

Global Change, Ultraviolet Radiation Monitoring Program

2008 Request for Applications

APPLICATION DEADLINE: May 09, 2008



U.S. Department of Agriculture



Cooperative State Research, Education, and Extension Service

**COOPERATIVE STATE RESEARCH, EDUCATION, AND EXTENSION SERVICE;
U.S. DEPARTMENT OF AGRICULTURE**

Global Change, Ultraviolet Radiation Monitoring Program

INITIAL ANNOUNCEMENT

CATALOG OF FEDERAL DOMESTIC ASSISTANCE: This program is listed in the Catalog of Federal Domestic Assistance under **10.200**.

DATES: Applications must be received by close of business (COB) on **May 09, 2008** (5:00 p.m. Eastern Time). Applications received after this deadline will normally not be considered for funding. Comments regarding this Request For Applications (RFA) are requested within six months from the issuance of this notice. Comments received after that date will be considered to the extent practicable.

STAKEHOLDER INPUT: The Cooperative State Research, Education, and Extension Service (CSREES) is requesting comments regarding this RFA from any interested party. These comments will be considered in the development of the next RFA for the program, if applicable, and will be used to 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)). This section requires the Secretary to solicit and consider input on a current RFA from persons who conduct or use agricultural research, education and extension for use in formulating future RFAs for competitive programs. Written stakeholder comments on this RFA should be submitted in accordance with the deadline set forth in the DATES portion of this Notice.

Written stakeholder comments should be submitted by mail to: Policy, Oversight, and Funds Management Staff; Office of Extramural Programs; Cooperative State Research, Education, and Extension Service; USDA; STOP 2299; 1400 Independence Avenue, SW; Washington, DC 20250-2299; or via e-mail to: RFP-OEP@csrees.usda.gov. (This e-mail address is intended only for receiving comments regarding this RFA and not requesting information or forms.) In your comments, please state that you are responding to the Global Change, Ultraviolet Radiation Monitoring Program RFA.

EXECUTIVE SUMMARY: CSREES announces the availability of grant funds and requests applications for the Global Change, Ultraviolet Radiation Monitoring Program (GCUVM) for fiscal year (FY) 2008 to provide climatological data on ultraviolet radiation (UV-B) reaching the Earth's surface and assess the combined impact of UV-B and other stressors on crops, forests, and rangelands. The amount available for support of this program in FY 2008 is approximately \$1.5 million.

This notice identifies the objectives for GCUVM projects, the eligibility criteria for projects and applicants, and the application forms and associated instructions needed to apply for a GCUVM grant. CSREES additionally requests stakeholder input from any interested party for use in the development of the next RFA for this program.

Table of Contents

PART I—FUNDING OPPORTUNITY DESCRIPTION4
A. Legislative Authority and Background.....4
B. Purpose and Priorities4
C. Program Area Description5
PART II—AWARD INFORMATION.....7
A. Available Funding7
B. Types of Applications.....7
C. Scientific Peer Review7
PART III—ELIGIBILITY INFORMATION.....8
A. Eligible Applicants8
B. Cost Sharing or Matching8
PART IV—APPLICATION AND SUBMISSION INFORMATION9
A. Address to Request Application Package.....9
B. Content and Form of Application Submission.....10
C. Submission Dates and Times12
D. Funding Restrictions.....13
E. Other Submission Requirements.....13
PART V—APPLICATION REVIEW REQUIREMENTS14
A. General.....14
B. Evaluation Criteria.....14
C. Conflicts of Interest and Confidentiality15
D. Organizational Management Information16
PART VI—AWARD ADMINISTRATION17
A. General.....17
B. Award Notice.....17
C. Administrative and National Policy Requirements18
D. Expected Program Outputs and Reporting Requirements19
PART VII—AGENCY CONTACT20
PART VIII—OTHER INFORMATION21
A. Access to Review Information.....21
B. Use of Funds; Changes21
C. Confidential Aspects of Applications and Awards.....22
D. Regulatory Information22
E. Definitions.....22

PART I—FUNDING OPPORTUNITY DESCRIPTION

A. Legislative Authority and Background

The authority for this program is contained in subsection (c)(1)(B) of section 2 of the Competitive, Special, and Facilities Research Grant Act, of Pub. L. No. 89-106, as amended (7 U.S.C. 450i(c)(1)(B)). Of the administrative regulations at 7 CFR part 3400, only section 3400.1, Applicability of Regulations, subpart C, Peer and Merit Review Arranged by Grantees, and subpart D, Annual Reports, apply to the Special Grants Programs solicited and awarded under the authority of section 2(c)(1)(B) of this Act (7 U.S.C. 450i(c))

In accordance with the statutory authority, grants awarded under this program will be for the purpose of facilitating or expanding ongoing State-Federal food and agricultural research programs that: (i) Promote excellence in research on a regional and national level; (ii) promote the development of regional research centers; (iii) promote the research partnership between the Department of Agriculture, colleges and universities, research foundations, and State agricultural experiment stations for regional research efforts; and (iv) facilitate coordination and cooperation of research among States through regional research grants.

