGBTQIA+ to be historically underserved.

Below is an example of a well-written diversity statement.

There are 17,000 men and women who work annually in the apple industry in New York, and many are low-income, Hispanic/Latino and African American workers. The livelihoods of these workers are dependent on maintaining an economically viable fruit industry in New York and, more broadly, the eastern U.S. Our project will provide key information on how best to maintain healthy and diverse wild bee communities in fruit tree orchards through more informed pesticide use practices. In addition, our project will provide information that will guide pesticide use policies, which will lead to a healthier working environment for migrant and permanent orchard workers.

E. Objectives and Anticipated Impacts. (15 points) For each objective, describe the anticipated outcomes and impacts that will be associated with its fulfillment. PDs should review this RFA's goals and briefly discuss how their proposed project would contribute.

Applicants are encouraged to contact [David Lane](#), Center evaluation specialist, to create strong, measurable objectives.

Before preparing your objectives in the application, please read the following "Sample Objectives:"

Sample Objectives and Anticipated Outcomes:

"Optimization of Biologicals and ASD Combination Treatment for Managing Soilborne Diseases to Promote Adoption" (Mahfuz Rahman, 2023)

Specifically, our objectives are to:

a) Evaluate the efficacy of three different C sources (grape pomace, bio char and rice bran) for anaerobic soil disinfestation and compare the result with mustard meal.

*Anticipated outcomes: These C sources have been used by other researchers in different agroecological regions with variable results. However, we anticipate at least one of the C-source will produce results comparable to mustard meal.

b) Conduct an economic analysis to determine cost and benefit ratio for these C source use from soil health indicators and marketable fruit yield. Northeastern IPM Center – IPM Partnership Grant Program Project Description 4

*Anticipated outcomes: As price of the C sources selected for this work is significantly lower than mustard meal, there is a probability of obtaining higher net benefit from these treatments even in the case of slightly lower efficacy and yield.

c) Unravel the mechanism and microbiome associated with disease suppression by conducting metagenomic analysis from soil samples of each treatment.

*Anticipated outcomes: Survival and multiplication of probiotic bacteria should be the determining factor in prevention of disease and increase of yield. We hope to quantify and characterize the microbiome associated with this.

d) Analyze fruit quality parameters due to the use of probiotic bacteria.

*Anticipated outcomes: This will incentivize growers to use beneficial microbes for managing plant disease.

e) Disseminate the technology to organic growers and small farmers, and county-based extension staff through individual communication, grower meetings and conferences, annual field day events, newsletters and cooperative county extension programming.

*Anticipated outcomes: Project staff will reach out to at least 150 fruit and vegetable growers through the above methods with the intent being to motivate growers to replicate these treatments in their operations to reduce disease and increase yield. We will use the approach “seeing is believing” through demonstration in grower cooperators’ field. Educational events will encompass the WVU Extension Small Farms Conference and Mid-Atlantic Fruit and Vegetable Convention to highlight the mechanism and benefits of using biorational treatments starting from transplant production and field setting of plants. We will develop web-based publications (bulletins, fact sheets, etc.) on non-chemical means for management of soilborne pathogens and share those with farmers through different list serves and links with the WVU Small Farm Center and IPM sites as well as

WVSU extension site. WVU certified organic farm field day is also a suitable avenue to show the results to the organic growers.

F. Activities and Procedures. (19 points). Describe in detail how the work will be done to achieve each of the stated objectives in the same order as listed above in Objectives and Anticipated Impacts.

Applied Research proposed work must describe the procedures for obtaining and analyzing data and information that will permit accomplishing the objectives. If technological support is required (page 5 of this RFA), please detail that here. Construct a timetable for the start and completion of each phase of the project with milestones and indicators of success.

Applied Research PDs *must address* 1) study design (e.g., identify the hypothesis or question(s) being asked), 2) statistical analysis with a detailed protocol, 3) data collection (e.g., samples, pesticide records, surveys, GIS), 4) the potential for confounding factors or limitations and how they will be addressed, 5) elimination of bias, and 6) the presentation of key findings with target audiences identified.

