



# REQUEST FOR APPLICATIONS

## *Agricultural Genome to Phenome Initiative*

**MODIFICATIONS: 4/7/2023** – This RFA has been modified from the original announcement. Edits are indicated using track changes and red font so the public/potential applicants can identify the changes within the solicitation.

Edits appear on pages: 1, 7, 9, and 24

FUNDING YEAR: Fiscal Year (FY) 2023

APPLICATION DEADLINE: June 1, 2023

ANTICIPATED PROGRAM FUNDING: \$2,308,369

AVERAGE AWARD RANGE: \$20,000 – ~~\$925,000~~ **\$1,100,000**

FUNDING OPPORTUNITY NUMBER: USDA-NIFA-OP-009622

ASSISTANCE LISTING NUMBER: 10.332

LETTER OF INTENT DEADLINE: Not Required

**INITIAL ANNOUNCEMENT**  
National Institute of Food and Agriculture  
United States Department of Agriculture

**Assistance Listing Number (ALN):** The Agricultural Genome to Phenome Initiative (AG2PI) is listed in the Assistance Listings under number 10.332.

**Table 1:** Key Dates and Deadlines

Task Description	Deadline
<b>Application:</b>	5:00 P.M. Eastern, June 1, 2023 [Ref to <a href="#">Part I § C of this RFA</a> ]
<b>Letter of Intent:</b>	Not Required
<b>Applicants Comments:</b>	Within six months from the issuance of this notice ( <i>NIFA may not consider comments received after the sixth month</i> )

**Advancing Diversity, Equity, Inclusion, and Accessibility.** The National Institute of Food and Agriculture (NIFA) recognizes research, education, and extension efforts will have the greatest impacts when programs are grounded in DEIA. NIFA is committed to enhancing diversity, equity, inclusion, and accessibility of programs and encourages individuals, institutions, and organizations from underserved communities to apply to funding opportunities as lead, co-lead, or subaward recipient(s), and to engage as leaders in the peer panel review process to support the development of strong networks and collaborations. NIFA encourages applications that engage diverse communities and have broad impacts through research, education, extension, and integrated activities to address current and future challenges.

**Stakeholder Input.** 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 uses 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](mailto:Policy@usda.gov) (email is for comments only). Please use the following subject line: Response to the Agricultural Genome to Phenome Initiative RFA.

**Centers of Excellence.** Applicants are encouraged to visit NIFA's [Centers of Excellence \(COE\)](#) for information on COE designation process, including COE criteria, and a list of programs offering COE opportunities. A recording of COE outreach and COE implementation webinars are also available.

## **EXECUTIVE SUMMARY**

This notice identifies the objectives for the Agricultural Genomes to Phenomes Initiative (AG2PI) projects, deadlines, funding information, eligibility criteria for projects and applicants, and application forms and associated instructions. NIFA requests applications for the AG2PI for fiscal year (FY) 2023 that enable and support novel management and modeling tools for improved predictions and, therefore, selection of superior individuals or cultivars in genetic populations.

The intent of the AG2PI program is to support integration of diverse disciplines that can effectively harness the power of phenomics, genomics, engineering, genetic diversity, and data science for improving production, sustainability, and climate resiliency of crop and livestock species.

