

The amount of funding for this program is currently unknown and therefore all or part of this RFA is subject to change depending on the economic situation and the amount of Hatch funds received from the federal government

FY2017

AAES AgR-SEED Funding Program

Request for Applications (RFA)

Submission Deadline: May 11, 2016

- I. **The purpose of the program:** The purpose of the AAES AgR-SEED (Agricultural ReSearch Enhancement, Exploration and Development) funding program is to provide seed monies that strengthen agriculturally related research at Auburn University.

AAES AgR-SEED (Agricultural ReSearch Enhancement, Exploration and Development) funding program is to be viewed as a source of funds to initiate, stimulate, or partially fund a research program, these funds should **not** be viewed as a primary source of research support. Principal investigators (P.I.s) are **required** to seek grant funds for additional research dollars from extramural sources, particularly regionally or nationally competitive grant programs. Proposed research projects should address Alabama agricultural needs and ultimately serve as economic engines for the state of Alabama through research and extension efforts. Therefore, the objectives of research projects should align with Alabama's agricultural needs and with extramural funding opportunities.

II. **Priority areas:**

1. **Enhancing Agricultural Production Systems/Global Food Security and Hunger:**
AAES supports research or research/extension integrated activities that will boost Alabama agricultural production, lower production costs, contribute to global capacity to meet the growing food demand, and foster innovation in fighting hunger by addressing food security for vulnerable populations. The goal of this area is to enhance competitiveness and sustainability of rural community and farm economies of Alabama in the global market through development and/or application of technologies, farming approaches, or organizational strategies that ensure the sustainability of rural communities and agricultural and forestry production systems. Specific areas of research include, but are not limited to: value-added food, improved cropping systems, improved poultry and animal systems, integrated crop and livestock management systems, genomic studies, genetic studies of agriculturally important traits and processes, basic agricultural research for the discovery of new and improved food and forest products or alternatives

to pesticides and antibiotics to control disease outbreaks, development of genetically enhanced plant varieties or animal stocks including aquaculture species, alternative specialty crops, fisheries and aquaculture, forest products and sustainable systems, market analysis and economics, rural communities, agricultural economics, and rural finance, needs of producers with limited resources, analysis of institutional and infrastructural constraints, integrated pest management, alternative and innovative products and new production methods, and organic agriculture, local food systems, and sustainable agriculture. Of particular interest are projects that present innovative synergies of disciplines and perspectives while advancing sustainability objectives. This priority is aligned with the USDA research priority area of Global Food Security and Hunger and with enhancing the competitiveness of Alabama agriculture in the global economy.

2. **Food, Nutrition, Health and Well-being, and Childhood Obesity:** AAES supports research and research/extension integrated activities to identify effective measures that guide individuals and families to make informed, science-based decisions that will reduce child obesity, and improve health and well-being. Nutrition, obesity prevention, and strong families, youth, and communities are of paramount importance to Alabama agriculture. Specific areas of research include, but are not limited to: issues that affect quality of life and economic well-being of families and children, bioactive food components for optimal health, human nutrition and obesity, improvement in food quality and value, understanding factors associated with child and family health. This priority is aligned with the USDA research priority area of Childhood Obesity, and with the strategic goal of ending obesity among children, the number one nutrition-related problem in Alabama and United States.
3. **Food Safety and One Health:** AAES supports research and research/extension integrated activities that enhance food safety. The goal of this area is to develop and promote the use of innovative and sustainable food processing technologies, develop strategies to prevent cross contamination during processing, packaging, transportation or storage, and to better understand, characterize and mitigate antimicrobial resistance across the food chain, from farm to fork. Examples of areas of research include, but are not limited to: reduce the incidence of food-borne illness and provides a safer food supply, eliminating causes of microbial contamination and antimicrobial resistance, educating consumer and food safety professionals, developing food processing technologies to improve food safety, development of technologies for tracing the sources of food production, development of technologies for rapid analysis and identification of food including seafood, development of technologies for rapid detection of biological and chemical contamination such as antibiotics, pesticides, and other contaminants, fundamental understanding of the linkage between the health of the environment, animals and people, innovative strategies for healthy and sustainable coexistence between humans, animals and the environment, . This priority is aligned with the USDA research priority area of Food Safety and with the needs of Alabama to ensure the safety and wellbeing of its citizens, and with the economic interest of Alabama in the global economy.