For Working Groups: Describe data collection and analysis and how the data support the objectives, showing the pathway from the activities to the potential scope of outcomes and impacts.

Estimate the expected size and composition of the audience as well as the delivery method. Describe the plans for publicizing the WG to all interested participants and for publishing the proceedings of WG meetings, if applicable. Meeting notes and conference proceedings should be provided to the Northeastern IPM Center for posting on the Center's website. Annual and final reports are required.

Beyond the steps described in the previous paragraph, describe plans for disseminating results of the WG efforts.

Describe all deliverables, including white papers, peer-reviewed research, and educational activities and publications.

If technological support is required (page 3 of this RFA), please detail that here. Construct a timetable for the start and completion of each phase of the project with milestones and indicators of success.

Working group members are expected to be conduits for the free flow of information among the Center, the working group, their organizations, and peers.

For Communications Projects: Proposed work must describe the methods for disseminating data and information, providing education, and promoting IPM adoption that will permit accomplishing the objectives. If technological support is required (page 3 of this RFA), please detail that here. Construct a timetable for the start and completion of each phase of the project with milestones and indicators of success.

G. Evaluation Plans.

Note: Applied Research proposals do not require a separate evaluation plan.

For Working Groups and Communications Projects (19 points): A logic model identifying inputs to the project, outputs (deliverables), and outcomes (changes) should be included and uploaded as an appendix in the grant management system. The logic model should be similar to the one shown in Appendix B that summarizes project inputs (such as expertise, facilities, and other funding), audience(s), activities (such as meetings, workshops, and experiments), outputs (such as recommendations and guidelines), and outcomes and impacts. When creating the logic model, make sure to indicate how the potential scope of outcomes and impact will lead to success in achieving the objectives of the proposed project. Upload a PDF of the logic model as an appendix in the grant management system.

An evaluation plan is required and should include approaches that are appropriate for determining if objectives were met and at what level. Please review Appendix C for more details, additional samples, templates, and other information.

For working groups only: WG chairs *are required* to invite the Center's evaluation specialist to working group meetings.

H. Cooperation, Institutional Units, and Key Personnel Involved. (5 points) Clearly define the roles and responsibilities of the PD, Co-PDs, lead institution, and each institutional unit or stakeholder group contributing to the project. Applicants must identify key personnel and their plans of work. For multi-organizational or multistate projects, describe how the project will be managed (e.g., who will coordinate the different organizations and states, and how). Financial arrangements should be identified here and explained in detail in the budget forms and budget justification.

Three additional points are available for projects that are led by, or include as a project partner, a PD from an 1890 land-grant institution or Native American affiliated organization.

Competitive Preference Priority. Please describe how your project meets the preference priorities if applicable. (You may use up to 1000 words for this response).

Attachments

Budget. (Download form, submit as single PDF.) (10 points) For this RFA, projects may last up to 24 months.

Projects that involve subcontracts will need to submit multiple budget forms. Convert each form to a PDF file for uploading. In accordance with USDA-NIFA, the indirect costs are limited to 30% of Total Funds Awarded (equivalent to 42.857% of Total Direct Costs). Matching funds are not required.

Funding Limits

For Applied Research: Maximum \$40,000.

For Working Groups: Whether the WG is new (not funded before or not funded since 2015) or continuing, the PD can apply for up to two years of funding in the range of \$10,000 to \$20,000 per project.

For Communications Projects: The PD can apply for up to two years of funding in the range of \$10,000 to \$20,000 per project.

Projects that meet Competitive Preference Priority 2 are eligible to apply for an additional \$10,000 beyond that stated funding limits.

Budget Justification. (Submit as single PDF.) Include a detailed, self-explanatory narrative description for each line item in the budget. Follow the order of the budget form. Show the sum of each line, copied from the budget, and explain any calculations (e.g., hourly wages, printing estimates, travel expenses). Write the justification in complete sentences or a detailed outline; do not just replicate amounts from the budget. (See Appendix A for a budget justification example.) Clearly identify the lead institution, all collaborators, and the role of each in the budget justification.

