Agricultural Genome to Phenome Initiative

REQUEST FOR APPLICATIONS

MODIFICATIONS: PAGE 6 and 7

FUNDING YEAR: Fiscal Year 2020
APPLICATION DEADLINE: July 15, 2020
LETTER OF INTENT DEADLINE: Not Required
AWARD AMOUNT: $ 960,000
CATALOG OF FEDERAL DOMESTIC ASSISTANCE NUMBER: 10.332
INITIAL ANNOUNCEMENT
National Institute of Food and Agriculture
United States Department of Agriculture

Catalog of Federal Domestic Assistance. The Agricultural Genome to Phenome Initiative - AG2PI] is listed in the Assistance Listings under the Catalog of Federal Domestic Assistance number 10.332.

Table 1: Key Dates and Deadlines

<table>
<thead>
<tr>
<th>Task Description</th>
<th>Deadline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application</td>
<td>5:00 P.M. Eastern on July 15, 2020</td>
</tr>
<tr>
<td>Letter of Intent:</td>
<td>Not Required</td>
</tr>
<tr>
<td>Applicants Comments:</td>
<td>Within six months from the issuance of this notice</td>
</tr>
<tr>
<td></td>
<td>(NIFA may not consider comments received after the sixth month)</td>
</tr>
</tbody>
</table>

Stakeholder Input. The National Institute of Food and Agriculture (NIFA) seeks comments on all request for applications (RFAs) so it can deliver programs efficiently, effectively, with integrity, and with a focus on customer service. NIFA considers comments, to the extent possible when developing RFAs and use comments to help meet the requirements of Section 103(c)(2) of the Agricultural Research, Extension, and Education Reform Act of 1998 (7 U.S.C. 7613(c)(2)). Applicants may submit written comments to Policy@usda.gov (email is for comments only). Please use the following subject line: Response to the Agricultural Genome to Phenome Initiative RFA.
EXECUTIVE SUMMARY

NIFA requests applications for the Agricultural Genome to Phenome Initiative (AG2PI) for Fiscal Year FY 2020. The amount available for grants in FY 2020 is approximately $960,000. AG2PI will fund one collaborative research project to expand the knowledge of phenomes and genomes of plants and animals important to the agricultural sector of the United States.

This notice identifies the objectives for AG2PI projects, deadlines, funding information, eligibility criteria for projects and applicants, and application forms and associated instructions.
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PART I. FUNDING OPPORTUNITY DESCRIPTION

A. Legislative Authority

B. Purpose and Priorities
The National Institute of Food and Agriculture’s Agricultural Genome to Phenome Initiative (AG2PI) focuses on collaborative science engagement and invites innovative research proposals that intend to develop a community of researchers across both crops and animals that will lay the foundation for expanding knowledge concerning genomes and phenomes of crops and animals of importance to the agriculture sector of the United States. Applications that propose a collaboration among U.S. crop and animal researchers are encouraged. AG2PI supports the President’s high priority on American leadership in the Industries of the Future (IOTF) on Artificial Intelligence and Biotechnology. In addition, AG2PI supports multiple goals within the USDA Science Blueprint, USDA Innovation Agenda, the Genome to Phenome: USDA Blueprint for Animal Genomics Research, and relevant publicly initiated and led crop research initiatives to catalyze and coordinate research linking genomics and predictive phenomics to achieve advances that generate societal and environmental benefits. The purposes of AG2PI are to:

1. Study agriculturally significant crops and animals in production environments to achieve sustainable and secure agricultural production;
2. Ensure that current gaps in existing knowledge of agricultural crop and animal genetics and phenomics are filled;
3. Identify and develop a functional understanding of relevant genes from animals and agronomically relevant genes from crops that are of importance to the agriculture sector of the United States;
4. Ensure future genetic improvement of crops and animals of importance to the agriculture sector of the United States;
5. Study the relevance of diverse germplasm as a source of unique genes that may be of importance in the future;
6. Enhance genetics to reduce the economic impact of pathogens on crops and animals of importance to the agriculture sector of the United States; and
7. Disseminate findings to relevant audiences.

