

Northeastern Integrated Pest Management Center
Partnership Grants Program
Request for Applications (RFA) – September 10, 2020

Due Date	5:00 p.m. eastern time, Thursday, November 12, 2020
Total Amount Available	Approximately \$200,000
Range of Awards	Max. \$50,000. (\$60,000 if includes an 1890 institution)
Start Date & Length	March 1, 2021; projects may be 12–24 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.
Northeastern IPM Center Priorities	Proposals are sought that address priorities within our five Signature Programs: <ul style="list-style-type: none"> • IPM and Organic Systems • Next Generation Education • Rural and Urban IPM • Climate Change and Pests • Advanced Production Systems
Types of Projects	We fund 3 types of projects: <ul style="list-style-type: none"> • IPM Applied Research • IPM Working Groups • IPM Communications
Narrative Length	8 pages plus budget, references, and required forms
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 • Include regional collaborations (1890 institution participation = 3 points) • Project director must work in the Northeast • Work must be conducted in the Northeast
Webinar	October 5, 2020, 11:00–12:00 noon.
Questions	Jana Hexter (jh30@cornell.edu) Deborah Grantham (dgg3@cornell.edu)

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 5, 2020, 11:00–12:00 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 at <https://neipmc.org/go/rfawebinar2021>.

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 12, 2020*.

Available funds. Approximately \$200,000 is available, with a maximum of \$50,000 per award, depending on the project type. There is a 24-month time limit on funded projects. PDs should propose an April 1, 2021, start date at the latest. A March 1, 2021, start date will be acceptable for one-year grants. 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 five Signature Programs 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) IPM and Organic Systems, 2) Rural and Urban IPM, 3) Climate Change and Pests, 4) Next Generation Education, and 5) Advanced Production Systems.

Funded projects are expected to contribute significantly to the adoption and/or development of IPM in one or more Signature Program 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

Following is a short description of each Signature Program.

IPM and Organic Systems. The Northeastern IPM Center supports collaboration between the IPM and organic communities in order to build a more sustainable agricultural system in the northeastern region and nationally. These two philosophies share many of the same goals as well as challenges, and have great potential to support one another and accomplish more together than either might individually. The Center welcomes grant proposals that strengthen the knowledge, “toolbox,” or audience base for both IPM and organic agriculture or that support collaborative work to address an issue with broad regional impact.

<https://www.northeastipm.org/about-us/signature-programs/ipm-and-organic-systems/>

Rural and Urban IPM. IPM works in all environments where food is produced and people live, work, and play. Crop-growing environments range from agricultural fields to residential backyards, while public buildings to private residences make up structural settings. Projects using IPM techniques to produce safe, healthy, nutritious food supplies or reduce allergens to improve the indoor environment or to protect structural integrity, especially in underserved areas, are welcome.

<https://www.northeastipm.org/about-us/signature-programs/rural-and-urban-ipm/>

Next Generation Education. The knowledge gained through IPM helps solve current and future societal challenges, but only if it reaches the end user. The need for trained individuals, whether undergraduate or professionals in another field, in the fundamentals of IPM will be critical in maintaining the knowledge base for the future. Programs are needed that introduce, educate, or re-educate students in IPM. This can be done through online, face-to-face, and hands-on courses,

research/extension projects, and training.

<https://www.northeastipm.org/about-us/signature-programs/next-generation-education/>

Climate Change and Pests. Human-induced climate change is resulting in an increase in extreme weather events and a gradual rise of average annual temperatures. The Northeast is not immune to these changes and there is noticeable change in the agro- and natural ecosystems. What will changes in climate mean for the distribution and occurrences of pests? How will IPM respond to these changes and what tools will help in addressing the needs? These questions and others will require answers, which may come from scientific research and extension communities.

<https://www.northeastipm.org/about-us/signature-programs/climate-change-and-pests/>

Advanced Production Systems. Sensor technologies, global positioning systems, and robotics have transformed our ability to detect and target pests. Our production systems may soon operate in new locations, such as on rooftops, in skyscrapers, and in high-tech greenhouses. How will the latest technologies and advanced production systems help with the development and adoption of IPM?