B. Purpose and Priorities

The USDA has long been concerned about high levels of ultraviolet radiation (UV-B) from the Sun, which are known to have harmful effects on agricultural crops, rangelands, forest ecosystems, humans, and livestock. The purpose of the GCUVM Program is to support research which:

- generates an uninterrupted stream of climatology data;
- determines mechanisms and symptoms of plant and animal response; and
- applies tightly integrated models to assess regional and national impacts of multiple plant stressors.

First, GCUVM documents long-term trends in ultraviolet radiation in agricultural settings, e.g., fields, forests, and range. These data provide a much needed history of dosage, along with seasonal and geographic variability. Second, through the application of controlled experiments, GCUVM seeks to understand how ultraviolet radiation alters plant and animal physiology and development, and disturbs the ecosystems where they reside. This creates a knowledge base of the plant and plant community responses. Finally, based on crop growth models (adapted for UV-B inputs), knowledge of cultural practices, data on the Earth's climate, radiation data, and satellite data, GCUVM provides a better understanding of regional climate-crop interactions. This climate-crop assessment framework is used to predict crop responses to environmental stressors, and ultimately provide valuable information for producers and policy makers as they deal with a changing climate. The annually updated strategic plan describing this effort can be found at http://uvb.nrel.colostate.edu/UVB/strategic_plan.pdf.

C. Program Area Description

Applications are being solicited for research projects in the Global Change, Ultraviolet Radiation Monitoring Program under the following areas. In FY 2008, *each application submitted must address one or more of these program areas:*

1. Ultraviolet radiation climatology, total funding available: up to \$1,150,000 for one year

To understand better the impacts of UV-B radiation on U.S. agricultural production systems, CSREES is soliciting proposals for work that would generate and deliver high-quality UV-B radiation data for use by USDA and plant and animal scientists nationally. To be useful, multi-band and broadband UV-B data must be collected at a minimum of 25 locations around the continental U.S., covering different eco-regions, elevations, and land-use types. Sites should include a mix of crop, forest, and range lands. Measurements should be taken at least every quarter hour and made available via the Internet within 48 hours of collection. Companion measurements of photosynthetically active radiation and basic weather information (temperature, humidity, and barometric pressure) are also expected to be part of the data stream. Extensive quality assurance and quality control protocols should be included to ensure that the delivered data meet the highest possible scientific standards. In addition to the above requirements, the immediate need for uninterrupted data demands that only existing, currently operational UV-B networks will be considered eligible for funding. Some accommodation will be made for augmenting existing UV networks that otherwise meet stated expectations of network size and siting, and data quality and availability. However, GCUVM funds will not be awarded to develop a UV-B network unless it already provides some measurement of UV radiation. **In FY 2008, CSREES anticipates funding one award for this program area.**

2. Plant responses to UV-B, total funding available: up to \$125,000 for one year

This program area seeks to evaluate the *isolated* effects of elevated UV-B on agricultural crops, livestock, forest, and range resources, as well as the *combined* effects of UV-B and other stress factors such as moisture (drought), elevated temperature, ozone, soil nutrients, and elevated CO₂. However, because of the importance of crops in food, feed, fiber, and energy production, plant effects have priority in this program area at the current time. Plant susceptibility and adaptability to elevated UV-B levels is extremely variable. For most economically important agricultural plants, both symptomatic and physiological responses are poorly understood. **This program area supports experimental studies to advance the knowledge of UV-B induced phenological, morphological, physiological, and productivity changes in agricultural crops of economic importance such as agronomic, energy, horticultural, and silvicultural crops.** In addition, projects may investigate the underlying metabolic pathways that mediate between gene expression and organism response. Quantified results of these plant effects studies should lead directly to algorithms that can be incorporated in crop models for use in the comprehensive assessment system (described in 3 below). Potential applicants are directed to the list of high-priority studies outlined in the five-year strategic plan (http://uvb.nrel.colostate.edu/UVB/strategic_plan.pdf) that provide crucial experimental support

for the integrated climate-crop modeling program area described below. **In FY 2008, CSREES anticipates funding 2-4 awards of up to \$50,000 for this program area.**