Global Engagement. NIFA supports global engagement that advances U.S. agricultural goals. NIFA recognizes that collaboration with international partners may be necessary to attain the agency’s goals for U.S. agriculture, promote global competence of our nation’s future agricultural workforce, and promote safe and nutritious food security in a growing world. Therefore, although application to this RFA is limited to eligible U.S. institutions, applicants may collaborate with international partners, to include subcontracts to international partners or other institutions. Applications must clearly demonstrate benefits to the United States.

The AG2PI is aligned with the following USDA Strategic Goals:
1. Strategic Goal 2: Maximize the Ability of American Agricultural Producers To Prosper by Feeding and Clothing the World;
2. Strategic Goal 3: Promote American Agriculture Products and Exports
3. Strategic Goal 5: Strengthen the Stewardship of Private Lands Through Technology and Research;

Table 2: Program Key Information

<table>
<thead>
<tr>
<th>Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program Code:</td>
<td>AG2PI</td>
</tr>
<tr>
<td>Program Code Name:</td>
<td>Agricultural Genome to Phenome Initiative</td>
</tr>
<tr>
<td>CFDA Number</td>
<td>10.332</td>
</tr>
<tr>
<td>Project Type:</td>
<td>Research only</td>
</tr>
<tr>
<td>Grant Type:</td>
<td>Collaborative AG2PI</td>
</tr>
<tr>
<td>Application Deadline</td>
<td>July 15, 2020</td>
</tr>
<tr>
<td>Grant Duration:</td>
<td>36 Months</td>
</tr>
<tr>
<td>Anticipated # of Awards:</td>
<td>1</td>
</tr>
<tr>
<td>Maximum Award Amount:</td>
<td>$960,000</td>
</tr>
</tbody>
</table>

C. Program Area Description

Research Applications that propose a collaboration among U.S. crop and animal researchers are encouraged.

Applications must begin their title as “NIFA AG2PI Collaborative: [full title]…followed by the specific name of the project”.

Applications must aim to:

1. Expand knowledge concerning genomes and phenomes of crops and animals of importance to the agriculture sector of the United States;
2. understand how variable weather, environments, and production systems impact the growth and productivity of specific varieties of crops and species of animals in order to provide greater accuracy in predicting crop and animal performance under variable conditions;
3. support research that leverages plant and animal genomic information with phenotypic and environmental data through an interdisciplinary framework, leading to a novel understanding of plant and animal processes that affect growth, productivity, and the ability to predict performance, which will result in the deployment of superior varieties and species to producers and improved crop and animal management recommendations for farmers and ranchers;
4. catalyze and coordinate research that links genomics and predictive phenomics at different sites across the United States to achieve advances in crops and animals that generate societal benefits;
5. combine fields such as genetics, genomics, plant physiology, agronomy, climatology, and crop modeling with computation and informatics, statistics, and engineering;
6. combine fields such as genetics, genomics, animal physiology, meat science, animal nutrition, and veterinary science with computation and informatics, statistics, and engineering;
7. focus on crops and animals that will yield scientifically important results that will enhance the usefulness of many other crops and animals;
8. build on genomic research, such as the Plant Genome Research Project and the National Animal Genome Research Program, to understand gene function in production environments that is expected to have considerable returns for crops and animals of importance to the agriculture of the United States;
9. develop improved data analytics to enhance understanding of the biological function of genes;
10. allow resources developed under this section, including data, software, germplasm, and other biological materials, to be openly accessible to all persons, subject to any confidentiality requirements imposed by law; and
11. encourage international partnerships with each partner country responsible for financing its own research.

Other program information:

1. Applications must include a budgeted plan for data management that includes making data publicly available and/or compatible with other open data sources.
2. Applications must include, as an appendix, a budgeted project management plan and timeline to ensure efficient functioning of the plant and animal collaborative team of researchers.
3. Applications should use the existing community white papers on genome to phenome in crops and animals or develop new white papers to identify short, medium, and long-term priorities to be addressed with the available funding.
4. Applications must include, as an appendix, a budgeted plan and timeline for an advisory group of principal stakeholders and scientists relevant to the proposed project.
5. Applications that demonstrate coordination and collaboration with international partners, especially other genome to phenome projects worldwide will be viewed favorably. However, applications must be submitted by eligible U.S. institutions.
PART II. AWARD INFORMATION

A. Available Funding
The anticipated amount available for AG2PI in FY 2020 is approximately $960,000. For FY 2020, this program will accept applications for standard research projects up to $960,000 (total, including indirect costs, not per year). Project periods for this program are limited to a maximum duration of 3 years. USDA is not committed to fund any application or to make a specific number of awards. The Automated Standard Application for Payments, operated by the Department of Treasury, Bureau of Fiscal Service, is the designated payment system for awards resulting from this RFA.