<https://www.northeastipm.org/about-us/signature-programs/advanced-production-systems/>

See Appendix A for more details about current stakeholder priorities.

Competitive Preference Priority

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. Projects that include an 1890 institution may apply for \$60,000.

Evaluation. Applicants are encouraged to contact David Lane, evaluation specialist (del97@cornell.edu), to create strong, measurable objectives.

The Center is currently developing new purpose-driven evaluation models. Therefore, if your application is accepted, please be prepared to work with the Center evaluation specialist to improve your results framework.

Diversity. As a recipient of federal funds, the Center is obligated to provide equal opportunity in research and extension. As identified by our federal partners, target audiences of concern include women in agriculture and racial and ethnic minorities in any program. Direct benefit would

include projects that are focused specifically on an audience of concern or those that incidentally benefit audiences of concern.

Please comment on how this project directly or indirectly serves the interests of diverse participants or stakeholders, including people/communities of color and women in agriculture. Please do not comment on staffing or employment data; that information is not collected through this process.

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.

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.

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), 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 at <https://neipmc.org/go/FITT>.

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 3e 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.

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. 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
Identifies 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 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: The Center is implementing an exciting project to use data collected from our funded projects to conduct a meta-analysis to document the effectiveness of IPM. While meta-analyses are common in other fields, we believe this is new for IPM. Our goal is to combine published studies in the literature with data from funded Applied Research projects each year to provide a rich source of data. The meta-analysis will determine

- the effect IPM has had on several different variables (e.g., crop yields, pest populations, financial savings, reduced inputs, and improving beneficial insects, diversity, and other ecosystem services);

- the rate of adoption of IPM by different groups (e.g., conventional, organic), types of farmers (e.g., beginning and senior), and sizes of farms (e.g., small and large).

The information will be updated continuously and shared with decision makers, educators, and the research community. We hope that the meta-analysis provides a solid case for continued IPM funding during budget debates.

By clearly defining measurable objectives and detailing the research protocol in each proposal and submitting complete reports at the project conclusion, PDs will contribute to this groundbreaking endeavor.

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 year's 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 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 (NEERA1004) (see Appendix A for regional priorities).

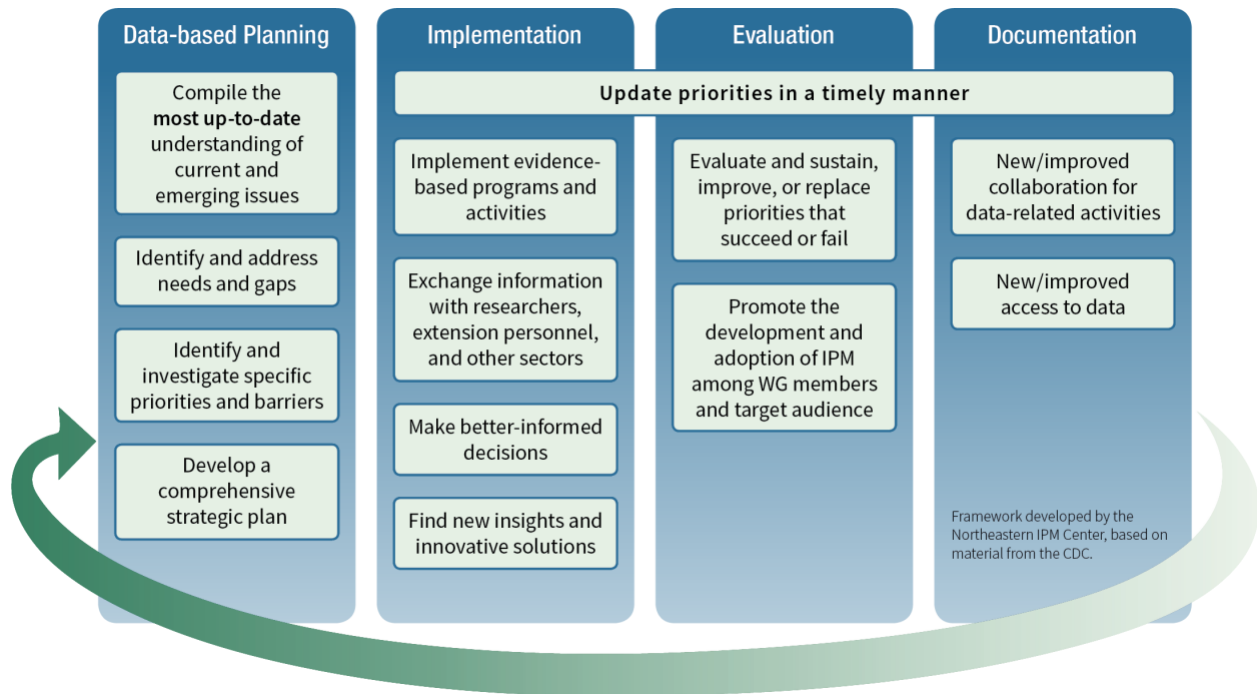
IPM Applied Research Priorities: Proposals must 1) clearly articulate the issue and how it will be addressed, and 2) start important new work or promote innovative, effective solutions. In addition, results from projects must be shared with the Center for dissemination and meta-analysis purposes.