4. **Climate Variability and Change, and Water for Agricultural and Natural Resource Systems:** AAES supports research that address use of water in, and the effects of climate variability and change in agricultural and natural resource systems. The goal of this area is to understand how agroecosystems and natural resource systems adapt to climate variability and change, to support research that facilitate the implementation of mitigation strategies in these systems, and provide solutions to the critical water problems in rural and agricultural watersheds. Examples of areas of research include, but are not limited to: develop best management practices and sustainable methods to reduce greenhouse gas emissions and increase carbon sequestration from agriculture and forest systems while contributing to the emerging carbon-based market, develop advanced food, feed, and fiber production systems and new plant cultivars and animal breeds adapted to changing climates through classical/conventional breeding and other appropriate approaches, improve understanding of the land-water interface and the urban-agriculture interface, contribute to solutions to the consequences of global climate change, provide a framework for understanding and addressing issues of water quality and quantity, water reuse, carbon sequestration, air quality, and seek economically viable practices for improved sustainability in large- and small-scale agriculture, water quality and improvement, management of agricultural waste and residues generated through the animal and poultry and crop production systems, sustainable agriculture systems to enhance soil productivity and improve water infiltration and the plant-root environment, ecotourism, invasive species, soil conservation, quality, and bio-indicators, rural-urban interface and environmental issues, wildlife management, restoration and best management practices, remote sensing and precision agriculture, and science-based policy development. This priority is aligned with the USDA research priority areas of Climate Variability and Change, and Water for Agriculture with Alabama's long-term goal of best conserving and utilizing natural resources while sustaining the environment.
5. **Bioenergy and Bio-based Economy:** AAES contributes to the national goal of energy independence by supporting science to develop biomass, and convert biomass to fuels, products and chemicals. The goal of this area is to develop technology and increase our knowledge for efficient production of biomass for feedstock and conversion of feedstock to bioenergy and bioproducts, bioprocessing systems, biomass production, conversion of byproducts into value-added products, and to enhance understanding of the long-term sustainability of feedstock production and bioconversion systems including economics, social issues, land use policies, and energy security and the environment. Specific areas of research include, but are not limited to: alternative crops for efficient production of bioenergy feedstock, biotechnology of bioenergy crops to enhance production or to enhance its utilization as an energy source, and technology development for bioenergy conversion. This priority is aligned with the USDA priority area of Sustainable Energy with Alabama's long-term goal of developing regional systems that reduce U.S. dependence on foreign oil and at the same time are appropriate for producing biopower and biobased products.

6. Investigator-initiated Innovative Research and Industry-wide Emerging Issues:

This priority area is open to innovative ideas dealing with significant agricultural issues, and to research projects dealing with emerging issues in agriculture. Industry-wide emerging issues are usually raised by commodity groups with significant concerns. It is the duty of the land grant institutions to work with agricultural commodities and agribusinesses to address such urgent concerns.

III. Investigator Eligibility

The leading principal investigator must have an AAES appointment and a USDA-approved (or pending USDA approval) Hatch project or a Hatch/Multistate project (membership in multistate project only is NOT sufficient for this requirement. The P.I. must also officially file a Hatch project under the Hatch/Multistate Project category in the REEport system). Leading principal investigators who were funded through the 2015 competition are not eligible for this competition. **Leading principal investigators who were previously funded with AAES grants, but have not submitted proposal(s) for extramural funding (of any type) since the AAES grant(s) are not eligible for this competition** (see Section VI 2.E.). These rules do not apply to co-principal investigators.

IV. Project Duration

To provide flexibility, all funding for this FY17 competition is for two years, and the approved dollar amount will be fully funded when the account is established.

V. Types of application

- 1. Young Investigator Research Support Program:** To assist new faculty (untenured tenure-track assistant professors only) in building research careers and producing data for grant applications from extramural sources. Recommended funding levels are \$15,000-\$25,000 per year for two years (total of \$30,000-\$50,000 based on merit). While formal participation of a senior faculty member as a co-P.I. or collaborator is not a requirement of this program, new faculty members are encouraged to have such an individual with strong grantsmanship skills review and provide constructive commentary on the proposal as appropriate prior to submission. Assistant professors who were previously funded under this program are ineligible for this program, i.e., each assistant professor is limited to funding only once under this program.
- 2. SEED Program:** To enhance the ability of associate and full professors to develop proposals for extramural grant applications. Recommended funding levels are \$15,000-\$25,000 per year for two years, based on merit. Assistant professors may apply if they are ineligible for the Young Investigator Research Support Program.

VI. Project Format

1. Format

- A. Margin - 1 inch: top, bottom, left, and right.
- B. Minimum font size - 12 points.
- C. Single- or double-spaced, single-sided 8.5 x 11 inch pages.
- D. Pages should be numbered.