3. Integrated climate-crop modeling, total funding available: \$250,000 for one year

As our knowledge of UV-B plant exposure increases and our understanding of UV-B effects becomes more refined and complete, we need to integrate such information for agricultural management across time and space. By examining how crop plant growth and productivity are affected over one or more growing seasons, across large geographic areas, and under the conditions of climate change, we can begin to understand the national implications of elevated UV-B in concert with other stress factors. **This program area supports the development and application of an integrated crop assessment modeling system that accurately simulates crop productivity and its dependence on various climatic and environmental stress factors at the regional and national scales. As a minimum requirement, such a system must be capable of predicting both climate and UV-B variations, using mechanistic dynamic models for crop growth and development that are fully coupled with regional climate models.** The assessment system should also effectively assimilate or integrate satellite remote sensing and in-situ measurement data most relevant to crop-climate-UV-B interactions. As such, any proposed assessment system must demonstrate the existing capability to address UV-B effects on crop productivity in concert with other stressors, including variability and changes in water (drought), temperature (heat), and soil nutrients, as well as elevated ambient CO₂ and/or ozone concentrations. Furthermore, applicants must demonstrate (via published literature such as refereed journals or scientific proceedings) that they have already incorporated UV-B data into at least one crop growth model, and that they can deliver scientifically credible regional crop predictions by the end of the one-year grant period using an assessment system with the aforementioned components. The focus should be on agricultural crops of economic importance such as agronomic, energy, horticultural, and silvicultural crops. **In FY 2008, CSREES anticipates funding one award of up to \$250,000 for this program area.**

For additional information applicants may refer to the Current Research Information System (CRIS) website for an example of a previously funded [GCUVM Project](#).

PART II—AWARD INFORMATION

A. Available Funding

There is no commitment by USDA to fund any particular application or to make a specific number of awards. Approximately \$1.5 million will be available to fund applications in FY 2008. The anticipated number and maximum budget for awards in each program area are noted in the Program Area Description (Part I.C).

B. Types of Applications

In FY 2008, applications may be submitted to the GCUVM Program as new applications only. A new application is a project application that has not been previously submitted to the GCUVM Program. All new applications will be reviewed competitively using the selection process and evaluation criteria described in Part V—Application Review Requirements.

C. Scientific Peer Review

Subsection (c)(5) of the Competitive, Special, and Facilities Research Grant Act, as amended (7 U.S.C. 450i(c)(5)) requires applicants to conduct scientific peer review of their proposed research activities in accordance with regulations promulgated by the Secretary prior to the Secretary making a grant award under this authority. Regulations implementing this requirement are set forth in 7 CFR part 3400.20. The regulations impose the following requirements:

- 1) Scientific peer review. Prior to the award of a standard or continuation grant by CSREES, any proposed project shall have undergone a review arranged by the grantee. For research projects, such review must be a scientific peer review conducted in accordance with 7 CFR 3400.21.
- 2) Credible and independent review. A review arranged by the grantee must provide for a credible and independent assessment of the proposed project. A credible review is one that provides an appraisal of technical quality and relevance sufficient for an organizational representative to make an informed judgment as to whether the proposal is appropriate for submission for Federal support. To provide for an independent review, such review may include USDA employees, but should not be conducted solely by USDA employees.
- 3) Notice of completion and retention of records. **A PDF version of the Scientific Peer Review Certification of the review shall be conveyed in writing to CSREES as part of the Other Attachments (Field 11. of the R&R Other Project Information Form).** The written notice constitutes certification by the applicant that a review in compliance with these regulations has occurred. Applicants are not required to submit results of the review to CSREES; however, proper documentation of the review process and results should be retained by the applicant. **Please note: award funds cannot be released until the Scientific Peer Review Certification is received.**

PART III—ELIGIBILITY INFORMATION

A. Eligible Applicants

Applications may be submitted by State agricultural experiment stations, land-grant colleges and universities, research foundations established by land-grant colleges and universities, colleges and universities receiving funds under the Act of October 10, 1962, as amended (16 U.S.C. 582a et seq.), and accredited schools or colleges of veterinary medicine.

Award recipients may subcontract to organizations not eligible to apply provided such organizations are necessary for the conduct of the project. An applicant's failure to meet an eligibility criterion by the time of an application deadline will result in CSREES returning the application without review or, even though an application may be reviewed, will preclude CSREES from making an award.

B. Cost Sharing or Matching

CSREES does not require matching support for this program and matching resources will not be factored into the review process as evaluation criteria.

PART IV—APPLICATION AND SUBMISSION INFORMATION

A. Address to Request Application Package

Only electronic applications may be submitted via Grants.gov to CSREES in response to this RFA.

Prior to preparing an application, it is suggested that the Project Director (PD) / Principle Investigator (PI) first contact an Authorized Organizational Representative (AOR) to determine if the organization is prepared to submit electronic applications through Grant.gov. If the organization is not prepared, the AOR should see http://www.grants.gov/applicants/get_registered.jsp for steps for preparing to submit applications through Grants.gov.