## TABLE OF CONTENTS

<b>EXECUTIVE SUMMARY .....</b>	<b>3</b>
<b>TABLE OF CONTENTS .....</b>	<b>4</b>
<b>PART I. FUNDING OPPORTUNITY DESCRIPTION .....</b>	<b>6</b>
A. Legislative Authority .....	6
B. Purpose and Priorities .....	6
C. Program Area Description .....	7
<b>PART II. AWARD INFORMATION .....</b>	<b>9</b>
A. Available Funding .....	9
B. Application Restrictions .....	9
C. Project and Grant Types .....	9
D. Ethical Conduct of Funded Projects .....	9
<b>PART III. ELIGIBILITY INFORMATION.....</b>	<b>11</b>
A. Eligibility Requirements.....	11
B. Cost Sharing or Matching.....	11
C. Centers of Excellence .....	12
<b>PART IV. APPLICATION AND SUBMISSION .....</b>	<b>13</b>
A. Method of Application .....	13
B. Content and Form of the Application .....	13
C. Funding Restrictions.....	16
<b>PART V. APPLICATION REVIEW REQUIREMENTS .....</b>	<b>18</b>
A. NIFA's Evaluation Process .....	18
B. Evaluation Criteria.....	19
C. Centers of Excellence .....	20
D. Organizational Management Information.....	20
E. Application Disposition.....	21
<b>PART VI. AWARD ADMINISTRATION .....</b>	<b>22</b>
A. General .....	22
B. Administrative and National Policy Requirements.....	22
<b>PART VII. OTHER INFORMATION .....</b>	<b>23</b>
A. Use of Funds and Changes in Budget.....	23
B. Confidential Aspects of Applications and Awards.....	23
C. Regulatory Information .....	23
D. Limited English Proficiency.....	24
<b>APPENDIX I: AGENCY CONTACT.....</b>	<b>25</b>
<b>APPENDIX II: GLOSSARY OF TERMS.....</b>	<b>26</b>
<b>APPENDIX III: DEFINITIONS .....</b>	<b>27</b>

## TABLE OF TABLES

Table 1: Key Dates and Deadlines.....	2
Table 2: Program Key Information.....	7
Table 3: Steps to Obtain Application Materials.....	13
Table 4: Help and Resources .....	13
Table 5: Key Application Instructions.....	13

## **PART I. FUNDING OPPORTUNITY DESCRIPTION**

### **A. Legislative Authority**

The Agriculture Genome to Phenome Initiative is authorized under [7 U.S.C. 5924](#).

### **B. Purpose and Priorities**

The National Institute of Food and Agriculture's Agricultural Genome to Phenome Initiative (AG2PI) is intended 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.

The priorities of this program are to:

- (1) Promote effective collaborations across academic disciplines by integrating diverse perspectives and expertise through team science and communication.
- (2) Develop models connecting traits such as yield, feed conversion efficiency, production efficiency and nutritional quality with environmental variability, genetics, and climate.
- (3) Employ common data architectures across crop and animal systems consistent with FAIR data principles (<https://www.go-fair.org/fair-principles/>).
- (4) Engineer novel hardware, computing, and information systems to improve and democratize acquisition, interpretation, and analysis of large datasets of high periodicity imagery, spectra, phenotypes, genotypes and accompanying metadata.
- (5) Study the potential relevance of diverse germplasm as a source of unique genes that may be of importance in the future genetic improvement of crops and animals of importance to the agriculture sector of the United States.
- (6) Improve the quality and availability of crop and animal genetic resources that may reduce the economic impacts of climate change on the agriculture sector of the United States.

The AG2PI is aligned with the following USDA Strategic Goals through funding foundational research to meet:

1. Strategic Goal 1: Combat Climate Change to Support America's Working Lands, Natural Resources and Communities.
2. Strategic Goal 2: Ensure America's Agricultural System is Equitable, Resilient, and Prosperous.
3. Strategic Goal 3: Foster an Equitable and Competitive Marketplace for All Agricultural Producers.
4. Strategic Goal 4: Make Safe, Nutritious Food Available to All Americans.

The complete USDA Strategic Plan is found at

(<https://www.usda.gov/sites/default/files/documents/usda-fy-2022-2026-strategic-plan.pdf>)

**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 U.S.

For a program informational webinar, please visit the [NIFA calendar](#) for dates, event registration, and link. If you need a reasonable accommodation to participate in any of the informational webinars listed, please contact the event host listed no later than 10 days prior to the event.

**Table 2: Program Key Information**

Title	Description
Program Code:	AG2PI
Program Code Name:	Agricultural Genome to Phenome Initiative
CFDA Number	10.332
Project Type:	Integrated <b>Projects (Research and Education)</b> only
Grant Type:	Standard, Conference
Application Deadline	<b>Thursday, June 1, 2023, (5:00pm ET)</b>
Grant Duration:	a. 36-60 months for <b>Integrated Projects</b> b. Up to 12 months for <b>Conference Grants</b>
Anticipated # of Awards:	2 – 3
Maximum Award Amount:	a. Including indirect costs: <del>\$925,000</del> <b>\$1,100,000</b> for <b>Integrated</b> . b. <del>\$20,000</del> <b>\$50,000</b> for <b>Conference Grants</b>