B. Type of Application
NIFA will evaluate applications using the criteria described in Part V of this RFA. Application for FY 2020 is limited to the following application type:

New application: New applications will be evaluated using the criteria described in Part V of this RFA and are subject to the due dates herein (see Appendix III for definition).

C. Project and Grant Types
The type of projects or grants that are eligible for funding is limited to Standard Research applications.

D. Ethical Conduct of Funded Projects
In accordance with sections 2, 3, and 8 of 2 CFR Part 422, institutions that conduct USDA-funded extramural research must foster an atmosphere conducive to research integrity, bear primary responsibility for prevention and detection of research misconduct, and maintain and effectively communicate and train their staff regarding policies and procedures. In the event an application to NIFA results in an award, the Authorized Representative (AR) assures, through acceptance of the award that the institution will comply with the above requirements. Award recipients must, upon request, make available to NIFA the policies, procedures, and documentation to support the conduct of the training. See Responsible and Ethical Conduct of Research for further information.
PART III. ELIGIBILITY INFORMATION

A. Eligibility Requirements
The Secretary may make grants under this subsection to:
1. State agricultural experiment stations;
2. colleges and universities;
3. university research foundations;
4. other research institutions and organizations;
5. Federal agencies;
6. national laboratories;
7. private organizations, foundations, or corporations;
8. individuals; or
9. any group consisting of two or more of the entities described in subparagraphs (A) through (H).

A consortium of eligible entities is encouraged to apply under this RFA.

Applicants for the AG2PI must meet all the requirements discussed in this RFA. Failure to meet the eligibility criteria by the application deadline may result in exclusion from consideration or, preclude NIFA from making an award. For those new to Federal financial assistance, NIFA’s Grants Overview provides information about grants and other resources to help understand the Federal awards process.

Duplicate or Multiple Submissions: Duplicate, essentially duplicate or predominantly overlapping applications submitted to one or more program areas within NIFA in any one fiscal year will not be reviewed.

B. Matching Funds Requirement
With respect to a grant or cooperative agreement under this section that provides a particular benefit to a specific agricultural commodity, the recipient of funds shall provide non-Federal matching funds (including funds from an agricultural commodity promotion, research, and information program) equal to not less than the amount provided under the grant or cooperative agreement. Non-Federal matching funds may include in-kind support, in keeping with the requirements detailed in Part IV, B. of this RFA.

Matching Waiver: The matching funds requirement may be waived if NIFA determines that
A. the results of the project are of a particular benefit to a specific agricultural commodity, but those results are likely to be applicable to agricultural commodities generally; or
B. the project
   a. involves a minor commodity; and
   b. deals with scientifically important research; and
   c. the recipient is unable to satisfy the matching funds requirement.
PART IV. APPLICATION AND SUBMISSION

A. Method of Application
Applicants must apply to this RFA electronically; no other method or response is accepted. The electronic application for this RFA and additional resources are available on Grants.gov and Grants 101. Table 3 provides instructions on how to obtain an electronic application. Part II § 1 of the NIFA Grants.gov Application Guide (Application Guide) contains detailed information regarding the Grants.gov registration process.