IPM Applied Research Budget Guidelines: Projects may be funded for up to \$50,000 per project and may request up to 24 months to complete the work.

IPM Working Groups

IPM working groups (WGs) are strategically planned assemblies of researchers, educators, practitioners, and other stakeholders convened 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. WGs are intended to assess and address new emerging issues and provide valid and reliable information back to the Center in the form of meaningful outputs and outcomes.

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 research protocol in each proposal and submitting complete reports at the project conclusion, PDs will contribute to the Center’s impact assessment.

IPM Communications Activities: IPM Communications support the development of multistate and regional IPM publications and other media. 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, *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, and 3) facilitate and promote interstate collaboration. 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

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 cover pages, support letters, or appendices that need to be scanned should be submitted as searchable text and not as pictures.

PDs will need to register in the online grant management system before submitting an application. 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.)

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, 2021, and must be expended by February 28, 2022, and two-year projects will be available by April 1, 2021, and must be expended by March 31, 2023.

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. Priority Statement. (10 points) Address the specific issue(s) identified by growers or other qualified stakeholders in the northeastern region within the five Signature Programs (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.

B. 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.

C. Diversity Statement. (5 points) Describe how this project directly or indirectly serves the interests of diverse participants or stakeholders, including people/communities of color and women in agriculture.

D. 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.

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

Sample Objectives:

"Assessing and controlling house mouse infestations in multi-family dwellings" (Changlu Wang, 2018–2019)

- assess the spatial distribution of house mouse infestation in a multi-family dwelling;
- evaluate factors associated with the presence of house mouse infestations;
- implement and evaluate building-wide house mouse preventative and control strategies for multi-unit dwellings.

"Manipulation of winter soil conditions as an IPM tool for blacklegged tick *Ixodes*" (Kirby Stafford, 2015–2018)

- increase knowledge within the tick-borne-disease research community on the effectiveness of novel landscape management techniques implemented during fall and winter for blacklegged tick IPM;
- increase knowledge within the tick-borne-disease research community about the specific abiotic factors influencing tick population sizes annually such that blacklegged tick IPM may be used more judiciously;
- increase collaboration between CAES and MMCRI researchers in the study of the impact of climate change on tick IPM in the Northeast.

E. 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.

F. 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.

G. 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.

H. 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.

Attachments

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

If funds are being requested for two years, the budget must show each year of funding with the first year's budget on the "Year 1" tab and the second year on the "Year 2" tab. 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.

For Working Groups: Whether the WG is new (never before funded or not funded since 2014) or continuing, the PD can apply for up to two years of funding in the range of \$10,000 to \$20,000 per project.

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 requesting funding for two years, provide justification for the amounts in each line for each year.

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).

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, please declare both the current and previous name. If the PD or a co-PD 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.) Please attach an explanation of the potential environmental impacts of the proposed activity, if necessary. 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.