If consulting, collaborative, or sub-contractual arrangements are included in the proposal, these arrangements should be fully explained and justified. For collaborative arrangements, for the

transfer of substantive programmatic work, or for the provision of financial assistance to a third party, provide letters of intent or other evidence that collaborators have agreed to render these services (such as a proposed statement of work and a simple budget for each arrangement).

The Center hosts a “[Find a Colleague](#)” page on its website where you can find people who are open to collaboration. The Center recommends that all funded PD’s [complete an online profile](#).

Current and Pending Support Forms. (Download template, submit as single PDF.) Complete a form for each PD and Co-PD. All existing and pending proposals must be declared on this form. Please include “THIS PROPOSAL” under the “Pending” heading.

Conflict of Interest Forms. (Download template, submit as single PDF.) Complete a form for each PD and Co-PD. Provide a list of collaborative partners (co-authors and project collaborators) for the past three years and include advisees/advisors for all years. Do not include outdated collaborations; doing so could hinder the review of your proposal.

Conflict of Interest forms are used to choose reviewers who do not have an interest in the proposed work in order to guarantee an impartial review for all submitted proposals. If the name of a collaborator on the Conflict-of-Interest form has changed (i.e., for marital or life reasons), please declare both the current and previous name. If the PD or a co-PD name has changed, please declare both the current and previous name.

Documentation of Collaboration. (Submit as single PDF.) (5 points) Proposals can be strengthened by showing evidence that the project will benefit those involved in or affected by it. Letters of support and the names of members showing who will serve on the WG must be included in the proposal.

Use this section to upload letters of support from a) stakeholder groups describing the need for the project and/or willingness to participate in it, b) research facilities willing to host and/or participate in the project, and c) contractors to be hired for specific portions of the project.

Letters should be addressed to the PD and show the name and affiliation of the sender (letterhead is preferred), the level of commitment or scope of work, and the author’s original or electronic signature. Please provide evidence that contractors have agreed to render the services described (a statement of work).

Curriculum Vitae (CV). (Submit as single PDF.) Submit one for the PD and one for each Co-PD. Include education, experience, and relevant publications. Do not include social security numbers. *Limit the CV to two pages per person.*

Other Documents. (Submit as single PDF.) Electronic versions of other relevant items, such as reprints or brief reports, may also be uploaded as necessary into the grant management system.

Institutional Signature Page. Signatures from the PD and the authorized organizational representative (such as the director of the Office of Sponsored Programs) are required. You

should print the completed Signature Page, have all relevant parties sign it, scan the page and save it as a PDF or photograph, and upload it into the online application.

Compiled PDF. For ease of review, in addition to the single PDFs uploaded, please create a single compiled PDF of your complete application and upload here. If you need assistance in collating all the documents into a single PDF, please contact [Kevin Judd](#) at the Northeastern IPM Center at least 3 business days before the deadline.

C. Proposal Submission

All proposals must be submitted through the [online grant management system](#), the same system used to download forms. Further instructions are provided through screens in the proposal submission process.

In addition to uploading the documents and conversion to PDF files, applicants will be prompted to copy and paste the project summary and objectives into the online fields. Formatting in these fields is limited to plain text. Information in these fields for funded projects will become part of the [publicly searchable project database](#) and will be included in an [interagency database of IPM-related projects](#). The project data will also include future project reports.

Please contact [Kevin Judd](#) at the Northeastern IPM Center with technical questions about proposal submission.

Proposals must be received by *5:00 p.m. eastern time on Thursday, November 9, 2023*. A confirmation email will be sent to the PD after the Submit Final Proposal button is clicked. If this confirming email is not received, the proposal has not been submitted correctly. If you do not receive a confirmation email after submitting your proposal, it is likely that the proposal was not submitted correctly. Please allow enough time to upload all your materials and verify the proposal was submitted before the deadline.