### C. Program Area Description

Integrated applications must directly address at least two of the following goals:

1. Develop new or augment existing benchmark datasets comprised of genetic, phenotypic, environmental, climatic, and physiological data on crops or livestock for the purpose of testing, training, and comparing predictive analytic tools by the data science community with potential wide application in agricultural fields.
2. Address technological or institutional barriers that prevent effective collaboration with for-profit entities whose involvement is critical for development of robust predictive analytic tools for agricultural genomes to phenomes research.
3. Combine 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 plant and animal management recommendations for farmers and ranchers;
4. Improve curricula and training involving cross-disciplinary research approaches for students and scientists in order to develop expertise in agricultural genome to phenome research;
5. Build on genomic research 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;

**Other Program Information:**

1. Applications must include a budgeted plan for data management that includes making data publicly available and that adheres to FAIR data principles (<https://www.go-fair.org/fair-principles/>)
2. Applications must provide a compelling case for why it is essential to bring together substantially different science and engineering disciplines to address a specific genome to phenome need.
3. Applications that demonstrate coordination and collaboration with international partners, especially public-private partnerships, and other genome to phenome projects worldwide will be viewed favorably. However, applications must be submitted by eligible U.S. institutions.
4. Consortia of eligible entities are encouraged to apply for this funding opportunity.



## PART II. AWARD INFORMATION

### A. Available Funding

The amount available for the Agriculture Genome to Phenome Initiative (AG2PI) in FY 2023 is approximately \$2,308,369. For FY 2023, this program will accept applications for standard integrated projects up to ~~\$925,000~~ **\$1,100,000** (total, including indirect costs, not per year). Project periods for this program are limited to a maximum duration of ~~three~~ **five years for Integrated Projects and 1 year for Conference Grants**. 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. Application Restrictions

NIFA will evaluate applications using the criteria described in [Part V](#) of this RFA and are subject to the due dates herein (see Appendix III for definition).

Applications for FY2023 are limited to the following application types:

***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 Integrated (**Research and Education**) applications, and Conference Grant Applications.

**Integrated Research and Education Projects:** The two functions should be interwoven throughout the life of the project and act to complement and reinforce one another. The functions should be interdependent and necessary for success with no more than two-thirds of the project's budget focused on any one single component.

The proposed education (teaching and teaching-related) component of an Integrated Project should develop human capital relevant to overall program goals for U.S. agriculture. An education or teaching activity is formal classroom instruction, laboratory instruction, and practicum experience in the food and agricultural sciences and other related matters such as faculty development, student recruitment and services, curriculum development, instructional materials and equipment, and innovative teaching methodologies.

### 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

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 highly recommended information about grants and other resources to help understand the Federal awards process.

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 (1) through (8).

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 highly recommended information about grants and other resources to help understand the Federal awards process.

Duplicate or Multiple Submissions – submission of duplicate or predominantly overlapping applications is not allowed. NIFA will disqualify both applications if an applicant submits multiple applications that are duplicative or substantially overlapping to NIFA programs within the same fiscal year.

### B. Cost Sharing or Matching

**Match Required** – Applicants **MUST** provide matching contributions on a dollar-for-dollar basis for all Federal funds awarded under the AG2PI. 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:** NIFA may waive the matching funds requirement for a grant if one of the following applies:

1. 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
2. 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.

**C. Centers of Excellence**

Pursuant to [Section 7214 of the Agricultural Act of 2014 \(Pub. L. 113-79\)](#), NIFA will recognize and prioritize COE applicants that carry out research, extension, and education activities that relate to the food and agricultural sciences. A COE is composed of one or more of the following entities that provide financial or in-kind support to the COE.

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 (1) through (8).

## 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](https://www.grants.gov) and [Grants 101](#). **Table 3** provides instructions on how to obtain an electronic application. **Part III** of the [NIFA Grants Application Guide](#) contains detailed information regarding the [Grants.gov](https://www.grants.gov) registration process. The [NIFA Grants Application Guide](#) is contained in the specific funding opportunity package or a sample of the guide can be found [here](#). When applying for a NIFA award, it is important to reference the version of the guide that is included in the specific funding opportunity application package.