C. Proposal Submission

All proposals must be submitted through the online grant management system at <https://grants.ipmcenters.org/>, the same system used to download forms. Further instructions are provided through screens in the proposal submission process.

Please contact Kevin Judd at the Northeastern IPM Center (kaj57@cornell.edu) with technical questions about proposal submission.

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 (<https://www.northeastipm.org/ppms>) and will be included in an interagency database of IPM-related projects (<https://iipd.ipmcenters.org/>). The project data will also include future project reports.

Proposals must be received by *5:00 p.m. eastern time on Thursday, November 12, 2020*. A confirmation email will be sent to the PD after the Submit Final Proposal button is clicked.

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 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, 2021. 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. PDs of 12-month projects will have a March 1, 2021, start date and should expend funds by February 28, 2022; PDs of 24-

month projects will have a start date of April 1, 2021, and must expend funds by March 31, 2023.

IX. REPORTING AND ACKNOWLEDGMENT REQUIREMENTS

PDs who are awarded funds will be asked to submit regular reports. Progress reports on two-year projects will be due one year after project initiation; 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:

- the USDA logo and the Center logos that can be found at <https://neipmc.org/go/BGJF>
- the following acknowledgment:

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X. CONTACT INFORMATION

For questions about this RFA or your proposal idea:

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

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For questions about uploading a proposal to the website:

Kevin Judd, Web Administrator

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APPENDIX A: RESOURCES

Partnership Program Application Materials & Background Information

1. Download forms and application materials: <https://www.northeastipm.org/grant-programs/ipm-center-grants/ipm-partnership-grants/>
2. All proposals must be submitted through the online grant management system: <https://grants.ipmcenters.org/>
3. Cornell University's PD eligibility criteria: <https://www.northeastipm.org/rfa/partnership>
4. Budget justification example: <https://www.northeastipm.org/sample-budget>
5. Frequently asked questions: <https://www.northeastipm.org/rfa/faqs>
6. Report samples: [Progress Report](#); [Final Report](#)
7. Evaluation: <https://www.northeastipm.org/ipm-planning/evaluation/introduction-to-evaluation-plans-for-grant-proposals/>

Funded IPM Projects

8. Database of previously funded projects: <https://www.northeastipm.org/ppms>
9. An interagency database of IPM-related projects: <https://iipd.ipmcenters.org/>

IPM Priorities Information

10. A full list of stakeholder priorities including Center Signature Programs: <https://www.northeastipm.org/grant-programs/regional-priorities/>
11. National IPM Road Map: <https://neipmc.org/go/YhJR>
12. Pest management strategy plans: <https://www.northeastipm.org/PMSPs>

Working Group Information

13. Current and past Center working groups: <https://www.northeastipm.org/working-groups/>
14. Working group priority-setting guidelines: <https://www.northeastipm.org/neipm/assets/File/Priorities/Priority-Setting-Guidelines.pdf>
15. Meeting note sample: "About thirty scientists gathered recently 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:

<https://www.northeastipm.org/park2012/>

18. Northeastern IPM Center's *Guidelines for Center-Funded Communications Projects*:

<https://www.northeastipm.org/publication-guidelines>

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)