VII. SELECTION CRITERIA

A review panel composed of experts from outside the Northeast will rate the merits and technical qualities of the proposals using the criteria in the chart below. Each type of project (i.e., Applied Research, Working Groups, and Communications) will be scored within its own category. Given proposals of equal merit, the review panel will select proposals that balance the Center's portfolio of grant types and geographic distribution within the Northeast and promote the creation of new partnerships. See Appendix D for the rating sheet.

VIII. FUNDING ARRANGEMENTS

PDs will be notified in writing of funding decisions by February 15, 2024. Successful applicants will be funded via a subcontract from Cornell University. The Center may choose to issue only one subcontract per institution to minimize overall indirect costs to projects. PDs of successful proposals will be contacted to work out the funding mechanism. One-year projects will have a March 1, 2024, start date and two-year projects on April 1, 2024.

IX. REPORTING AND ACKNOWLEDGMENT REQUIREMENTS

PDs who are awarded funds will be asked to submit regular reports. Final reports will be due 60 days after the termination date of the contract. Your final invoice, which should request *no less than* 10% of your total award, will be paid after your final report has been accepted. PD's will submit reports via an online grant management system. PDs will be reminded by email and sent reporting instructions. (See Appendix A for a link to reporting instructions.)

If funded, all communications from your project (flyers, abstracts, brochures, posters, presentation slides, websites, books, and any other print publications and products) *during and beyond the project period* must include:

1. the [USDA logo and the Center logos that can be found here](#).
2. the following acknowledgment:

This publication was funded by the Northeastern IPM Center through Grant #2023-70006-38004, the USDA National Institute of Food and Agriculture, Crop Protection and Pest Management, Regional Coordination Program.

X. CONTACT INFORMATION

For questions about this RFA or your proposal idea:

[Jana Hexter](#), Grants and Partnerships Coordinator

[Deborah Grantham](#), Director

For questions about objectives, metrics, institutional review board (IRB), and evaluation design:

[David Lane](#), Evaluation Specialist

For questions about uploading a proposal to the website:

[Kevin Judd](#), Web Administrator

APPENDIX A: RESOURCES

Partnership Program Application Materials & Background Information

1. [Download forms and application materials here.](#)
2. All proposals must be submitted through the [online grant management system](#).
3. [Cornell University's PD eligibility criteria.](#)
4. [Budget justification example.](#)
5. [Frequently asked questions.](#)
6. Report samples: [Progress Report](#); [Final Report](#)
7. [Evaluation information.](#)

Funded IPM Projects

8. [Database of previously funded projects.](#)
9. [An interagency database of IPM-related projects.](#)

IPM Priorities Information

10. [A full list of stakeholder priorities including Center Signature Programs.](#)
11. [National IPM Road Map.](#)
12. [Pest management strategy plans.](#)

Working Group Information

13. [Current and past Center working groups](#)
14. [Working group priority-setting guidelines](#)
15. Meeting note sample: "About thirty scientists gathered in New Brunswick, New Jersey, and discussed the persistent, steady spread of the brown marmorated stink bug."
(<https://neipmc.org/go/kexG>)
16. Recommendations/guidelines sample: brown marmorated stink bug commodity documents (<http://www.stopbmsb.org/managing-bmsb/management-by-crop/>)

Communications Information

17. [An example of a publication produced with Center funds](#)
18. Northeastern IPM Center's [Guidelines for Center-Funded Communications Projects](#)

APPENDIX B: LOGIC MODELS

Logic Model. In concert with or following the development of the evaluation plan, a logic model should be created to succinctly synthesize the main elements of the project. Logic model elements should include:

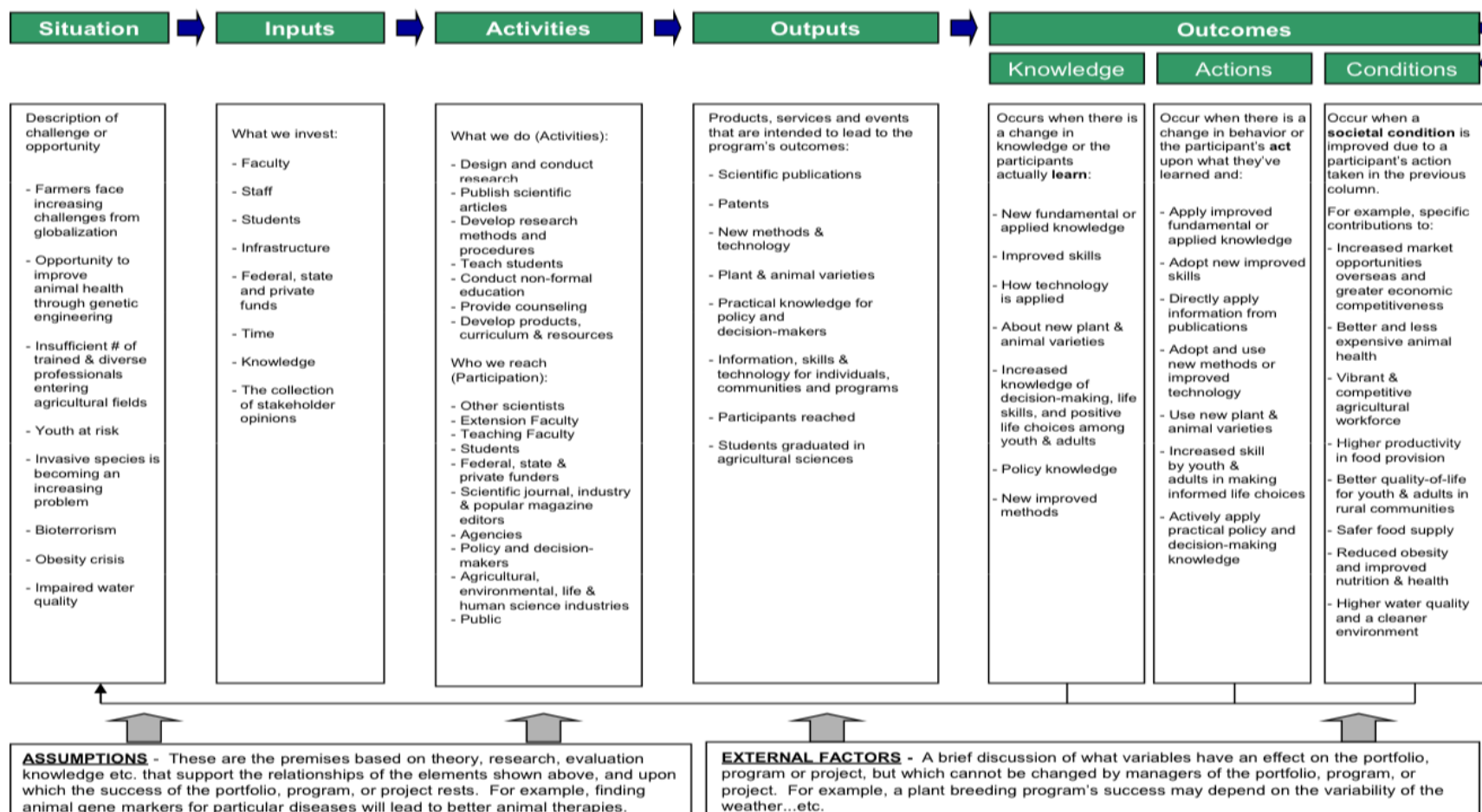
- **Inputs:** resources invested in the project
- **Activities:** events or actions that occur
- **Output:** direct product obtained as a result of project activities
- **Outcomes and impacts:** short-term, intermediate, and long-term impact of project, the sequence of changes/impacts/results triggered by new IPM implementation (activities and outputs)
 - *Short-term outcome:* related to learning and knowledge gained. Direct tangible outputs of program activities
 - *Intermediate outcome:* related to behavioral change. Practice modified or altered completely
 - *Long-term outcome:* related to conditional changes (e.g., environmental, human health, society, and economics outcomes)