Table 3: Steps to Obtain Application Materials

<table>
<thead>
<tr>
<th>Steps</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step One: Register</td>
<td>New Users to Grants.gov must register early with Grants.gov prior to submitting an application (Register Here).</td>
</tr>
<tr>
<td>Step Two: Download Adobe</td>
<td>Download and Install Adobe Reader (see Adobe Software Compatibility for basic system requirements)</td>
</tr>
<tr>
<td>Step Three: Find Application</td>
<td>Using this funding opportunity number USDA-NIFA-OP-007632, search for application here: Opportunity Package.</td>
</tr>
<tr>
<td>Step Four: Assess Readiness</td>
<td>Contact an AR prior to starting an application to assess the organization’s readiness to submit an electronic application.</td>
</tr>
</tbody>
</table>

Table 4: Help and Resources

<table>
<thead>
<tr>
<th>Grants.gov Support</th>
<th>NIFA Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grants.gov Online Support</td>
<td>Email: <a href="mailto:electronic@usda.gov">electronic@usda.gov</a></td>
</tr>
<tr>
<td>Telephone support: 800-518-4726 Toll-Free or 606-545-5035</td>
<td></td>
</tr>
<tr>
<td>Email support: <a href="mailto:support@grants.gov">support@grants.gov</a></td>
<td>Key Information: Business hours: Monday thru Friday, 7a.m. – 5p.m. ET, except federal holidays</td>
</tr>
<tr>
<td>Self-service customer based support:</td>
<td></td>
</tr>
<tr>
<td>Grants.gov iPortal</td>
<td></td>
</tr>
<tr>
<td>Key Information: Customer service</td>
<td></td>
</tr>
<tr>
<td>business Hours 24/7, except federal</td>
<td></td>
</tr>
<tr>
<td>holidays</td>
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</table>

B. Content and Form of the Application
The Application Guide is part of the corresponding application package for this RFA. The RFA overrides the Application Guide if there is a discrepancy between the two documents. NIFA will accept subsequent submissions to an application until the application deadline. However, applicants that do not meet the application requirements, to include partial applications, risk being excluded from NIFA’s review. NIFA will assign a proposal number to all applications that
meet the requirements of this RFA. Applicants must refer to the proposal number when corresponding with NIFA. Table 5 outlines other key instructions for applicants.

**Table 5: Key Application Instructions**

<table>
<thead>
<tr>
<th>Instruction</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attachments must be in a portable document format (PDF) format.</td>
<td>Part III § 3</td>
</tr>
<tr>
<td>Check the manifest of submitted files to verify attachments are in the correct format.</td>
<td>Part III § 6.1</td>
</tr>
<tr>
<td>Conduct an administrative review of the application before submission.</td>
<td>Part VII and</td>
</tr>
<tr>
<td>Follow the submission instructions.</td>
<td>Part IV § 1.5</td>
</tr>
<tr>
<td>Provide an accurate email address, where designated, on the SF-424 R&amp;R.</td>
<td>Part IV § 1.5</td>
</tr>
<tr>
<td>Contact the Grants.gov helpdesk for technical support, and keep a record of the correspondence.</td>
<td>N/A</td>
</tr>
<tr>
<td>Contact NIFA if applicant does not receive correspondence from NIFA regarding an application within 30 days of the application deadline.</td>
<td>N/A</td>
</tr>
<tr>
<td>“NIFA AG2PI Collaborative: [full title]…followed by the specific name of the project”.</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**SF 424 R&R Cover Sheet.** See Part V § 2 and Part V § 2.17 of the Application Guide for the required certifications and assurances.

**SF 424 R&R Project/Performance Site Location(s).** See Part V § 3 of the Application Guide.

**R&R Other Project Information Form.** See Part V § 4 of the Application Guide.

1. Field 7. Project Summary (PS)/Abstract. The PS must show how the project objectives align with the program goals of the AG2PI (See Part I.C) [. See Part V § 4.7 of the Application Guide for instructions and suggested templates.
2. Field 8. Project Narrative (PN). The PN must not exceed 18 1.5 spaced pages of written text including figures and tables (the font size for tables should be no smaller than 11 points, Times New Roman). The page limits outlined here ensure fair and equitable competition. Appendices to the PN are allowed if they are directly germane to the proposed project. Do not add appendices to circumvent the page limit. PN should reference community white papers on genome to phenome in crops and animals and/or propose the development of new white papers to identify short, medium, and long-term priorities to be addressed with the available funding. The PN must include all the following:
   a. Introduction;
b. Rationale and significance;
c. Objectives;
d. Approach;
e. Global engagement;
f. Project timeline;
g. Cooperation and institutional involvement; and
h. Summary of previous work