2. Proposal Content

- A. *Alabama Agricultural Experiment Station Hatch/Multistate Grant Proposal Cover Form* – signatures are needed on the cover form. All the forms are available at: <http://aaes.auburn.edu/resources/aaes-research-funding-programs/>
- B. *Project Summary/Abstract* –The Project Summary is limited to **one typed page**.
- C. *Project Narrative* (Project Description) – limited to **10 single- or double-spaced pages, including figures and tables**. The page limit will be strictly enforced to ensure fair and equitable competition. Proposals that fail to comply with the page limit will be returned without review.
 - (a) ***Response to Previous Review***. This requirement only applies to Resubmitted Applications to the AAES Agr-SEED Grants (formerly the Hatch/Multistate Funding) Program. P.I. must respond to the previous review panel summary on **no more than one page**, titled “RESPONSE TO PREVIOUS REVIEW.” When a Response to Previous Review is included in the Project Narrative, the page limitation is increased to 11 total pages to include the one-page response.
 - (b) ***Introduction***. The introduction should include a clear statement of the research question/problem, long-term goal(s), and supporting objectives or research questions of the proposed project. Summarize the body of knowledge or other past activities that substantiate the need for the proposed project. Describe ongoing or recently completed significant activities related to the proposed project including the work of key project personnel. Include preliminary data/information pertinent to the proposed research. All works cited should be referenced [see item (D) References Cited of this section]. This is the section to set the stage for your project, to answer a significant scientific question or to resolve a significant problem.
 - (c) ***Rationale and Significance***. Concisely present the rationale behind the proposed research project, the specific relationship of the project’s objectives to at least one of the priority areas of this funding program, the potential long-term impact on improvement in and sustainability of U.S. agriculture and food systems, and the potential of this project to enhance future extramural grant applications. Use this section to tell the reviewers why your research should be funded.
 - (d) ***Approach***. The activities proposed or problems being addressed must be clearly stated and the approaches being applied clearly described. Specifically, this section must include: a description of the activities proposed and the sequence in which the activities are to be performed, methods to be used in carrying out the proposed project, including the feasibility of the methods, considerations of alternative methods and if the proposed

method is state of the art, expected outcomes, means by which results will be analyzed, assessed, or interpreted, how results or products will be used, pitfalls that may be encountered and the alternative approaches to compensate for pitfalls, limitations to proposed procedures, a full explanation of any materials, procedures, situations, or activities related to the project that may be hazardous to personnel, along with an outline of precautions to be exercised to avoid or mitigate the effects of such hazards, and a brief timeline of the proposed project.

- D. Results from Prior AAES Support –2-Page Limit per Award.** If the P.I. has received AAES support in the past five years, information on results from that prior funding is required. Required information includes year of previous AAES funding and dollar amount, publication list, patents, products, or other significant research output as appropriate.
- E. Leverage of AAES funding–No Page Limit.** As the name implies, the AAES AgR-SEED grants program is a seed funding program. An important measurement of its success is the leverage of additional funding from extramural sources. If the P.I. has received AAES support in the past five years, please provide a list of extramurally funded projects with information on funding agency, funding period, and dollar amount of the grants/contracts (Please do not list Auburn University intramural grants). Earmarked funding can be listed, but must be so noted. Leverage of extramural funding will be used as one of the important criteria in funding decisions.

A separate list of proposals that were submitted to extramural sources, but were not funded, should be also included, this list should provide the name of each submitted proposal, the requested funding level, and the agency to which the proposals were submitted. This information will be used in the application review (see section VIII.3.D under Evaluation Criteria).

Principal investigators are encouraged to make a case as to why AAES should continue to provide “seed funding” for their programs, and how such seed funding will be leveraged. This information will also be used in the review of the application.

- F. References Cited –No Page Limit.** All work cited in the text, including that of key personnel, should be referenced in this section of the application. All references must be complete, including titles and all co-authors in a professional journal format, listed in alphabetical order, using the last name of the first author or listed by number in the order of citation.
- G. Facilities & Equipment –No Page Limit.** In addition to describing available equipment, list applicable items of nonexpendable equipment, and facilities in the outlying units that are necessary to conduct and successfully complete the project.
- H. Functions of Key Personnel**–Clearly describe the roles and responsibilities of the P.I. and co-P.I.s. Biographical sketches for key personnel should be attached.
- I. Budget-** Provide a budget for each year, use USDA standard format similar to: <http://aaes.auburn.edu/resources/aaes-research-funding-programs/>. Funds can be requested for:

1. Salaries and Wages.
2. Fringe Benefits (for FY 2016: 32.0% for full time employees, 9.8% for part time employees and 4.8% for Graduate Assistants., 0% for undergraduates).
3. Materials and Supplies, including payment to human subjects.