[For more information on logic model planning and evaluation.](#)

Sample Logic Model. Situation: IPM is critical to cropping systems, natural areas, and the built environment. We will focus on the region’s pest problems, tap into trustworthy scientific information, work together efficiently, and build on each other’s successes to foster the development and adoption of IPM in helping to sustain food security in healthy, functioning ecosystems that benefit human health. For more examples, see <https://logicmodels.ipmcenters.org/>

Generic Logic Model for NIFA Reporting

(This model is intended to be illustrative guide for reporting on NIFA-funded research, education and extension activities. It is not a comprehensive inventory of our programs.)



Version 1.3

APPENDIX C: EVALUATION

The purpose of evaluation is to measure the IPM impact while fulfilling the following goals outlined in the National IPM Road Map:

1. Improve economic and social analyses of adopting and implementing IPM practices, including assessing the benefits of practice adoption
2. Reduce potential human-health and safety risks from pests and related pest management strategies
3. Minimize adverse environmental effects from pests and related management practices

Effective project evaluation would measure the progress made toward achieving these goals, especially goals numbered two and three above.

Project Evaluation Plan

Improve your chances of receiving IPM funding by carefully describing:

- Your evaluation plan objectives, indicators, and methods
- How the evaluation objectives meet the IPM Road Map goals (outlined above)

Evaluation systematically measures project inputs, outputs, outcomes, and long-term impacts. Regardless of your evaluation approach, if you are applying for an IPM Partnership Grant, or any other publicly funded grant, you will need a mechanism for measuring the outcomes and impacts of your project. For example, the Center wants to know if your project has increased stakeholders' IPM knowledge, awareness, skills, and aspirations (KASA) as a result of your research, collaboration, and communication efforts.

While evaluation plans and logic models are described in term of steps, the actions are not always linear, the resources are not always enough, or there is not always enough time to answer every question. In most cases, the outcomes and impacts (*not outputs*) may take years to develop or materialize. However, the Center wants evaluation plans that clearly show the findings of the project, including lessons learned, communication increased, and information disseminated, so that project improvements can be made each year and benefits can be documented.

In general, the evaluation plan should include approaches that are appropriate for determining if objectives were met and at what level. The evaluation method should be explained in detail.

Evaluation techniques and activities, such as statistically valid surveys or focus groups, should be included in the proposal. Ultimately, we strive to measure changes in behaviors and conditions that increase IPM implementation. Therefore, if your project is funded, please be prepared to work with the Center evaluation specialist to effectively evaluate outcomes and impacts based on the most relevant evaluation approaches and methods. Before preparing your objectives in the application, please read the following sample objectives

Sample Objectives

“BMSB IPM Working Group: Addressing Consumer/Pest Management Professional Needs and Coordination” (2015–2018):

- Coordinate with other regional IPM centers, the NIMSS BMSB Multistate Project, and other affiliated groups to increase networking and reduce duplication of effort
- Identify and address needs of consumers and pest management professionals
- Update existing priorities based on outputs generated from a number of extramural projects and pest status in newly invaded regions

Performance Indicators

Successful project directors (PDs) will partner with the Center evaluation specialist to collect the performance indicators described in Table 1 below. When you report, you will be prompted to provide the performance indicators outlined in the checklist in the “PDs” column. The Center will follow up post-project to collect the indicators checked under the “IPM Center” column. Therefore, please design your evaluation plan in a way that will enable you to collect the information listed in Table 1 below. For help in this regard, please contact the evaluation specialist at the Center and/or consult the following references:

- Penna, R. M., and W. J. Phillips. 2004. *Outcome frameworks: An overview for practitioners*. Center for Outcomes, Rensselaerville Institute.
- [A toolkit for assessing IPM adoption and impacts.](#)
- [Introduction to Evaluation Plans for Grant Proposals](#)

These references may be helpful in writing a solid evaluation. In sum, please review Table 1 below to see what kinds of evaluation data the Center will collect and what we expect the PDs to collect, then design your evaluation plan accordingly.