The steps to access application materials are as follows:

1. Download and install PureEdge Viewer, a small, free program that provides access to the grant application. See http://www.grants.gov/resources/download_software.jsp#pureedge.
2. The application package must be obtained via Grants.gov, go to <http://www.grants.gov>, click on “Apply for Grants” in the left-hand column, click on “**Step 1: Download a Grant Application Package and Instructions,**” enter the funding opportunity number **USDA-CSREES-SRGP-001464** in the appropriate box and click “Download Package.” From the search results, click “Download” to access the application package.

Contained within the application package is the “[CSREES Grants.gov Application Guide: A Guide for Preparation and Submission of CSREES Applications via Grants.gov.](#)” This Guide contains an introduction and general Grants.gov instructions, information about how to use a Grant Application Package in Grants.gov, and instructions on how to complete the application forms.

If assistance is needed to access the application package (e.g., downloading or navigating PureEdge forms, using PureEdge with a Macintosh computer), refer to resources available on the Grants.gov Web site first (<http://grants.gov/>). Grants.gov assistance is also available as follows:

- Grants.gov customer support
Toll Free: 1-800-518-4726
Business Hours: M-F 7:00 am – 9 pm Eastern Standard Time
Email: support@grants.gov

See <http://www.csrees.usda.gov/funding/electronic.html> for additional resources for applying electronically.

B. Content and Form of Application Submission

Electronic applications should be prepared following Part V and VI of the document entitled “[A Guide for Preparation and Submission of CSREES Applications via Grants.gov.](#)” This guide is part of the corresponding application package (see Section A. of this Part). The following is **additional information** needed in order to prepare an application in response to this RFA. If there is discrepancy between the two documents, the information contained in this RFA is overriding.

Note the attachment requirements (e.g., portable document format) in Part III section 3. of the CSREES Grants.gov Application Guide available with the Application Package at Grants.gov. **ANY PROPOSALS CONTAINING NON-PDF DOCUMENTS WILL BE AT RISK OF BEING EXCLUDED FROM CSREES REVIEW.** Partial applications will be excluded from consideration. With documented prior approval, resubmitted applications will be accepted until close of business (COB) on the closing date in the RFA.

If you do not own PDF generating software, Grants.gov provides online tools to assist applicants. Users will find a link to “[PDF Conversion Programs](#)” on (http://www.grants.gov/resources/download_software.jsp#pdf_conversion_programs).

1. R&R Other Project Information Form

Information related to the questions on this form is dealt with in detail in Part V, 3. of the CSREES Grants.gov Application Guide.

- a. Project Summary/Abstract (Field 6. on the Form). The summary should also include the relevance of the project to the goals of GCUVM.
- b. Project Narrative (Field 7. on the Form).

PLEASE NOTE:

The Project Narrative shall be prepared using standard size (8 1/2" x 11"), one-inch margins, using no type smaller than 12 point font, and single- or double-spaced. Use an easily readable font face (e.g., Geneva, Helvetica, Times Roman).

For Part I C (1) **Ultraviolet radiation climatology**, or Part I C (3) **Integrated climate-crop modeling**, the Project Narrative shall not exceed **15** pages of written text and up to **10** additional pages for figures and tables. This maximum (**25** pages) has been established to ensure fair and equitable competition.

For Part I C (2) **Plant responses to UV-B**, the Project Narrative shall not exceed 10 pages of written text and up to 5 additional pages for figures and tables. This maximum (15 pages) has been established to ensure fair and equitable competition.

For applications covering more than one program area, the Project Narrative shall not exceed **20** pages of written text and up to **15** additional pages for figures and tables. This maximum (**35** pages) has been established to ensure fair and equitable competition.

In the Project Narrative, an application must include the following information appropriate to the specific program area(s) for which the application is requesting funds:

(1) Ultraviolet radiation climatology

- a. Clearly demonstrate the ability to collect multi-band and broadband UV-B data at a minimum of 25 locations around the continental U.S., including coverage for different eco-regions, elevations, and land-use types.
- b. Document each proposed data collection site. Proposals must include a mix of crop, forest, and range lands.
- c. Describe a comprehensive process of logging measurements taken at least every quarter hour and disseminating data via the Internet within 48 hours of collection. Companion measurements of photosynthetically active radiation and basic weather information (temperature, humidity, and barometric pressure) must be included as part of the comprehensive process.
- d. List and describe all quality control protocols that will ensure that the delivered data meet the highest possible scientific standards.