3. Field 12, Add Other Attachments. See Part V § 4.12 of the Application Guide. The Other Attachments must include:

**Budgeted Project Management Plan and Timeline.** A budgeted project management timeline is required to ensure efficient functioning of the plant and animal collaborative team of researchers. A timeline or chart of milestones to be achieved that clearly identifies which key personnel are involved in which objectives during each time segment of the project is encouraged. This plan must include an organizational chart, administrative timeline, a description of how the project will be governed, intellectual property management, and identification of short-, medium- and long-term metrics that will be used in project evaluation, the expectations for each team member, a mechanism whereby progress metrics can be evaluated, and how the project will coordinate, complement and/or link to existing programs or projects.

**Advisory Group Budgeted Plan and Timeline.** A budget and timeline are required for an advisory group of principal stakeholders and scientists relevant to the proposed project to assess and evaluate the quality, potential outcomes, and impacts, and how they could function effectively to support the goals and objectives of the Collaborative.

**R&R Senior/Key Person Profile (Expanded).** See Part V § 5 of the Application Guide for profile requirements, details about the biographical sketch, and suggested support templates. Applications should consider budgeting to hire an administrative project manager at the lead PD’s institution to facilitate day-to-day operations, planning and strong coordination of team members.

**R&R Personal Data.** This information is voluntary and is not a precondition of award (see Part V § 6 of the Application Guide).

**R&R Budget.** See Part V § 7 of the Application Guide.

Match – If an applicant concludes that the matching requirements described under Part III § B of this RFA is not applicable to them; the applicant must include an explanation of their conclusion in the budget justification. NIFA will consider this justification when determining final matching requirements or if required matching can be waived. NIFA retains the right to make final determinations regarding matching requirements.

Grants that require matching funds as specified under Part III § B of this RFA must list in their budget justification the matching sources, the identification of the entity(ies) providing the match, and the total pledged amount. A written verification of commitments of matching support (a pledge agreement) is not required. However, applicants are subject to the documentation, valuing and reporting requirements, as specified in 2 CFR Part 200, “Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards (the Uniform

Indirect costs (IDC) – See Part IV § C of this RFA for funding restrictions regarding indirect cost, and Part V 7.9 of the Application Guide for additional information.

Data Management Plan. A DMP is required for this program. Applicants should clearly articulate how the project director (PD) and co-PDs plan to manage and disseminate the data generated by the project. The DMP must include making data publicly available and/or compatible with other open data sources. Specifically, applications must provide a description and budgeted plan for the release of research results (e.g., data, germplasm, cultivars, genetic resources) that is compliant with the Research Terms and Conditions that govern NIFA-funded projects in the areas of plant and animal breeding, genetics and genomics; the terms and conditions can be found at https://nifa.usda.gov/sites/default/files/resource/NIFA-19-012-NIFA-Research-Agency-Specific.pdf. The following sections are particularly relevant: Genetic Resources from Outside of the U.S (page 6); and Patents and Inventions including Plant Variety Protection and Release of Animal or Plant Genome Sequence Data, Distribution of Animal or Plant Genomic Resources, and the Release or Distribution of Plant Germplasm (pages 15-16). The DMP will be considered during the merit review process (see Part V § B of this RFA, Part III § 3.1 of the Application Guide and NIFA’s Data Management Plan).

Supplemental Information Form. See Part VI § 1 of the Application Guide.

1. Field 2. Program to which the applicant is applying. Enter the program name Agricultural Genome to Phenome Initiative the program code (AG2PI). Accurate entry is critical.
2. Field 8. Conflict of Interest List. See Part VI § 1.8 of the Application Guide.

Representations Regarding Felony Conviction and Tax Delinquent Status for Corporate Applicants. This is required for corporate applicants. See Part VI § 2 of the Application Guide for a description of the term, “corporation.”

A. Funding Restrictions

Legislative mandated Indirect Cost (IDC)-Indirect Cost (IDC) not to exceed 30 percent of Total Federal Funds Awarded (TFFA) of the recipient. Section 1462(a) and (c) of the National Agricultural Research, Extension, and Teaching Policy Act of 1977 (NARETPA) limits IDC for the overall award to 30 percent of Total Federal Funds Awarded (TFFA) under a research, education, or extension grant. The maximum IDC rate allowed under the award is determined by calculating the amount of IDC using:

1. the sum of an institution’s negotiated indirect cost rate and the indirect cost rate charged by sub-awardees, if any; or
2. 30 percent of TFFA.