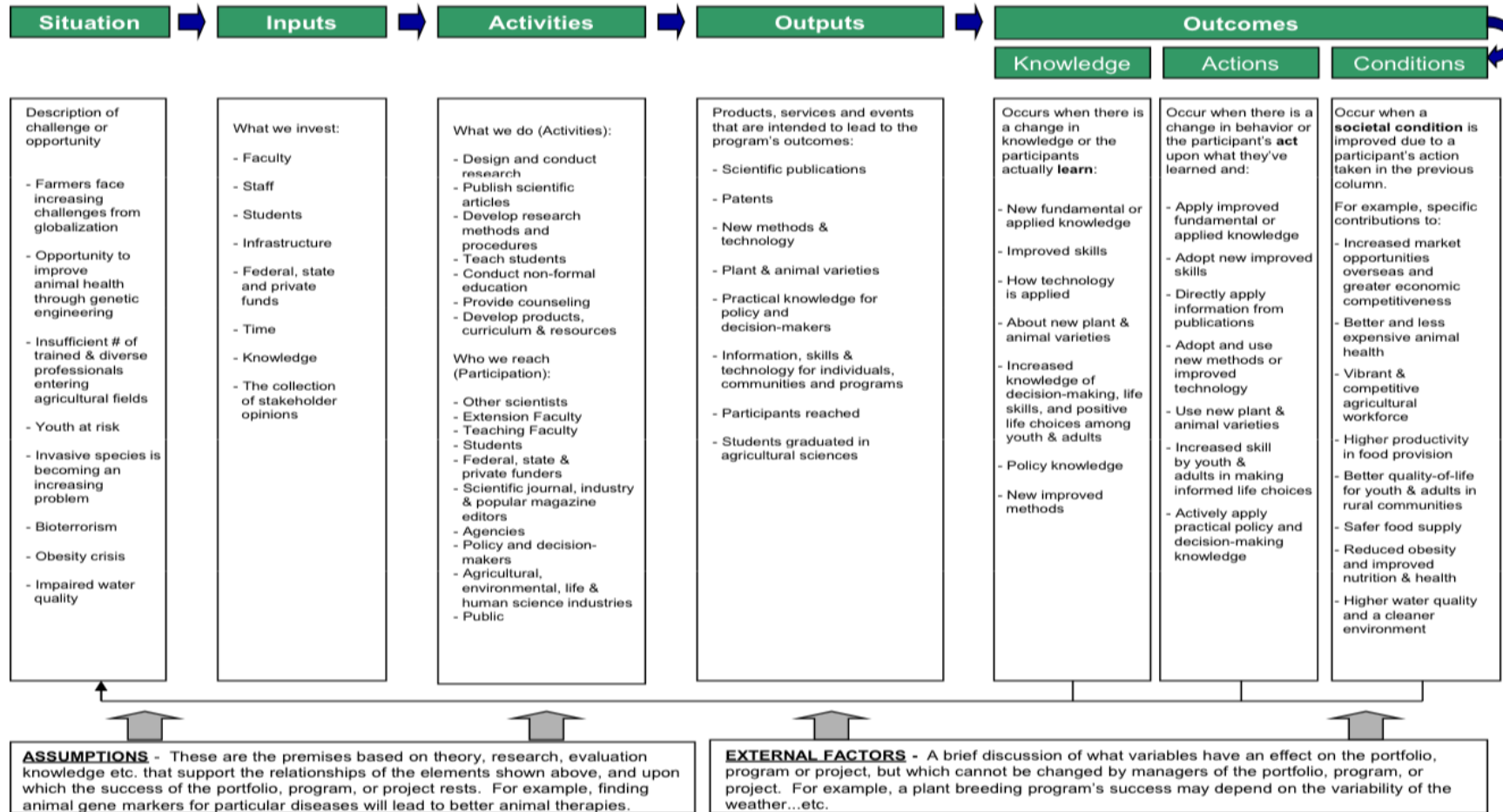
For more information on logic model planning and evaluation:

<https://neipmc.org/go/logic-models>

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:
<http://westernipm.org/index.cfm/center-projects/project-websites/toolkit-for-assessing-ipm-outcomes-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 and 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

APPENDIX D: RATING SHEET

Partnership Grants Program 2021 Rating Sheet	Possible Points
<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. 	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. 	19
<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. 	19 (WG and Comm. Only)
<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 PD(s) have strong past performance as Center grant recipients, or will be new partners. • The proposal design involves 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). 	10
<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. 	10
<p>2021 Competitive Preference Points</p> <ul style="list-style-type: none"> • 3 points for projects that are led by or include an 1890 institution as a partner. 	3
<p>Total Points</p>	100

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 (<https://www.law.cornell.edu/cfr/text/2/200.92>), 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 (<https://www.law.cornell.edu/cfr/text/2/part-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, <https://www.dnb.com/>.
- Have an active registration in the System for Award Management (SAM), <https://www.sam.gov/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), 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.