**Table 3.** Steps to Obtain Application Materials

Steps	Action
<b>Step One: Register</b>	<i>New Users</i> to <a href="https://www.grants.gov">Grants.gov</a> must register early with <a href="https://www.grants.gov">Grants.gov</a> prior to submitting an application ( <a href="#">Register Here</a> ).
<b>Step Two: Download Adobe</b>	Download and Install <a href="#">Adobe Reader</a> (see <a href="#">Adobe Software Compatibility</a> for basic system requirements).
<b>Step Three: Find Application</b>	Using this funding opportunity number <b>USDA-NIFA-OP-009622</b> , search for application here: <a href="#">Opportunity Package</a> .
<b>Step Four: Assess Readiness</b>	Contact an AR prior to starting an application to assess the organization's readiness to submit an electronic application.

**Table 4:** Help and Resources

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

### B. Content and Form of the Application

The [NIFA Grants Application Guide](#) is part of the corresponding application package for this RFA. The RFA overrides the [NIFA Grants Application Guide](#) if there is a discrepancy between the two documents. 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**

Instruction	References (All references are to the NIFA Grants Application Guide)
Attachments must be in a portable document format (PDF) format.	Part IV
Check the manifest of submitted files to verify attachments are in the correct format.	Part IV
Conduct an administrative review of the application before submission.	Part IV
Follow the submission instructions.	Part IV
Provide an accurate email address, where designated, on the SF-424 R&R.	Part V
Contact the <a href="#">Grants.gov</a> helpdesk for technical support and keep a record of the correspondence.	N/A
Contact NIFA if applicant does not receive correspondence from NIFA regarding an application within 30 days of the application deadline.	N/A

**SF 424 R&R Cover Sheet.** See **Part V** of the [NIFA Grants Application Guide](#) for the required certifications and assurances.

**SF 424 R&R Project/Performance Site Location(s).** See **Part V** of the [NIFA Grants Application Guide](#)

**R&R Other Project Information Form.** See **Part V** of the [NIFA Grants Application Guide](#)

1. Field 7. Project Summary (PS)/Abstract. The PS must show how the project goals align with the project goals of the AG2PI. See **Part V** of the [NIFA Grants 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. The PN must include all the following:
  - a. Introduction;
  - b. Rational and significance;
  - c. Objectives;
  - d. Approach;
  - e. Project timeline;
  - f. Data management plan (DMP);

- g. Centers of Excellence Justification; Applicants requesting consideration of COE status must include their justification at the end of their Project Narratives and within the page limits provided for the project narratives; and
- h. Field 12, Add Other Attachments. See **Part V** of the [NIFA Grants Application Guide](#)

**R&R Senior/Key Person Profile (Expanded).** See **Part V** of the [NIFA Grants Application Guide](#) for profile requirements, details about the biographical sketch, and suggested support templates.

**R&R Personal Data.** This information is voluntary and is not a precondition of award (see **Part V** of the [NIFA Grants Application Guide](#)).

**R&R Budget.** See **Part V** of the [NIFA Grants Application Guide](#).

1. 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 \(the Uniform Guidance\),”](#) and [7 CFR 3430, “Competitive and Noncompetitive Non-Formula Federal Assistance Programs – General Award Administrative Provisions.”](#)
2. Indirect costs (IDC) – See [Part IV § C](#) of this RFA for funding restrictions regarding indirect cost, and **Part V** of the [NIFA Grants 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 will be considered during the merit review process (see [Part V § B](#) of this RFA, [NIFA’s Data Management Plan](#)). If you need help in preparing a data management plan or have questions about what constitutes a data management plan for this role (including questions about data privacy, etc.), please contact the NIFA program contacts listed at the end of this RFA.

**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*).

**Supplemental Information Form.** See **Part V** of the [NIFA Grants Application Guide](#).

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

### **C. Funding Restrictions**

**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 is allowed to 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.

If the applicant wants full IDC (Indirect Cost), but does not have a negotiated rate, and NIFA is the cognizant agency, the applicant must calculate an IDC rate in order to request IDC.



Applicants are not required to complete the IDC package during the application process. Applicants need only to calculate an IDC rate to serve as a basis for requesting IDC, please see National Institute of Food and Agriculture ([usda.gov](http://usda.gov)) for additional resources. If awarded, the applicant will be required to submit a complete IDC proposal package to obtain a negotiated rate.