The maximum allowable IDC rate under the award, including the IDC charged by the sub-awardee(s), if any, is the lesser of the two rates.

If the result of number one is the lesser of the two rates, the grant recipient can charge the negotiated IDC rate on the prime award and the sub-award(s), if any. Any sub-awards would be subject to the sub-awardee’s negotiated IDC rate. The sub-awardee may charge its negotiated...
IDC rate on its portion of the award, provided the sum of the IDC rate charged under the award by the prime awardee and the sub-awardee(s) does not exceed 30 percent of the TFFA.

If the result of number two is the lesser of the two rates, then the maximum IDC rate allowed for the overall award, including any sub-award(s), is limited to 30 percent of the TFFA. That is, the IDC of the prime awardee plus the sum of the IDC charged by the sub-awardee(s), if any, may not exceed 30 percent of the TFFA.

In the event of an award, the prime awardee is responsible for ensuring the maximum indirect cost allowed for the award is not exceeded when combining IDC for the Federal portion (i.e., prime and sub-awardee(s)) and any applicable cost-sharing (see 7 CFR 3430.52(b)). Amounts exceeding the maximum allowable IDC are considered unallowable. See sections 408 and 410 of 2 CFR 200.

Successful applicants must not use grant funds awarded under the authority of this RFA to renovate or refurbish research, education, or extension space; purchase or install fixed equipment in such space; or to plan, repair, rehabilitate, acquire, or construct buildings or facilities (including site grading and improvement, and architect fees).
PART V. APPLICATION REVIEW REQUIREMENTS

A. NIFA’s Evaluation Process
NIFA evaluates each application in a two-part process. First, we screen each application to ensure that it meets the administrative requirements as set forth in this RFA. Second, a scientific peer-review process will be used to technically evaluate applications that meet the administrative requirements using a review panel (see NIFA Peer Review Process).

Scientific Peer Review Process:
1. NIFA selects reviewers for the review panel based upon their training and experience in relevant scientific, extension, or education fields, taking into account the following factors:
2. the level of relevant formal scientific, technical education, or extension experience of the individual, as well as the extent to which an individual is engaged in relevant research, education, or extension activities;
3. the need to include experts from various areas of specialization within relevant scientific, education, or extension fields;
4. the need to include other experts (e.g., producers, range or forest managers/operators, and consumers) who can assess relevance of the applications to targeted audiences and to program needs;
5. the need to include experts from a variety of organizational types (e.g., colleges, universities, industry, state and Federal agencies, and private profit and non-profit organizations) and geographic locations;
6. the need to maintain a balanced composition with regard to minority and female representation and an equitable age distribution; and
7. the need to include reviewers who can judge the effective usefulness of each application to producers and the general public.
8. after each peer review panel has completed its deliberations, the responsible program staff of NIFA will recommend that your project is either approved for support from currently available funds or declined due to insufficient funds or unfavorable review.

NIFA reserves the right to negotiate with the PD/PI and/or the submitting organization or institution regarding project revisions (e.g., reductions in the scope of work, funding level, period, or method of support) prior to recommending any project for funding.

After the review process has been completed, NIFA sends copies of reviews, not including the identity of reviewers, and a summary (if applicable) of the review panel comments to the applicant.

B. Evaluation Criteria
The following evaluation criteria will be used for the review of AG2PI applications:
1. Scientific Merit of the Application for Research:
   a. Novelty, innovation, uniqueness, and originality;
   b. Where model systems are used, ability to transfer knowledge gained from these systems to organisms of importance to U.S. agriculture;
   c. Conceptual adequacy of the research;
d. Clarity and delineation of objectives;
e. Adequacy of the description of the undertaking;
f. Suitability and feasibility of methodology and data management plan;
g. Demonstration of feasibility through preliminary data; and
h. Probability of success of the project given the level of scientific innovation, and risk-reward balance.