(2) Plant responses to UV-B

- a. Clearly describe proposed experimental studies that will advance the knowledge of UV-B induced phenological, morphological, physiological, and productivity changes in plants.
- b. Explain how the results of proposed Plant response studies might be effectively utilized to support integrated climate-crop modeling priorities.
- c. Clearly define a process for converting quantified results of these plant effects studies directly into algorithms that can be incorporated in crop models for use in a comprehensive assessment system.

(3) Integrated climate-crop modeling

- a. Describe plans to develop and apply an integrated crop assessment modeling system that accurately simulates regional and national scale crop productivity and its dependence on various climatic and environmental stress factors at the regional and national scales.
- b. Describe proposed development of a crop assessment modeling system capable of predicting both climate and UV-B variations, using mechanistic dynamic models for crop growth and development that are fully coupled with regional climate models.
- c. Proposed projects must demonstrate effective assimilation or integration of satellite remote sensing and in-situ measurement data most relevant to crop-climate-UV-B interactions.
- d. Demonstrate the existing capability to address UV-B effects on crop productivity in concert with other stressors, including variability and changes in water (drought), temperature (heat), and soil nutrients, as well as elevated ambient CO₂ and/or ozone concentrations.

- e. Demonstrate (via published literature such as refereed journals or scientific proceedings) that they have already incorporated UV-B data into at least one crop growth model, and that they can deliver scientifically credible regional crop predictions by the end of the one-year grant period using an assessment system with the aforementioned components.

c. Other Attachments (Field 11. on the Form) – PDF Attachment

- (1) **Scientific Peer Review Certification Documentation.** The application must contain a written notice to CSREES that a Scientific Peer Review has been completed (see Part II, C.).
- (2) **Appendices to Project Description.** Appendices to the Project Description are allowed if they are directly germane to the proposed project. The addition of appendices should not be used to circumvent the text and/or figures and tables page limitations.

2. R&R Senior/Key Person Profile (Expanded)

Information related to the questions on this form is dealt with in detail in Part V, 4. of the CSREES Grants.gov Application Guide.

3. R&R Personal Data – As noted in Part V, 5., the submission of this information is voluntary and is not a precondition of award. PLEASE DO NOT PROVIDE THE SOCIAL SECURITY NUMBER OF PROJECT DIRECTOR / PRINCIPAL INVESTIGATOR.

4. R&R Budget

Information related to the questions on this form is dealt with in detail in Part V, 6. of the CSREES Grants.gov Application Guide.

CSREES does not require matching support for this program and matching resources will not be factored into the review process as evaluation criteria.

5. Supplemental Information Form

Information related to the questions on this form is dealt with in detail in Part VI, 1. of the CSREES Grants.gov Application Guide.

a. Program Code (Field 2. on the Form). Enter the **Program Code Name: Global Change/Ultraviolet Radiation** and the **Program Code: “HZ”**.

b. Supplemental Application Types (Field 5 on the Form). – Check all that apply.

c. Conflict of Interest List (Field 8. on the Form).

6. SF 424 (R&R) Subaward Budget Attachment (Only required if submitting a Subaward Proposal) All subawards’ budgets must be included in the R&R Subaward Budget Attachment and a Budget Justification which includes an explanation for each budget item.

C. Submission Dates and Times

Instructions for submitting an application are included in Part IV, Section 1.9 of the CSREES Grants.gov Application Guide.

Applications must be received by Grants.gov by COB on **May 09, 2008** (5:00 p.m. Eastern Time). Applications received after this deadline will normally not be considered for funding.

Correspondence regarding submitted applications will be sent using e-mail. Therefore, applicants are strongly encouraged to provide accurate e-mail addresses, where designated, on the SF-424 R&R Application for Federal Assistance.

If the AR has not received correspondence **from CSREES** regarding a submitted application within 30 days of submission of the application, please contact the Program Contact identified in Part VII of the applicable RFA and request the proposal number assigned to the application. **Failure to do so may result in the application not being considered for funding by the peer review panel. Once the application has been assigned a proposal number, this number should be cited on all future correspondence.**

D. Funding Restrictions

CSREES has determined that grant funds awarded under this authority may not be used for renovation or refurbishment of research, education, or extension space; the purchase or installation of fixed equipment in such space; or the planning, repair, rehabilitation, acquisition, or construction of buildings or facilities.

Pursuant to Section 1473 of the National Agricultural Research, Extension, and Teaching Policy Act of 1977, as amended, 7 U.S.C. 3319, indirect costs and tuition remission are not allowable costs under section 2(c)(1)(B) projects, and no funds will be approved for these purposes. Further, costs that are a part of an institution's indirect cost pool (e.g., administrative or clerical salaries) may not be reclassified as direct costs for these purposes of making them allowable.

E. Other Submission Requirements

The applicant should follow the submission requirements noted in the document entitled “A Guide for Preparation and Submission of CSREES Applications via Grants.gov.”