Organizations that do not have a current negotiated (including provisional) rate, may elect the De Minimis rate (2 CFR 200.414). The Uniform Guidance offers the option of electing to charge a de Minimis rate of 10 percent of modified total indirect costs (MTDC) which may be used indefinitely. As described above and in 2 CFR 200.403, costs must be charged consistently as either indirect or direct costs but may not be double charged or inconsistently charged as both. If elected, this methodology must be used consistently for all Federal awards until such time as a non-Federal entity chooses to negotiate for a rate, which it may do at any time.

## 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 set forth in this RFA. All administrative requirements must be met in order for the application to proceed to the next level of review. Second, a scientific peer-review process will be used to technically evaluate applications that have met the administrative requirements using a review panel (see [NIFA Peer Review Process](#)).

#### **Scientific Peer Review Process:**

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:

1. 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.
2. the need to include experts from various areas of specialization within relevant scientific, education, or extension fields.
3. the need to include other experts (e.g., producers, range, or forest managers/operators, researchers, public health practitioners, educators, consumers, and commercial reviews) who can assess relevance of the applications to targeted audiences and to program needs.
4. 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.
5. the need to maintain a balanced composition with regard to race, ethnicity, gender representation, and an equitable age distribution.
6. the need to include reviewers who can judge the effective usefulness of each application to producers and the general public.

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 PD.

***Conflicts of interest.*** NIFA takes extreme care to prevent any actual or perceived conflicts of interest that may influence the review or evaluation (see [NIFA Peer Review Process for Competitive Grant Applications](#)).

## **B. Evaluation Criteria**

The following evaluation criteria will be used for the review of AG2PI applications:

### **1. Proposal Relevance:**

#### **For Integrated Proposals**

- a. Documentation that the research supports the Purposes of AG2PI identified in Part I.B, is directed toward specific Program Priorities identified in Part I.C, and is designed to accelerate productivity, 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. Education Plan. Application includes a detailed plan for integrating curricula development with training and cross-disciplinary research toward producing the skilled scientific workforce required for implementation of goals identified in Part I. B;
- c. Clarity and delineation of objectives including why it is essential to bring together different science and engineering disciplines to achieve them;
- d. Adequacy of the description of the undertaking including how contributing disciplines will be integrated;
- e. Suitability of the data management plan;
- f. Probability of success of the project given the level of scientific innovation, and risk-reward balance.
- g. When international or public-private partnerships are involved, the project leverages expertise, resources, and experience to achieve greater impact or brings foreign or international research efforts to address issues relevant to U.S. agriculture.

#### **For Conference Proposals**

- a. Demonstrated need. Justification of conference, curriculum proposed, or planned activities. Application adequately addresses at least one of the FY 2023 AG2PI priorities referenced in Part I.B.
- b. Adequacy of background research. Listing of recent meetings, outreach activities or other activities on the same subject.
- c. Stakeholder involvement. Application includes names and organizational affiliations of the chair and other members of the organizing committee or planning team members, including information on how stakeholders were selected, how their input was solicited and incorporated, and a description of their future involvement in the project.
- d. Quality of proposed program (or agenda) for the conference activity and planning proposals, including a listing of scheduled participants, their institutional affiliations, and a description of their expertise. For curriculum products, a description of the program including the target audience, expected number of participants, a detailed syllabus, experiential training activities, how the program fits within ongoing activities.
- e. Describe how the impact of the programs being proposed will be assessed.
- f. Potential for the project to make a difference.

## **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. 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.
- d. Demonstration of strong team coupling, high leveraging, or co-development of integrated or complementary tools and techniques. Integration of contributing disciplines' knowledge and modes of thinking.

## **3. Proposal Quality for All Project Types**

- a. Conceptual adequacy. Application clearly states objectives and how they will be achieved within the timeframe, scope, and budget of the proposed project;
- b. Approach. The proposed method and approach are appropriate to project objectives;
- c. Involvement of appropriate and relevant expertise;
- d. Experience of key project personnel;
- e. Appropriateness of budget;
- f. Feasibility, probability of success; and
- g. Adherence to guidelines and appropriate Data Management Plan.