2. Qualifications of Project Personnel, Adequacy of Facilities, and Project Management:
   a. Qualifications of applicant (team) to conduct the proposed project, including performance record and potential for future accomplishments;
   b. Demonstrated awareness of previous and alternative approaches to the problem identified in the application;
   c. Institutional experience and competence in subject area;
   d. Adequacy of available or obtainable support personnel, facilities, and instrumentation; and
   e. Planning and administration of the proposed project, including: time allocated for systematic attainment of objectives; and planned administration of the proposed project and its maintenance, partnerships, strength of the collaborative efforts, and the planned dissemination of information for multi-institutional projects over the duration of the project.

3. Project Relevance:
   a. Documentation that the research supports the Purposes of AG2PI identified in Part I.B and is directed toward specific Program Priorities identified in Part I.C and is designed to accelerate progress toward the productivity and economic, environmental, and social sustainability of U.S. agriculture with respect to natural resources and the environment, human health and well-being, and rural communities.
   b. When international collaboration or activities are involved, the project leverages expertise, resources, and experience from beyond the United States to achieve greater impact or brings foreign or international research efforts to address issues relevant to U.S. agriculture.

C. Organizational Management Information
 Applicants must submit specific management information relating to an applicant prior to an award and update the information as needed. Applicants may only have to update their information if they had previously provided the information under this or another NIFA program. NIFA provides the requisite forms during the pre-award process. Although an applicant may be eligible for award under this program, there are factors that may exclude an applicant from receiving federal financial and nonfinancial assistance and benefits under this program (e.g., debarment or suspension of an individual, or a determination that an applicant is not responsible).

D. Application Disposition
 Applicants may withdraw at any time before NIFA makes a final funding decision. NIFA will retain all applications, including withdrawn applications and unfunded applications.
PART VI. AWARD ADMINISTRATION

A. General
Within the limit of funds authorized, the NIFA awarding official will make grants to responsible and eligible applicants whose applications are judged most meritorious under the procedures set forth in this RFA. The date specified by the NIFA awarding official as the effective date of the grant must be no later than September 30 of the federal fiscal year in which the project is approved for support and funds are appropriated for such purpose, unless otherwise permitted by law. The project need not be initiated on the grant effective date, but as soon thereafter as practical so that project goals may be attained within the funded project period. All funds granted by NIFA under this RFA may be used only for the purpose for which they are granted in accordance with the approved application and budget, regulations, terms and conditions of the award, applicable federal cost principles, USDA assistance regulations, and NIFA General Awards Administration Provisions, 7 CFR part 3430, subparts A through E.

Award Notice. The award document will provide pertinent instructions and information as described in 2 CFR 200.210 (see NIFA’s Terms and Conditions).

B. Administrative and National Policy Requirements
Several federal statutes and regulations apply to grant applications and the projects outlined in this RFA (some are listed here: Federal Regulations). Unless specifically noted by statute or award-specific requirements, NIFA Policy Guide applies to all NIFA awards.
PART VII. OTHER INFORMATION

A. Use of Funds and Changes in Budget

Delegation of fiscal responsibility. Unless the terms and conditions of the award state otherwise, awardees may not in whole or in part delegate or transfer to another person, institution, or organization the responsibility for use or expenditure of award funds.

Changes in Budget or Project Plans. In accordance with 2 CFR 200.308, awardees must request prior approval from NIFA for the following program or budget-related reasons (the awardee is subject to the terms and conditions identified in the award):

1. Change in the scope or the objective of the project or program without prior written approval (even if there is no associated budget revision requiring);
2. Change in a key person specified in the application or the federal award;
3. Disengagement from the project for more than three months, or a 25 percent reduction in time devoted to the project;
4. Inclusion of costs that require prior approval in accordance with 2 CFR 200 Subpart E (Cost Principles), or 45 CFR Part 75 Appendix IX, (Principles for Determining Costs Applicable to Research and Development under Awards and Contracts with Hospitals), or 48 CFR, unless waived by the federal awarding agency,
5. Part 31, Contract Cost Principles and Procedures;
6. Transfer of funds budgeted for participant support costs to other categories of expense (§200.75 Participant support costs);
7. Sub-awarding, transferring or contracting out of any work under a federal award, including fixed amount sub-awards (see §200.332, Fixed Amount Sub-awards), unless described in the application and funded in the approved federal awards. This provision does not apply to the acquisition of supplies, material, equipment, or general support services;
8. Changes in the approved cost-sharing or matching provided by the non-federal entity; and
9. The need for additional federal funds to complete the project.