PART V—APPLICATION REVIEW REQUIREMENTS

A. General

Each application will be evaluated in a 2-part process. First, each application will be screened to ensure that it meets the administrative requirements as set forth in this RFA. Second, applications that meet these requirements will be technically evaluated by a review panel.

Reviewers will be selected based upon training and experience in relevant scientific, extension, or education fields, taking into account the following factors: (a) 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; (b) the need to include as reviewers experts from various areas of specialization within relevant scientific, education, or extension fields; (c) the need to include as reviewers 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; (d) the need to include as reviewers experts from a variety of organizational types (e.g., colleges, universities, industry, state and Federal agencies, private profit and non-profit organizations) and geographic locations; (e) the need to maintain a balanced composition of reviewers with regard to minority and female representation and an equitable age distribution; and (f) the need to include reviewers who can judge the effective usefulness to producers and the general public of each application.

B. Evaluation Criteria

The evaluation criteria below will be used in reviewing applications submitted in response to this RFA:

General criteria applied to ALL GCUVM applications: Value 25 %

- (1) Qualifications of applicant (individual or team) to conduct the proposed project, including research performance history and potential for future accomplishments;
- (2) Key personnel's experience qualifies them to serve in the roles proposed in the application;
- (3) Key personnel have committed sufficient time and resources to complete the proposed project; and
- (4) Evidence of institutional capacity, facilities, and experience in the proposed area of work, particularly as they relate to the requirements in the program area description.

Specific criteria applied to Ultraviolet radiation climatology applications: Value 75 %

- (1) Documented experience in nationally coordinated research which demonstrates the ability to collect required variety of multi-band and broadband UV-B data;
- (2) Evidence that proposed network of data collection sites includes a variety of working land cover types, e.g., forest, range, and crop, as specified previously (see Part IV (B)1b);
- (3) Feasibility of proposed comprehensive process of logging UV-B measurements and disseminating data including companion measurements; and
- (4) Adequacy of proposed quality control protocols.

Specific criteria applied to Plant responses to UV-B applications: Value 75 %

- (1) Likelihood that proposed experimental studies will advance the knowledge of UV-B induced phenological, morphological, physiological, and productivity changes in plants from economically important crops.
- (2) Feasibility of utilizing experimental results to support integrated climate-crop modeling priorities; and
- (3) Likelihood that the proposed studies will lead to algorithms that can be successfully incorporated in crop models for use in a comprehensive assessment system.

Specific criteria applied to Integrated climate-crop modeling applications: Value 75 %

- (1) Technical merit of proposed plans to develop and apply an integrated crop assessment modeling system that accurately simulates regional and national scale crop productivity;
- (2) Likelihood that proposed crop assessment modeling system will be capable of predicting both climate and UV-B variations coupled with climatic variations;
- (3) Demonstrates the capability to assess UV-B effects on crop productivity in concert with other stressors, including variability and changes in water (drought), temperature (heat), and soil nutrients, as well as elevated ambient CO₂ and/or ozone concentrations;
- (4) Demonstrates effective assimilation or integration of satellite remote sensing and in-situ measurement data most relevant to crop-climate-UV-B interactions; and
- (5) Likelihood that the proposed project can deliver scientifically credible integrated regional crop predictions by the end of the one-year grant period.

C. Conflicts of Interest and Confidentiality

During the peer evaluation process, extreme care will be taken to prevent any actual or perceived conflicts of interest that may impact review or evaluation. For the purpose of determining conflicts of interest, the academic and administrative autonomy of an institution shall be determined by reference to the current Higher Education Directory, published by Higher Education Publications, Inc., 6400 Arlington Boulevard, Suite 648, Falls Church, Virginia 22042. Phone: (703) 532-2300. Web site: <http://www.hepinc.com>.

Names of submitting institutions and individuals, as well as application content and peer evaluations, will be kept confidential, except to those involved in the review process, to the extent permitted by law. In addition, the identities of peer reviewers will remain confidential throughout the entire review process. Therefore, the names of the reviewers will not be released to applicants.

D. Organizational Management Information

Specific management information relating to an applicant shall be submitted on a one time basis, with updates on an as needed basis, as part of the responsibility determination prior to the award of a grant identified under this RFA, if such information has not been provided previously under this or another CSREES program. CSREES will provide copies of forms recommended for use in fulfilling these requirements as part of the preaward process. Although an applicant may be eligible based on its status as one of these entities, there are factors which may exclude an applicant from receiving Federal financial and nonfinancial assistance and benefits under this program (e.g., debarment or suspension of an individual involved or a determination that an applicant is not responsible based on submitted organizational management information).