### **C. Centers of Excellence**

In addition to evaluating applicants using the criterion listed in [Part V § B](#) of this RFA, NIFA will use the COE standards described in this RFA to evaluate applicants that rank highly meritorious and requested to be considered as a COE. In instances where applicants are found to be equally meritorious with the application of a non-COE applicant, NIFA will prioritize the COE applicant meeting the COE criteria. NIFA will effectively use the COE prioritization as a “tie breaker.” Applicants that rank highly meritorious but who did not request consideration as a COE or who are not deemed to have met the COE standards may still receive funding.

Applicants that meet the COE requirements will have the COE designation in their notice of award. Entities recognized as COE will maintain that distinction for the duration of their period of performance or as identified in the terms and conditions of that award.

### **D. Organizational Management Information**

Applicants must submit specific management information prior to an award and update the information as needed. Applicants may only need to provide an update if there was a change in previously provided 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).

**E. 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 200.211](#) (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, [48 CFR Part 31, Contract Cost Principles and Procedures](#);
5. Transfer of funds budgeted for participant support costs to other categories of expense ([2 CFR 200.456 Participant support costs](#));
6. Sub-awarding, transferring or contracting out of any work under a federal award, including fixed amount sub-awards (see [2 CFR 200.333, 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.
7. Changes in the approved cost-sharing or matching provided by the non-federal entity; and
8. 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](#).

**D. Limited English Proficiency**

NIFA offers language access services, such as interpretation and translation of vital information, free of charge. If you need interpretation or translation services, please visit [NIFA Language Access Services](#) or contact Lois Tuttle, Equal Opportunity Specialist, at [Lois.Tuttle@usda.gov](mailto:Lois.Tuttle@usda.gov) or (443) 386-9488.



## APPENDIX I: AGENCY CONTACT

### **Program Contacts**

Christian Tobias

[Christian.Tobias@usda.gov](mailto:Christian.Tobias@usda.gov)

610-312-7619

Angelica Van Goor

[Angelica.Van.Goor@usda.gov](mailto:Angelica.Van.Goor@usda.gov)

816-584-5304

For administrative questions related to;

1. Grants.gov, see Part IV of this RFA
2. Other RFA or application questions, please email [grantapplicationquestions@usda.gov](mailto:grantapplicationquestions@usda.gov)
3. Awards under this RFA, please email [awards@usda.gov](mailto:awards@usda.gov)

### **U.S. Postal Mailing Address:**

National Institute of Food and Agriculture

U.S. Department of Agriculture

P.O. Box 419205, MS 10000

Kansas City, MO 64141-6205

### **Courier/Package Delivery Address:**

National Institute of Food and Agriculture

U.S. Department of Agriculture

2312 East Bannister Road, MS 10000

Kansas City, MO 64141-3061

## **APPENDIX II: GLOSSARY OF TERMS**

### **Glossary of Terms**

Agricultural Genome to Phenome Initiative – AG2PI

Assistance Listing Number-ALN

Authorized Representative – AR

Centers of Excellence – COE

Data Management Plan – DMP

Indirect Costs – IDC

Minority Serving Institutions – MSI

National Agricultural Research, Extension, and Teaching Policy Act of 1977 – NARETPA

National Institute of Food and Agriculture – NIFA

Portable document format – PDF

Project Director – PD

Project Narrative – PN

Project Summary – PS

Request for Application – RFA

Research, Education, and Economics – REE

Total Federal Funds Awarded – TFFA

United States Department of Agriculture – USDA

### **APPENDIX III: DEFINITIONS**

Refer to [7 CFR 3430 Competitive and Noncompetitive Non-formula Federal Assistance Programs – General Award Administrative Provisions](#) for additional definitions.

#### **Definitions**

##### **Continuation Award:**

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.

##### **Matching:**

The process through which a grant recipient match awarded USDA funds with cash and in-kind contributions on a dollar-for-dollar basis. The matching funds must derive from non-Federal sources.

##### **New Application:**

An application not previously submitted to a program.

##### **Renewal Application:**

A project application that seeks additional funding for a project beyond the period that was approved in an original or amended award.

##### **Resubmitted Application:**

A project application that was previously submitted to a program, but the application was not funded.

##### **Resubmitted Renewal Application:**

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.