Table 1. Project Evaluation Performance Indicators

Logic Model Category	Performance Indicators (When you report, you will receive prompts for these indicators.)
Participants	Number of stakeholders receiving training
	Number of students, postdocs, or early career professionals trained or participated in project
	Number of extension or other educators reached through educational activities
Activities	Number and type of educational and/or outreach activities conducted
Outputs	Number of new or improved IPM programs or tools
	Number of peer reviewed publications
	Number and types of non-refereed outreach publications
	Number and type of other educational products
Short-Term Outcomes	Number of stakeholders who learn about the new or improved IPM program or tool
	New collaborations as a result of project
	Number of citations of journal articles produced by the project
	Leveraged dollars
Medium-Term Outcomes	Number of stakeholders who adopt the new or improved IPM program or tool
	Number of stakeholders who intend to use the knowledge gained

	Number of stakeholders who changed their management practices based on the results of the project
Long-term Outcomes	Number of stakeholders who report a gain or increase in their ability to manage the pest scenario using the new or improved IPM program or tool
	Amount of land/service area affected by new or improved IPM program or tool (e.g., number of acres)
	Economic, environmental, human health, and social benefit(s) from adopting IPM practice
	Increased capacity for meeting pest management needs, including more IPM jobs

*Institutional Review Board Approval

If a member of your research team or a collaborator will observe, interact with, or intervene with human participants to gather information that will be used for research during this project, it may require Institutional Review Board (IRB) approval through your institution or Cornell University.

The following link gives the federal guidance on determining when an institution and their researchers would be considered formally involved in human participant research.

<https://www.hhs.gov/ohrp/regulations-and-policy/guidance/guidance-on-engagement-of-institutions/index.html>

We strongly suggest that all PD’s contact their IRB office during the proposal development stage to determine if the project might be subject to IRB if it is awarded.

IRB approvals can take 6-9 months to be approved, so ensure that you are aware of what steps will be necessary if the project is approved. The online application also asks about the PD’s IRB certification status.

APPENDIX D: RATING SHEET

Partnership Grants Program 2024 Rating Sheet	Score Percentage
<p>1. Proposal Preparation</p> <ul style="list-style-type: none"> • The proposal is complete and follows the format specified in this RFA. • Information is presented clearly. 	4%
<p>2. Priority Statement (approx. 3 points each)</p> <ul style="list-style-type: none"> • Clearly cites Northeast stakeholder priorities. • States the economic, human-health, and environmental impact (or potential impact) of the pest. • Clearly addresses a Center Signature Program. • Clearly describes how project is relevant to and benefits or will potentially benefit the entire region. 	10%
<p>3. Opportunity Statement and Literature Review (approx. 5 points each)</p> <ul style="list-style-type: none"> • Considers existing and previous work on the topic in the region. • Includes relevant literature citations. • Clearly describes why this is the best time to pursue this project in the Northeast. 	15%
<p>4. Diversity Statement</p> <ul style="list-style-type: none"> • The project clearly identifies stakeholder groups that will benefit from the proposed work. • The project strives to serve the diversity of the stakeholder groups. • Benefits to stakeholders are clearly identified. 	5%
<p>5. Objectives and Anticipated Impacts (approx. 3 points each)</p> <ul style="list-style-type: none"> • The author provides clear, logically numbered statements on the aims of the project. • Objectives are sequential, but if the first fails, the others have a chance of standing alone. • Project is innovative (new or expands significantly on a previous effort). • Anticipated impacts show potential to be measurable outcomes—not merely accomplishments. • Discusses how the project goals contribute to and deliver on the goals of its project type (i.e., Applied Research). 	15%