PART VI—AWARD ADMINISTRATION

A. General

Within the limit of funds available for such purpose, the awarding official of CSREES shall make grants to those responsible, eligible applicants whose applications are judged most meritorious under the procedures set forth in this RFA. The date specified by the awarding official of CSREES as the effective date of the grant shall 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. It should be noted that 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 CSREES under this RFA shall be expended solely for the purpose for which the funds are granted in accordance with the approved application and budget, the regulations, the terms and conditions of the award, the applicable Federal cost principles, and the Department's assistance regulations (parts 3015 and 3019 of 7 CFR).

B. Award Notice

The award document will provide pertinent instructions and information including, at a minimum, the following:

- (1) Legal name and address of performing organization or institution to which the Administrator has issued an award under the terms of this request for applications;
- (2) Title of project;
- (3) Name(s) and institution(s) of PDs chosen to direct and control approved activities;
- (4) Identifying award number assigned by the Department;
- (5) Project period, specifying the amount of time the Department intends to support the project without requiring recompetition for funds;
- (6) Total amount of Departmental financial assistance approved by the Administrator during the project period;
- (7) Legal authority(ies) under which the award is issued;
- (8) Appropriate Catalog of Federal Domestic Assistance (CFDA) number;
- (9) Applicable award terms and conditions (see <http://www.csrees.usda.gov/business/awards/awardterms.html> to view CSREES award terms and conditions);
- (10) Approved budget plan for categorizing allocable project funds to accomplish the stated purpose of the award; and

(11) Other information or provisions deemed necessary by CSREES to carry out its respective awarding activities or to accomplish the purpose of a particular award.

C. Administrative and National Policy Requirements

Several Federal statutes and regulations apply to grant applications considered for review and to project grants awarded under this program. These include, but are not limited to:

7 CFR Part 1, subpart A—USDA implementation of the Freedom of Information Act.

7 CFR Part 3—USDA implementation of OMB Circular No. A-129 regarding debt collection.

7 CFR Part 15, subpart A—USDA implementation of Title VI of the Civil Rights Act of 1964, as amended.

7 CFR Part 331 and 9 CFR Part 121—USDA implementation of the Agricultural Bioterrorism Protection Act of 2002.

7 CFR Part 3015—USDA Uniform Federal Assistance Regulations, implementing OMB directives (i.e., OMB Circular Nos. A-21 and A-122, now codified at 2 CFR Parts 220 and 230) and incorporating provisions of 31 U.S.C. 6301-6308 (formerly the Federal Grant and Cooperative Agreement Act of 1977, Pub. L. No. 95-224), as well as general policy requirements applicable to recipients of Departmental financial assistance.

7 CFR Part 3017—USDA implementation of Governmentwide Debarment and Suspension (Nonprocurement) and 7 CFR Part 3021—Governmentwide Requirements for Drug Free Workplace (Grants).

7 CFR Part 3018—USDA implementation of Restrictions on Lobbying. Imposes prohibitions and requirements for disclosure and certification related to lobbying on recipients of Federal contracts, grants, cooperative agreements, and loans.

7 CFR Part 3019—USDA implementation of OMB Circular A-110, Uniform Administrative Requirements for Grants and Other Agreements With Institutions of Higher Education, Hospitals, and Other Nonprofit Organizations.

7 CFR Part 3052—USDA implementation of OMB Circular No. A-133, Audits of States, Local Governments, and Non-profit Organizations.

7 CFR Part 3407—CSREES procedures to implement the National Environmental Policy Act of 1969, as amended.

29 U.S.C. 794 (section 504, Rehabilitation Act of 1973) and 7 CFR Part 15b (USDA implementation of statute) —prohibiting discrimination based upon physical or mental handicap in Federally assisted programs.

35 U.S.C. 200 et seq. —Bayh Dole Act, controlling allocation of rights to inventions made by employees of small business firms and domestic nonprofit organizations, including universities, in Federally assisted programs (implementing regulations are contained in 37 CFR Part 401).

D. Expected Program Outputs and Reporting Requirements

Grantees are required to submit initial project information and annual and summary reports to CSREES' Current Research Information System (CRIS). The CRIS database contains narrative project information, progress/impact statements, and final technical reports that are made available to the public. For applications recommended for funding, instructions on preparing and submitting of project documentation will be provided to the applicant by the Agency Contact. Documentation must be submitted to CRIS before CSREES funds will be released. Project reports will be requested by the CRIS office when required. For more information about CRIS, visit <http://cris.csrees.usda.gov>.

PART VII—AGENCY CONTACT

Applicants and other interested parties are encouraged to contact **Daniel L. Schmoldt**; National Program Leader – Plant and Animal Systems; telephone: **(202) 720-4807**; fax: **(202) 401-5179**; e-mail: dschmoldt@csrees.usda.gov.