B. Confidential Aspects of Applications and Awards

When an application results in an award, it becomes a part of NIFA transaction records, which are available to the public. Information that the Secretary of Agriculture determines to be confidential, privileged, or proprietary in nature will be held in confidence to the extent permitted by law. Therefore, applicants should clearly mark any information within the application they wish to have considered as confidential, privileged, or proprietary. NIFA will retain a copy of an application that does not result in an award for three years. Such an application will be released only with the consent of the applicant or to the extent required by law. An applicant may withdraw at any time prior to the final action thereon.

C. Regulatory Information

This program is not subject to the provisions of Executive Order 12372, which requires intergovernmental consultation with state and local officials. Under the provisions of the Paperwork Reduction Act of 1995 (44 U.S.C. Chapter 35), the collection of information requirements contained in this notice have been approved under OMB Document No. 0524-0039.
# APPENDIX I: AGENCY CONTACT

## Program Contact

<table>
<thead>
<tr>
<th>Name</th>
<th>Email</th>
<th>Telephone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ed Kaleikau</td>
<td><a href="mailto:Edward.kaleikau@usda.gov">Edward.kaleikau@usda.gov</a></td>
<td>816-926-1741</td>
</tr>
<tr>
<td>Lakshmi Matukumalli</td>
<td><a href="mailto:Lakshmi.matukumalli@usda.gov">Lakshmi.matukumalli@usda.gov</a></td>
<td>816-926-1189</td>
</tr>
</tbody>
</table>

NIFA’s Mailing Address:
National Institute of Food and Agriculture
U.S. Department of Agriculture
2312 East Bannister Road
Mail Stop 10000 (ten thousand)
Kansas City, MO 64131
# APPENDIX II: GLOSSARY OF TERMS

<table>
<thead>
<tr>
<th>Name</th>
<th>Acronyms</th>
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<tbody>
<tr>
<td>Authorized Representative</td>
<td>AR</td>
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<tr>
<td>Catalog of Federal Domestic Assistance</td>
<td>CFDA</td>
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<tr>
<td>Data Management Plan</td>
<td>DMP</td>
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<tr>
<td>National Institute of Food and Agriculture</td>
<td>NIFA</td>
</tr>
<tr>
<td>Request for Applications</td>
<td>RFA</td>
</tr>
<tr>
<td>United States Department of Agriculture</td>
<td>USDA</td>
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APPENDIX III: DEFINITIONS

Refer to 7 CFR 3430 *Competitive and Noncompetitive Non-formula Federal Assistance Programs – General Award Administrative Provisions* for additional definitions.

<table>
<thead>
<tr>
<th>Terms</th>
<th>Definitions</th>
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<tr>
<td>Continuation Award</td>
<td>An award instrument by which NIFA agrees to support a specified level of effort for a predetermined period of time with a statement of intention to provide additional support at a future date, provided that performance has been satisfactory, appropriations are available for this purpose, and continued support would be in the best interest of the federal government and the public.</td>
</tr>
<tr>
<td>Matching</td>
<td>The process through which a grant recipient matches awarded USDA funds with cash and in-kind contributions on a dollar-for-dollar basis. The matching funds must derive from non-Federal sources.</td>
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<tr>
<td>New Application</td>
<td>An application not previously submitted to a program.</td>
</tr>
<tr>
<td>Renewal Application</td>
<td>A project application that seeks additional funding for a project beyond the period that was approved in an original or amended award.</td>
</tr>
<tr>
<td>Resubmitted Application</td>
<td>A project application that was previously submitted to a program, but the application was not funded.</td>
</tr>
<tr>
<td>Resubmitted Renewal Application</td>
<td>A project application that requests additional funding for a project beyond the period that was approved in the original award. This is an application that had previously been submitted for renewal to but not funded.</td>
</tr>
</tbody>
</table>