4. Travel directly relevant to proposed effort.
5. Equipment – total is limited to \$5,000.
6. Publication Costs.

- I. Budget Justification.** Provide a justification for budget requests. Budget requests can be made for technical or postdoctoral salary support, graduate research assistantships, and undergraduate research support. AAES recognizes the importance of graduate and undergraduate training and encourages P.I.s to involve graduate and undergraduate students in agricultural research. Request for summer salary for P.I.s on 9-month appointment is allowed only for the leading P.I. up to one month salary per year regardless of the number of collaborators; fringe benefits must be included for all salaries as appropriate, payments for various materials, chemicals, and supplies, travel directly related to the project, publication costs, and/or equipment (up to \$5,000 total) can be requested. Funds cannot be requested for indirect costs such as office supplies, phones, cell phones, internet service, subscriptions, memberships, laptop computers, ipads, software, desktop computers, or computer peripherals (e.g., printers, data storage, etc.). Salaries already supported by AAES funds cannot be charged to these projects.
- J. Curriculum Vitae.** Provide a biosketch for each investigator, **limited to two pages in length** excluding the publications list. The CV should be limited to presentation of academic and research credentials. Do not include meetings attended, seminars given, or personal data. The publications list shall include a chronological or reverse chronological list of all publications in refereed journals during the past four years. Please indicate with an * publications that have resulted from previous AAES grants.
- K. Current and Pending Support Form for each P.I.** A template can be found with budget pages at: <http://aaes.auburn.edu/resources/aaes-research-funding-programs/>.
- L. Conflict of Interest List for each P.I.** You can provide an alphabetical list, or use the USDA Conflict of Interest List Template that can be found with budget pages at: <http://aaes.auburn.edu/resources/aaes-research-funding-programs/>.

No additional materials, appendices, or supplementary documentation will be accepted.

VII. Proposal Submission

Application deadline: Proposals must be received by 5:00 PM, May 11, 2016. Proposals should be submitted in one single pdf file to aaesgrant@auburn.edu.

VIII. Proposal Review and Evaluation

1. **Each application will be evaluated in a two-part process.** First, each application will be screened to ensure that it meets the administrative requirements as set forth in this RFA. **Applications that do not meet the guidelines as stated in the RFA will be eliminated from the competition and will be returned to the applicant without review.** Second, a review panel will evaluate applications that meet these requirements for technical content. In addition to the review panel, written comments may be solicited from *ad hoc* reviewers.

Recommendation for funding is dependent on comments from ad-hoc reviewer (if applicable), and peer-review panel comments/discussion.

2. **Review Panel Selection and Evaluation Process:** The review panel members will consist of representation of expertise of research areas. This review panel may include internal, external, or a mix of internal/external members. The Review Panel will meet, discuss, evaluate, rank, and make recommendations for funding.

Evaluation Criteria: The peer reviewers and the review panel will be asked to take the following factors into account:

- A. Overall merit of the application, including comments on: novelty, uniqueness, and originality, conceptual adequacy of the hypothesis, research question, or problem(s) to be addressed, clarity and delineation of objectives, adequacy of the description of the undertaking and suitability and feasibility of methodology, and probability of success of project. **(30 points)**
- B. Qualifications of proposed project personnel and adequacy of facilities. Research productivity and quality: research productivity and quality as measured by peer-reviewed publications in high-quality professional journals, patents awarded, or products developed as reflected in the biosketch, experience, track record, and training, and adequacy of available or obtainable support personnel, facilities, and instrumentation. **(20 points)**
- C. Relevance of the project to Alabama and/or U.S. agriculture, and a clear justification of how the proposed project is aligned with national agricultural, environmental, natural resources, food security, bioenergy, food safety, and childhood obesity research priorities and how such alignments will lead to extramural funding to continue the research. **(20 points)**
- D. Leveraging that includes efforts and success for extramural funding, and compliance with federal reporting requirements: Justification of how the project will help extramural grant applications in relation to specific funding sources and potential projects, for researchers who were previously funded through AAES funds, demonstrated efforts of extramural funding applications are required before eligible again for AAES funding (see above under “Eligibility”). Success and the level of success in extramural funding from all sources (e.g., federal, regional, state, industry, commodity groups, private, etc.) will be key factors for consideration of continued AAES funding. Timely and satisfactory reports as required by federal laws or regulations are required for continued AAES funding. **(25 points)**
- E. Appropriateness of the budget. **(5 points)**

The review panel will rank all the proposals into categories of must fund, high priority for funding, medium priority for funding, lower medium priority for funding, low priority for funding, and do not fund. Funding decisions and funding levels will be determined based on

the evaluation ranking in consideration of the availability of funds as discussed by the AAES Assistant Director and the AAES Business Office. Final funding decisions will be approved by the AAES Director. A panel summary, along with reviews, will be sent to the leading P.I. upon completion of the funding cycle evaluations.