PART VIII—OTHER INFORMATION

A. Access to Review Information

Copies of reviews, not including the identity of reviewers, and a summary of the panel comments will be sent to the applicant PD after the review process has been completed.

B. Use of Funds; Changes

1. Delegation of Fiscal Responsibility

Unless the terms and conditions of the award state otherwise, the awardee 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.

2. Changes in Project Plans

a. The permissible changes by the awardee, PD(s), or other key project personnel in the approved project shall be limited to changes in methodology, techniques, or other similar aspects of the project to expedite achievement of the project's approved goals. If the awardee or the PD(s) is uncertain as to whether a change complies with this provision, the question must be referred to the Authorized Departmental Officer (ADO) for a final determination. The ADO is the signatory of the award document, not the program contact.

b. Changes in approved goals or objectives shall be requested by the awardee and approved in writing by the ADO prior to effecting such changes. In no event shall requests for such changes be approved which are outside the scope of the original approved project.

c. Changes in approved project leadership or the replacement or reassignment of other key project personnel shall be requested by the awardee and approved in writing by the ADO prior to effecting such changes.

d. Transfers of actual performance of the substantive programmatic work in whole or in part and provisions for payment of funds, whether or not Federal funds are involved, shall be requested by the awardee and approved in writing by the ADO prior to effecting such transfers, unless prescribed otherwise in the terms and conditions of the award.

e. The project period may be extended by CSREES without additional financial support, for such additional period(s) as the ADO determines may be necessary to complete or fulfill the purposes of an approved project, but in no case shall the total project period exceed five years. Any extension of time shall be conditioned upon prior request by the awardee and approval in writing by the ADO, unless prescribed otherwise in the terms and conditions of award.

f. Changes in Approved Budget: Unless stated otherwise in the terms and conditions of award, changes in an approved budget must be requested by the awardee and approved in writing by the ADO prior to instituting such changes if the revision will involve transfers or expenditures of

amounts requiring prior approval as set forth in the applicable Federal cost principles, Departmental regulations, or award.

C. Confidential Aspects of Applications and Awards

When an application results in an award, it becomes a part of the record of CSREES transactions, available to the public upon specific request. Information that the Secretary determines to be of a confidential, privileged, or proprietary nature will be held in confidence to the extent permitted by law. Therefore, any information that the applicant wishes to have considered as confidential, privileged, or proprietary should be clearly marked within the application. The original copy of an application that does not result in an award will be retained by the Agency for a period of three years. Other copies will be destroyed. Such an application will be released only with the consent of the applicant or to the extent required by law. An application may be withdrawn at any time prior to the final action thereon.

D. Regulatory Information

For the reasons set forth in the final Rule related Notice to 7 CFR part 3015, subpart V (48 FR 29114, June 24, 1983), this program is excluded from the scope of the 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.

E. Definitions

For the purpose of this program, the following definitions are applicable:

For the purpose of this program, the following definitions are applicable:

Administrator means the Administrator of the Cooperative State Research, Education, and Extension Service (CSREES) and any other officer or employee of the Department to whom the authority involved is delegated.

Authorized departmental officer means the Secretary or any employee of the Department who has the authority to issue or modify grant instruments on behalf of the Secretary.

Authorized representative (AR) means the president, director, or chief executive officer or other designated official of the applicant organization who has the authority to commit the resources of the organization.

Budget period means the interval of time (usually 12 months) into which the project period is divided for budgetary and reporting purposes.

Department or USDA means the United States Department of Agriculture.

Grant means the award by the Secretary of funds to an eligible organization or individual to assist in meeting the costs of conducting, for the benefit of the public, an identified project which is intended and designed to accomplish the purpose of the program as identified in these guidelines.

Grantee means an organization designated in the grant award document as the responsible legal entity to which a grant is awarded.

Partnering means a joint effort among two or more institutions, organizations and/or other entities with the capacity to conduct projects intended and designed to accomplish the purpose of the program.

Peer review means an evaluation of a proposed project for scientific or technical quality and relevance performed by experts with the scientific knowledge and technical skills to conduct the proposed work or to give expert advice on the merits of a proposal.

Prior approval means written approval evidencing prior consent by an authorized departmental officer as defined above.

Project means the particular activity within the scope of the program supported by a grant award.

Project director means the single individual designated in the grant application and approved by the Secretary who is responsible for the direction and management of the project.

Project period means the period, as stated in the award document, during which Federal sponsorship begins and ends.

Research activity means a scientific investigation or inquiry that results in the generation of knowledge.

Secretary means the Secretary of Agriculture and any other officer or employee of the Department to whom the authority involved is delegated.