<p>6. Approach and Procedures (approx. 15 points each)</p> <ul style="list-style-type: none"> • The work plan will address the specified objectives and the timetable is realistic. • The activities are appropriate for the potential scope of outcomes and impacts. • <i>Existing WG only</i>: Update on progress, accomplishments, and future direction—may use an extra page not included in the 8-page limit. 	<p>19%</p>
<p>7. Evaluation (Only <i>Working Group</i> and <i>Communications</i> complete this section; 17 points for plan, 3 points for logic model)</p> <ul style="list-style-type: none"> • The plan addresses a) how conceptual ideas/objectives will be turned into actionable knowledge during program development stage, b) the “big picture” from multiple WG member perspectives, c) how the program-in-action will answer relevant questions, and d) what impacts from the project will result in meaningful outcomes that go beyond the program outputs. • The logic model shows sequences that explain the connection between target audience and material inputs to help organize and structure program evaluation plan to further document outcomes and impacts (short-term, intermediate, and long-term). • The evaluation objectives meet the IPM Road Map priorities. 	<p>19% (integrated into the scoring calculation for WG and Comm. Only)</p>
<p>8. Project Director and Collaborators (approximately 5 points per bullet)</p> <ul style="list-style-type: none"> • The CV(s) indicate that the PD and team have the expertise needed to carry out the project. • The proposal design meets Center priority to involve collaboration with stakeholders from more than one state. There is evidence of the team’s willingness to partner (e.g., letters of support, statements of work). 	<p>10%</p>
<p>9. Budget (approximately 3 points per bullet)</p> <ul style="list-style-type: none"> • The budget is well-defined, reasonable for the proposed project, and within the project funding limits described in this RFA. • It follows guidelines described in the RFA and instructions on the form. • The justification follows the order of the budget form and explains assumptions in the budget. 	<p>10%</p>

<p>2024 Competitive Preference Points</p> <p>CPP 1: Economic Analysis. Project is well-designed to produce improved economic analyses of the costs and benefits of IPM adoption.</p> <p>CPP 2:</p> <p>A: 1890 Institution Participation. Project is led by or includes an 1890 land-grant institution, OR</p> <p>B: Meaningfully includes historically underserved audiences.</p> <ul style="list-style-type: none"> • Is a project focused on a historically underserved audience, <i>or</i> • Is led by or partners with a Native Nation affiliated organization, <i>or</i> • Is led by or partners with a non-profit that focuses on historically underserved audiences. 	<p>3%</p>
<p>Total Percent</p>	<p>100%</p>

All projects must be of sufficient quality and technical merit to qualify for funding. The scoring criteria are the most tangible expression of this program’s priorities.

Appendix E: Federal and Cornell University Subaward Requirements

Successful applicants will receive a subaward, as defined by 2 CFR 200.92, under a U.S. Department of Agriculture (USDA) National Institute of Food and Agriculture (NIFA) grant awarded to Cornell University.

Consistent with the [federal Uniform Guidance found at 2 CFR 200](#), the requirements of the USDA-NIFA grant, and the subaward procedures of Cornell University, each successful applicant will be required to meet the following base criteria prior to the execution of the resultant subaward;

- Have or obtain a [Data Universal Numbering System \(DUNS\) number](#).
- Have an active registration in the [System for Award Management \(SAM\)](#).
- Neither it nor its principals may be presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any U.S. federal department or agency.

Additionally, all subrecipients will be expected to provide to Cornell prior to subaward execution the following documents:

- A copy of or link to recent audits or financial statements.
- A completed subrecipient profile that provides basic information about your institution such as address, business type, audit information, and internal policies for compliance with federal regulations.
- Documented approvals for human subjects (IRB), live vertebrate animal subjects (IACUC), and/or biosafety (IBC), if applicable to the awarded effort.
- For subrecipients other than domestic universities and government agencies, a Certificate of Insurance.

All subaward agreements will contain terms regarding regular invoice submission, required technical and financial reporting, intellectual property and publications, and federal and USDA-NIFA terms and conditions.