IX. Award Notice

Upon the completion of funding decisions, the leading P.I. will be notified. In case of funding, the award announcement will include the following:

1. Title of project
2. Project period, specifying the duration of the project AAES intends to support the project without requiring re-competition for funds
3. Total dollar amount as approved by the AAES Director during the project period
4. Instructions on completion of the required CRIS forms and a non-technical abstract

X. Requirements for approved projects, for release of funds:

In order to reduce redundant reporting, a single page of the P.I. Pledge Form will be included as a part of the AAES AgR-SEED Funding application. On this form, the P.I. will be asked if the proposed project falls under the scope of his/her existing Hatch project or Hatch/Multistate project(s) (please note: participation in multistate project is insufficient, the P.I. must have a Hatch/Multistate project number). If the answer is yes, then the P.I. will be asked to pledge by signing that all the methodologies and procedures in the project are covered by the existing Hatch/Multistate project in compliance with federal and state regulations concerning human subjects, animal welfare, recombinant DNA, and any other hazardous materials, and that the P.I. will comply with all the reporting requirements set for Hatch projects or the AAES/Multistate Funding program.

If the proposed project does not fall under the existing Hatch or Hatch/Multistate project(s), the P.I. must complete the following before the release of funds:

1. Projects approved by the Director of the AAES must be entered into REEport as a new project.
2. Each year, a progress report must be completed in the REEport system for the period of October 1 to September 30. Hatch funds will be withheld if reports are not completed to the satisfaction of the Director. A final report will be filed in the last year of the project covering the last year only.
3. All recipients of AAES Hatch/Multistate Program Funds should also communicate their results and impact to the public by submitting a non-technical abstract to the AAES through the office of Ag Communications and Marketing.
4. Approvals for work with animals, human subjects (including those participating in surveys), hazardous materials (including biological agents and toxins), and recombinant DNA are

required. Such approvals must be finalized and documented by completing the Assurance Statement in the project initiation, by using the project change tabs in REEport, or by signing the P.I. Pledge Form prior to release of funds for approved projects. The P.I. should notify the research office when these forms are completed. Information for each category is listed below.

A. **Animals** – an approved Animal Subjects Review Form (ASRF) will be needed for approved projects before funds are released. More information can be obtained at: <https://cws.auburn.edu/OVPR/pm/compliance/iacuc/forms>

B. **Recombinant DNA, Radioactive Products, Hazardous Materials, and Biologicals** – contact the Office of Safety and Environmental Health, Leach Science Center, 844-4870. More information can be obtained at: <https://cws.auburn.edu/OVPR/pm/compliance/ibc/forms>

C. **Human Subjects** – training and IRB approvals needed. More information can be obtained at: <https://cws.auburn.edu/OVPR/pm/compliance/irb/forms>

The Director of the AAES reserves the right to redistribute or retract monies if problems arise relative to satisfactory progress or compliance of all terms as set with this RFA, or due to economic necessity of the AAES. An annual progress report and a termination report are required, and should be made in the REEport system. The federal deadline for reports may vary, but should be completed annually no later than February 15. Notification of the required annual reports will be sent to each P.I. yearly. Nonproductive projects may not be funded for the second year if satisfactory progress is not documented.

Additional Information:

Applications containing proprietary information will be evaluated with due consideration for protection of this information to the extent permitted by law provided such information is clearly identified by inclusion of the Proprietary Information Disclosure Statement.

XI. Timetable summary:

May 2, 2016	Q&A session about the AgR-SEED Program, 2-3:30 p.m, 109 Comer
May 11, 2016	Proposals due
August 1-5, 2016	Review Panel meets and recommends projects for approval and funding
August 16, 2016	AAES Director will finalize and approve funding decisions, final decisions will be mailed to lead P.I.s
September 5, 2016	P.I. completion of requirements for release of funding
October 1, 2016	Project start, pending NIFA approval